

EUROPEAN ECONOMY

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THE EU ECONOMY: 2001 REVIEW
INVESTING IN THE FUTURE

European Economy appears twice a year. It contains important reports and communications from the Commission to the Council and the Parliament on the economic situation and developments, in particular its *Broad economic policy guidelines* and the *EU Economic review*. As a complement to *European Economy*, the series *Reports and studies* focuses on problems concerning economic policy.

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Abbreviations and symbols used

Member States

B	Belgium
DK	Denmark
D	Germany
EL	Greece
E	Spain
F	France
IRL	Ireland
I	Italy
L	Luxembourg
NL	The Netherlands
A	Austria
P	Portugal
FIN	Finland
S	Sweden
UK	United Kingdom
D_90	Germany prior to unification in 1990
EU	European Union
EU-12-	European Community, 12 Member States excluding East Germany
EU-12+	European Community, 12 Member States including East Germany
EU-15	European Community, 15 Member States
EUR-11	Group of 11 Member States participating in monetary union (B, D, E, F, IRL, I, L, NL, A, P, FIN)

Currencies

ECU	European currency unit
EUR	Euro
ATS	Austrian schilling
BEF	Belgian franc
DEM	German mark (Deutschmark)
DKK	Danish krone
ESP	Spanish peseta
FIM	Finnish markka
FRF	French franc
GBP	Pound sterling
GRD	Greek drachma
IEP	Irish pound (punt)
ITL	Italian lira
LUF	Luxembourg franc
NLG	Dutch guilder
PTE	Portuguese escudo
SEK	Swedish krona
CAD	Canadian dollar
CHF	Swiss franc
JPY	Japanese yen
SUR	Russian rouble
USD	US dollar

Other abbreviations

Bn	1 000 million
CPI	consumer price index
ECB	European Central Bank
ECSC	European Coal and Steel Community
EDF	European Development Fund
EIB	European Investment Bank
EMCF	European Monetary Cooperation Fund
EMS	European Monetary System
EMU	economic and monetary union
ERM	exchange rate mechanism
Euratom	European Atomic Energy Community
Eurostat	Statistical Office of the European Communities
FDI	foreign direct investment
GDP (GNP)	gross domestic (national) product
GFCF	gross fixed capital formation
HICP	harmonised index of consumer prices
ILO	International Labour Organisation
IMF	International Monetary Fund
LDCs	less developed countries
Mio	million
Mrd	1 000 million
NCI	New Community Instrument
OCTs	overseas countries and territories
OECD	Organisation for Economic Cooperation and Development
OPEC	Organisation of Petroleum Exporting Countries
PPS	purchasing power standard
SMEs	small and medium-sized enterprises
VAT	value added tax
:	not available
–	none

Comments on the report would be gratefully received and should be sent to:

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Chapter 1

Prospects and policy challenges for
the EU economy

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1. Introduction

Sudden change of fortunes.

Looking back at the previous (2000) review, the change in economic prospects and the main policy preoccupations during this past year is striking. The rapid and continuous deterioration of short-term economic prospects is one of the most prominent features of economic developments over the past year. Only a year ago, conditions in the EU appeared to be in place for a continued robust economic performance and the main economic policy challenge was to sustain the strong growth, while increasing its potential. Internal dynamics seemed robust, as employment creation was vigorous in a setting of price stability, while export growth surged and domestic demand was strong. Moreover, after a rather lacklustre performance of fixed capital formation in the first half of the 1990s, investment growth seemed to be picking up steam. Currently, policy attention is focused on avoiding a prolonged downturn and revitalising the economy. In this context it is important that the medium- and long-term policy challenges are not put to the back and that previous achievements and sound fundamentals are preserved.

Although some risks were apparent last year, the EU economy seemed resilient.

Last year, some dark clouds had already appeared on the horizon. Oil prices had tripled in 18 months to peak in autumn 2000 at USD 35 a barrel, casting some shadows on the optimistic outlook. However, the higher oil price and increased short-term interest rates were expected to affect growth only mildly. Improved labour market performance, strong job growth and some acceleration in real wage growth was expected to underpin consumer confidence and continue to stimulate private consumption. Taking into account the increased profitability in the EU, companies were expected to absorb the oil price rise more easily than in the past, while the generated cash flow seemed to have diminished their dependence on the prevailing financing conditions for external funds. Moreover investment growth seemed further supported by limited spare capacity. A balanced macroeconomic policy mix, a stable macroeconomic environment and the successful introduction of the euro in 1999 were also expected to have strengthened the resilience of the EU economy. Furthermore, as a large and relatively closed economic entity, the euro area was expected to be in a good position to withstand the external shocks. Obviously, further reform efforts were needed in conformity with the Lisbon strategy.

However, resilience was insufficient to weather the global slowdown.

Now, a year later, even without taking the consequences of the dramatic events of 11 September 2001 into account, the economic situation and prospects give less ground for optimism. Growth in both 2001 and 2002 is foreseen to be considerably below potential. The unexpectedly sharp downturn and the lack of resilience pose important policy challenges.

2. Macroeconomic developments in the EU

Chill winds blow across the world stiffened by a number of adverse economic shocks ...

Since the second half of 2000, the world economy has experienced a sharp, universal and protracted economic slowdown. The world economy is now expected to grow only by about 2% in 2001. This is sharply down from the growth rate of 4½% recorded in 2000 and it represents the lowest rate since 1993. A number of common factors are at the origin of the slowdown. First, the hike in oil prices in 1999/2000 fuelled inflation and implied an important drop in purchasing power, thereby dampening consumption. It also squeezed company profits, which together with the sharp drop in share prices, affected investment adversely. Furthermore, the accompanying rise in

headline inflation prompted a monetary reaction by the major central banks to dampen the risk of second-round effects and increased inflationary expectations. Second, there was the simultaneous bursting of the ICT bubble and the related dramatic fall in share prices. The resulting sharp decline in international trade growth from 11½% last year to an estimated 1% in 2001, was a further compounding factor that added to the adverse effects.

... exacerbated by the terrorist attacks of 11 September 2001 and the aftermath ...

This economic slowdown had set in long before the dramatic events of 11 September 2001. Just before the terrorist attacks there were even some first, tentative signs that the slowdown was bottoming out. The effects of the terrorist attacks on the United States of America and its aftermath will deteriorate the international economic environment further and postpone a recovery of world growth by at least two or three quarters. Direct damage to US infrastructure, though dramatic for persons and firms involved, was limited. However, the terrorist attacks and their aftermath have created a feeling of insecurity worldwide. Consequently, risk perception and aversion have increased and confidence has dropped, further depressing consumption and investment.

The medium and longer run effects of the attacks are far from clear yet. Were there, for instance, to be an increase in risk perception, transaction and transportation costs on a longer term, then the effects on world trade growth and therefore allocation and potential output could be more protracted. Probably, the level of productivity undergoes a one-time downward adjustment as the economy responds to higher levels of perceived risk. Moreover, a shift in preferences and needs towards security-related goods and services may have some impact on the structure of the economy and the composition of economic growth.

... while heightened interdependence reinforced the global downturn.

The propagation of the slowdown around the world has been much more rapid than expected, giving leeway to a downward spiral as the effects are mutually reinforcing. The synchronicity of business cycles around the globe, which was primarily due to the common causes, was further strengthened by the increased integration of financial markets and the internationalisation of firms. Financial and confidence linkages via stock markets have been reinforced through the cross-country holdings of shares.

The EU has not escaped a growth slowdown.

Consequently, despite strong macroeconomic fundamentals, the EU has not escaped the slowdown. The continuous high level of oil prices, aggravated by the weakness of the euro and the sudden rise in European food prices, dented real disposable income and private consumption in the EU. Financial linkages and the internationalisation of firms increased the effects, in particular on investment, and speeded up the transmission of the external shocks. As a result, year-on-year GDP growth declined from a peak of 3.8% in the second quarter of 2000 to 1.7% in the second quarter of 2001, as GDP growth came to a virtual standstill in that quarter. Employment growth also slowed down and came to a standstill in some Member States. The continuous decline in the unemployment rate since the end of 1996 lost its momentum in the first quarter of 2001, stabilising at just below 7¾%. Weak employment growth can be expected to result in a higher unemployment rate in 2002.

Inflation eases after hiccup.

Clearly, the development of inflation, eroding household's purchasing power, has played a major role in the euro-area growth slowdown. Headline inflation in the euro area peaked in May 2001 at 3.4%. Core inflation rose more moderately to just over 2%, owing to the stability culture of EMU and limited second-round effects, as wage rises remained moderate due to improved labour market functioning. Currently, some

of the forces driving headline inflation are fading out, notably the higher oil and food prices and the exchange rate effects. The economic slowdown has further reduced upward pressure on prices considerably. Therefore, inflation in the euro area, already down to 2.4% in October 2001, is expected to return to below 2% by the beginning of 2002.

EU needs to rely on domestic policy responses which reflect the nature of the downturn and preserve the stability-oriented framework of EMU.

Since the slowdown is global, the cyclical turnaround will have to come predominantly from domestic sources of growth, rather than from external forces as has occurred on previous occasions. In this context, an appropriate response of domestic economic policies is key to restoring confidence and improving growth prospects. The policy response needs to reflect the nature of the shocks, which were largely symmetric and have been propagated via confidence effects on private consumption and investment. An appropriate policy mix should involve a cautious fiscal policy. With monetary policy aimed at maintaining price stability and responding to receding inflationary risks, this would secure low interest rates. This would help stimulate business investment, the key to triggering a recovery in growth, thus contributing to the Union's objective of full employment. It would also ensure a continued reduction in public debt and thus help prepare for the budgetary impact of ageing populations.

The reduced risks to price stability have facilitated a monetary policy response ...

Monetary conditions in the euro area have eased gradually in the course of this year and at a more rapid pace in recent months. As the balance of risks to price stability improved gradually, the European Central Bank reduced its monetary policy rates by 25 basis points on 10 May and 31 August. Following the terrorist attacks in the United States, the ECB cut its policy rates more aggressively by 50 basis points each on 17 September and 8 November. Thus, the main refinancing rate was reduced to 3.25%, as the detrimental impact on confidence and growth further reduced the risks to price stability in the euro area. Initially, in the aftermath of the 11 September, the ECB also provided ample liquidity to assure the proper functioning of financial markets. Decreasing price pressures and the declining trend in inflation may provide further scope for monetary policy, depending on the continuation of wage moderation, the development of oil and other commodity prices, the exchange rate and the budgetary discipline.

... which counters the effects of increased risk aversion ...

In this context, it is noteworthy that the development of short-term interest rates is not fully reflected in the change in actual financing conditions. First, due to the large volatility and downward adjustment of stock markets, financing through issuance of new shares has become much less advantageous. Second, a steepening of the yield curve implies that real financing costs, for instance for mortgage loans, have not fallen much. Third, monetary conditions may be tighter than indicated by short-term rates as corporate bond spreads have increased on average in the euro area over the last few months, partly as a result of downgrading of heavily-indebted telecommunication companies, but also because of increased risk aversion.

... while the euro remains undervalued.

Despite the sharp turnaround in economic prospects and increased economic risks in the major economic areas, exchange rate volatility of the major currencies has been rather muted throughout the year. As the weakness of the exchange rate of the euro had previously been attributed largely to the impressive performance and the bright prospects of the US economy, the lack of a decisive euro appreciation in response to the rapidly deteriorating prospects in the United States is surprising. Especially, the very short-lived reaction to the 11 September attacks is puzzling. This underlines that short-run exchange rate movements cannot consistently be predicted. However, based

on fundamental, long-run factors, that have more predicting power, there seems to be consensus that the euro remains undervalued against the US dollar as well as in real effective terms. Still, there is uncertainty about the timing and speed at which the euro might close the gap to its equilibrium level.

Fiscal policy activism has numerous limitations and ...

While fiscal policy is commonly seen as bearing a higher responsibility for cyclical stabilisation in a currency union, this does not imply a return to fiscal fine-tuning. One of the clearest messages from recent literature is the growing scepticism vis-à-vis fiscal policy activism. First, most studies reveal longer and more uncertain impact lags than was previously assumed. As a result, the impact of discretionary fiscal measures may only materialise long after an economy needs stimulation. Consequently, they may inadvertently have a pro-cyclical impact. Second, the most 'effective' fiscal measures to boost demand in the short term are also those which are most detrimental to growth in the medium term. Third, fiscal discretionary actions appear inappropriate to tackle temporary shocks, as the reversal of policy choices is very costly. Finally, to avoid debt accumulation, discretionary fiscal policy would have to act symmetrically during recessions and booms: this implies tax increases or expenditure cuts during upswings, which may be politically unrealistic and thus generate a bias towards running deficits which contributes to the accumulation of public debt. Experiences in previous decades have exposed these limitations.

... fiscal fine-tuning is not the answer to the waning growth prospects.

Given the numerous drawbacks of fiscal fine-tuning to stabilise output, the norm for budgetary behaviour should be to let automatic stabilisers operate freely, thereby avoiding pro-cyclical policy. Moreover, a strong commitment to controlling public expenditure, while upgrading the quality of public finances and implementing reforms of tax and welfare systems would be consistent with a medium-term orientation of budgetary policy. It would also help prepare for the budgetary and economic impact of ageing. Such a cautious fiscal policy further increases the scope for a monetary policy conducive to reviving growth by contributing to price stability. This approach should not be put into question by the current cyclical developments. To strengthen resilience and ensure sustainability of government finances, it is essential to maintain the credibility of the fiscal framework in the Stability and Growth Pact (SGP), especially given the substantial fiscal challenges posed by the ageing populations in the coming years and decades.

The budgetary framework of the SGP enables automatic budgetary stabilisation ...

This medium-term orientation of budgetary policies and the scepticism on fine-tuning are embodied in the SGP. This provides an appropriate framework for conducting budgetary policy both in good and in bad times. It not only strives for the consolidation of sound public finances in the medium and long run, but also provides leeway for cyclical stabilisation through the output smoothing impact of automatic fiscal stabilisers. Automatic stabilisers in the euro area provide a relatively high degree of stabilisation, especially in the case of shocks to private consumption. This is reflected in the deterioration of the expected actual budget balances compared to forecasts in the beginning of the year. For the euro area as a whole, a deficit of 1.1 % of GDP is now expected in 2001, increasing to 1.4 % of GDP in 2002, 1 percentage point higher than what was forecast in spring, before the extent of the economic slowdown was known. The deterioration of the government finances as a result of the operation of the automatic stabilisers in a context of faltering growth should however not lead to the appearance of an excessive deficit (3 % of GDP). Therefore, the SGP requires that Member States' budgets are 'close to balance or in surplus' over the cycle, such that they have sufficient room for a deterioration in government finances.

... however, lack of consolidation efforts in the major countries limits their leeway for stabilisation.

However, in contrast with a number of Member States that have moved decisively into budget surpluses, the major euro-area economies have shown a virtual lack of progress on budgetary consolidation in recent years. As a consequence, the budgetary consolidation process for the euro area as a whole has come to a standstill since 1998. As these economies were growing robustly in 1999 and 2000, the budgetary dividends of their economic performance were not being used to 'put the budgetary house in order', i.e. to achieve a budgetary position 'in balance or in surplus' over the medium term. The cyclically-adjusted primary balance, that shows the consolidation efforts, has actually worsened a bit over the past couple of years, reflecting mainly implemented tax cuts in some Member States. Still, both the structural consolidation paths and the balanced budget target for 2003/04, set out in the stability programmes, need to be maintained.

Market mechanisms play a key role in economic adjustment to country-specific developments.

The aforementioned drawbacks of fiscal fine-tuning should be taken into account as well with regard to adjustment policies to country-specific economic developments. For example, in the case of overheating pressures in individual Member States, market adjustment through changes in relative prices and wages, in addition to the full operation of automatic stabilisers, limits the burden of policy-induced adjustment. Further increasing flexibility on labour and product markets, while assuring adequate financial supervision and increasing international integration of financial markets, is essential to enhance the economic adjustment processes in individual Member States in the EMU.

Stepping up the process of structural reforms is essential to increase potential growth, strengthen resilience and assure smooth economic adjustment.

Moreover, the pace of structural reforms needs to be stepped up to increase potential growth and contribute to the overcoming of the global slowdown. Some progress on reforms has been made, thereby improving the euro area's market functioning. Yet, structural rigidities continue to sap the resilience and the potential growth of the euro-area economy. Although in 2000 economic growth in the euro area clearly exceeded 3%, it is doubtful whether a growth rate well above 2.5% would have been sustainable, even if resilience would have been strong or adverse shocks had not occurred. The growth performance in 2000 was characterised by some exceptional circumstances, such as a spur in world trade growth, a decline in private savings and a catching-up effect of investment growth from the lows of the early 1990s. Moreover, growth has been job rich. In the absence of a meaningful acceleration in reforms, there is a risk that beyond the cyclical downturn, trend growth will again be unsatisfying. In its paper for the Ghent European Council, the Commission stressed therefore that despite 'economic and labour market reforms and modernising social policies are already improving the way the Union's economic and labour markets function, the continuation of such reforms is all the more important now the Union faces economic conditions very different from the ones prevailing when the Lisbon strategy was launched.' This strategy emphasises the mutually-reinforcing interaction of economic, employment and social policies and provides the basic orientations for policies pursued in order to reach the Union's agreed objectives in these three fields.

Expectations of gradual rebound based on sound fundamentals and progressive unwinding of shocks.

However, looking ahead, macroeconomic fundamentals still look rather strong in the euro area and the existence of the euro has proven to be a major factor of stability. The turnaround in growth is expected to take place earlier than in the United States, as the economy is free of major imbalances. Contrary to the United States, private households are not highly indebted, over-investment in technology is more contained and the current account is broadly balanced. As inflation is rapidly declining, household's disposable income in the euro area increases. Against this background

private consumption could pick up, further helped by the already implemented tax cuts in some Member States. Moreover, as spare capacity remains limited, investment should also resume when demand strengthens. Nevertheless, growth can be expected to be disappointingly low in 2002, with the growth rate gaining momentum only in the second half of the year. Further support should come from the decline in interest rates, while automatic stabilisers work on the budgetary side. Apart from the cyclical stabilisation issues, medium and longer term policy challenges should remain in the forefront of attention. Strengthening internal dynamics and resilience, while increasing potential growth and ensuring sustainability represent broadly the main economic policy objectives.

Investing in the future.

In this broad context, four selected issues that play an important role are being discussed in-depth in this 2001 review: investment, financial markets, pensions and information and communication technologies. These issues are strongly interrelated and support the broad policy objectives. Moreover, stepping up structural reforms in labour and product markets and adhering to the stability-oriented macroeconomic framework are essential for success.

3. Determinants of investment growth

Mediocre investment performance over the 1990s ...

Despite the high rate of capacity utilisation and the internal growth dynamics in the euro area, investment growth has not been resilient to the recent adverse economic shocks. Assessing investment in the euro area over a somewhat longer period also shows a disappointing performance, both in comparison with the United States and with the previous investment cycle. As investment is a crucial element of economic performance in the short and in the long run, the lacklustre investment performance in the euro area during the 1990s is often considered a major factor behind relatively poor economic growth and limited growth potential in the euro area. During the 1990s, the share of fixed capital formation in GDP in the United States caught up with the traditionally significantly higher level in the euro area. In the late 1990s, as economic performance improved, investment growth in the euro area picked up to the levels seen during the economic expansion in the late 1980s. An examination of the composition of investment shows that most of the difference in investment growth between the United States and the euro area can be attributed to equipment investment, notably in ICT equipment.

It should be noted, however, that the impressive investment growth in the United States is not without pitfalls, as the economy is now suffering from severe excess capacity due to over-investment. A sharp drop in investment is currently the main driver of the US downturn. The slowdown in the growth rate of fixed capital formation in the euro area is expected to be more benign as there has not been an investment boom similar to that in the United States.

... cannot be explained by macroeconomic fundamentals.

Traditional macroeconomic variables cannot explain the diverging developments of investment growth in the euro area and the United States in the 1990s. Although profitability remains traditionally higher in the United States, the gap with the euro area has not changed much over the 1990s. The relative price of investment goods is one of the few macroeconomic indicators that does provide some explanation for the diverging developments, as it declined significantly faster in the United States than it did in the euro area.

Less flexible product and labour markets and less developed financial markets seem to be at the origin of the different investment performance in the United States and the euro area.

Structural rigidities seem to be at the origin of the rather poor performance of investment growth in the euro area in the wake of the rapid developments in the ICT sector. The available evidence suggests that improving the flexibility of product and labour markets in the euro area will contribute to the incentive to invest. Moreover, well-developed financial markets, in particular stock markets, play an important role in the financing of investment particularly for enterprises in the ICT sector. A closer examination of financial markets in relation to investment, and growth in general, can shed some light on the role of the financial markets in enhancing growth.

Gradually, the EU financial markets are integrating, ...

4. Financial market integration in the EU

The EU financial system is being transformed by the interaction of several phenomena, including the wider process of globalisation, the harmonisation of the regulatory framework across the Union and the implementation of financial reforms in the Member States. Together, these developments contribute to the progressive integration of the EU financial system. This process is reflected in more homogenous markets, a wave of consolidation among financial intermediaries and the emergence of new and innovative products and techniques. Since 1999, the euro has also helped in this transformation by eliminating exchange risk for financial flows across most of the Union.

... stimulating its long-term economic performance.

There are important economic benefits of the integration of the EU financial system. While the link between financial development and economic growth is still under investigation in the economic literature, there is increasing empirical evidence suggesting that the *long-term* performance of an economy is positively related to the level of development of its financial system. By extension, to the extent that financial integration raises the level of financial development, it is most likely to result in an improved economic performance. This two-step rationale underlies previous analysis of EU financial integration by the Commission services (e.g. 'The Economics of 1992' (1988)) which estimated a substantial increase in the value added from financial services following the integration of financial markets. As the estimate was based on a comparative static analysis, including dynamic gains from integration would probably result in even higher benefits.

The introduction of the euro accelerates the integration process ...

The effect of the euro in accelerating the process of financial integration is already evident in the main financial markets, among the key financial intermediaries and in market infrastructure. Recent developments in the different market segments reveal that the extent of integration across market segments is not uniform.

First, the introduction of a single monetary policy in the EMU has ensured a substantial integration of the euro-area money market, in which all market segments are highly integrated except the secured money market segment. Second, the homogeneity of the euro-area government bond market is evident in highly convergent yields across the Member States and the effects of integration are reflected in many aspects of market activity. Third, the integration in EU equity markets has been mainly apparent in a more sectorally-correlated movement in equity prices across the various Member State markets. The trend toward cross-border trade is also driven by the broader internationalisation of equity issuance, more mergers and acquisitions across borders and the need for formal stock exchanges to consolidate. Fourth, banks are increasingly involved in offering financial services to foreign businesses and individuals. The introduction of the euro has further intensified competition in an already highly competitive environment for financial intermediaries.

... yet, integration is far from complete ...

Full financial market integration in Europe is, however, far from being complete. A substantial amount of work remains to be done. The increase in the international ownership of assets reflects the pace of financial market integration. While the share of international financial assets in total financial wealth is still relatively small, an acceleration of the trend towards international asset holdings is notable after 1996. Cross-border asset holding of banks and in banks have increased. Still, institutional investors have evolved as key drivers of financial market integration. Investment companies and pension funds hold a larger share of wealth in foreign assets than banks and households, which show a quite pronounced home bias.

... and the implementation of the FSAP risks falling behind schedule.

The economic benefits of financial integration have been recognised by successive European Councils. Hence, facilitating the integration process has been recognised as a priority of economic reform. This priority is reflected in the deadline of 2005 (decided by the Lisbon European Council), set for implementing the financial services action plan as the blueprint for an integrated EU financial system and in the target date of 2003 (agreed by the Stockholm European Council) for the integration of the securities markets. Despite encouraging progress on a number of individual dossiers, the overall progress in implementing the FSAP has been rather slow. Against the background of the slowdown in economic growth and an uncertain financial environment, progress must now be speeded up. Any weakening in the commitment of Member States to the integration process would be likely to undermine financial-market confidence.

Three priority actions to enhance financial market integration.

Three main lines of action can be identified to reassure financial markets. First, there is a need to accelerate the implementation of the FSAP so as to ensure that the Lisbon deadline is respected. Second, the adoption of the Lamfalussy proposals on the regulation of EU securities markets is an essential step in accelerating implementation of the FSAP. Third, some issues relating to arrangements for cross-border financial supervision should be resolved. The higher systemic risk associated with financial-sector integration and consolidation implies a need for close cooperation among national supervisors and central banks regarding matters of financial crisis prevention and management.

Well-functioning financial markets will help to cope with the ageing challenge.

Over the next few decades, the transition to an aged society will change savings and investment behaviour on a macro-scale. Transparent, liquid and well-functioning financial markets will contribute to ensure financial and macroeconomic stability during this transition. The functioning and efficiency of financial-market channelling of savings and investment throughout the transition period are important, not least because they influence the internal rates of return of both funded and pay-as-you-go (PAYG) pension systems.

5. Options for pension reforms

Additional reforms are needed to meet the challenges posed by population ageing.

Ageing will pose challenges for budgetary, labour and financial-market policies as well as for the overall economic performance and social cohesion. A central element in the challenges posed by ageing is the increase in the old-age dependency ratio and its consequences for pension systems. Between 2000 and 2040 the ratio of people over the age of 65 relative to the working age population increases from 24 to 49 % in the EU. The economic and budgetary consequences will be immense for the traditional PAYG pensions systems, which are prevalent around Europe. As the number of

workers will be reduced, fewer resources will be available to pay for a rapidly-increasing number of pensioners. Moreover, current systems provide relatively few incentives to work until the official retirement age, further limiting the number of available workers. The design and structure of public pension systems play a crucial role in determining the scale of the budgetary and growth impact of ageing. Notwithstanding the wide range of reforms that Member States have introduced up until the end of the 1990s in order to tackle the ageing problems, the latest estimates of the impact of ageing on growth and public expenditure confirm that additional reforms will be needed.

Wide-ranging pension reforms are an important element in a comprehensive strategy to address these challenges.

There is a widespread consensus on the need for major reforms to cope with the challenges of ageing in Europe. This reform strategy should aim at three main goals. Firstly, increase overall economic and employment growth. Secondly, public debt should be reduced so as to make more resources available in the future. And thirdly, social protection systems, including pension systems should adequately meet their social objectives and be adapted to respond to changing needs of the economy, society and individuals while ensuring equal treatment between women and men. Reforms of pension systems should particularly focus on improving incentives to work, for instance by strengthening the actuarial link between contributions and benefits. In order to avoid over-burdening future active generations, benefit levels of first pillar schemes are frequently lowered. This increases the need for second and third pillar provision.

Reforms not only aim at ensuring budgetary sustainability, but also improving economic growth prospects and assuring a balanced income distribution.

Assuring the budgetary sustainability of pension systems is a major challenge for the reforms, with the objective of ensuring macroeconomic stability in the long run and avoiding the crowding out of private investment and consumption. However, broadening the assessment framework to the three objectives mentioned above and notably by including the economic growth impact and income distribution is — in the long run — vital for the political sustainability of the reform process. Taking account of these major policy objectives, no single ‘best’ approach to pension reforms exists. There is no clear-cut answer regarding the optimal form and extent of reforms, as economic, social and political considerations do not always point in the same direction.

Increasing the effective retirement age is the single most potent reform option.

Reforms that reduce generosity, while providing clear budgetary gains, are less successful in terms of easing the growth loss associated with ageing, and income distribution difficulties are evident. No such problems exist with increasing the effective retirement age, as it simultaneously meets all three policy objectives. Growth is boosted, budgetary pressures are reduced and political sustainability in terms of income distribution can be assured. With regard to the fiscal gain, the retirement simulation suggests that the public expenditure impact of an increase in the effective retirement age is of the order of 1 for 1. In other words, for each additional year worked before retiring, the public expenditure impact on pensions is reduced by close to 1 percentage point of GDP. Linking the retirement age to the development of life expectancy over the next few decades can ensure that all three main policy objectives can continue to be met over time.

Costs and benefits of a partial shift to funding need to be carefully examined.

Regarding ‘systemic’ reforms, a partial shift to a funded system seems preferable to either a 100% PAYG or a fully-funded system. A mixed approach will be able to draw on both the returns to human capital investment in the PAYG system (i.e. real wage growth) and returns to physical capital in the funded system (i.e. the real interest rate). Consequently, such a partial shift exploits the expected higher return in the

funded system, while diversifying the risks. The extent of the partial shift to funding needs to be assessed taking account of both the costs and benefits of such a change. While an estimated higher internal rate of return calls for increased funding, increasing volatility of the return calls for risk diversification and greater reliance on PAYG. Furthermore, funded systems result in additional administration costs. Moreover, a shift to increased funding implies that at least one generation of workers must lose in the process, as both current PAYG obligations need to be paid for and pension fund assets need to be built up. The operational demands of any shift to funding need therefore to be carefully examined in order to make certain that the natural benefits of funding are not partly or completely eroded. A politically feasible shift to partial funding over the next 50 years will bring significant gains in terms of budgetary sustainability. The size of the gains in terms of economic growth should not be exaggerated, however, especially when compared to a broad-based 'parametric' reforms scenario, which also provides impressive budgetary relief.

The underlying economics of pension systems need to be re-equilibrated.

From a growth perspective it is essential that the fundamental real economy measures are introduced, which are necessary for economies to adjust to the changes brought about by ageing populations. In terms of pension reform, ageing has significantly altered the underlying economics of the pension system. The system needs to be re-equilibrated, reflecting the twin 'certainties' of ongoing increases in life expectancy and lower birth rates compared with previous decades. In this regard, action is necessary to firstly bring the relationship between the number of years spent in employment relative to the years spent in retirement (i.e. the passivity ratio) back to the levels witnessed when the PAYG system was in its infancy. Secondly, it needs to be recognised that whilst budgetary sustainability is an important measuring rod for pension reform measures, economic growth considerations must be retained as the central objective.

6. The microeconomic impact of ICT in Europe

Undoubtedly ICT has made a substantial contribution to growth in the 1990s ...

Recent developments in stock markets and the economic downturn have led many observers and policy-makers to wonder whether the potential economic benefits of information and communication technologies (ICTs) might have been exaggerated. However, the technological driving forces behind the investment boom in ICTs remain intact. As for stock prices, economic history suggests that these tell us next to nothing about the wider economic benefits of 'general-purpose technologies'. There is little doubt now that ICTs made a substantial contribution to growth during the 1990s in the US economy and in several EU Member States, even though revisions to recent economic data mean that the contribution of ICTs to growth was less than it seemed in 2000.

... though its effects were smaller in the EU than in the United States.

In the EU as a whole, the contribution of ICTs to growth has been smaller, partly because of a smaller ICT production sector and partly because ICT-using sectors have invested less than their US counterparts. There are signs that ICT investment in the EU was catching up immediately prior to the current economic downturn. However, there is little evidence at the macroeconomic level of productivity improvements due to network effects or improved business organisation enabled by ICTs — changes that should show up in the form of higher total factor productivity in ICT-using sectors.

To ensure that ICTs positively affect employment, human capital is of vital importance.

Employment creation in ICT-producing and -using sectors in the EU has also been disappointing compared to the United States. However, there are grounds for cautious optimism that ICTs could have a positive impact on employment in the longer term, to the extent that they facilitate greater adaptability in the workforce. There are also significant risks that need to be managed, in particular the risk that lower-skilled workers will be displaced. Human capital is of paramount importance, in terms of both providing basic information society skills (not only ICT skills) and ensuring that employers, social partners and individuals have appropriate incentives to invest in specific training.

Productivity rises due to enhanced market transparency and business processes.

At the microeconomic level, there does seem to be considerable potential for ICTs to raise productivity. E-commerce, or ICT-supported systems for handling transactions, raises the prospect of enhanced transparency across markets. Empirically, it seems that price levels are declining as a result of e-commerce, although it is nowhere near the watershed that had been predicted by some commentators. This may be due to increased product differentiation. But contrary to the traditional view, such strategies may actually enhance welfare to the extent that they satisfy demand for variety. The automation of business processes, or e-business, further promises to boost production efficiency. This is powered by seamless information flows across computer-mediated networks, both inside firms and connected to externals. But firm-level studies reveal that the acquisition of sophisticated ICT systems will come to nothing without complementary investments in human capital and organisational change.

Increased flexibility in product and labour markets is key to facilitate organisational changes and fully reap the benefits of ICT.

A key policy perspective is the need to focus as much on organisational changes as on technologies themselves. A lack of flexibility is often put forward as the reason why the EU as a whole has lagged behind the United States in the application of some ICTs, and there may well be some truth in this. Certainly, if the largest benefits are indeed still to come, in the form of organisational improvements in ICT-using sectors, then it is essential to examine product and labour market policies and institutions to ensure that flexibility is not unduly restricted. If ICTs can indeed improve the functioning of markets, then Europe potentially has much to gain. The global nature of e-commerce and e-business means that the process of market integration, initiated by the single market programme, could shift up a gear. These improvements are not automatic, but they could be fostered by progress on economic reforms to create an environment conducive to confidence in on-line transactions, investment in ICTs and the necessary complementary investments in business, human capital and work organisation.

Chapter 2

Macroeconomic developments
in the euro area

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1. Introduction

Economic performance in 2001 has not met expectations. A year ago, conditions in the euro area appeared to be in place for continued robust economic growth. Strong domestic demand, vigorous employment creation and price stability were seen as important assets conducive to sustained economic growth. After having posted real GDP growth of 3.4% in 2000, a certain moderation of growth in the euro area was anticipated for 2001 on the back of three main factors: the sharp increase in oil prices, the tightening of monetary policy and the slowdown of economic activity in the United States. Furthermore, it seemed probable that headline inflation would recede below the ECB's 2% threshold in the course of the year. An abrupt cooling off of economic activity with real GDP growth posting a meagre 1½% in 2001 and a hiccup in inflation to 3½% in mid-2001 was not foreseen.

This chapter looks at recent macroeconomic developments in the euro area, with the different sections focusing on economic growth, inflation, macroeconomic policies and economic adjustment in euro-area countries. Section 2 looks at the origin of the unexpected slowdown focusing on the underestimation of the magnitude of the relevant shocks and the working of international propagation mechanisms. Section 3 analyses recent and prospective inflation trends. A key issue addressed in this section is the continuous moderate wage growth in the euro area despite higher rates of inflation and declining unemployment. The stance of and challenges for current macroeconomic policies are dealt with in Section 4. The final section elaborates on economic differences among the euro-area Member States and discusses national policy adjustments when there is overheating.

2. Causes of the growth slowdown

2.1. Identifying the economic shocks affecting the euro area

Although the quarterly profile of real GDP growth resembles those of the two slowdowns experienced in the 1990s, the present one is driven by different elements. Compared to previous cyclical downturns, the quarterly profile of demand components reveals a rather atypical pattern. In the past, the slowdown showed up first in a deceleration of export and investment growth. This time, the first signs of weakening activity became apparent in private consumption, which started to slow in the third quarter of 2000. Investment weakened in the fourth quarter and export growth in the first quarter of 2001. This sequencing indicates that the current weakness is rooted in more than one cause and although demand components are interdependent by nature, their deterioration can be related to the impact of three major economic shocks, which have been acting on a global scale.

- The **oil price surge** — Private consumption was hit in autumn 2000 by the considerable drag on the purchasing power of euro-area households from the impact of the surge in oil prices, aggravated initially by the weakness of the euro and later by the persistence of the high level of oil prices. In addition to this global shock, consumer spending in the euro-area economy was adversely affected by the sudden rise in food prices in spring 2001.
- The **crisis in the ICT sector** — The previously buoyant economic activity in the ICT sector has deteriorated sharply since the reversal in equity market valuation of ICT firms in spring 2000. Concerns about over-investment and excess-capacity as a consequence of the boom-and-bust development in ICT stock prices have been prominently voiced only in the United States. But euro-area enterprises also suffered from the tightening of financial conditions on equity markets and the subsequent reassessment of the profitability of investment in ICT.

- The **collapse in world trade** — Economic activity slowed not only in the euro area but also in the United States and in other regions of the world. The synchronised weakening of economic activity resulted in the steepest deceleration in world trade growth since the early 1980s.

The terrorist attack in the United States can be assessed as a further economic shock. Its consequences are still quite uncertain ⁽¹⁾. Since previous forecasts underestimated the impact of the disruptions on economic activity, a cautious stance on the impact of this event is warranted.

The impact of price hikes on private consumption

Subdued consumer spending is mainly the result of two serious price shocks. In 2000, surging oil prices and a weakening euro entailed a sharp deterioration of the terms of trade ⁽²⁾. Contrary to earlier expectations, the oil price hike was more enduring. Moreover, it was followed in early 2001 by a sharp increase in meat and other food prices in reaction to crises in the agricultural sector (BSE, foot-and-mouth disease).

These price surges exerted significant pressure on households' purchasing power in 2000 and 2001. The worsening of the terms of trade shaved off about 1 percentage point of consumers' real income in 2000 through a direct increase in the households' energy bill. It also led to further rounds of price increases as producers endeavoured

⁽¹⁾ At the time of writing, official economic data for the euro area post 11 September are still scarce. In the euro area, business and consumer confidence have plummeted and the Commission's business climate indicator dropped in October 2001 to a five-year low, the steepest fall ever. First data releases from Member States confirm a weakening in industrial production.

⁽²⁾ For a more detailed analysis of the impact of the surge in oil prices, see European Economy No 71: The EU Economy: 2000 Review, Chapter 2, Section 2.

to restore their margins depressed by higher input costs. This pass-through effect remained limited in 2000 but was more pronounced in 2001 as evidenced by the delayed increase of core inflation to the rising energy bill (see Section 3). Finally, the increase in food prices curbed households' purchasing power by at least 0.5 of a percentage point in 2001. Overall, the two price hikes caused a reduction in household's purchasing power of about 1 percentage point in 2000 and 0.5 to 1.0 percentage point in 2001, which translated into lower growth in real consumption spending.

Furthermore, the surge in prices had a bearing on consumer confidence. A first decline in consumer confidence occurred at the time of the peak of the oil prices. Consumer confidence was further hit as the crisis in the agricultural sector unfolded and the worsening in general economic conditions materialised. Already in autumn 2000, households' expectation in terms of unemployment had deteriorated significantly more than during the previous downturn. The labour market registered its first signs of weakness at the beginning of 2001; the rate of unemployment ceased to decline and employment growth decelerated, aggravating the impact of the price shocks on real disposable income.

Further evidence of a reduced propensity to consume can be drawn from the relatively unfavourable and atypical developments in household's saving behaviour. The euro-area household's saving rate began to drift upwards at the end of 2000 and increased slightly further in 2001. Faced with a temporary decline in purchasing power, consumers usually try to maintain their level of consumption by reducing saving. Hence, households must either have perceived the reduction in real disposable income through the increase in oil prices as permanent or other forces must have been at work.

Among those other factors, effects related to uncertainty and financial wealth may have played an important role.

With progress in budgetary consolidation coming to a halt and deteriorating employment prospects, households were faced with a more uncertain economic environment. Normally, the immediate adjustment to increased uncertainty is an increase in precautionary saving and a postponement of major purchases of durable goods. Furthermore, falling stock prices have reduced financial wealth, which may have induced households to reduce spending in order to restore their wealth position ⁽¹⁾. The share of equity wealth in households' total financial wealth has surged in the past few years and, although equity wealth effects are generally estimated to have been limited in the 1990s, their importance has increased in recent years.

Table 1 reproduces the result of a simulation with the Commission's macro-econometric model QUEST, which was used to assess the magnitude of the impact of the oil price hike in the EU economy 2000 review. The simulation indicates that the impact on GDP growth is largest in year 2, and is still considerable in year 3. Taking into account that due to the weakening of the euro the actual increase in consumer inflation has been larger than the one yielded by the simulation ⁽²⁾, the actual effect on GDP is likely to have also been larger than estimated.

The ICT shock undermined the prospects for investment

A key source of the recent investment weakness appears to be the crisis in the ICT sector ⁽³⁾. The ICT shock originated

- ⁽¹⁾ Virtually independent from the exact form of the consumption function, the impact of stock price developments on the saving ratio depends on the propensity to consume out of wealth, the share of equity in wealth and the ratio of wealth to disposable income.
⁽²⁾ For the impact of rising energy prices on inflation, see Section 3.
⁽³⁾ For an analysis of the contribution of ICT to growth in the EU, see EU ECONOMY 2000 REVIEW, Chapter 3.

Table 1

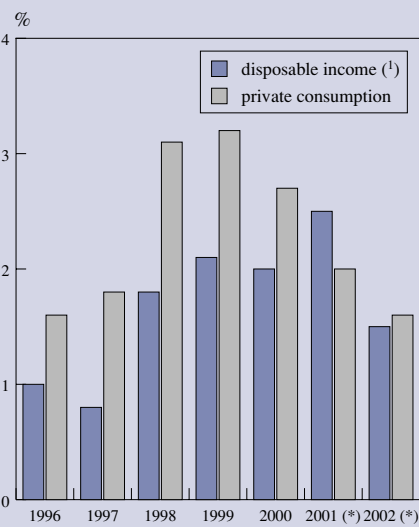
Impact of a USD 12 increase in oil prices, euro area

	Year 1	Year 2	Year 3
— GDP growth (% p.a.)	- 0.2	- 0.4	- 0.2
— Inflation (% p.a.)	0.7	0.4	0.2

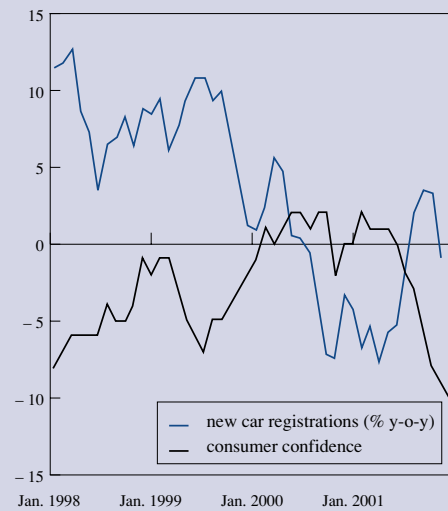
Source: Commission services, QUEST simulations.

Graph 1: Determinants of private consumption in the euro area

Private consumption and households' disposable income, euro area
(annual changes in real terms)



Consumer confidence, euro area

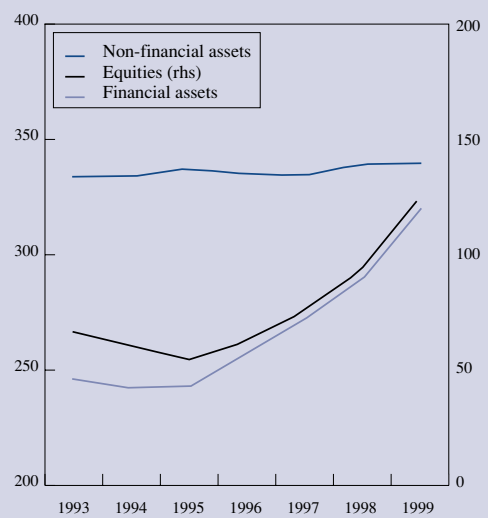


(*) European Commission autumn 2001 forecasts.
(¹) Euro area excl. IRL, I and A.

Households' saving ratio and unemployment, euro area



Households' wealth, EU-3 (¹)
(% of disposable income)



(*) European Commission autumn 2001 forecasts.
(¹) D, EL, F, I, FIN.

(¹) D, F, I.

Source: Commission services, ECB and OECD.

in the United States but has been spreading rapidly to the rest of the world. Stock valuations of ICT firms experienced a bubble-like increase in the late 1990s. This trend reversed in spring 2000 under the impact of sharp revisions to expected profitability in the technology-producing sector and also to expected profitability of ICT investment in ‘traditional’ sectors. Hence the ICT shock is not limited to high-tech sectors but is impinging on investment by both ‘new’ and ‘old-economy’ companies.

Global equity prices have registered heavy declines since spring 2000. Between the first half of 2000 and August 2001 euro-area stock market valuations declined by 25%. Especially share prices of ICT firms, which had displayed a bubble-like increase until March 2000, were strongly hit. The market valuation of technology and telecommunication firms declined by about 60% between the first half of 2000 and August 2001 ⁽¹⁾.

Traditionally, the impact of equity prices (if any) on business investment and private consumption in the euro

area has been assessed as modest ⁽²⁾. A recent empirical study revealed, however, that the economic effects of equity valuations in the ICT markets on investment are similar in Anglo-Saxon countries and continental Europe ⁽³⁾. Furthermore, ICT firms are heavily dependent on external finance and in particular on conditions in equity markets ⁽⁴⁾. In consequence, the stock market decline had a strong adverse effect on investment in this sector. Moreover, the role of equity prices may have recently become more important through its impact on confidence. The correlation between changes in stock prices and industrial confidence has increased noticeably since the late 1990s (see Graph 6). Against this background, there is reason to believe that investment in the euro area was significantly affected by the events in the ICT sector.

With expected returns on both investment in ICT by ‘traditional’ sectors and investment of ICT firms having been strongly revised downward in the euro area, the

⁽¹⁾ A puzzling difference between the United States and euro-area share prices is in the timing of the turnaround. European shares started the downward trend already in March/April 2000 while most US share prices resisted the downward trend until August/September 2000. The exceptions were shares traded on the Nasdaq, a market dominated by US high-tech enterprises, which also peaked in March 2000 and declined afterwards.

⁽²⁾ In’t Veld (2000) simulates the effect of a stock market crash with the QUEST model. His estimates of the wealth effect indicate that a 20% drop in global equity prices, without counterbalancing monetary policy responses, reduces private consumption in the United States by 1.7 percentage points and in the EU by 0.8 of a percentage point in the first year. The effect after five years is – 0.7 in the United States and – 0.2 in the EU. However, a reduction of short-term interest rates by 1% in the first year almost neutralises the negative impact of the wealth effect on consumption in the euro area.

⁽³⁾ Edison and Sløk (2001).

⁽⁴⁾ IMF (2001a).

Table 2

Gains (+) and losses (–) of stock market value until August 2001 if the portfolio was invested in stock indices / time of engagement

	1H 1996	1H 1999	1Q 2000	2Q 2000
Dow Jones broad Euro Stoxx	120	5	– 24	– 24
Dow Jones Euro Stoxx 50	140	8	– 23	– 25
Dow Jones Euro technology index	184	8	– 56	– 58
Dow Jones Euro telecom index	135	– 32	– 67	– 61
US S&P 500	82	– 9	– 17	– 19
US Dow Jones industrial average	86	2	– 4	– 4
US Nasdaq	71	– 21	– 56	– 48

Source: ECB.

Table 3

Impact of a loss in financial wealth and an increase in the risk premium on investments, equivalent to a decline of stock prices by 10 % in Year 1 and a further 10 % in Year 2

	Year 1	Year 2	Year 3
	US		
— GDP growth (% p.a.)	- 1.5	- 0.3	0.8
— Private investment growth (% p.a.)	- 5.8	0.4	1.9
— Inflation (% p.a.)	- 1.2	0.0	0.9
— Short-term interest rate (%)	- 0.5	- 1.7	- 2.0
	euro area		
— GDP growth (% p.a.)	- 1.3	- 0.4	0.9
— Private investment growth (% p.a.)	- 4.9	- 0.9	1.9
— Inflation (% p.a.)	- 0.8	- 0.2	0.6
— Short-term interest rate (%)	- 0.3	- 1.3	- 1.8

NB: Due to the forward-looking behaviour of the agents in the QUEST model, the largest impact of the shock is in the first year.

Source: Commission services.

ICT shock has likely had a crucial impact on economic activity. Due to a lack of detail in national accounts data, there is not yet direct evidence of a collapse in ICT investment spending in the euro area. However, the available data point to a sharp decrease in both production of IT hardware and imports in the ICT sector in the euro area since the beginning of 2001. The cost in terms of GDP growth will ultimately depend on the size of the ICT sector in total value added. Although estimates of this size vary significantly depending on the source considered, the euro area is generally deemed to be less exposed than the United States.

In order to get an impression of the quantitative impact of a sharp re-assessment in the profitability of investment, Table 3 presents simulations with the Commission's macro-econometric model QUEST of a reduction in financial wealth and a permanent increase in the risk premium ⁽¹⁾. The size of the shock was designed to yield

a reduction in share prices by 10% in year 1 and a further 10% in year 2, similar to the actual developments on stock markets in 2000 and 2001. The simulation shows a strong decline of investment in both the United States and the euro area. The effect on real GDP growth is of a similar magnitude in both economic entities in the simulations because, although the reduction in investment growth is larger in the United States in year 1, GDP in the euro area is depressed by declining exports in response to an appreciation of the euro ⁽²⁾. Concerning the response of central banks, an inflation targeting strategy is assumed, which allows cuts in short-term interest rates to cushion the impact of the shock on economic activity.

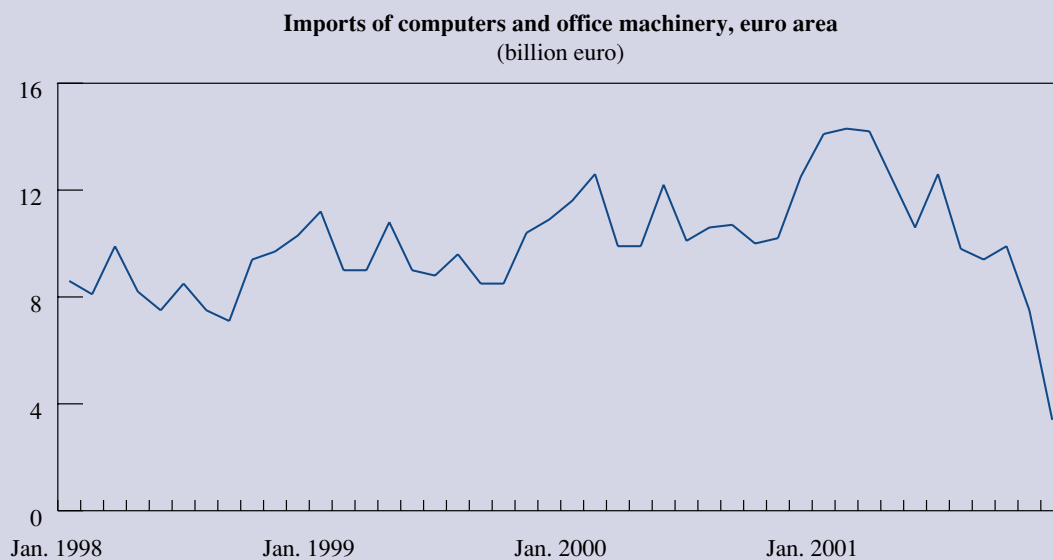
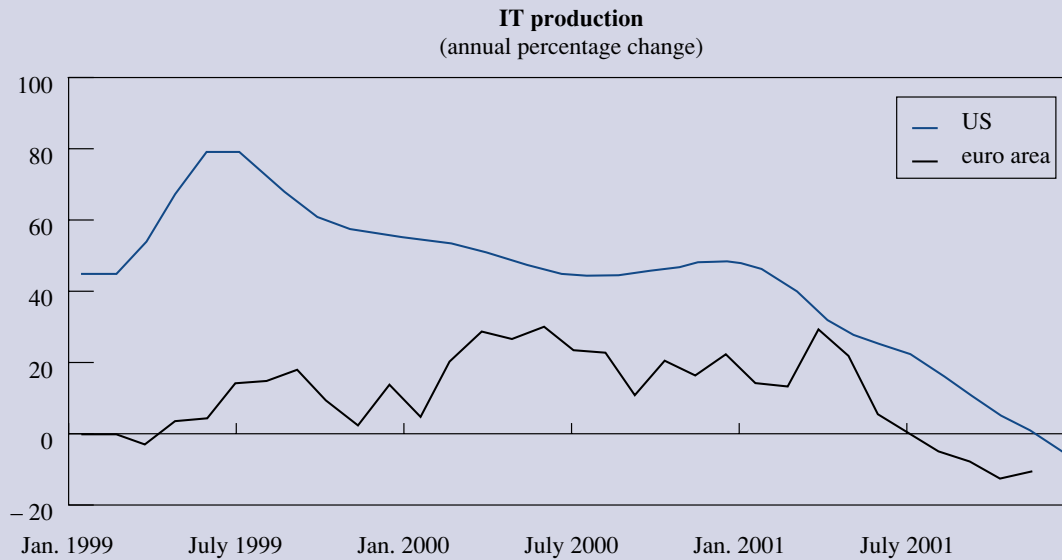
The sharp deceleration of global trade dented exports

After a period of extraordinarily high rates of world trade growth, the pace of global trade decelerated sharply in the beginning of 2001. The more enduring than initially

⁽¹⁾ In the QUEST model, the real interest rate plus the risk premium is the factor used in discounting future profits. The increase in the risk premium accounts for a decline in stock prices by 5%. The decline in financial wealth alone has almost no impact on economic activity in the euro area. For the effect of a pure financial wealth shock in a comparable setting with the QUEST model, see In't Veld (2000).

⁽²⁾ The simulation yields a larger decline in prices in the United States compared to the euro area. In consequence, interest rates are reduced more strongly in the United States, which leads to an appreciation of the euro in the QUEST model via the uncovered interest parity.

Graph 2: Activity in the ICT sector



Source: Commission services, Federal Reserve Board.

expected increase in oil prices, the reassessment of prospects in the ICT sector and the associated correction in equity prices had weakened domestic demand in the euro area and other regions of the world. Against this exposure, and triggered by faltering US import demand, economic activity and import demand elsewhere in the world declined significantly. Neither the still ailing Japanese economy, nor the dynamic Asian economies and most of the economies in Latin America have been able to withstand ⁽¹⁾ and in consequence, output and import demand have been sharply revised down for both industrial and developing countries.

The timing of the so-called global trade shock coincided with a further decline in economic activity in the United States. Initially, only a small reduction of external demand in the euro area was expected. For instance, since exports to the United States account for only 15 % of the euro-area's external trade in goods and services, and with the share of extra-euro-area exports of goods and services being about a fifth of GDP, a mere 3 % of euro-area GDP was directly affected via the trade channel by the deteriorating US outlook.

However, it turned out that the euro-area's real export growth declined from double-digit annual rates in 2000 to negative ones in the first half of 2001. Underestimating the size and the speed with which second-round effects materialised has led to a too-positive assessment of the euro-area's trade outlook. Indeed, the decline in the euro-area's exports has been evenly spread across trade regions, indicating that the decline in import demand was a global phenomenon, which has not been restricted to a single region.

2.2. The propagation mechanisms of the global shocks

Before the severity of the global trade shock unfolded, it was widely expected that the euro area could weather the adverse shocks. Unlike the United States, the euro-area economy does not seem to be beleaguered by domestic supply or demand imbalances, which would hamper a fast recovery. Furthermore, the implementation of a macroeconomic policy framework conducive to sta-

bility and the elimination of intra-euro-area exchange rate volatility as a potential device for aggravating the impact of external shocks, represent important structural breaks with the past. As a large and relatively closed economic entity possessing sound fundamentals, the euro area was expected to be in a good position to withstand the external disturbances.

The larger-than-expected downturn since summer 2000 has cast doubts on the resilience of economic activity in the euro area. Domestic demand, especially, has weakened more than in previous externally-induced slowdowns. The reason could be either that confidence in the strength of the euro-area economy was exaggerated, that the propagation mechanisms of the economic shocks were stronger than in the past, or simply that the magnitude of the shocks was underestimated (as discussed above). The following subsections look at the evidence in favour of two alternative hypotheses concerning the resilience of domestic demand and the propagation mechanism of the shocks.

Resilience of domestic demand

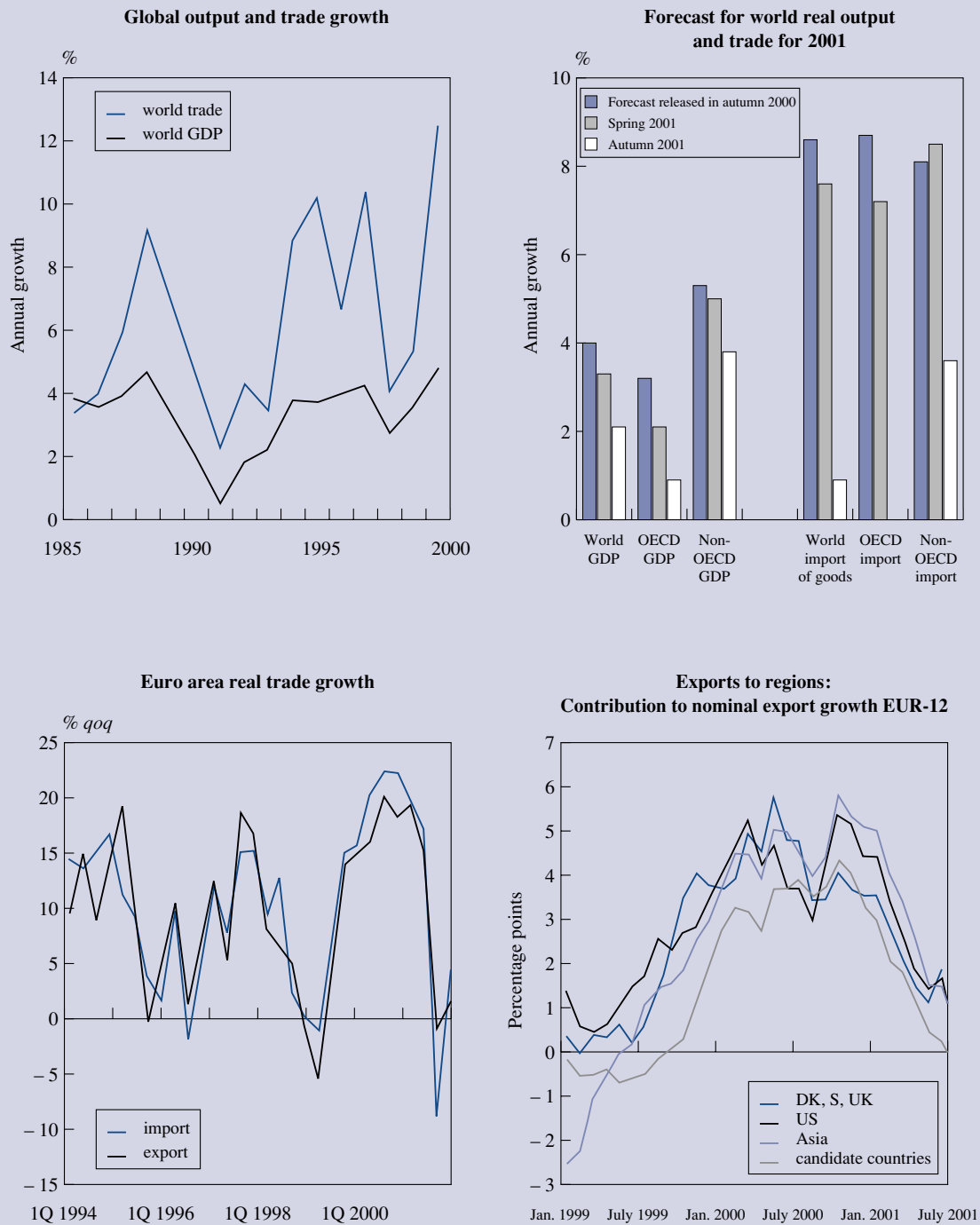
The belief in resilient economic activity in the euro area was underpinned by the fact that domestic demand had proven increasingly robust to the previous external shocks ⁽²⁾. In particular robust growth in private consumption, expanding by more than 3 % annually from the last quarter of 1997 to the first half of 2000, fuelled expectations that strong internal dynamics in the euro area would largely cushion the decline in external demand.

The good performance of private consumption was closely linked to strong employment growth. Thanks to structural reforms in the labour market and wage moderation, growth has become more employment intensive during the second half of the 1990s in the euro area (See Box 1 and European Commission (2001b)). This trend was particularly marked in recent years, allowing employment to grow by 1.9 % in 2000, a rate not registered since the late 1980s. Improvements in the labour market fuelled consumer spending through two channels. Firstly, rapid employment growth, which was accompanied by an increase in real wages, led to robust

⁽¹⁾ These regions have close trade and production links with the United States. Together they account for 19.1 % of world trade, which is roughly the share of the United States.

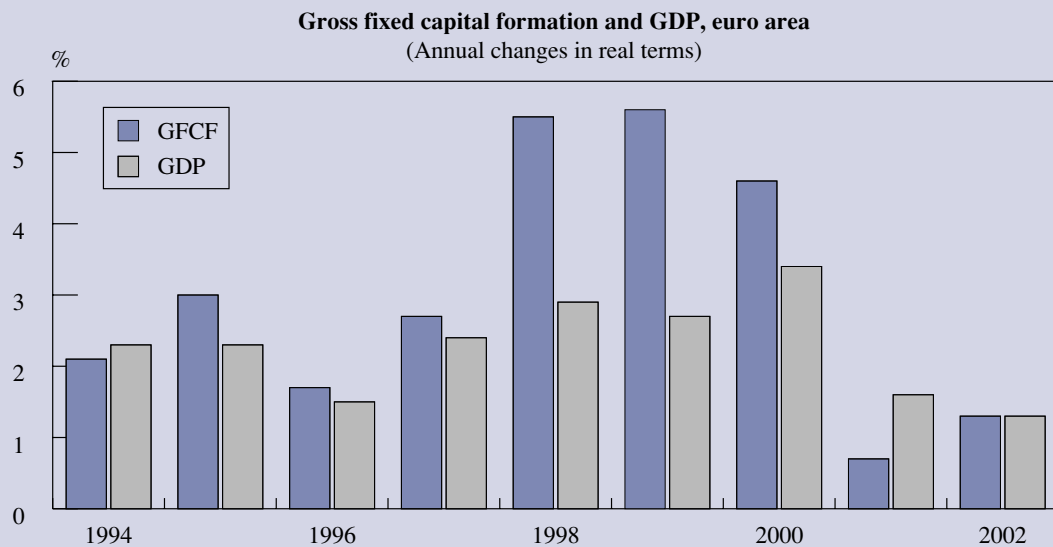
⁽²⁾ The slowdowns in the mid- and late-1990s related to the currency turbulence triggered by Mexico's financial crisis in 1995 and to the global financial turbulence that started in Asia and spread to Russia and Brazil in 1998/99.

Graph 3: The impact of the global trade shock on euro-area exports

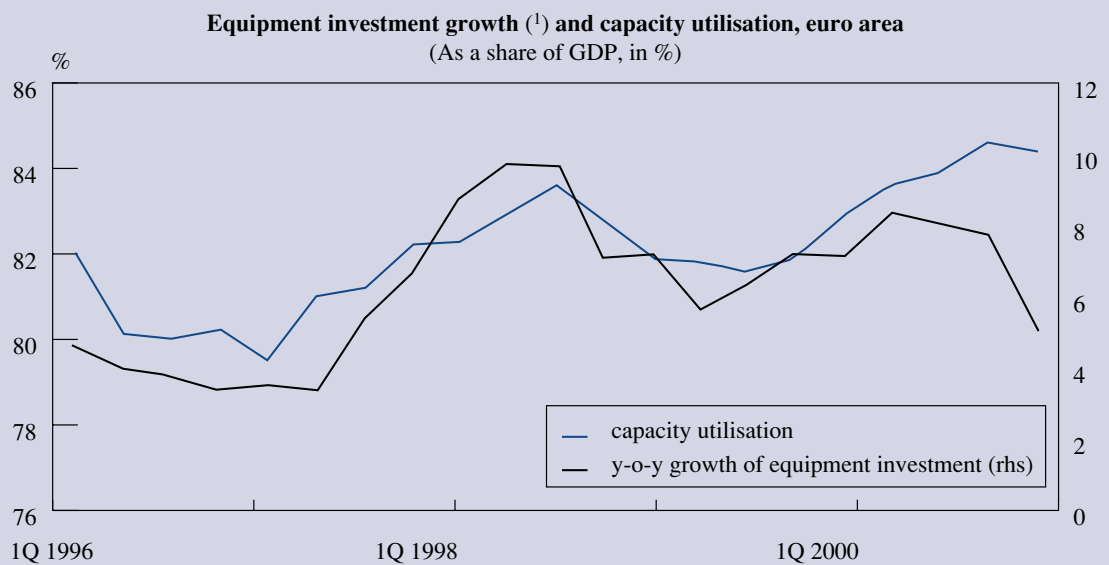


Source: Commission services, IMF.

Graph 4: Capital formation in the euro area



NB: European Commission autumn 2001 forecasts.



(1) EU-12 excluding B, EL, E, IRL, I and P.

Source: Commission services, ECB and OECD.

gains in disposable income. Secondly, the decline in unemployment since 1998 boosted households' confidence.

Private consumption in 2001 was expected to benefit in particular from the fiscal stimulus provided by income tax cuts in several euro-area countries. According to preliminary estimates, lower taxes on income and wealth added about 0.6 of a percentage point to growth in disposable income in 2001. Given that some of the deceleration of tax payments may be attributed to slower income growth and smaller wealth increases, the impact of tax cuts on disposable income probably did not exceed 0.5 of a percentage point in 2001. This was only enough to offset the negative impact of the food price shock. Indeed, private consumption growth was quite strong ahead of the food price shock in the first quarter of 2001, but weakened again in the second quarter of 2001. In consequence, real private consumption is forecast to grow by only 2% in 2001 and to decelerate further to 1.6% in 2002.

Recent developments suggest that the current downturn is taking a much heavier toll on investment than previously anticipated. Its growth in 2001 as a whole is unlikely to exceed 1%, the weakest performance for the euro area since 1993. The sharp weakening of investment can only partly be attributed to cyclical forces⁽¹⁾. Less favourable developments in terms of profitability and cost of capital since the late 1990s have added to the negative impact of the cyclical downswing. However, the worsening of the terms of trade in 2000 has been largely absorbed by consumers and has weighed much less on profitability than similar disturbances in the past.

Factors shaping the impact of the global trade shock

The deceleration in growth of world trade is considerably larger than could have been expected from income effects alone. Over the past decade, world trade grew at approximately twice the pace of output. According to the European Commission's autumn 2001 forecast, real world trade has expanded by only 0.9% in 2001 compared to a 2.1% increase in real world GDP. Thus,

⁽¹⁾ Simulations made with an accelerator equation estimated for the euro area confirm that investment decelerated more markedly in 2000–01 than what would be expected on the basis of developments in aggregate demand. For details, see Chapter 3.

for the first time since 1985, the growth in world output will exceed that of foreign trade. The over-proportional large deterioration in world trade could be due to either the origin of the impulse in the United States, or to the fact that cross-border production linkages have increased the magnitude of income effects.

A decisive difference between the current slowdown and those of the 1990s consists in the cyclical situation of the United States. Economic growth in the United States was hardly affected by the growth pauses in 1995 and 1998–99, whereas this time economic activity in the United States has decelerated precipitously. Undoubtedly, economic activity in the United States is an important determinant of growth abroad, and in particular of growth conditions in developing countries⁽²⁾. Whilst the US import share in GDP rose from about 10% in the 1980s to 12% in 1995 and an envisaged 13.5% in 2001, this effect alone cannot explain the extent to which the interdependency of economic activity has increased over the past decade⁽³⁾.

Although it is well known that production has become increasingly linked across borders, the economic impact of international production linkages seems to have been underestimated in the current juncture⁽⁴⁾. Recent academic research concludes that cross-border production linkages have substantially increased with, in particular, those of the United States with developing countries

⁽²⁾ Including US growth as a parameter in standard cross-country growth regressions, Arora and Vamvakidis (2001) find that 'a 1% increase in US growth is correlated with an average 0.8 to 0.9% increase in growth in other countries'. In this study, the coefficient is highly significant for the sample of developing countries, but not if the sample is restricted to industrial countries. Furthermore, if trade-weighted growth of partner countries is included, the US coefficient becomes insignificant for the whole sample, suggesting that it is not growth in the United States per se, but global output growth that matters.

⁽³⁾ The observed increase in import shares has been too small to be responsible for the heightened interdependency between economic activity in the United States, the euro area and the rest of the world (see Doyle et al. (2001)).

⁽⁴⁾ Potentially, this underestimation is due to the fact that trade in intermediate goods, which can be considered as the category of goods typically involved in cross-country production linkages, did grow in proportion with overall trade. However, the category of intermediate goods consists of several items, i.e. primary commodities, in which trade declined in importance. Thus, trade in intermediate goods may not adequately reflect the upward trend in cross-border production.

Box 1: Job-rich growth

It was primarily buoyant job creation that boosted euro-area output growth in the second half of the 1990s. Between 1996 and 2000 about 7.6 million extra jobs were created in the euro area, of which around 2.5 million jobs were newly established in 2000. The rate of unemployment declined from 11.5% in 1996 to 8.3% in 2001. High-employment growth contributed to a steady expansion in the euro-area growth potential as well as to robust growth in domestic demand. In consequence, private consumption growth remained healthy during the Asian crisis, which was a decisive factor in weathering this external shock.

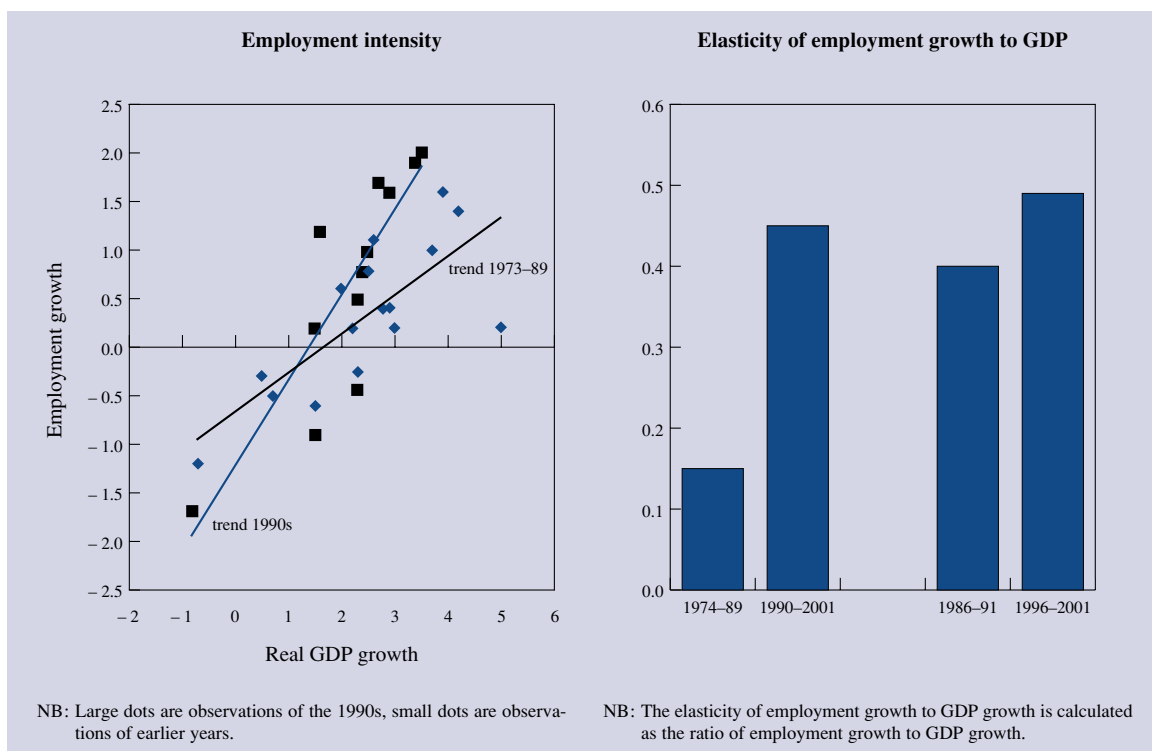
The remarkable change in euro-area labour market conditions is reflected in a rising employment content of growth, i.e. employment growth responded more strongly to output growth in the 1990s than in the 1980s. The trend lines derived from annual observations for the euro area in the graph below show that the threshold above which output growth spurs additional employment seems to have remained stable at about 1.5% for a quarter of a century. But compared to the period 1974–89, real output growth exceeding this threshold resulted in much higher employment growth in the 1990s. Output growth translates into higher employment growth in comparison with past

decades; and also the elasticity of employment to growth was higher during the last five years than during the pronounced cyclical upswing in 1986–91.

In view of the two-way causality between employment and output, the above findings fall short of explaining strong job creation in the euro area. Instead a closer look at structural determinants of labour demand and supply is warranted.

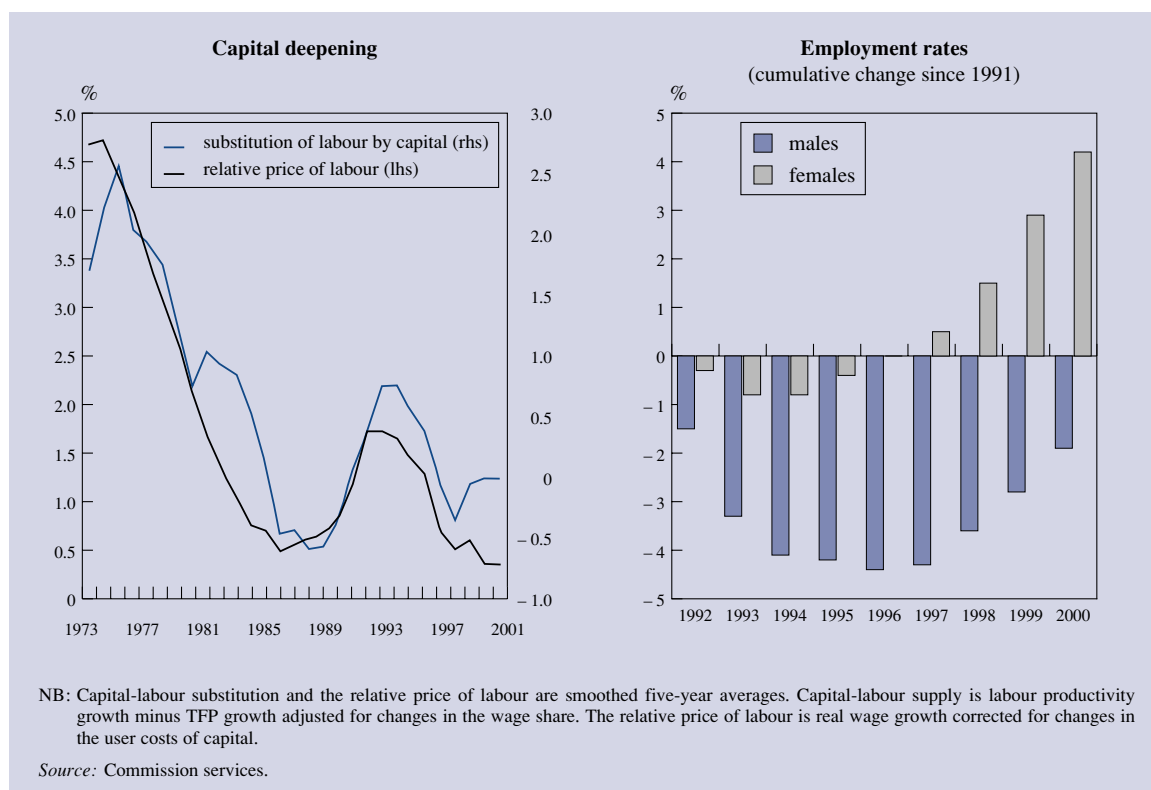
Labour demand forces — Driven by the failure of labour costs to adjust instantaneously to shocks to productivity and capital costs in the 1970s and early 1980s, firms turned to using more capital-intensive production technology, implying a downward shift of the labour demand curve ⁽¹⁾. Actually, as the left-hand side graph below demonstrates, the extent of capital-labour substitution is linked to the relative price of labour to capital. In the second half of the 1990s, capital-labour substitution slowed under the impact of a protracted period of wage moderation, thereby contributing to a better employment performance. Jobs were created almost exclusively in the service

⁽¹⁾ See EU Economy 1999 Review, Study 1.



(Continued on the next page)

Box 1 (continued)



sector, in which employment grew by 1% per year between 1991 and 1999. Labour shedding continued in manufacturing until 1996. Since then, 250 000 new jobs have been created in the euro-area industry (excluding construction). A more disaggregated view reveals that employment creation was driven in particular by high-skilled non-manual activity and concentrated in the high-tech, high-education and knowledge-intensive services sectors ⁽²⁾.

Labour supply forces — Over the long run, changes in employment have been closely linked to changes in working age population. In the second half of the 1990s, employment growth clearly outpaced working-age population growth, principally due to an increasing labour market participation of women. Over the period 1996–2000, 4.6 million women net entered into employment compared to 3 million men. The spread of part-time jobs and of temporary contracts has supported rising labour force participation of women. Typically, the share of women in both categories is higher than that of men. Overall, the share of part-time jobs in total employment increased from 13.7%

in 1995 to 16% in 2000, and the share of temporary contracts rose from 13 to 15.1%. The long-term upward trend in female participation is likely due to social factors, i.e. improved gender equality, better education, better childcare facilities. Over the business cycle, labour market participation tends to increase in line with declining rates of unemployment. In particular some groups (women, youth and elderly) are encouraged to enter the labour force when they have a real chance of obtaining a job and leave it when the search for employment tends to be unsuccessful. In view of this behavioural pattern, the low participation rate in the first half of the 1990s and the marked increase in the second half are at least partially due to cyclical factors. Furthermore, structural reforms endeavouring to reduce the tax wedge and lowering reservation wages are likely to have contributed to rising participation since the mid-1990s.

Whereas the recent downturn has clouded the prospects for employment growth, there is not yet evidence that it has affected the fundamental change in the employment-output relationship in the euro area. Provided that the trend of continued wage moderation remains intact and labour market reforms continue, conditions bode well for a swift pickup in employment growth once the economy rebounds.

⁽²⁾ For a comprehensive review of labour market trends, see European Commission (2001b).

having intensified notably, increasing their exposure towards demand conditions in the United States. For instance, intra-industry trade has grown considerably and vertical specialisation seems to account for up to 30% of world exports ⁽¹⁾. Furthermore, the observation that export and import growth usually move in tandem suggests that a large part of imports is used in the production of goods for export.

Interdependency between industries and firms does not only show up in external trade figures, but also in foreign ownership. Foreign direct investment (FDI) from abroad into the euro area and abroad from the euro area increased considerably during the 1990s ⁽²⁾. As a result, affiliates of foreign firms now play a larger role than in the past. For instance, euro-area affiliates generated almost 2% of the US gross product in 1999 with more than two million employees. With only 12% of their sales being imported, the majority of these affiliates cannot be classified as just sales offices. Comprehensive and timely data on the activity of foreign affiliates in the euro area is not available. In 1998, foreign affiliates of US enterprises alone accounted for 3.5% of gross product in the euro-area Member States ⁽³⁾. Despite the problems of timeliness, the statistical sources unanimously indicate a rapid increase of foreign ownership over the most recent periods ⁽⁴⁾.

Anecdotal evidence points to important adjustment of sales, production and investment activity by many enterprises in the face of the downturn in world demand. Vertical integration and expanding activity of multinational

enterprises raise the interdependence of output across borders, even if the share of overall trade in output would remain constant. The transmission channels are manifold:

- With rising vertical integration, a fall in demand for the final product abroad immediately reduces demand for intermediate imports. Thus, a decline in demand has a larger impact on trade the more vertically integrated the production. For instance, lower demand for computer equipment in the United States had a severe effect on the production of semi-conductors in the Asian dynamic economies and in consequence on income in these countries.
- If demand falls short, multinational enterprises may not only cut production in the area concerned, but relocate production to the most profitable location ⁽⁵⁾. The effect of falling demand on profitability exceeds that of declining revenues because most industrial production relies on the exploitation of economies of scale. In consequence, enterprises will not only respond by cutting actual production but also by reassessing production capacity.
- Crucially, a profound weakening of sales in a key market, such as the US market, for most multinationals, reduces overall cash flows and may enforce a downward adjustment of investment plans throughout the enterprise.

Increased linkage between production in different areas should also be seen in cross-border co-movement in industrial production. In autumn 2000, the euro area recorded steady growth in industrial production whereas it decelerated rapidly in the United States (see Graph 5). Growth of industrial production in the euro area turned negative in spring 2001, three months after the US rate had dropped into negative territory. This pattern suggests that only severe downturns in the United States affect industrial production in the euro area while mild ones do not show up in the data. A similar pattern can be observed for the production of computers and office machinery, which is the best-measured part of

⁽¹⁾ This number was estimated by Hummels, Ishii and Yi (1999) on the basis of input-output tables. On intra-industry trade, see Markusen and Maskus (2001), who calculated concentration indices for foreign affiliate sales and intra-industry trade, showing that the richer the economy, the more sales from foreign affiliates matter relative to trade.

⁽²⁾ In 2000, FDI outflows from the euro area were 6.0% of GDP, whilst FDI inflows reached 6.2%. In 1997, the numbers were 1.7 and 0.9% respectively.

⁽³⁾ A pilot study carried out by Eurostat (2001) covers foreign ownership in the service sector. Only for two euro area Member States were data on foreign ownership in the manufacturing sector available. For the US data on foreign affiliates, see US Bureau of Economic Analysis (2000, 2001).

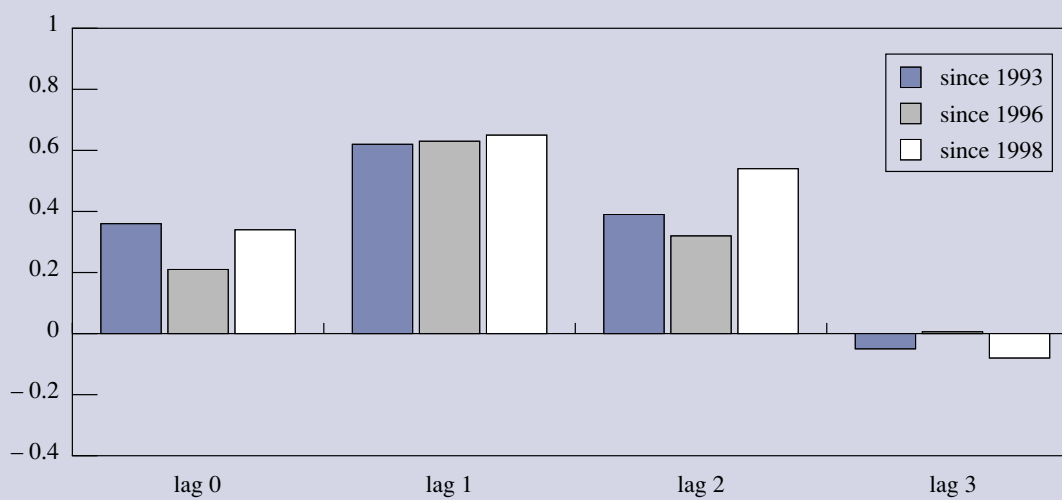
⁽⁴⁾ Gross product of all foreign non-bank affiliates in the United States grew by about 7% per annum between 1990 and 1999. The Eurostat (2001) study points to an increase of the contribution of foreign-owned firms to value added by 1.1 percentage points in the Netherlands and 0.4 of a percentage point in Finland from 1997 to 1998.

⁽⁵⁾ The analysis of the behaviour of 1 200 European multinational enterprises by Konings and Murphy (2001) finds evidence in favour of substitution between employment at home and abroad. However, according to their results, substitution occurs mainly in the manufacturing sector and takes place between parent firms and affiliates within the EU rather than between the EU and candidate countries.

Graph 5: Production linkages between the US and the euro area



Coefficient of correlation between US and euro area industrial production growth, q-o-q



Source: Commission services and Federal Reserve Board.

IT production. It is only since winter 2000–01 that growth in IT production has declined in tandem in both areas.

The transmission through global financial markets

Financial markets have played an important role in triggering or transmitting impulses across borders. In the present juncture, the financial situation is less supportive than during the Asian crisis, in which the flight-to-quality phenomenon reduced capital costs in industrial countries and bolstered growth conditions. Comparing the development since the peak of economic activity in the second quarter of 2000, government bond yields declined less than in the previous slowdowns, indicating less scope to benefit from flight to quality. While the correction of stock prices was initially perceived as a welcome reversal towards more sustainable levels, the boom and bust development on global stock markets may have accelerated the transmission of shocks across borders.

The euro area's integration into the world capital market has progressed considerably as evidenced by the remarkable, and recently even accelerating, growth of investment income received from abroad and paid to abroad ⁽¹⁾. Although balance of payments data for the euro-area aggregate do not yet have a long history, the data indicate the importance of international financial linkages and the acceleration of financial market integration over the recent past ⁽²⁾. Considering both that the expansion of FDI flows has outpaced that of portfolio flows and that a rising share of portfolio flows is in equity, it is reasonable to assume that international financial flows are increasingly reflecting real economic linkages ⁽³⁾.

Furthermore, financial interdependence between the US and euro-area economies manifests itself in the development of financial prices. Bond rates have moved broadly in parallel for several years now and virtually converged in 2001. The co-movement is remarkable

when instead of their level, the change in bond yields is considered. But also stock market returns have been highly synchronised in 2001 and the coefficient of correlation of monthly stock returns is considerably higher in 2001 than in previous years ⁽⁴⁾.

Traditionally, developments on stock markets have been considered to be of minor importance for economic activity in the euro area because the share holdings by households were relatively small and the issuance of stocks was not a major source of enterprises' financing. However, financial wealth and liabilities have become much more important in the course of the recent years (see Table 4) and there is a strong positive relationship between stock prices and confidence indicators. Thus, international stock market linkages may have contributed to the weakening of domestic consumption and investment through their impact on business and consumer confidence.

International financial market linkages may transmit external impulses through the exposure of financial intermediaries. For instance, the decline in stock prices may have eroded the capital position of banks and this may force them to reduce their supply of loans. Furthermore, bad loans abroad may enforce banks to adjust domestic lending. Actually, the increase in euro-area banks' external liabilities has outpaced that of external assets, making the euro-area banking system potentially vulnerable to a deterioration in external conditions ⁽⁵⁾.

However, so far there is no evidence of credit rationing to domestic enterprises in the euro area. Banks have allocated more loans relative to capital and reserves after the downturn of international stock prices, thereby providing credit to enterprises in face of rising demand (see Graph 7). Conditions for short-term credit to enterprises seem to have tightened markedly relative to government bond conditions or in relation to money market rates. Given that short-term credit is an instrument to bridge unexpected declines in cash flows, the increase in

⁽¹⁾ Financial market integration within the EU has also progressed considerably, see Chapter 4.

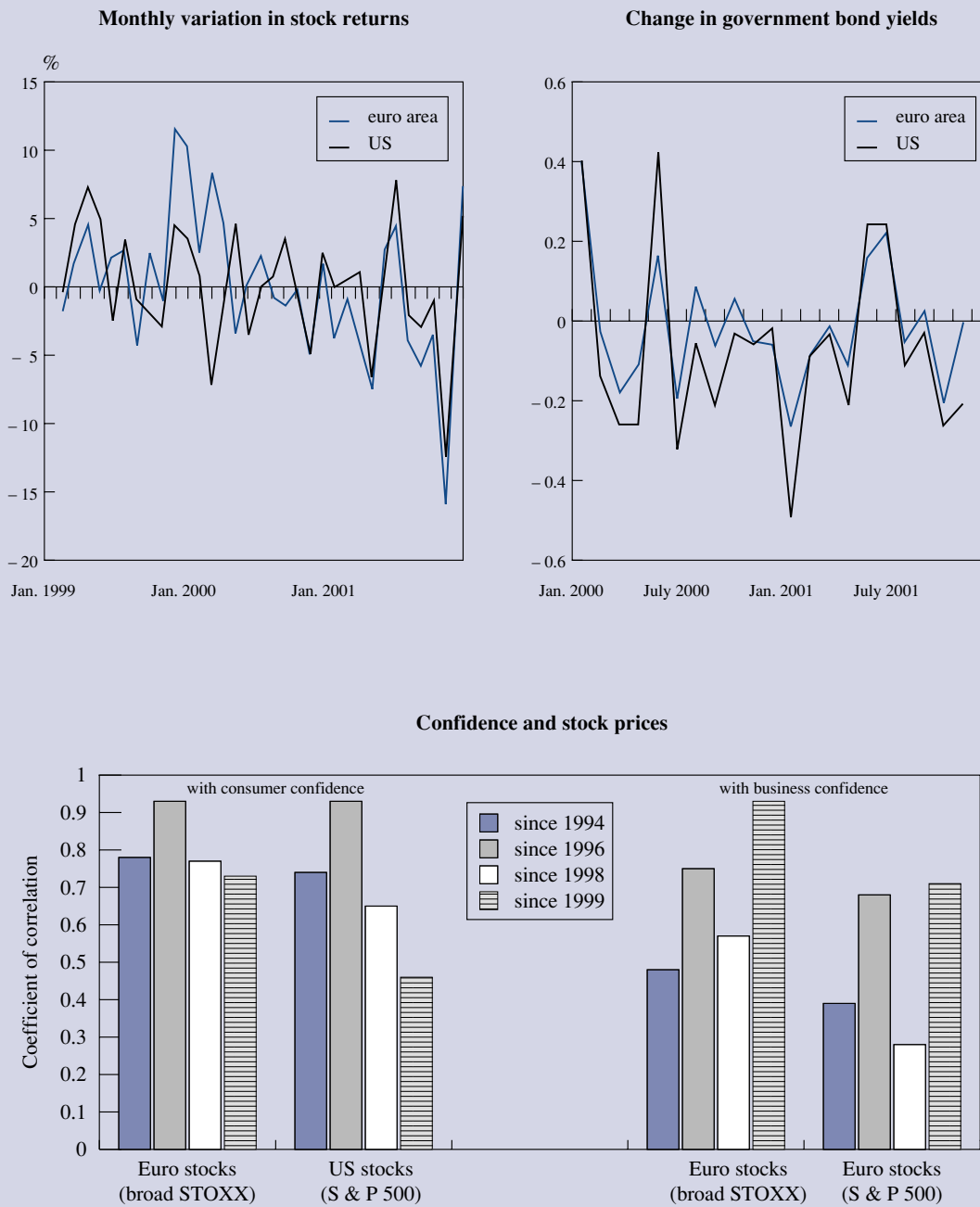
⁽²⁾ The enormous surge in FDI (see footnote) has dwarfed the growth in international portfolio flows, at least to the extent that net flows of portfolio capital are concerned. Net outflows of portfolio capital were at 7.4% of GDP in 2000 and net inflows reached 4.7% of GDP, just 0.3 and 0.4 of a percentage point respectively higher than in 1998.

⁽³⁾ Given that the euro-area debt market is dominated by government bonds, which are exposed to inflation risk rather than to economic risk, whereas the opposite holds for stocks, a rise in the share of equity in the portfolio increases the exposure towards 'real' economic distress.

⁽⁴⁾ Even on perfect financial markets, a synchronisation of yields across borders relies on the absence of exchange rate variations. Actually, the euro's effective exchange rate appreciated by about 7% from September 2000 to January 2001 in accordance with the observed differences in the growth outlook. However, the appreciation of the euro was moderate and prematurely choked off (see subsection 4.1.).

⁽⁵⁾ External assets and liabilities are derived from the aggregate balance sheet of euro-area monetary financial institutions (excluding Eurosystem).

Graph 6: Financial market linkages between the US and the euro area



Source: Commission services, ECB.

Table 4

The importance of financial assets and liabilities in the euro area

	Financial assets (% of GDP)				Shares (% of financial assets)	
	Economy		Households		Economy	Households
	Total assets	Shares	Total assets	Shares		
1995	546.8	106.7	165.8	38.9	19.5	23.4
1999	741.9	242.1	215.6	83.6	32.6	38.8

	Financial liabilities (% of GDP)				
	Total economy	Financial corporations	Non-financial corporations	Households	General government
1995	548.1	264.5	153.3	47.5	82.7
1999	744.0	353.5	253.2	54.1	83.2
Average annual growth	6.3	6.0	10.5	2.6	0.1

NB: Non-consolidated figures for EUR-9, without EL, IRL, L.

Source: Commission services.

demand and the relative level of lending rates cannot be assessed as an abnormal market response.

Confidence contagion effects may have played a role

The speed with which the recent slowdown in the United States affected economic activity in the euro area has drawn attention on the working of another mechanism, namely whether the contagion of confidence across borders constitutes an additional propagation channel of external shocks. The theoretical justification is clear-cut. In face of intrinsic uncertainty, imitating other agents' decisions and following herd behaviour can be a rational strategy. Accordingly, agents may base their assessment of the domestic economic situation on developments abroad. Given its size and role in the world economy, news from the United States may have a relatively strong bearing on business and consumer confidence abroad. Consequently, the decline in US business and consumer confidence may have sparked pessimism elsewhere.

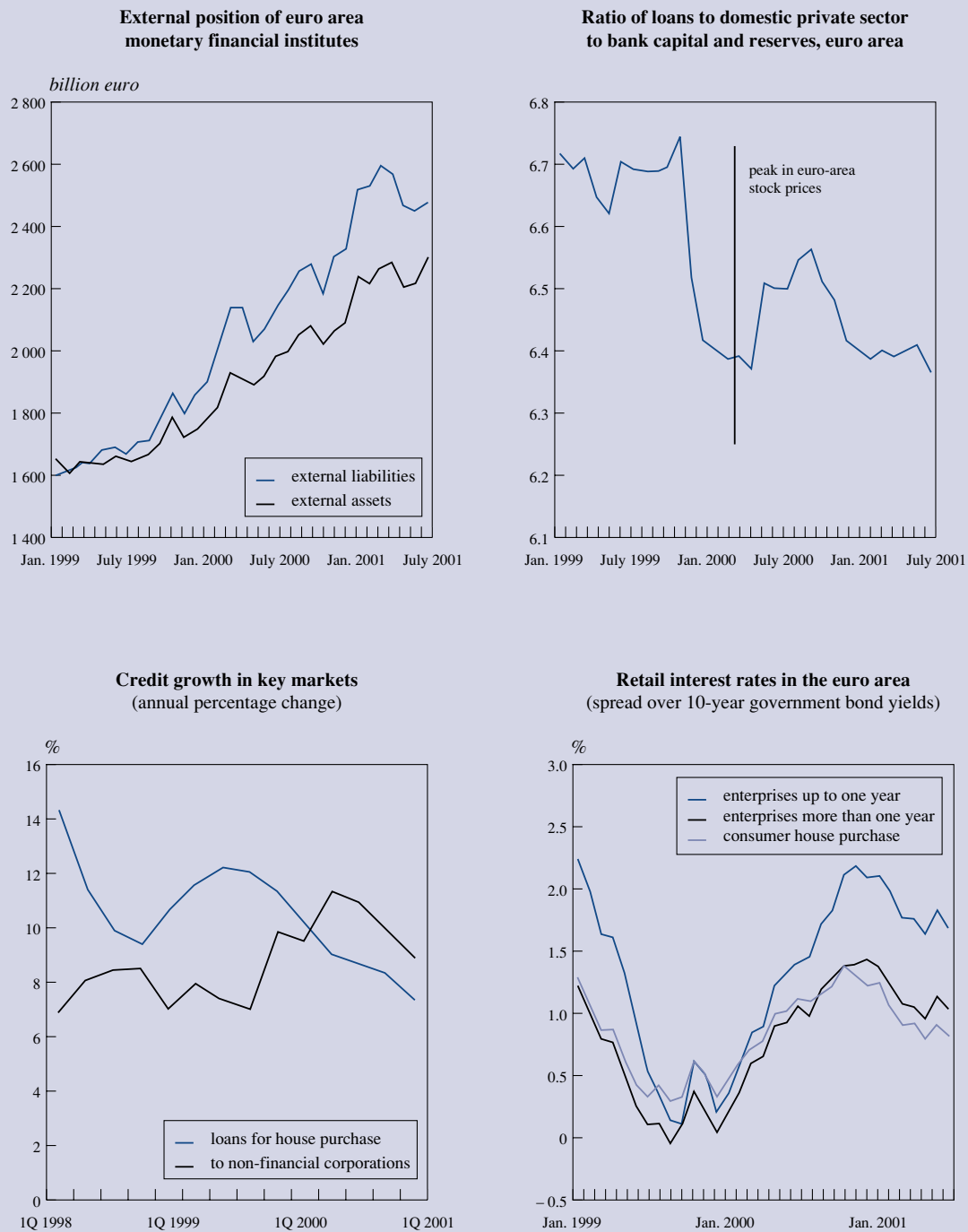
Quantitative evidence for a direct contagion effect between confidence in the United States and the euro area is ambiguous and does not yet allow drawing strong conclusions. Co-movement between confidence indicators has consistently been interpreted as evidence of the strength of underlying business-cycle linkages between

the euro area and the United States. Thus, it is not easy to disentangle this effect from confidence contagion.

Correlation analysis indicates very low co-movement between contemporaneous US and euro-area industrial confidence indicators, which has not consistently increased over time. The connection is quite strong and has increased considerably if one accepts that euro-area business confidence responds to changes in the United States with a delay of several months. However, the maximum correlation at a lag of 6 to 10 months is too long to be aligned with spontaneous 'contagion' effects, even if the US indicators may be considered as more forward looking than their euro-area counterparts⁽¹⁾. The result is not materially different for contagion in consumer confidence. Using more sophisticated methods, IMF (2001b) reports indirect evidence in favour of confidence linkages, arguing that the observed increase in co-movement of confidence indicators goes beyond that explained by business-cycle linkages.

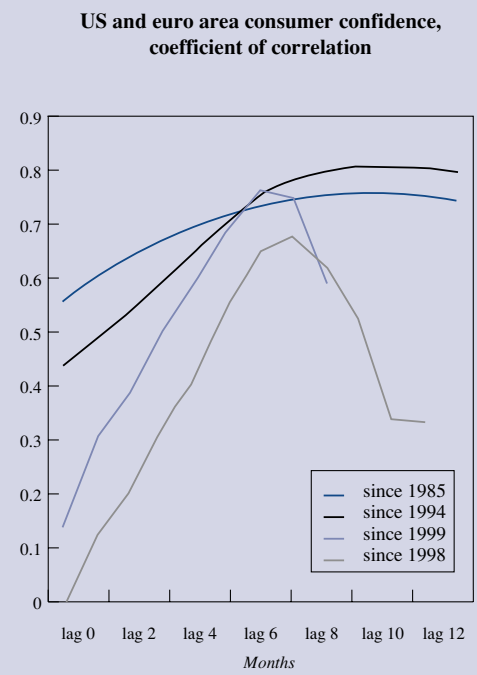
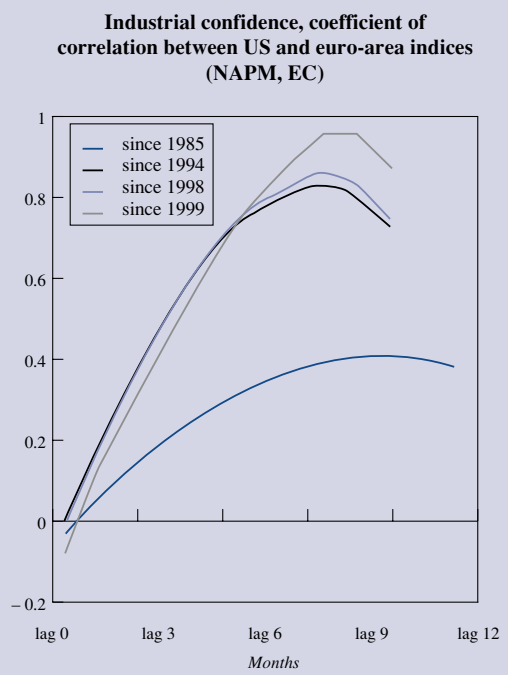
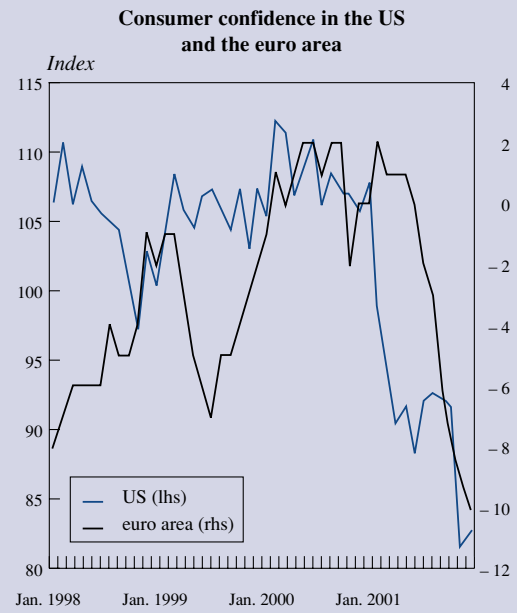
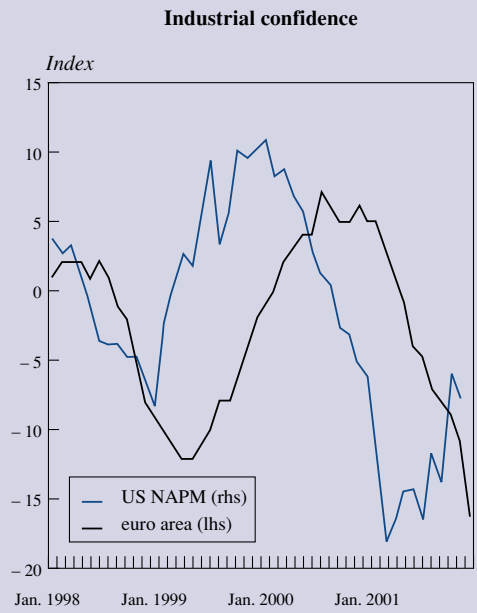
⁽¹⁾ Regression analysis reveals that contemporary US confidence has an impact on euro-area business confidence, while lagged US confidence does not if domestic confidence is included in the estimate. However, the coefficient is too small to be considered as evidence for a substantial contagion effect. Furthermore, the US variable becomes insignificant if the sample is restricted to the period after 1998.

Graph 7: Developments in the euro-area banking system



Source: ECB.

Graph 8: Confidence linkages



Source: Commission services, NAPM, University of Michigan Survey Research Center.

2.3. Implications for the short-term growth outlook

The analysis above reveals the complexity of the factors at work, which makes it hard to identify a single decisive element for the slowdown in the euro area. It also complicates an assessment about the duration of the downturn and the forces shaping the recovery. Forecasts for economic growth in the euro area had to be strongly revised downward in 2001 due to an underestimation of the impact of the adverse impulses on the one hand and the overestimation of the robustness of domestic demand on the other hand. Favourable dynamics on the supply side, such as the spread of ICT capital and the increased utilisation of the labour force, apparently came

to a halt and seem to have not yet contributed to a sufficient resilience of the euro area towards external disturbances.

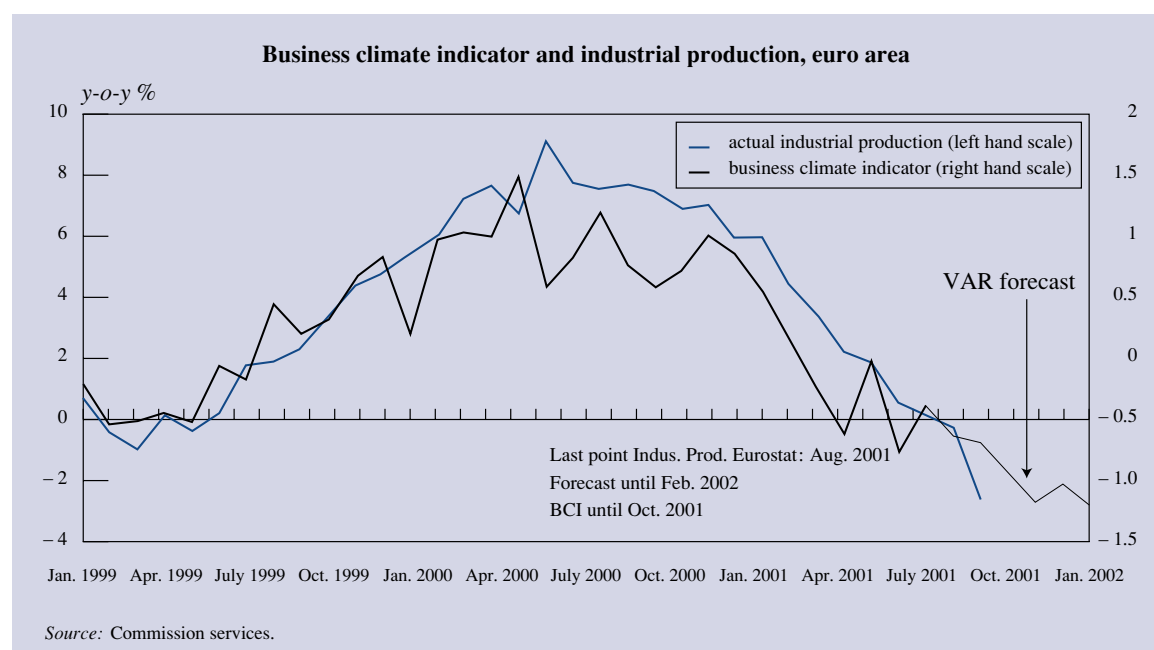
With no fundamental imbalances and equipped with sound economic framework conditions, the euro-area economy should be capable of recovering soon. The Commission services' autumn 2001 forecasts show a further slight deterioration in growth to a rate of 1.3% in 2002 and project real GDP growth to reach 2.9% in 2003. However, the uncertainty surrounding the forecast is considerable. The effects of the terrorist attacks in the United States and their aftermath have created a feeling of insecurity worldwide. Consequently, risk aversion has increased and confidence has dropped.

Box 2: Leading indicators for the euro area

Prior to Stage 3 of EMU, business cycle analysis was usually carried out from a national point of view, which continued in the first two years of EMU due to the virtual absence of quantitative tools for assessing the business cycle in the euro area as a whole. The first two years of the euro-area's existence have seen a proliferation of interest in indicators summarising or anticipating the economic situation of the euro area as a whole. Some of these combine a number of series into a single number and when the

series used contain information about future cyclical developments, the composite can be used as a leading indicator.

The European Commission's business climate indicator (BCI) is based on a different approach. It is designed to deliver a clear assessment of the cyclical situation within the euro area by extracting information from business surveys only. Being based on a factor model approach, the indicator identifies the, a priori, unknown variable



(Continued on the next page)

Box 2 (continued)

underlying the survey results. Thereby, it can be considered as a coincident indicator of the euro-area industrial production, which is, however only available with a delay of two months. Further to this indicator, and by taking advantage both of the earlier availability of the BCI and the dynamics of the industrial production series, a VAR model combining BCI and industrial production statistics delivers a rough forecast of the growth rate of the industrial production for the six months ahead.

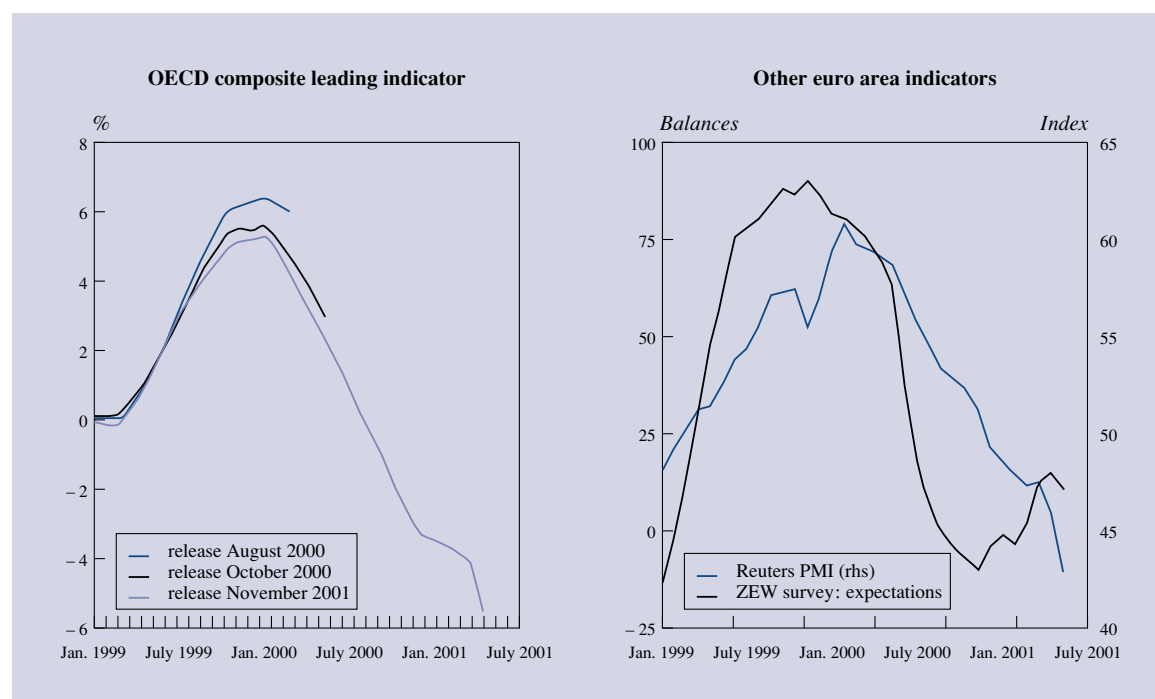
When the BCI was released for the first time in November 2000, the business climate had already peaked, indicating that industrial firms were 'less optimistic about the economic situation in the area than was the case before the summer' ⁽¹⁾. The six-months forecast of industrial production pointed to a slowdown in the growth rate of industrial output, which was confirmed later by the actual outcome. From that first publication, the BCI constantly deteriorated, thus pointing to a decline in industrial firms' confidence. No clear signs of recovery appeared before the September 2001 terrorist attacks in the United States. The October 2001 BCI fully integrates the impact of these

events, showing the steepest fall of the indicator ever. According to the VAR-based forecast, this could translate into negative growth of industrial production until February 2002 at least.

Other indicators for the entire euro area released over the last two years give the same overall picture. They indicated a strong economic growth at the beginning of the year 2000. In the course of 2000 signs gradually emerged that pointed to a cooling off of buoyant economic activity. These signs have become clearer over time as, e.g. successive releases of the OECD's indicator demonstrated ⁽²⁾. It appeared that surveys asking specifically for expectations gave an early indication of slowing economic activity in 2000. Furthermore, signals for an improvement noticed in summer 2001 show up in particular in expectations data. For the euro area this is suggested by the series on economic expectations of analysts and portfolio managers compiled by the Mannheim-based ZEW institute.

⁽¹⁾ Press release accompanying the first publication of the BCI, 26 November 2000.

⁽²⁾ New releases encompass also revisions of earlier data due to more complete and revised component series and regular statistical revisions. Indicators based on surveys are less liable to revisions.



3. Forces behind the inflation hiccup

Following very subdued price increases in the first year of EMU, consumer price inflation in the euro area increased substantially in the course of the second and third year. Indeed, in contrast with an increase of just 1.1% for the euro area in 1999, the average yearly HICP inflation rate was 2.4% in 2000 and is estimated in the Commission services' autumn 2001 forecasts to amount to 2.8% in 2001. However, since June 2001 headline HICP inflation has abated. The discussion in this section is organised as follows. Subsection 3.1. reviews recent inflation developments, whilst subsection 3.2. discusses the main determinants, paying particular attention to the role of the euro exchange rate, oil prices and domestic food prices. Subsection 3.3. assesses the inflation outlook in the euro area. Finally, subsection 3.4. looks in some detail, and from a longer time perspective, at the surprisingly subdued reaction of wages to inflation developments. It highlights the crucial role of inflationary expectations and institutional changes.

3.1. Accelerating inflationary pressures and main determinants

The year 2001 witnessed a 'hiccup' pattern in consumer price inflation in the euro area. During the first months of the year, headline HICP inflation continued its accelerating trend, peaking at 3.4% (year-on-year) in May. Subsequently, a reversal set in, with headline inflation falling by 1 percentage point between May and October. The picture for core inflation, defined as HICP excluding the volatile energy and unprocessed food components, is different, as there are no signs yet of a change in the rising trend. It is noteworthy that since June 2000 headline inflation has remained above the ECB's 2% upper limit for price stability and since May 2001 core inflation has also broken that threshold (see Graph 9).

From the beginning of EMU, consumer price inflation in the euro area could be characterised in three phases. A first one in which headline inflation accelerated, but

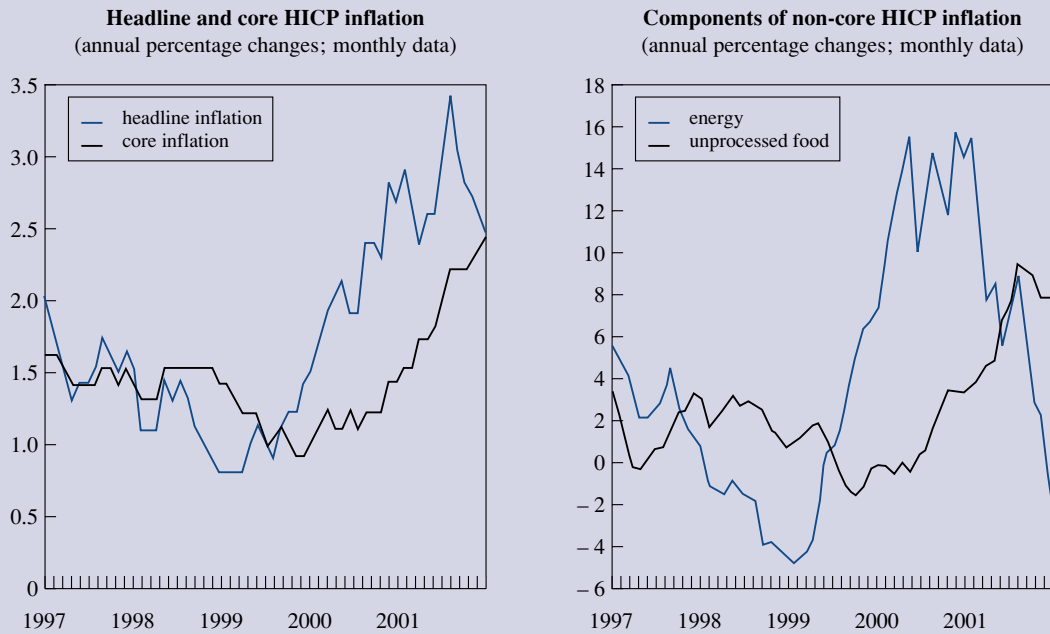
core inflation remained low, essentially the first year of EMU. A second phase in which both headline and core inflation accelerated, from the last months of 1999 to May 2001. And a third one in which headline inflation is slowing but core inflation continues to move upwards, from June 2001 until autumn.

Two main factors have dominated the observed developments in consumer price inflation in the euro area since its creation: an import price and a domestic food price surge. Rises in import prices were due to surging oil prices observed in 1999 and 2000 as well as to the depreciation of the euro during most of that time period. Rises in domestic food prices were caused by the BSE and foot-and-mouth outbreaks as well as by unusually bad weather.

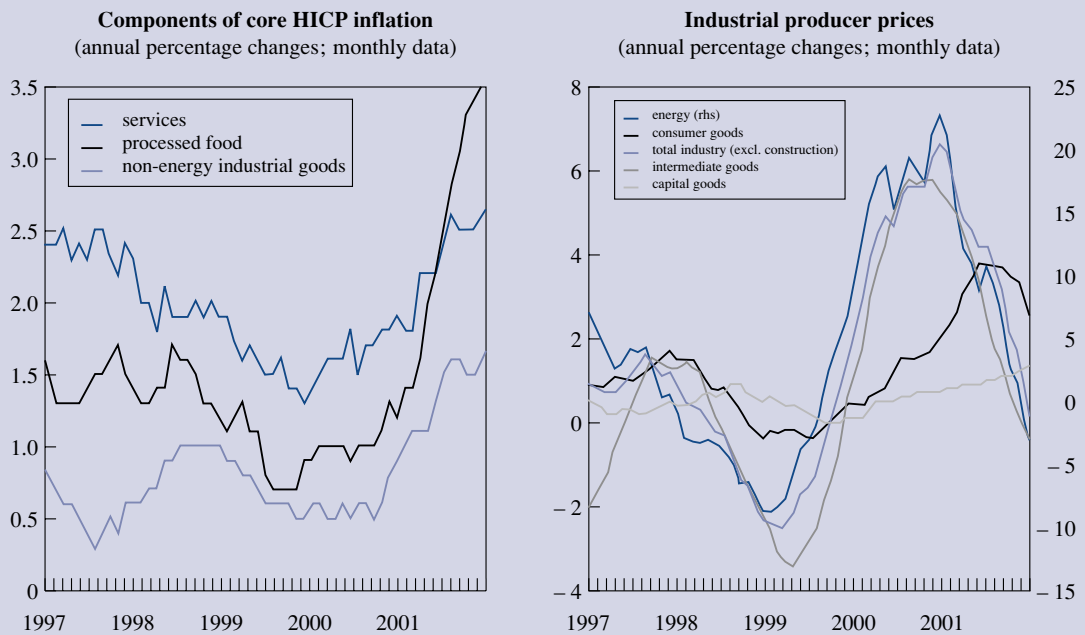
Developments in the foreign exchange rate of the euro and oil prices have played a predominant role in inflation behaviour. From its launch, the euro saw a depreciating trend for almost two consecutive years. Oil prices reached a peak in September 2000 at USD 32½ per barrel Brent, making price rises in 1999 and 2000 one of the major hikes in the history of this market. During 2001, however, oil prices dropped, and have been generally trading within the OPEC target band of USD 22–28 per barrel. In autumn 2001, oil prices weakened considerably. Due to the lower euro exchange rate, the domestic cost (in euro) of imported energy rose over and above international quoted prices, worsening the impact on domestic inflation during 1999 and 2000.

As can be seen from a decomposition of core and non-core HICP inflation, surging import prices had a direct and immediate impact on domestic energy prices, which drove up headline inflation during 1999 and much of 2000. As energy price inflation decelerated towards the end of 2000 unprocessed food inflation picked up, contributing importantly to the continued acceleration of headline inflation in the final months of 2000 and the early months of the year 2001. Indeed, the average

Graph 9: Headline and core HICP inflation in the euro area



NB: Core inflation is excluding energy and unprocessed food.



Source: Commission services.

Table 5

Inflation (y-o-y) in consumer prices

	1999		2000		October 2001	
	Y-o-Y growth rate, %	Contribution to total	Y-o-Y growth rate, %	Contribution to total	Y-o-Y growth rate, %	Contribution to total
Total HICP	1.1		2.4		2.4	
<i>Of which:</i>						
Non-core	1.2	0.2	7.8	1.3	0.1	0.3
— Energy	2.3	0.2	13.4	1.2	- 2.7	- 0.3
— Unprocessed food	0.1	0.0	1.7	0.1	7.8	0.6
Core	1.1	0.9	1.3	1.1	2.5	2.0
— Processed food	1.0	0.1	1.2	0.2	3.6	0.4
— Services	1.6	0.6	1.7	0.6	2.8	1.1
— Non-energy industrial goods	0.7	0.2	0.7	0.2	1.6	0.5

Source: Commission services.

monthly contribution of energy prices to overall inflation increased from 0.2 of a percentage point in 1999 to 1.2 percentage points in 2000. In 2000, unprocessed and processed food each contributed on average 0.15 of a percentage point, although towards the end of the year unprocessed food was contributing twice that amount to overall inflation. During the first 10 months of 2001 the average contribution of energy dropped to 0.5 of a percentage point, while for unprocessed and processed food it increased further to 0.5 and 0.3 of a percentage point respectively, mainly due to strong increases in the first half of the year. Since then their respective contributions seem to be stabilising at those high levels.

Hence, the recent slowing of inflation is almost entirely due to a significant fall in the contribution of energy prices. While during the first part of 2001 its annual rate of change was between 6 and 9%, from June it decelerated to 5.5% and in September it stood at - 1.3%, signalling base effects from last year's increases. For food prices, the latest observations suggest that the upward pressure on prices from the BSE and food-and-mouth outbreaks might be coming to an end. However, the indirect and second-round effects of the food price and import price hikes might not have completed their pass-through yet. This is indicated by the continued strong acceleration in the processed food component. Indeed, processed food inflation is the main driving force behind the continued acceleration in core inflation. Noticeably, however, services and non-energy industrial goods inflation have also been accelerating since mid-2000.

Industrial producer prices in the euro area displayed a more marked swing than consumer prices. Having followed a distinct upward trend from early 1999, they peaked at 6.6% year-on-year in October 2000 and have been decelerating since. They were rising at just 0.7% in the year to September 2001, compared with 6.3% in September 2000. The acceleration and subsequent deceleration in total industry inflation is due largely to similar developments in the energy and intermediate goods sectors. Inflation in these sectors peaked at 22.7 and 5.8% year-on-year, respectively, during the second half of 2000. By September 2001 year-on-year rates became negative, - 2.2 and - 0.2% respectively. The graph also indicates that the pass-through of past oil price increases has been mainly concentrated in these two sectors. While capital goods have been little affected so far, consumer goods prices have showed higher pass-through effects, with annual inflation at 2.8% in September 2001, but seem to have stabilised at that level. Given that producer prices usually lead consumer price developments, these movements point to an easing of core consumer price inflation by the first half of 2002.

3.2. Prospects for receding inflationary pressures

At this juncture, the outlook for inflation seems rather favourable. Decelerating growth at home and abroad, slowing producer price inflation, and weaker oil and commodity prices all point to a continuation of the recent downward trend of headline HICP inflation and to a

forthcoming trend reversal in core inflation. The European Commission's autumn 2001 forecast expects HICP inflation to fall to 1.8% in 2002 and 2003.

The salient element in the external environment that has important implications for inflation is the deterioration in world economic prospects, led by the sharp slowdown of economic activity in the United States and a recession in Japan. Slower world economic growth, lower oil prices and a stable exchange rate point to forthcoming relief on imported inflation, with the deceleration in producer prices already having started to feed through to consumer prices.

For 2001 and 2002 growth prospects for the euro area have been revised down. The slowdown in economic activity means that the euro-area output gap that was previously estimated, by the Commission services, to close in 2000 and turn positive in 2001 and 2002 is unlikely to materialise. The implication is that domestic inflationary pressure from overall domestic supply and demand conditions should be lower than originally expected. Domestic prices are expected to benefit from lower taxes, deregulation in the service sector and overall increased competition among firms. Moreover, the slowdown in the reduction of unemployment rates, the higher flexibility and the desire to maintain employment in the presence of weaker output growth suggests a continuation of wage moderation. Nominal compensation per head is forecast to increase by about 3% in 2002 and 2003 resulting in a deceleration of unit labour costs from 2.5% in 2001 to 1.9% in 2002 and 1.2% in 2003.

3.3. Sustained wage moderation in the euro area

A striking feature of the euro-area inflation picture so far has been the continued wage moderation observed in the face of rising consumer price inflation, and until early 2001 a depreciating euro and tightening labour markets. Nominal wages per employee in the euro area increased by 2.5% in 2000 and are expected to increase by 3% in 2001. At the same time, labour productivity gains were 1.5% in 2000 and are expected to be 0.5% in 2001. These figures are consistent with HICP inflation below 2% in the medium term.

Given the crucial role of expectations, as embodied in the wage-formation process, for the inflation outlook, a key question is whether this sustained wage moderation is the

result of fundamental changes in the wage formation process. If so, a related issue is whether these changes are a response to the preparation for, and finally the launch of, the single currency.

The euro area Phillips curve in the 1990s

Recent work in monetary economics has been building stronger theoretical foundations to a relationship long thought discredited: the Phillips curve. Models of the so-called New Keynesian school have shown that starting from a setting with explicit dynamics, where firms optimise having some degree of market power but also facing costs to adjust prices, the result is a reduced form that resembles loosely the Phillips curve formulation familiar from the work of Friedman and Phelps in the 1970s⁽¹⁾. Moreover, recent empirical work has shown that even as a forecasting tool, expectations-augmented Phillips curves are remarkably stable and relatively accurate predictors of inflation⁽²⁾. Much of this work has been sparked by the experience of robust growth and muted inflation in the United States during the second part of the 1990s.

Price Phillips curve — Looking at data on inflation and unemployment for the euro area in the 1990s, two observations become apparent. Firstly, as shown in Graph 10, the data seem to confirm the existence of a short-run Phillips curve. Secondly, the euro area appears to be currently on a lower short-run Phillips curve than 8–10 years ago. This descriptive evidence suggests that the euro-area economy may have moved to a sustainable lower inflation path with general inflationary expectations at a correspondingly lower level. It is interesting to note that the shift seems to have taken place in the run-up to EMU.

Since mid-1997 the euro-area Phillips curve has been broadly flat and is moving leftwards. Some steepening of the curve can be witnessed from mid-1999, but this can be attributed to some second round effects of oil prices on inflation, a weakening euro and the spike of food prices related to BSE and foot-and-mouth disease, not necessarily to wage pressures. A further interesting aspect of the 1990s data is that, if compared to the 1980s,

⁽¹⁾ According to Phelps and Friedman, the Phillips curve has a negative slope only in the short run whereas there is no trade-off between inflation and unemployment in the long run. The discussion has been taken up again in Mankiw (2001), Ball and Moffit (2001).

⁽²⁾ See Stock and Watson (1999).

Box 3: Macroeconomic effects of the euro cash changeover

Euro-area companies and individuals have been living with the euro already for almost three years. Nevertheless, it will only be with the introduction of euro banknotes and coins at the beginning of 2002 that they will need to cope in full with the modification in the basic functions of money — unit of account, store of value, medium of exchange — which the euro implies. This box looks at the impact of this event on inflation and money demand.

The impact on inflation

There are widespread fears, supported mostly by anecdotal evidence from consumers' associations and the media, that the euro changeover will result in unjustified price increases. Three types of concern are voiced most often. First, there is the fear that suppliers and retailers will take advantage of the unfamiliarity with the new currency to plainly increase prices. Second, there is the fear that the widespread use of 'psychological prices' will lead to a generalised rounding up in euro. Finally, there is the fear that the price hikes due to the changeover will not be an isolated phenomenon, but generalised and spread over time, leading to an acceleration of inflation and, in turn, demands for higher wages in compensation for the loss of purchasing power.

The microeconomics of the changeover — According to standard microeconomic theory a permanent increase in prices results from, for example, a permanent increase in marginal costs or an increase in market power. The euro changeover, however, is unlikely to have these effects. The costs of the changeover are mostly fixed costs, akin to the costs of installing new technologies. Once the new currency is in circulation, it will cost roughly the same to produce one more unit of output as it does now. In the transition there might be some temporary increases in handling costs per unit of output, which could be reflected in higher prices. Competition should ensure that these increases remain temporary. In terms of market power, the new currency is likely to accentuate competitive pressures, as consumers and firms find it easier to compare prices across borders.

Rounding effects — The fear concerning rounding is that companies may exploit the changeover to round up the new euro prices to the next higher 'psychological price'. The potential to increase prices, including by rounding, depends on several factors. An important one is the intensity of competition in the respective markets. In an environment with a high degree of competition, firms tak-

ing advantage of the changeover to raise prices would run the risk of losing market share to competitors. Such firms may also face loss of market share in less competitive markets, if consumers decide to 'punish' abusive brands.

The macroeconomic impact — So far, there is little macroeconomic evidence lending support to generalised and sustained price increases due to the euro changeover. In fact, consumer price inflation in the euro area peaked in May 2001 and has been falling since. In addition, comparing the path of the euro-area price index with the Member States that remain outside the area reveals that the paths are broadly similar, indicating the absence of a noticeable euro changeover effect. Another important element that determines the potential to raise prices is the cyclical condition of the economy. If aggregate demand is weak, it is generally hard to impose higher prices, by rounding up or otherwise. In this sense, slowing growth in the euro area should help to keep in check unjustified price hikes.

In sum, despite the anecdotal evidence and the media coverage of it, there is little basis in theory and macroeconomic data supporting the fears mentioned above. Even if some of those fears materialise to some extent, the risks that the euro changeover will lead to a sustained general increase in prices are small.

How does the changeover affect money demand?

The cash changeover is affecting demand for cash already this year and it will likely continue to do so in the first part of 2002. The ECB observed that euro-area citizens have been reducing their cash holdings ahead of the changeover already since the end of 2000. Supportive evidence is the deep decline in currency in circulation, which cannot be explained by nominal GDP or interest rate developments. If the stock of currency in circulation had grown at the same rate of nominal GDP since the fourth quarter of 2000, in July 2001 it would have been some EUR 25–30 billion above the actual stock.

At the beginning of 2002, it is expected that the changeover will produce a peak in the demand for cash, mainly because during the dual circulation period retailers will have to operate in two currency units. It seems likely that the ECB will accommodate the increased demand for cash so as not to change interest rate conditions. All in all, the impact on the rate of growth of the reference aggregate M3

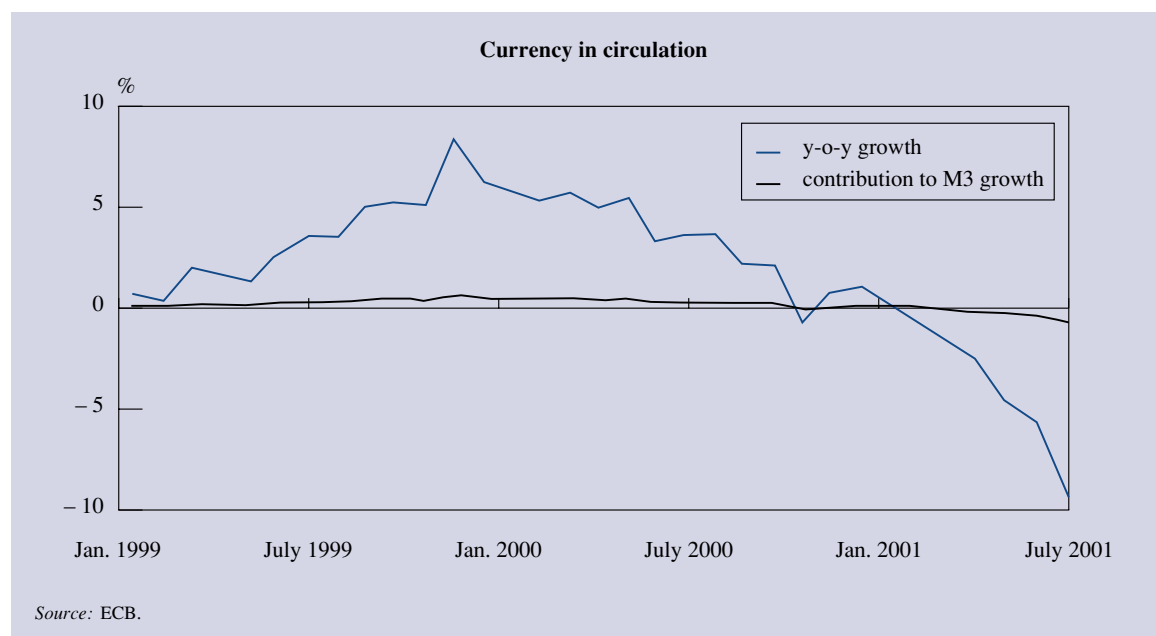
(Continued on the next page)

Box 3 (continued)

will probably be small, as cash in circulation constitutes only 6–7 % of M3.

A more interesting question is whether there will be some permanent changes in behaviour beyond the changeover period. The main reason is that use of electronic means of payment is likely to increase with the changeover. Both the public and the private sector are actively promoting such electronic means of payment as a way to facilitate trans-

actions in the new currency. In principle, a significant change in behaviour could alter the velocity of money with respect to income, and thus affect the alleged stability of money demand which underpins the first pillar of the ECB's monetary policy strategy. This would happen if the reduced need for cash for transaction purposes is directed to assets not included in M3. In any case, as noted above, the share of currency in circulation in M3 is small, limiting the potential for distortions in the growth of M3.



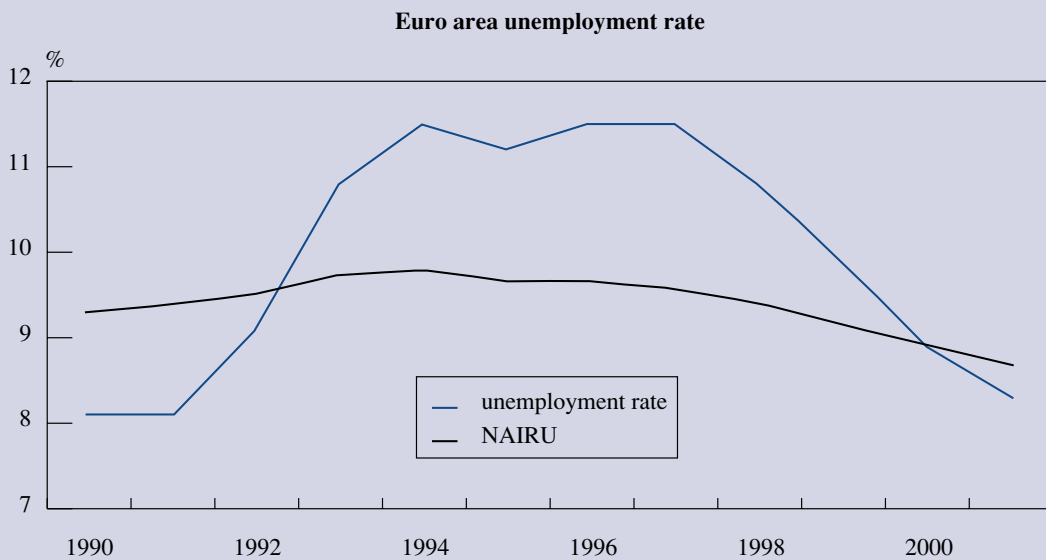
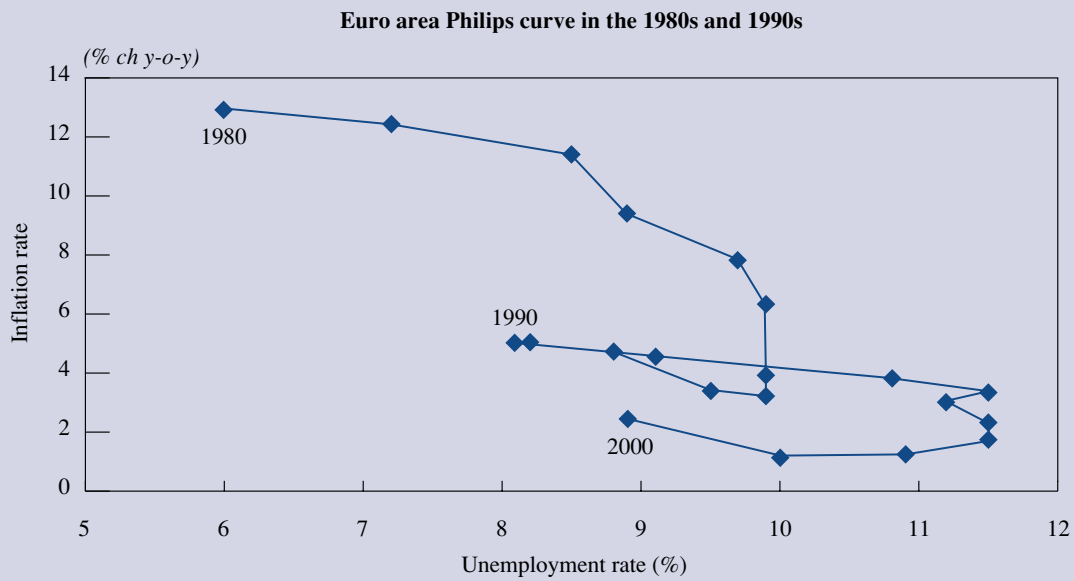
the short-run Phillips curve seems not only to be changing position but also changing slope. In particular the data points to a flattening Phillips curve, implying a lower sensitivity of price inflation to unemployment. This suggests that unemployment could now be further reduced without a substantial accompanying rise in inflation ⁽¹⁾.

⁽¹⁾ However, as is often the case, the picture for the euro area masks different experiences at the Member States level. For example, while most Member States display short-run Phillips curves shifting down, Ireland and Spain have done so from a much worse initial trade-off (higher inflation associated with higher unemployment) than other countries. This is indicative of a sort of 'catching-up' effect in the inflation-unemployment trade-off whereby structural reforms would permit countries having an initially worse trade-off to achieve a better one as fast as countries that had at the outset a more favourable trade-off.

An argument often advanced to explain the absence of significant wage inflation is the relatively high unemployment rate still observed in the euro area. However, unemployment has been declining since mid-1997. At 8.3% in September 2001, it is even lower than recent estimates for the NAIRU (See Graph 10). Yet little wage pressure has appeared over the last 12 months, providing a first piece of evidence that something may have changed in the wage inflation process of the euro area.

Wage Phillips curve — The traditional short- to medium-term relation implies co-movement of these two variables, i.e. as unemployment goes down, wage inflation should go up and vice-versa. As shown in Graph 11, the wage Phillips curve seems also to exhibit shifts down and to the left from the early 1980s. In particular, in the run-up to EMU a second favourable shift seems to have

Graph 10: Euro area Phillips curve



Source: Commission services.

taken place. This is a second piece of evidence pointing to a possible change in the unemployment-wage relation in the euro area. There are two distinct and not mutually exclusive possibilities. First, there might have been a regime change in inflationary expectations. Second, it is possible that structural reforms have favourably altered the NAIRU.

Expectations-augmented Phillips curve — The expectations-augmented version of the Phillips curve (Graph 11) suggests a shift to the left of the NAIRU ⁽¹⁾. In the early 1990s, inflation would have been constant at a rate of unemployment at around 10%, while the latter part of that decade it moved down to around 8%. Interestingly, this shift is in line with more sophisticated estimations carried out by the European Commission and international organisations such as the IMF and the OECD. Using time-varying methodologies, all institutions find a declining NAIRU in the latter part of the 1990s. Moreover, a recent study by the IMF, using system estimates, finds evidence in favour of a structural break in the wage formation process of the euro area ⁽²⁾.

Inflation expectations

As illustrated in the previous section, a confirmation of subdued inflation expectations is obtained by examining the euro-area Phillips curve. It indicates a regime of stable inflation expectations at around 2%. Additional evidence of subdued inflationary expectations can be found in a relatively flat, by historical standards, yield curve as well as a stable ‘break-even’ inflation rate on 10-year index-linked French government bonds, which serve as a proxy for the euro area.

Among the possible explanations of a regime change in inflationary expectations, two explanations clearly stand out:

- Low inflationary expectations might be the result of a credibility effect. The new euro-area monetary policy framework, with an independent central bank having price stability as a clear objective, has certainly caused a structural break in the way the private sector perceives monetary policy formulation. At

least in principle, this change should lead to a lowering of the steady state (expected) inflation bias of discretionary policy making.

- A related explanation is linked to the wage formation process in the euro area. With a common currency and monetary policy, wage negotiations need to take into account more than ever the likely externalities of wage increases over and above productivity gains. In a policy setting such as EMU, wage increases that are not compatible with the inflation objective are necessarily going to be felt in higher unemployment. There is evidence that wage setters are taking these considerations on board ⁽³⁾.

Institutional trends in wage bargaining

This subsection looks in more detail at the changing institutional set up of labour markets across the euro area and at how those changes may have favoured the shift in the Phillips curve relations. In general, reforms of wage formation systems in the euro area in the 1990s were limited, with only a few cases of reforms to industrial relations legislation. Nevertheless, there has been a gradual evolution of the process of wage determination. The overall trend has been one of gradual decentralisation of effective wage setting. One important element of wage formation in the 1990s was the extensive use of new forms of tripartite income policy agreements — in some Member States these agreements served as vehicles for changes in the wage determination process as well as for agreements on reforms of other labour market policies.

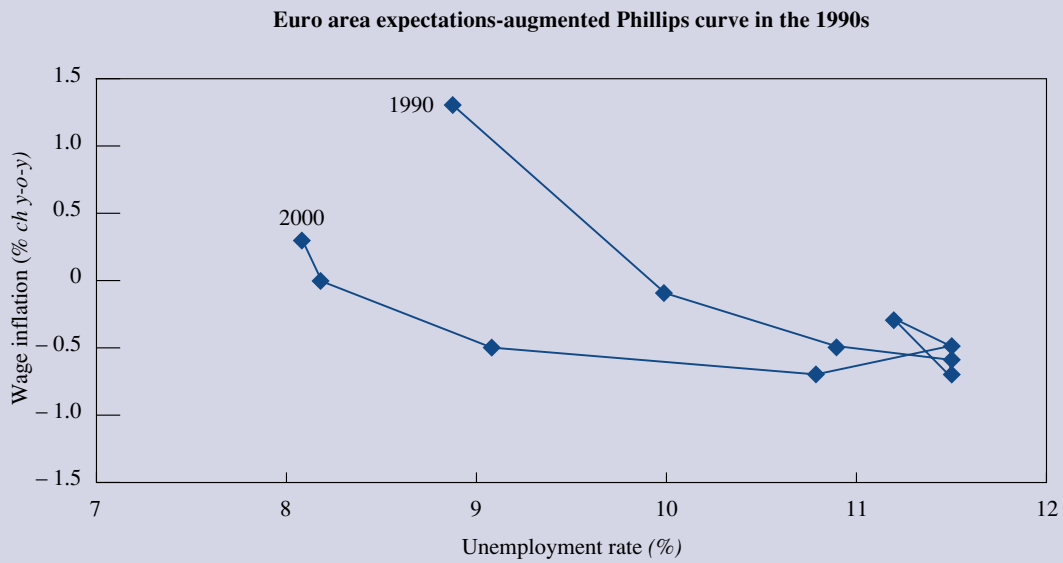
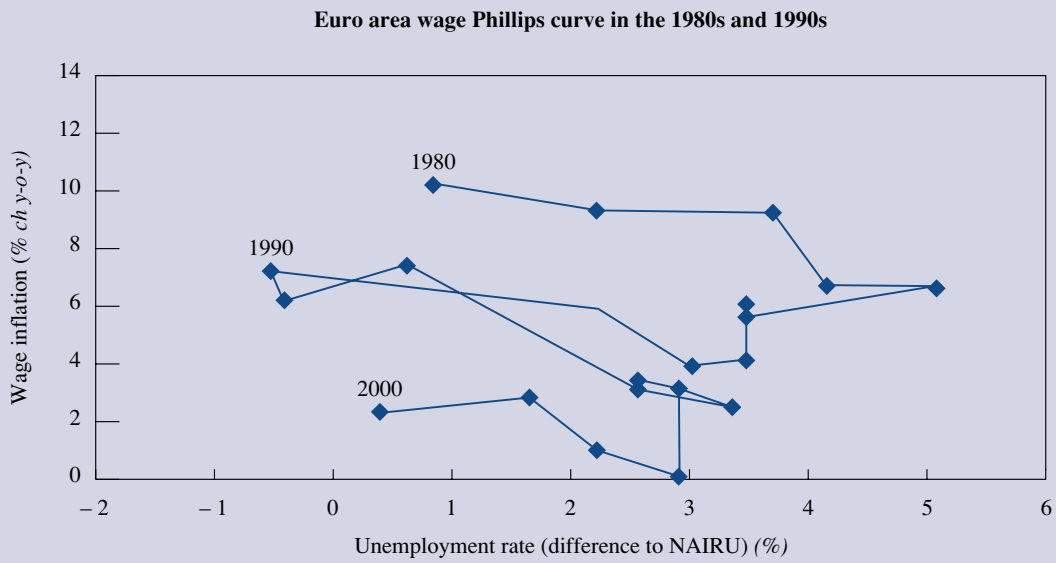
Decentralisation of bargaining — The flexibility at lower bargaining levels has increased as bargaining is slowly but clearly being shifted more towards the company level. This happens mostly informally through ‘opening’ or ‘hardship’ clauses that allow firms (sectors) to deviate from sectoral (central) wage agreements according to the financial situation of the firm (sector) or in exchange for job creation and job security. In several countries, an increasing share of — formal or informal — firm level bargaining substituting higher-level agreements is also noted. In two Member States, wage bargaining procedures have formally moved towards

⁽¹⁾ The non-accelerating inflation rate of unemployment (NAIRU) relates unemployment to the change in inflation whereas the Phillips curve relates unemployment to the change in the price level.

⁽²⁾ See IMF (2001b).

⁽³⁾ Observed continued wage moderation is perhaps the most conspicuous piece of evidence, while formal agreements like the 1996 Doorn Initiative between unions from Germany and Benelux to avoid ‘beggar-thy-neighbour’ outcomes by pursuing increases equal to productivity plus inflation are also noticeable.

Graph 11: Euro area wage Phillips curve and expectations-augmented Phillips curve



Source: Commission services.

more decentralisation in the 1990s. Reforms in Spain have led to a multi-layer bargaining system where peak-level guidelines are supplemented by regional, sectoral agreements. In Italy, the 1993 tripartite agreement introduced a two-tier system where sectoral wages are oriented at the official inflation target and the inflation rate of the best performing trade partners, while company-level agreements should take company performance into account.

Central bargaining coordination — At the same time, the coordination of bargaining at the central level has gained importance. While central coordination of wage bargaining is common to a majority of Member States, there are considerable differences in form and scope. In several Member States, formal wage agreements are concluded at the central level, leaving a varying degree of flexibility for lower-level negotiations. In other countries, coordination leads merely to wage recommendations, or central consultations on wages which are entirely informal. While the academic literature points to a considerable impact of EMU on incentives in collective wage bargaining, there has been little actual change since the start of EMU ⁽¹⁾. Newer developments include the recommendation for wage moderation by the German ‘Alliance for Jobs’ — a call that has been respected by the Social Partners at the sectoral level in the 2000 wage round. The Finnish Social Partners had dropped national bargaining in 1999, but returned to it after one year of sectoral bargaining.

Coordination across countries — Belgium was the first country to formally link national wage developments to wage developments of its main trade partners. Under the 1996 Employment and Competitiveness Law, the central wage norm takes into account the wage developments in Germany, France and the Netherlands. Trade union initiatives like the Doorn declaration or the agreement within the European Metalworkers’ Federation have followed. At Community level, the macroeconomic dialogue brings together representatives of the Council, the Commission, the European Central Bank and the social

partners in order to foster mutually supportive interaction between wage developments and monetary, budget and fiscal policy. In the same vein as the multilateral surveillance, it can contribute to wage moderation via the exchange of information and peer pressure.

Longer-term agreements — In the 2000 bargaining rounds in Germany and Austria, wage agreements covering more than one year became prominent. This trend towards longer-term agreements may be a reflex to credible, lower inflation expectations. Moreover, it may be the consequence of a modified strategic interaction between wage bargaining and monetary policy in EMU ⁽²⁾. Namely, it could be argued that the Social Partners, by committing themselves to wage moderation for a period that roughly covers the length of the lag with which monetary policy affects prices, try to provide the ECB with leeway to pursue a more accommodating interest rate policy. In fact, (framework) agreements for two years or more have predated EMU in some other countries. It is, however, still too early to identify anything like a general tendency to longer-term agreements and it is definitely premature to draw conclusions on a changed wage and monetary policy mix.

Changes in bargaining structures and wage moderation

The discussion of how wage bargaining structures affect wage developments has to a large extent been shaped by the Calmfors and Driffill (1988) hypothesis. It predicts a ‘hump-shaped’ relationship of unemployment and the centralisation of wage bargaining, where fully centralised and fully decentralised bargaining produce the most employment-friendly outcomes ⁽³⁾. Coordination, whether formal (e.g. through wage norms agreed with government involvement) or informal (e.g. through pattern bargaining), can be understood as a way of overcoming the potential disadvantage of bargaining at an intermediate level.

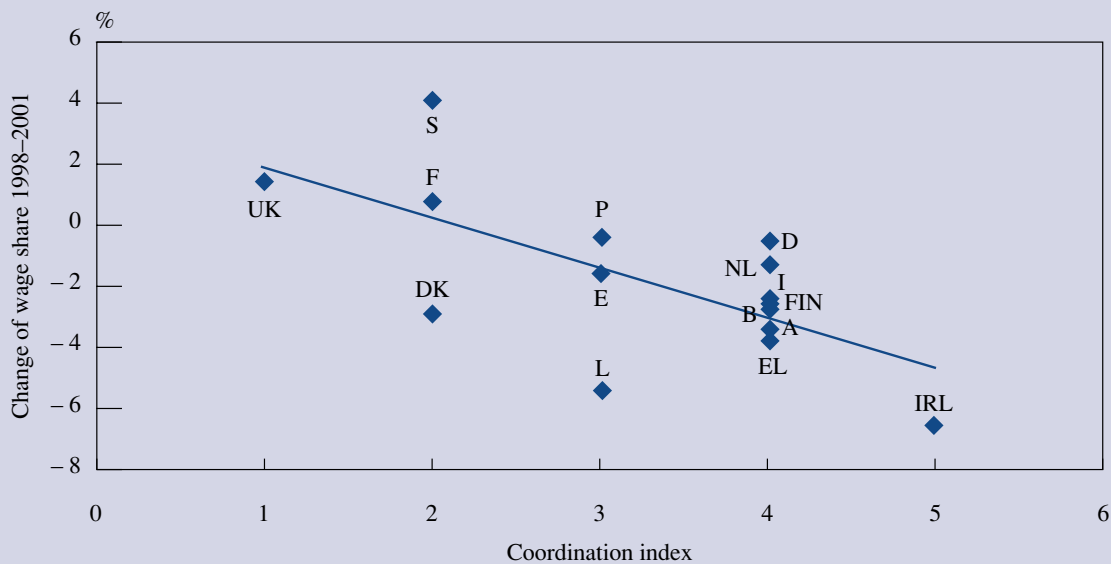
Formal or de facto **decentralisation** helps better taking into account the firm’s competitiveness as well as local levels of unemployment and productivity. It should result

⁽¹⁾ Fajertag and Pochet (2001) argue that the pressure that had favoured social pacts in the past has eased with the launch of the single currency and the favourable growth conditions in 1999–2000. Booth et al. (2000) stress the contradictions that arise from the attempt at coordination against the backdrop of the ongoing decentralisation and lower unionisation. According to these arguments, the future of central coordination would seem to be rather open.

⁽²⁾ For a brief overview on the strategic interaction of wages, wage bargaining institutions and monetary policy, see Pichelmann (2001b) and Calmfors (2001).

⁽³⁾ Empirical evidence for the hump-shaped relationship is, however, weak (see OECD (1997)).

Graph 12: Coordination and wage restraint



Source: Commission services.

in wage moderation in regions with high unemployment and/or low productivity and contribute to the absorption of structural and regional unemployment. Indeed, the share of the long-term unemployed in total unemployment in the euro area has decreased from 51.3% in 1997 to 47.2% in 2000. The regional disparity of unemployment has however increased over the same period, indicating that the regional flexibility of wages is still insufficient.

Central coordination has the advantage that the aggregate employment perspective is more easily internalised in wage negotiations and should therefore be a major contribution to sustained wage moderation also after the launch of the single currency. In fact, from 1999 to 2001 euro-area real wages increased at a rate below the EU average. Real wage developments were moderate (i.e. below productivity growth) in a large majority of Member States already from 1993 onwards ⁽¹⁾.

⁽¹⁾ Looking at unit labour costs, indeed an impressive degree of synchronisation emerges during the 1990s (see Pichelmann (2001a)).

Graph 12 shows a tentative grouping ⁽²⁾ of EU Member States according to their degree of wage bargaining coordination (1 is the lowest and 5 the highest degree) and relates it with the change of the wage share from 1991 to 2001. The inverse relationship suggests that central coordination has contributed to wage restraint.

The impact of the various other forms of wage coordination at the transnational or euro-area-wide level on actual wage developments is difficult to assess. National experiences with informal coordination of economic policy in tripartite bodies show that the exchange of views may well contribute to preclude wage growth which is inconsistent with aggregate developments. The spread of formal or informal orientation at wage development in neighbouring countries is an attempt to internalise the impact of wage growth on international competitiveness. Finally, the commitment of wage policy through longer-term wage agreements may reduce inflation expectations and facilitate the tasks of monetary policy. However, it is premature to back these theoretical conjectures with empirical evidence.

⁽²⁾ This is an attempt to update and refine the 1998 OECD indicator, see OECD (2000).

4. Testing time for the macroeconomic policy mix

4.1. Monetary policy: responding to improved inflation prospects

International monetary policy decisions and the ECB

Starting in early 2001, the deteriorating economic situation and outlook in the world economy and in the United States in particular have triggered a series of interest rate cuts in major economies. US interest rates have been reduced by a cumulative 450 basis points, more than offsetting the tightening of policy which took place between June 1999 and May 2000 and bringing US interest rates to their lowest level since 1961. Largely as a response to the deteriorating external environment, the Bank of England has lowered rates by 200 basis points so far this year while the Bank of Canada has cut interest rates by 300 basis points. In March, the Bank of Japan announced new operating procedures for monetary policy which returned short-term interest rates to zero.

The ECB left interest rates on hold between October 2000 and May 2001 at 4.75%. Beginning on 10 May 2001, the ECB has cut its main refinancing rate in four steps by 150 basis points to 3.25% motivated by the marked improvement in the balance of risks to price stability. Lower inflationary pressures have been originating from the demand side and wage developments are less of a risk than in the past ⁽¹⁾. Recent increases in M3 growth can be considered transitory and the ECB expects them not to imply risks to price stability in the medium term ⁽²⁾.

⁽¹⁾ See ECB Monthly Bulletin, September 2001.

⁽²⁾ The interest rate cut on 17 September by 50 basis points was aimed at stabilising financial markets after the terrorist attack in the United States and justified by the detrimental impact on confidence and growth, which was expected to reduce further the risks to price stability in the euro area.

Assessing the stance of monetary policy in the euro area

M3 growth has shown considerable fluctuations over the past two years. It decelerated until May 2001 when it almost met the 4.5% ECB reference value. Since then, M3 growth accelerated sharply to 6.9% for the July-September 2001 period ⁽³⁾. It appears that strong monetary growth is primarily caused by adjustments of portfolios to increased risk and a flat yield curve rather than by rising intentions to spend, as for instance indicated by the actual weakening of credit growth. Among those factors that reduce the information content of M3 in the current juncture are a portfolio shift towards short-term instruments owing to financial factors (including a flat yield curve and the decline in stock prices), a preference for liquidity in response to the increased uncertainty and higher nominal money demand due to the transactions motive triggered by higher energy and food prices.

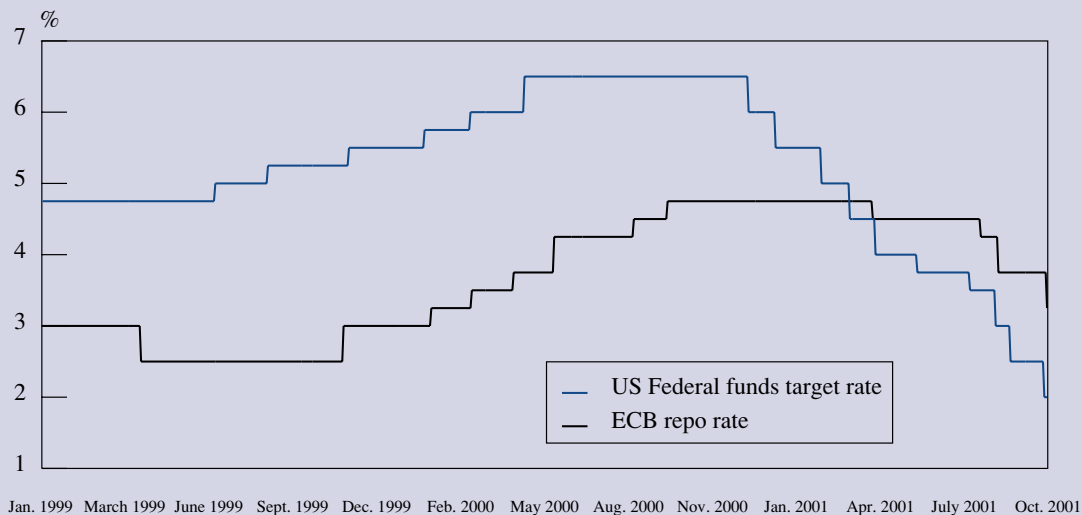
Monetary conditions on financial markets have changed relatively little over the last two years. Since the middle of last year, **nominal long-term interest rates** have declined some 85 basis points to a level of 4.3% in the beginning of November 2001, which is less than the fall during past slowdowns ⁽⁴⁾. However, in 1995 as well as in 1998, the level of nominal capital market rates was higher. The **yield curve** has remained flat until early summer, and has become only marginally positive since then ⁽⁵⁾. The flatter, in comparison with past slowdowns, slope of the yield curve in 2001 suggests that short-term

⁽³⁾ The ECB's benchmark series is the seasonally-adjusted, three-month, centred moving average of M3.

⁽⁴⁾ The benchmark series used is the German 10-year government bond rate.

⁽⁵⁾ The shape and movement of the yield curve contains some information about the expected path of future short-term interest rates, and implicitly also about expected inflation. The slight inversion at medium maturities reflects investors increased liquidity preference, possibly because of the high degree of uncertainty currently attached to the future.

Graph 13: Official interest rates



Source: ECB and US Federal Reserve Board.

rates are expected to remain at lower levels for a longer time. In terms of policy, one interpretation could be that the ECB gained low-inflation credibility. However, the expectation of lower future interest rates could also reflect pessimism about prospects for the real economy.

Since mid-2000, the **monetary conditions index (MCI)** has changed relatively little, with a small decline in real short-term interest rates and a moderate appreciation of the real effective euro exchange rate cancelling out each other ⁽¹⁾. The smaller decline in long-term benchmark rates over recent months, as well as the upward path of corporate bond spreads, and the fall in stock markets may imply that the overall financing situation for the private sector has actually become tighter, rather than remaining little changed as suggested by the MCI.

The **Taylor rule** describes an ‘optimal’ short-term interest rate corresponding to the cyclical situation and the

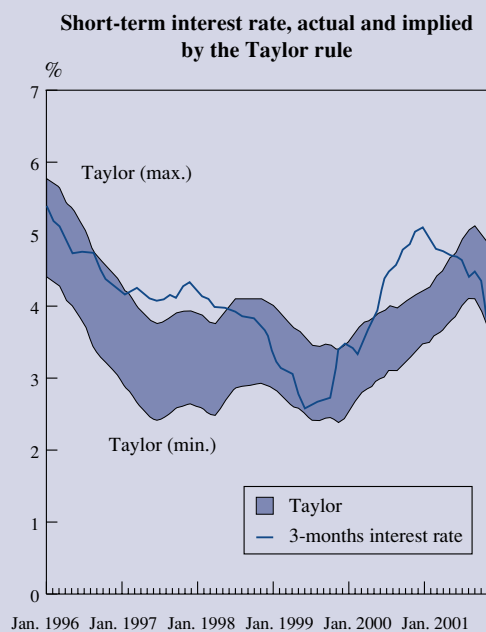
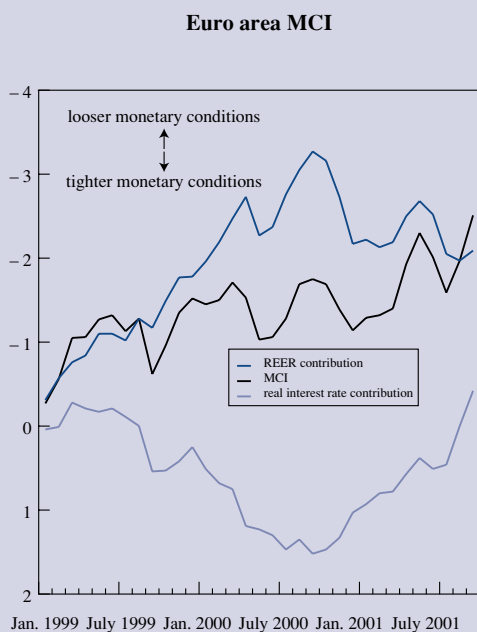
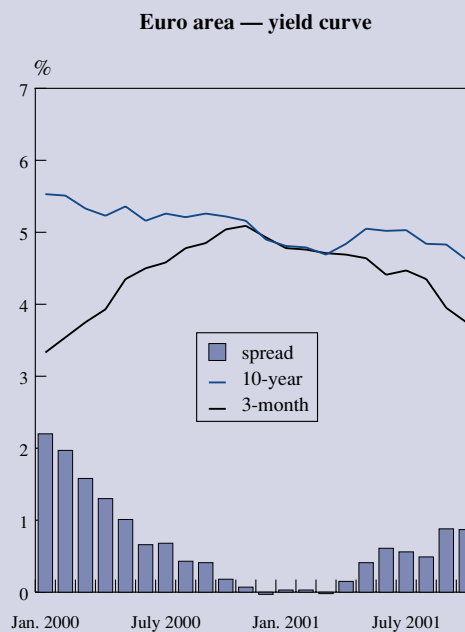
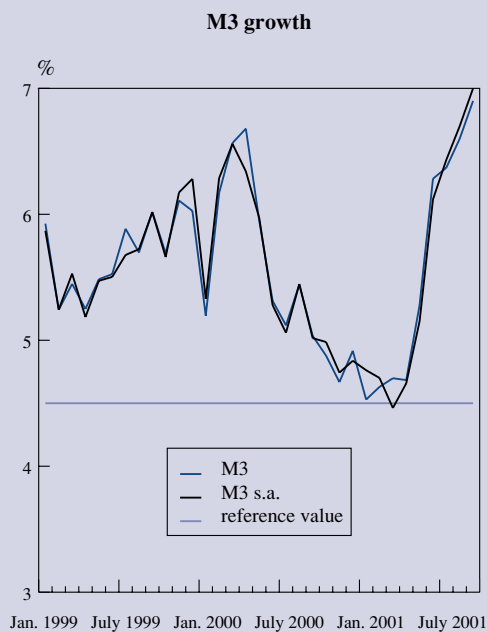
⁽¹⁾ The MCI reflects movements in the weighted sum of a real short-term interest rate and the real effective exchange rate of the euro against major trading partners. The absolute level of the MCI is uninformative for the assessment of the appropriateness of monetary conditions. See EU Economy 2000 Review, Chapter 2.

deviation of the inflation rate from its target, thereby representing a benchmark for assessing the stance of monetary policy against the prevalent economic situation ⁽²⁾. For the euro area, short-term interest rates started in the upper half of the corridor for the ‘optimal’ short-term interest rate implied by the Taylor rule in 2000, if ‘core inflation’ ⁽³⁾ is taken as the relevant inflation rate for the normative rule. In 2000, short-term interest rates were clearly above the level suggested by the Taylor rule. Since October 2000, the time of the ECB’s last interest hike, three-month interest rates have come down, and re-entered the Taylor corridor by April 2001. By August 2001 they have reached neutral territory, and after the recent cuts actual rates became accommodative.

⁽²⁾ The Taylor rule describes how the short-term interest rates could be adjusted in a systematic way to keep inflation close to the target and to respond to fluctuations of final demand around potential growth. See EU Economy 2000 Review, Chapter 2.

⁽³⁾ For the purpose of this analysis ‘core inflation’ is defined as the HICP excluding energy and unprocessed food. The precise measurement of underlying or core inflation is not simple. For a discussion of measurement concepts, see ECB (2001).

Graph 14: Monetary indicators in the euro area



Source: Commission services and ECB.

NB: Taylor rule based on core inflation, monthly figures.

Box 4: EMU and asymmetries in monetary policy transmission

The decision to launch EMU has focused attention on possible asymmetries in output and price responses to the single monetary policy across EU countries. Unfortunately, the numerous attempts to estimate the extent of such asymmetries in the context of empirical macroeconomic models have not provided a consistent and robust picture of cross-country differences in monetary transmission and they are affected by methodological problems. This state of affairs has revamped interest in microeconomic studies comparing economic and financial structures across countries, as these are ultimately responsible for any differences in the way monetary impulses are transmitted throughout the economy.

The insights and the empirical evidence from a recent study suggests that the structural differences across six euro-area countries (Belgium, Germany, Spain, France, Italy, the Netherlands) are significant but of a moderate scale ⁽¹⁾. Looking ahead, it seems likely that asymmetries in monetary transmission within the euro area could become smaller over time. It is possible to identify areas where one can expect national structures to converge over

⁽¹⁾ This box relies on Suardi (2001). His result has been confirmed by a number of studies, most recently by Clements et al. (2001).

Main determinants of the transmission of monetary policy to output

Interest rate channel

Interest rate pass-through	A quicker and fuller pass-through from policy interest rates to market and bank lending rates increases the power of transmission.
Interest sensitivity of production	A higher share of interest-sensitive sectors in GDP strengthens the effect of monetary policy.
Price and wage rigidity	The more rigid nominal price and wages, the larger the impact of any given demand fall on output. Real rigidities magnify the effect of nominal rigidities.
Income effect	The impact of higher interest rate on disposable income depends on households' debt position, the maturity of their interest-bearing assets and liabilities, as well as the pass-through from policy interest rates to average interest rates.
Wealth effect	The wealth effect on consumption will be stronger in countries where households' wealth is large and held in the form of assets with volatile prices. Given the weight of real assets in total wealth, the size and speed of the response of real estate prices to interest rate changes is also crucial.

Exchange rate channel

Openness to trade	More open economies experience a stronger reduction in output from a real exchange rate appreciation. In these economies, however, the exchange rate will also have a comparatively larger impact on prices (a positive terms of trade effect), and exports may have a higher import content.
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Credit view: Bank lending channel

Impact of monetary policy on loan supply	A monetary policy tightening may reduce loan supply, especially if bank health is poor. However, banks which have large holdings of securities and/or can acquire loanable funds (e.g. by issuing market securities) can keep their loan supply unchanged.
Degree of bank dependence	A high share of bank loans in business financing and a large number of small firms (which have less alternative sources of finance) would point to a potentially strong bank lending channel.

Credit view: Balance-sheet channel

Size structure of firms	Smaller firms, more prone to suffer from information asymmetries, are likely to experience a larger increase in the external finance premium (the difference in the cost of external versus internal finance).
Use of collateral	A monetary tightening that reduces the value of collateral will have a stronger effect where collateral is more extensively used.
Firms' leverage	Firms in financial distress (e.g. measured by a high ratio of interest payments over operating income), are more likely to suffer from the negative cash-flow impact of higher interest rates. A high leverage ratio may be an indicator of financial distress. On the other hand, it may also suggest ease of financing.
Efficiency of legal system and contract enforcement	Credit rationing is more likely in countries with inefficient legal systems and weak enforcement of contracts. In such cases, a low level of outstanding credit would suggest liquidity constraints.

(Continued on the next page)

Box 4 (continued)

time, hence reducing the potential for asymmetries in monetary transmission, and areas in which structural differences are likely to persist.

The biggest changes are undoubtedly taking place in financial structures, under the combined effect of the single monetary policy regime and of the wider forces of globalisation and technological change. These changes are blurring the traditional contrast between the Anglo-Saxon 'market-based' financial system and a continental European 'bank-centred' financial system. The degree of approximation of financial structures, however, will be constrained by three obstacles: the varying effectiveness and efficiency of national legal systems; the difference in the institutions governing the housing markets; the different national choices made, with regard to the funding of the pension system; and the role of pension funds.

With the euro, asymmetries originating from the external side are by definition reduced (but not eliminated), as for

all participating countries any given monetary policy shock will be associated with a smaller response of the effective exchange rate. As for economic structures, while the single market and the euro are bringing about changes in the pricing behaviour of companies and in the behaviour of social partners, there seems to be little ground to foresee that these changes will reduce the existing cross-country differentiation in production structures, labour market institutions and firm size.

All in all, although the cross-country heterogeneity in the effects of monetary policy could decrease over time as financial structures become more similar and economic agents adjust their behaviour to the new policy environment, it will remain to some extent a persistent feature of the euro area, as in any other large monetary union. In practical terms, however, it is probable that asymmetries in transmission will be a lesser concern, than the issues raised by having the same nominal interest rates in countries that are at different phases of the business cycle.

Developments in the euro exchange rate

Given the dramatic changes, which have taken place in the world economy, the relative stability of exchange rates in 2001 is surprising. Towards the end of 2000, bilateral exchange rates amongst the three main world areas seemed to follow the revision in the relative growth prospects and the euro strengthened against all major currencies. However, the euro appreciation against the dollar came to a halt at the beginning of January 2001. In the following months, the euro fell from USD 0.95 at the beginning of 2001 to USD 0.85 at the beginning of July. Since mid-August, the euro has been trading in a range of EUR 0.88 and EUR 0.92 against the US dollar, with some volatility as the market reacted to actual and expected monetary policy decisions and to the increased uncertainty in the aftermath of the terrorist attack in the United States. However, focusing on the exchange rate of the euro with the US dollar does not give a proper view on the actual development of the euro on foreign exchange markets. The effective exchange rate, i.e. the exchange rate weighted with the trade share towards 23 economies, has remained fairly constant between January and October 2001.

The inability of standard economic and empirical models to explain recent movements in exchange rates has led to a search for ad hoc explanations, in particular with reference to the USD/EUR exchange rate. In view of the

correlation of the exchange rate with net capital flows, the question emerges of what factors have been driving capital flows into the United States and of the euro area. A number of hypotheses, which have been formulated, do not seem fully convincing on theoretical and empirical grounds. A promising route to explain the USD/EUR exchange rate might be a combination of Balassa-Samuelson effects and portfolio diversification effects, although at times biased market perceptions have probably played a role ⁽¹⁾.

Higher productivity growth in the United States —

According to this view, the significant gains in productivity growth underpinning the long US expansion have increased the current and expected real rate of return on investment in the United States and attracted savings from the rest of the world. In the long run, a positive technology shock would lead to a higher equilibrium real exchange rate only if it were asymmetric, i.e. it raises productivity in the tradable sector relative to the non-tradable sector (Balassa-Samuelson effect). Over the past decades, productivity increases in the United States have been on average biased towards the tradable sector, while in Europe productivity advances have been more evenly

⁽¹⁾ For estimates of equilibrium exchange rates on the basis of the net foreign asset position and the Balassa-Samuelson effect, see Hansen and Roeger (2000).

distributed across sectors. According to some estimates, the annual increase in the US tradable sector in 1990–99 was 4.6% compared to 1.2% in the non-tradable sector. In the euro area the corresponding figures are 2.9% for the tradable sector and 0.9% for non-tradables ⁽¹⁾.

Portfolio shift associated with the start of the monetary union — The introduction of the euro has led to a surge in international borrowing in euro, especially in 1999 (+ 250% over the combined amount of issuance in the euro legacy currencies). At the same time, the introduction of the euro has led euro-area investors to diversify into other currencies. This increase in the demand for borrowing in euro relative to supply of investors' funds may have depressed the euro.

Biased market perceptions — The depreciation that started in January 1999 seemed about to be reversed on several occasions, but eventually all these recoveries aborted, inflicting losses on investors exposed in euro. The repeated failure of the euro to recover may have increased the risk premium attached to investing in euro-denominated assets relative to USD-denominated investments. There is some evidence that news on the United States and the euro-area economy have been treated asymmetrically by foreign exchange market participants. For instance, while relative GDP growth appeared as the overriding 'fundamental' driving the USD/EUR exchange rate in 1999–2000, the dollar continued to appreciate when expected relative growth moved in the euro-area's favour in early 2001.

⁽¹⁾ See Tille et al. (2001).

4.2. Public finances: using the flexibility of the Stability and Growth Pact

Slower growth takes its toll on public finances

While growth in the euro area was widely expected to come down from the 3.4% recorded in 2000, the sharp reduction by 1¾ percentage points to about 1.6% in 2001 is much larger than previously anticipated. A further small decline in the average growth rate is foreseen for 2002 (see Table 6).

After having touched a new low of 0.8% of GDP in 2000, the deficit for the euro area as a whole is expected to widen in both 2001 and 2002. The widening government deficit in 2001 results both from a certain loosening in the fiscal policy stance in 2001, reflecting tax cuts in several Member States, and from the adverse effects of slower growth on budgets through lower tax revenues and additional expenditures.

The negative impact of below-trend growth on public finance positions is expected to be slightly higher in 2002. However, as the cyclically-adjusted balance is expected to stabilise and thanks to further savings on interest payments, the further widening in the deficit is expected to be of similar magnitude as in 2001 (i.e. 0.3 of a percentage point).

Against the background of slower-than-expected growth, a slight majority of the euro-area Member States is expected to miss the budget targets earlier set in their stability and convergence programmes (see Table 7). Likely shortfalls are considerable (more than 0.5% of GDP) in Germany, Greece, France, Ireland and Portugal

Table 6

Budgetary outlook in the euro area

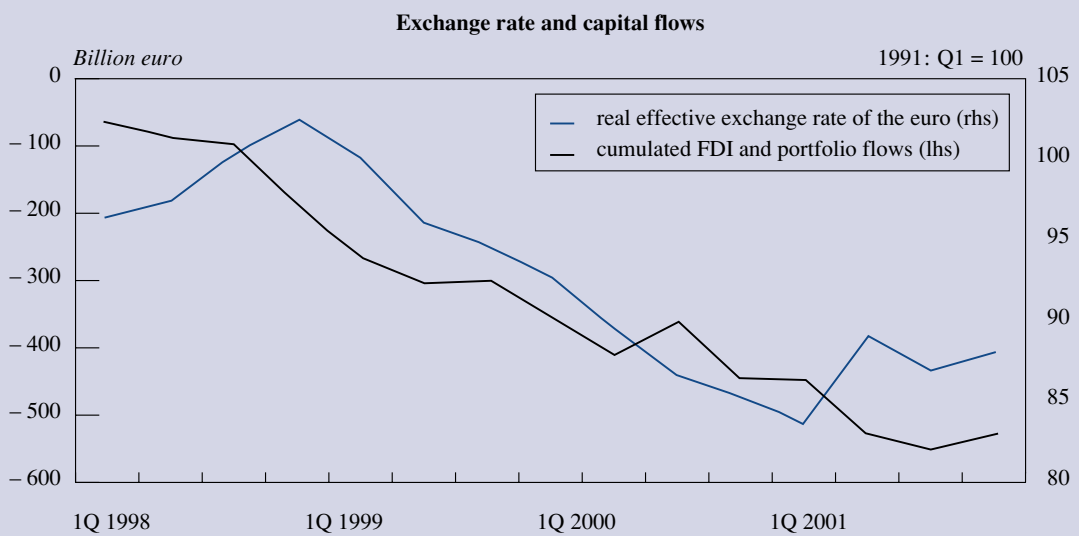
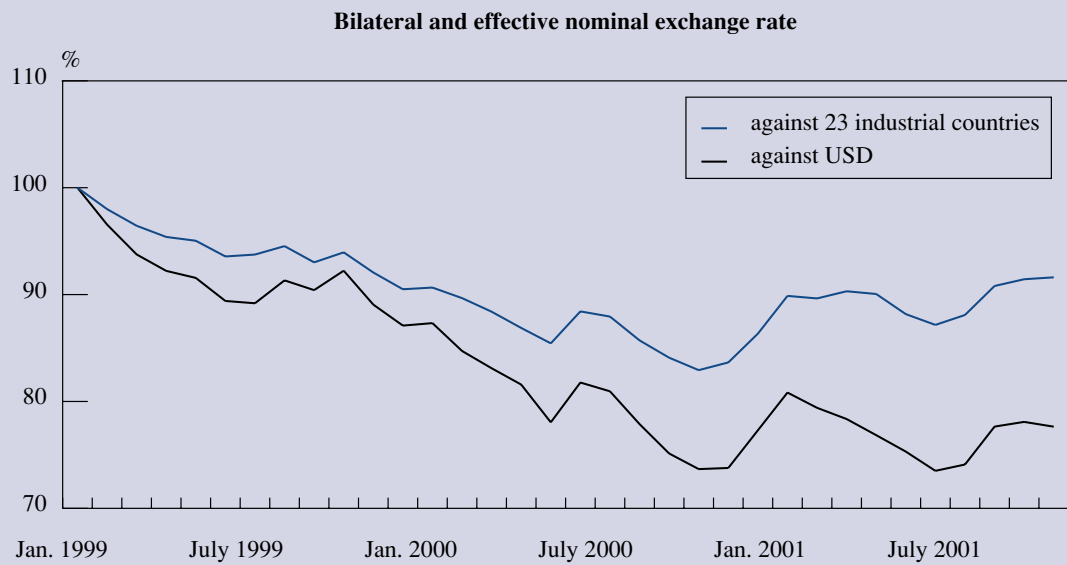
	(% of GDP)					
	1998	1999	2000	2001 (*)	2002 (*)	2003 (*)
Real GDP growth	2.9	2.7	3.4	1.6	1.3	2.9
Actual budget balance excl. UMTS proceeds (**)	- 2.2	- 1.3	- 0.8	- 1.1	- 1.4	- 1.0
Cyclically-adjusted balance	- 2.0	- 1.3	- 1.3	- 1.3	- 1.1	- 0.9
Cyclically-adjusted primary balance	2.7	3.0	2.8	2.6	2.6	2.7
Gross debt	73.7	72.7	70.2	68.8	68.4	66.7

(*) Autumn 2001 forecasts for 2001–03.

(**) Including UMTS receipts, the actual balance was +0.3% of GDP in 2000 and - 1.1% of GDP in 2001.

Source: Commission services.

Graph 15: Trends in the euro exchange rate



NB: Capital flow data of 3Q 2001 is July and August only. Euro-area enlargement in 2001.

Source: Commission services.

Table 7

General government net lending (+) / borrowing (-)

(% of GDP)

	Target 2001 (*)	Forecast 2001 (**)	Difference
B	0.2	- 0.2	- 0.4
DK	2.8	2.0	- 0.8
D	- 1.5	- 2.5	- 1.0
EL	0.5	- 0.4	- 0.9
E	0.0	0.1	0.1
F	- 1.0	- 1.6	- 0.6
IRL	4.3	2.4	- 1.9
I	- 0.8	- 1.2	- 0.4
L	2.6	4.4	1.8
NL	0.7	1.3	0.6
A	- 0.8	- 0.2	0.6
P	- 1.1	- 2.0	- 0.9
FIN	4.7	4.8	0.1
S	3.5	3.9	0.4
UK	0.6	1.2	0.6
Euro area	- 0.6	- 1.1	- 0.5
EU-15	- 0.2	- 0.5	- 0.3

(*) From the stability / convergence programmes.

(**) Commission autumn 2001 economic forecasts.

NB: B, DK, EL, F, euro area and EU-15 excl. UMTS.

Source: Commission services.

and, outside the euro area, in Denmark. Luxembourg, the Netherlands and Austria are, however, expected to over-achieve their earlier targets.

Considering the steep deceleration in growth, the deterioration in budget balances in 2001 remains relatively limited. Several factors can explain this result. Firstly, although growth decelerated precipitously, it fell from a record high level that was clearly above potential. The drop in growth below potential has led to a reduction in the positive output gap, though by far less than the drop in growth itself. Secondly, compared to earlier expectations at the time of the 2001 spring economic forecast, the deterioration in the cyclically-adjusted primary balance is somewhat less than earlier foreseen. Thirdly, again compared to earlier expectations, government interest payments seem to have come down more quickly.

It is encouraging to note that, by and large, Member States seem to have been able to prevent slippage from the implied path for their structural budget positions. Among the Member States still having a structural deficit, Belgium, Greece, Spain, Italy and Austria are expected to reduce them in 2001.

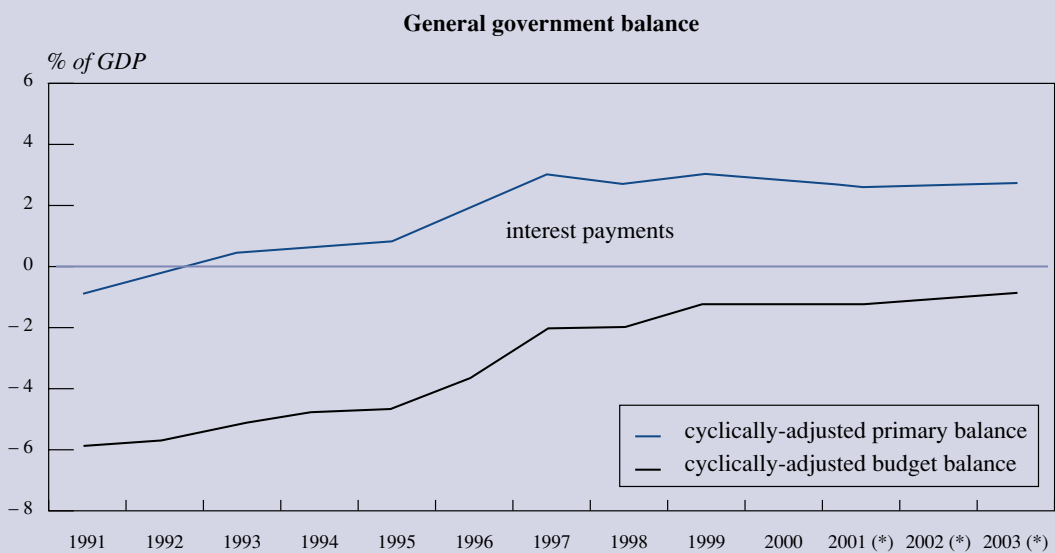
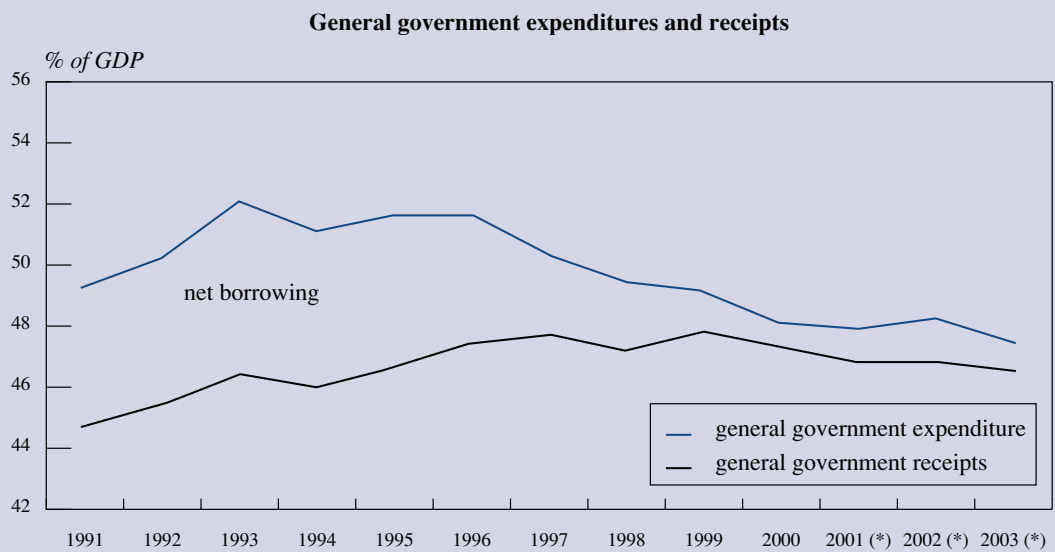
Developments in Member States' budgetary policies imply a continuation of the overall broadly neutral budgetary stance ⁽¹⁾ for the euro area. In view of the still important consolidation needs in public finances, a steady and prudent budgetary policy course committed to sound public finances and budgetary discipline appears appropriate in the present circumstances. It signals a continuing commitment to the stability-oriented framework, thereby facilitating the task of monetary policy in maintaining price stability and contributing to low interest rates.

Holding on to a medium-term approach to public finances

Current budgetary developments imply an end to the steady improvement in public finances since 1993. In the years leading up to the qualification for EMU, the improvement in public finances was underpinned by a

⁽¹⁾ Measured by the change in the cyclically-adjusted primary balance. A change smaller than $\pm 0.5\%$ of GDP is considered as being indicative of a broadly neutral fiscal stance.

Graph 16: Budgetary outlook in the euro area



NB: Data exclude mobile phone licences (UMTS) proceeds.

Source: Commission services. * Forecasts.

steady improvement in the cyclically-adjusted primary balance whilst growth was generally weak. Since 1997, the cyclically-adjusted primary balance of the euro area has not improved (see Graph 16) ⁽¹⁾.

This is not to say that governments have not pursued further budgetary adjustment efforts. There has been a further steady decline in government expenditure. Besides falling interest payments and lower outlays on unemployment benefits, these are also the result of sometimes-difficult policy measures. It is, however, indicative of a shift in priority from deficit reduction towards tax reduction.

Further reductions in the government deficit for the euro area as a whole thus became totally dependent upon further savings on interest payments and the beneficial impact on budgets of the operation of automatic stabilisers. With growth now falling away as a supportive factor, the lack of improvement in underlying budget positions has been exposed and shows up in the renewed widening in the deficit.

Developments in the deficit for the euro area as a whole do, however, conceal different developments at Member State level. Some Member States show a steady reduction in their structural deficits. In some other euro-area Member States, among which the biggest ones, the process of budget consolidation is, however, very slow. As a result, there are still several Member States that have not yet achieved sufficiently sound budgetary positions to allow for the free play of the automatic stabilisers without risking developing an excessive government deficit. Failure to sufficiently capitalise on good growth in recent years to make more progress towards balanced budgets has left them vulnerable to the consequences of faltering economic growth.

While current budget developments do not jeopardise the medium-term approach to public finances underlying the Stability and Growth Pact, they imply the need for strengthened consolidation efforts for several Member States over the coming years.

Member States agreed ⁽²⁾ that medium-term budgetary positions that respect the close-to-balance-or-in-surplus

⁽¹⁾ The cyclically-adjusted primary balance improved by 0.3 of a percentage point of GDP in 1999 but this was progressively lost in the subsequent two years.

⁽²⁾ See the recently agreed revised 'Code of conduct on the format and content of the stability and convergence programmes', the main features of which are explained in Box 6.

rule of the Stability and Growth Pact must also take account of unforeseen risks and other sources of variability and uncertainty in budgets and the need to ensure a rapid decline in high debt ratios. On this account, Member States would need to aim for cyclically-adjusted budget positions in balance or in surplus ⁽³⁾. To achieve those, several Member States would have to undertake further adjustment efforts over the coming years (see Graph 17). The expected return of growth in the course of the 2002 and its further acceleration in 2003 will provide an opportunity to give full priority to deficit reduction and make up for the current shortfalls.

Renewed commitment from Member States' authorities to sound public finances, further improvements in the surveillance of budgetary policies and improvements in budgetary procedures and institutions will help to support the adjustment efforts that still have to be made. These issues are dealt with in the next section.

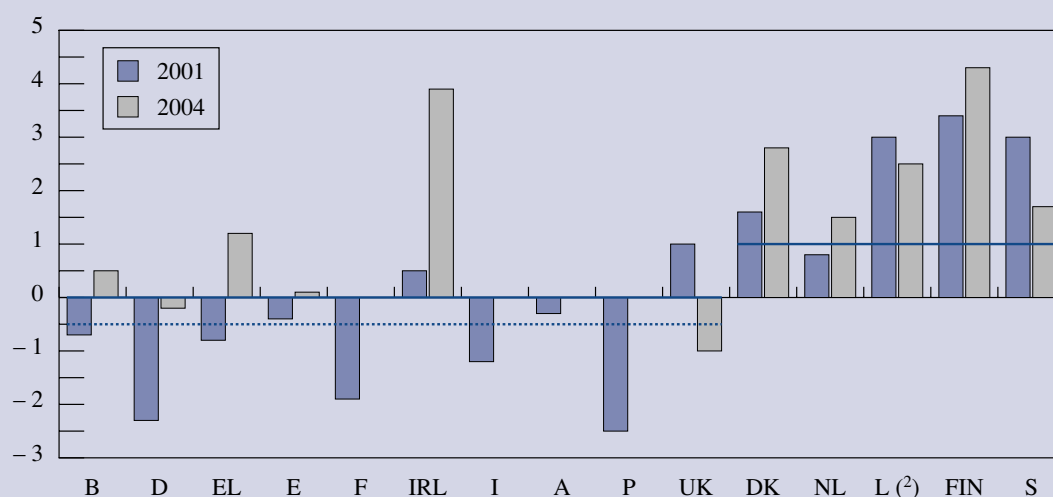
Improving the implementation of the Stability and Growth Pact

The current slowdown and the pressures it entails on budgets have caused considerable tension over the appropriate course of budgetary policy and in particular on the extent to which it should contribute to stabilising output. While fiscal policy is commonly seen as bearing a greater responsibility for cyclical stabilisation in a currency union, its contribution to stabilisation of output should come through the full and symmetric play of the automatic stabilisers over the cycle rather than through discretionary measures (see Box 5). This is the basic philosophy underlying the Stability and Growth Pact.

The Stability and Growth Pact has been instrumental in fostering improvements in public finances in the Member States. Most Member States, admittedly the smaller ones, have already achieved budgetary positions which allow for the full play of the automatic stabilisers without risking to develop deficits in excess of the 3% limit. For those that have not yet made sufficient progress to

⁽³⁾ Indeed, in the context of the 2001 broad economic policy guidelines, the Council agreed that 'all Member States, within compliance with the Stability and Growth Pact, need to ensure that cyclically-adjusted budgetary positions move towards, or remain in, balance or surplus in the coming years' (see Council Recommendation of 15 June 2001 on the Broad Guidelines of the Economic Policies of the Member States and the Community (OJ No L 179 of 2 July 2001)).

Graph 17: 'Close-to-balance' requirement, budgetary positions in 2001 and medium-term budgetary targets set in the last updates of the stability and convergence programmes (SCPs) ⁽¹⁾



⁽¹⁾ Budgetary positions for 2001 and SCPs targets for 2004 are presented in cyclically-adjusted terms.

⁽²⁾ 2003 target.

Source: 2001 — European Commission 2001 autumn forecasts. 2004 — Commission services calculations on the basis of the 2000/2001 updates of the SCPs.

the medium-term objective, the current experience during the slowdown and the pressures this can create on policies demonstrate the importance of getting to the medium-term objective as quickly as possible and avoiding pro-cyclical policies, especially during the expansionary phase of the cycle.

Recent developments, rather than pointing to shortcomings in the architecture of the Stability and Growth Pact itself, indicate shortcomings in its implementation and in the way in which several Member States are adjusting to it.

A sharper focus on structural developments in public finance would be in line with the spirit of the Pact ...

A sharper focus on structural developments in public finances may be helpful in maintaining budgetary discipline during good times and in increasing the transparency in Member States budgetary policies. It should be clear from the outset, however, that a greater focus on structural budget positions does not in any way detract from the importance of respecting the 3% excessive deficit limit.

While the underlying logic of the Stability and Growth Pact would suggest assessing public finance developments

in cyclically-adjusted terms, it has in practice been difficult to do so. Member States have continued to present the budgetary adjustment paths in their stability and convergence programmes in nominal rather than in cyclically-adjusted terms. Nominal targets fit rather better with existing budgetary practices in Member States. Even if nominal targets can be understood as being conditional on growth projections, it has not always been clear how they should be adjusted for — inevitable — deviations of growth from those projections. Furthermore, most Member States have little experience with cyclical adjustment methods and it has proven difficult to foster a broad consensus on a common methodology.

The focus on nominal balances has been convenient for Member States during the last couple of years, marked by relatively strong growth and declining interest payments on government debt. It made it possible to increase certain types of expenditure, to cut taxes and yet show a continued improvement in government budget balances. Such policies imply, however, that contrary to the fiscal policy philosophy underlying the Stability and Growth Pact, the beneficial impact on budget positions of the operation of the automatic stabilisers on the upside has been partially nullified.

Box 5: Stabilisation of output in EMU

Traditionally, one of the main macroeconomic policy objectives has been to limit the amplitude and duration of fluctuations of output around potential. Within EMU, the single monetary policy — by maintaining price stability — contributes to the stabilisation in economic activity on an area-wide basis. National budgetary policies are, however, in the frontline when it comes to dealing with country-specific shocks to real output.

The current economic slowdown has led to renewed calls for more activist budgetary policies which should help to limit the slowdown and re-invigorate growth. The answer as to how ambitious governments should be in attempting to stabilise economic activity depends crucially on the supposed effectiveness of budgetary policy in influencing income and output and on the possibilities to do so at the right moment.

Effectiveness of budgetary policy in influencing real output ...

Economic theory does not provide an unambiguous answer. While traditional Keynesian macroeconomic theory suggests that budgetary policies are very effective in influencing real income and output in the economy, other theories, taking account of the way in which individuals form expectations, suggest that budgetary policy is incapable of influencing aggregate demand in the economy. As always, the reality is likely to be somewhere in the middle and mainstream macroeconomic theory suggests that budgetary policy has some influence on the level of aggregate demand in the economy, at least in the short term.

The question on just how effective budgetary policy is in influencing aggregate demand is essentially an empirical one. Most recent studies and simulations with state of the art macroeconomic models conclude that fiscal policy multipliers are generally positive but small. Recent simulations by the Commission services, presented in its latest Public Finance Report ⁽¹⁾ suggest that the short-term effect of a 1 % of GDP increase in government expenditure on real GDP is in the order of 0.3 to 0.7 of a percentage point. A 1 % of GDP impulse on the revenue side (essentially tax cuts) would only yield an effect of 0 to 0.3 of a percentage point depending on the country. Overall, it would thus appear that the effectiveness of budgetary policy in influencing real output is limited. Furthermore, the measures that are most 'effective' in boosting demand in the short term (e.g.

stepping up public employment) are also the ones that are most detrimental to growth in the medium term.

... at the right moment

Beyond issues of effectiveness, the scope for successful stabilisation policies depends crucially on the possibilities to influence output at just the right moment. On this account, discretionary fiscal policy actions have generally met with little success. Informational and analytical requirements for active stabilisation policy are enormous and very little is known relative to these requirements. For instance, policy makers would have to know where the economy is relative to the cycle and by what kinds of shocks it is hit (demand and/or supply, temporary or permanent) to devise an optimal policy response. Furthermore, long and uncertain lags, institutional constraints and irreversibility of fiscal decisions combine to make discretionary fiscal policy in practice ill-suited for stabilisation purposes.

Against this background, it is widely recognised that discretionary policies are largely ruled out for stabilisation purposes and that governments should instead rely on the automatic budget stabilisers to do the job. They do not suffer from the drawbacks of discretionary policies. By being automatic, they do not require any decision to be taken and no lags are involved in their implementation. Ideally, and given the lack of suitable alternatives, governments should therefore allow for the full play of the automatic stabilisers so that they can have their maximum effect in cushioning fluctuations in economic activity. In this respect, history is not encouraging. Empirical evidence indicates that, over the last three decades, Member States have tended to behave in a distinctly pro-cyclical way. Failure to let the automatic stabilisers operate freely, especially in good times, has led to an upward ratcheting of underlying deficits and the accumulation of debt. Ultimately, this has led to unsustainable public finances, which eliminated the room for the play of automatic stabilisers on the downside forcing governments to take pro-cyclical corrective action. It is against this background that the Stability and Growth Pact actively seeks to promote sound public finances precisely so as to reinstate the necessary room for the operation of the automatic stabilisers and to ensure their full and symmetric play over the cycle.

The above discussion shows that the possibilities of governments to limit fluctuations of output around potential by using budgetary policy are rather limited. Furthermore, automatic stabilisers are mainly effective in cushioning the

⁽¹⁾ For a fuller discussion, the reader is referred to Part III of the report 'Public Finances in EMU — 2001' (published in European Economy No 3 of 2001).

(Continued on the next page)

Box 5 (continued)

effects on economic activity resulting from temporary domestic demand shocks. Especially in the case of permanent supply shocks, other policies may be called upon to facilitate the move towards a new equilibrium situation.

Strengthening the resilience of economies in the face of shocks to output

This points to another way in which governments can help to diminish the impact of shocks on the economy and

the concomitant fluctuations in output around potential. By making sure that necessary adjustments occur as quickly as possible, the lasting effects on output of shocks may be minimised. In this respect, governments can play a useful role in fostering structural reform that enhances the flexibility of product, labour and capital markets. While this requires sustained, rather than punctual, policy action, it is likely to be more productive in the long run in terms of stabilising the economy than budgetary policy responses.

In the context of the current growth slowdown there has been, however, an increasing recognition of the merits of correcting nominal budgets for the impact of the cycle and there are some positive developments in this regard. In a first step, Member States agreed in the context of the 2001 broad economic policy guidelines that, over the coming years, budgetary positions should move towards balance or surplus in cyclically-adjusted terms. A further step was taken in July 2001, when the Ecofin Council

agreed a new code of conduct for the preparation of stability and convergence programmes in which the importance of taking explicit account of the cyclical position and its effect on the budget was underlined (see Box 6). Beyond that, the revised code of conduct offers some hope for more transparency and higher-quality updates of stability and convergence programmes, which could be instrumental in organising stronger and more effective surveillance and peer pressure.

Box 6: The revised code of conduct on the format and content of the stability and convergence programmes

On 10 July 2001, the Ecofin Council endorsed a revised code of conduct on the content and format of stability and convergence programmes, which replaces the former one of 12 October 1998. This revised code of conduct builds upon the former, while taking account of the experience gathered during the first three years of the implementation of the Stability and Growth Pact with the stability and convergence programmes.

To allow for a better assessment and comparability of the programmes, the new code of conduct asks Member States to:

- submit their programme updates each year between 15 October and 15 December so as to allow for a more clustered examination;
- provide quantitative information on macroeconomic and budgetary developments in the form of standardised tables;
- use common basic assumptions on the main extra-EU variables or, for comparability reasons, present sensitivity analysis based on the common assumptions for these variables where these differences are significant; and

- include projections on the impact of longer-term demographic developments (ageing) on the sustainability of public finances.

These procedural improvements should allow for a better assessment of Member States' budgetary policies and of the resulting budgetary policy stance of the euro area, and thereby facilitate the coordination of budgetary policies. However, strengthened and more effective surveillance and peer pressure require also a deeper and shared understanding of some of the basic concepts involved. In this context, it is worth underlining that the new code:

- recognises more clearly the importance of taking explicit account of the impact of the changes in economic activity in assessing budgetary developments; and
- is more specific on the budgetary objectives; it distinguishes more clearly between the Stability and Growth Pact's obligation to achieve medium-budgetary positions that respect the close-to-balance-or-in-surplus rule and the need for appropriate medium-term budgetary targets; the latter would be consistent with the recommendations given in the broad economic policy guidelines and allow to deal with the impact of ageing populations or providing room for discretionary budgetary policy action (e.g. tax cuts).

However, a greater focus on structural budget developments is hard to organise without a better and wider shared understanding of the impact of cyclical developments on budgets. The Ecofin Council took a welcome third step when it endorsed on 6 November 2001 a new method for assessing the impact of the cycle on public finances. The Commission, in cooperation with Member States, has over the last few years developed this method within a working group of the Economic Policy Committee. It amounts to a shift in the way trend output, and therewith output gaps, are calculated. While thus far the Commission has relied upon a statistical extraction method using the Hodrick-Prescott filter (HP filter) to determine trend output, in the new method this will be done through a production function approach. It will allow better identifying of the driving forces behind the results and thus improving the economic analysis. The method will be further developed during the next months in order to be fully ready for application in time for the 2002–03 round of stability and convergence programmes.

These developments will hopefully induce Member States to place more emphasis on such concepts in budgetary policy formation at national level and in their stability and convergence programmes as this would also facilitate discussions at European level.

... and could be supported at Member State level by rules on government spending

The introduction of rules on the growth of expenditure may also help in arriving at budgetary policies that fit better with the requirements and the underlying budgetary policy philosophy of the Stability and Growth Pact. As by far the biggest part of the effect of the automatic stabilisers occurs on the revenue side, the adherence to pluri-annual rules for the growth in real spending whilst letting revenues fluctuate with economic activity comes close to targeting a structural budget balance.

Spending rules, as policy instruments aimed at better controlling the medium-term path of expenditure, can help to foster budgetary discipline. They are used by several Member States (see Table 8). Stronger budgetary discipline would appear to be particularly important when growth is buoyant and government revenues increase as a result of the operation of automatic stabilisers. Whilst the logic of the Stability and Growth Pact would imply that the resulting proceeds accrue fully to the budget, there is in practice a strong tendency to use the extra revenue to finance additional spending or tax cuts. Explicit spending rules would provide for an institutional solution to the inherent fiscal bias on the spending side. Credible and well-designed spending rules would thus seem largely consistent with the rationale of

Table 8

General government medium-term budgeting frameworks used in Member States ⁽¹⁾ ⁽²⁾

	Multi-annual spending targets / guidelines / objectives	Additional budget rules and targets
B	Annual CG + SS exp. growth 1.5% in real terms over medium term.	Primary balance objective.
DK	Annual GG consumption growth of 1% in real terms over medium term.	Average GG budget surplus of 2–3% of GDP. Reduce debt levels.
D	Annual GG 2% exp. growth in real terms.	Golden rule for federal government.
F	GG exp. 4.5% real growth target over 3 years (2002–04). Growth target set to be below potential growth of economy.	
NL	CG + SS to grow 9% in real terms over 1999–2002.	Rules on how to deal with growth dividends on the revenue side.
FIN	CG expenditures constant at 1999 real level over 2001–04 period.	CG budget in surplus in structural and ESA terms.
P	4% nominal growth of current primary expenditure.	
S	CG exp. growth not higher than projected nominal GDP.	GG 2% surplus over the cycle.
UK	—	— Golden rule for public sector. — Sustainable investment rule (40% net debt).

⁽¹⁾ GG: general government, CG: central government and SS: social security.

⁽²⁾ Member States not mentioned in the Table do not yet apply a medium-term budgeting mechanism domestically.

Source: 2000/2001 updated stability and convergence programmes and Commission services.

the EU fiscal framework which emphasises the role of budgetary discipline and the role of national automatic stabilisers in smoothing the business cycle. Furthermore, they would make it less important to worry about nominal changes in the budget balance, as the medium-term commitment is better anchored.

However, while spending targets can help in fostering budget discipline and a correct implementation of the Stability and Growth Pact, they cannot substitute for abiding by the Treaty requirement to avoid excessive

government deficits or the Stability and Growth Pact's requirement to reach a medium-term budgetary position of close-to-balance or in surplus. Put more concretely, when Member States have not sufficient leeway relative to the 3% excessive deficit limit, adherence to an expenditure rule may not be sufficient and revenue developments cannot be disregarded. Furthermore, compatibility with the Stability and Growth Pact implies that spending rules are consistent with continued fiscal consolidation until the transition to a cyclically-adjusted budget in balance or surplus has been completed.

5. Policy adjustment in the euro-area countries: the risk of overheating

In the 2001 broad economic policy guidelines (BEPGs), excessive demand, endogenous price pressures and risks of overheating were identified in most of the small euro-area economies. In particular Greece, Spain, Ireland, Luxembourg, the Netherlands, Portugal and Finland seemingly suffered from excessive demand pressures. Their cyclical positions were well ahead of the euro-area average. Although the current global economic slowdown slashes the risks of overheating, some important policy questions remain ⁽¹⁾. Moreover the current externally-induced slowdown of these economies will show whether the risks that are attributed to overheating will materialise, or whether economic adjustment to sustainable output growth levels will come about smoothly.

For individual Member States, the creation of a single currency area implies the loss of monetary adjustment mechanisms in response to economic shocks. Nominal interest and exchange rates can no longer assist cyclical and structural adjustment as the equilibrium state of the economy is altered. Adjustment to an equilibrium state now has to occur through other price variables, such as — the more inert — goods prices and wages and through real adjustment in the economy.

This section reassesses the importance of the loss of the monetary policy instruments, based on theoretical considerations and the experiences in the first years of the monetary union. It briefly presents the main economic divergences between the Member States that occurred prior to the present economic slowdown. The difficulties in determining the degree of overheating, its causes and the attendant risks are discussed more in depth, as it

elaborates on the ‘natural’ economic mechanisms that tend to stabilise and destabilise the national economies. It then focuses on the possibilities for national and common policies to limit the risks of overheating.

5.1. Macroeconomic adjustment and risks of overheating

Diverging economic performance in the euro area

In recent years, a number of euro-area economies have consistently experienced real output growth exceeding the euro-area average, sometimes by a wide margin. Differences in economic growth between the Member States are to a large extent due to dissimilar supply conditions ⁽²⁾. As such, these growth disparities represent broadly sustainable differences and do not hamper the well-functioning of the monetary union. Differences in economic growth can become a matter of concern, however, if growth in a Member State substantially deviates from its potential growth. If growth in a Member State is persistently above its potential for a number of years, a significant positive output gap arises, leading to increasing stress in the economy. For example, a stretched labour market can induce nominal wage increases exceeding a rate that is consistent with price stability and the rate of productivity growth. Similarly, imbalances on other markets may trigger price pressures.

If the output gap is in line with the euro-area output gap, exchange and interest rate adjustment for the euro area as a whole will contribute to stabilisation. Moreover, the resulting wage and price developments do not necessarily

⁽¹⁾ At the time the 2001 BEPGs were published, the extent of the global economic slowdown and its asymmetric effect on the euro-area economies were not yet apparent. As the small open economies are relatively more influenced by the externally-induced slowdown, and most notably the sharp reduction in world trade growth, the risks of overheating have been strongly reduced in the course of 2001.

⁽²⁾ Labour supply growth can differ, for example due to the effects of ageing, immigration or improved labour market functioning. Labour productivity growth in a Member State can deviate substantially from the euro-area average due to catching-up effects, structural reforms, more flexible labour and product market and better developed financial markets.

alter relative competitiveness within EMU, as these may be broadly symmetric. In the event of country-specific circumstances, though, the nominal interest rate and exchange rate can no longer provide for cyclical and structural adjustment. Therefore, price pressures will arise, changing the real exchange rate and, as a consequence, relative competitiveness. The next subsection will argue that such a deterioration of relative competitiveness within EMU is not *per se* undesirable, as relative prices and wages are an essential economic adjustment mechanism in the monetary union.

Macroeconomic adjustment in theory ⁽¹⁾

When output in a Member State exceeds its equilibrium value in a monetary union, there are — in theory — two macroeconomic ways in which the country can adjust. Firstly, by letting wage and price inflation increase above the euro-area average, leading to an appreciation of the real exchange rate and a decrease in foreign demand. This is a passive, market-based, adjustment policy. Secondly, by using active fiscal policy to decrease domestic demand instead. Which policy is most appropriate depends on the specific circumstances, notably on the nature of the high level of demand, domestic or external.

This simple theoretical picture of overheating yields an important insight. Domestic inflation may well be a desirable part of an adjustment process in a monetary union. If external demand is the main source of overheating, inflation is the natural instrument to return to equilibrium. If overheating is caused by excessive domestic demand, (fiscal) policy action might be required. Thus, the choice between the — active — domestic policy and the — passive — external policy, only seems to depend on the identification of the source of the excessive demand.

The insight that inflation due to overheating is not necessarily damaging is important, but — in reality — determining the required policy action is not as simple as in theory. Determining whether output is above potential, whether price and wage inflation actually deteriorate relative competitiveness, or are countered by productivity rises in the ‘tradable sectors’ (Balassa-Samuelson

effect ⁽²⁾) and whether the real exchange rate is at or close to equilibrium, is not a clear-cut exercise. Even assuming that the extent of (the risk of) overheating can be determined, translating the theoretical analysis to the actual economic environment is very difficult. Distinguishing between domestic and external sources of overheating is troublesome.

Risks and costs related to overheating

The main risks related to overheating stem from inefficient price developments leading to sub-optimal intertemporal and interregional allocation and the resulting build up of macroeconomic and financial imbalances.

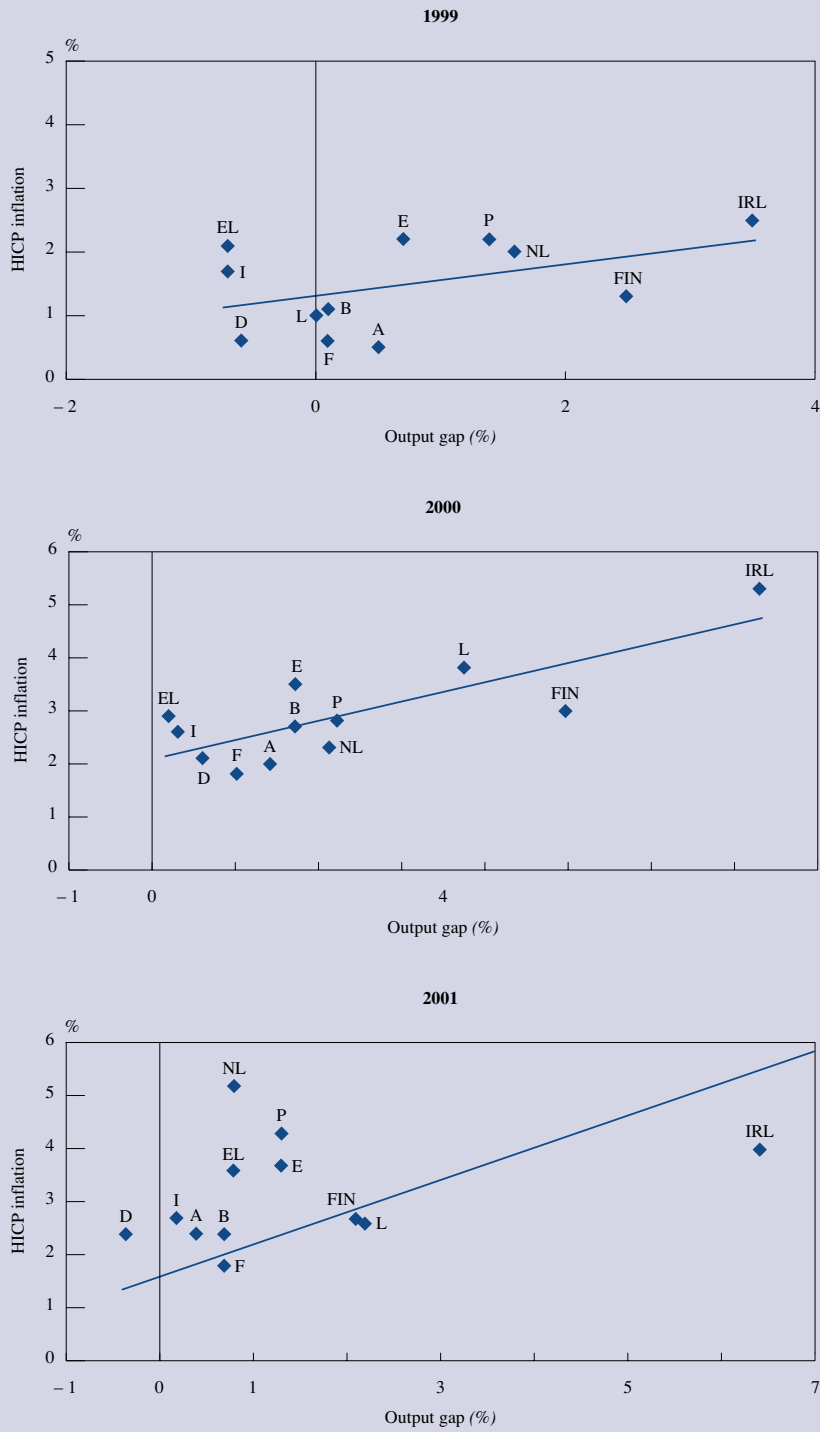
Loss of competitiveness — overshooting the real exchange rate is the most apparent potential cost of overheating. The demand pressures reduce unemployment below the NAIRU, thereby triggering wage increases and inflation. As cyclical conditions might be more pronounced and longer lasting due to destabilising feedbacks in a monetary union (e.g. pro-cyclical monetary conditions) and inflation is inert, overshooting of equilibrium price levels is a risk.

Consequently, if price levels diverge from equilibrium due to overheating, changes in relative competitiveness can hamper economic growth in the euro area. The accompanying developments in real interest rates due to the persistent inflationary differences can influence resource allocation adversely as well, both in the

⁽¹⁾ On the basis of a simple neo-Keynesian model, Alesina et al. (2001) present the different policy options very clearly. This analysis provides a useful starting point for a more elaborate assessment of policy options.

⁽²⁾ In an open economy with both tradable and non-tradable goods, a difference in the rate of productivity growth between sectors can induce inflation without influencing the relative price competitiveness of the Member State if nominal wages develop in parallel in both sectors. This is the so-called Balassa-Samuelson effect. The higher productivity growth in the tradable sector induces steady real wage rises in terms of tradables. The increase in the real wage and the lower productivity growth in the non-tradable sector combine to imply an increase in the relative price of non-tradables, raising the overall price index. The Balassa-Samuelson effect can be expected to be the strongest in less-advanced small economies, as the scope for technological catch-up is relatively large, and the influence of productivity advances on the world prices for tradables is negligible. Estimates of the Balassa Samuelson effect in the euro area vary between countries. While De Grauwe and Skudelny (2001) estimate the contribution of the Balassa-Samuelson effects on inflation differentials not to have exceeded 1 percentage point, Sinn and Reutter (2001) find significantly stronger effects of up to nearly 3 percentage points.

Graph 18: Output gap and inflation in the euro-area economies



Source: Commission services.

overheating phase and during the downturn. Most of the burden will be on the overheating country itself, but dependent on its size, it can influence aggregate price developments in the euro area and thereby the common monetary policy. However, it is important to stress that inflation **differentials**, as such, do not affect the monetary policy stance of the ECB.

The stickiness of prices and inertia of inflation, due to market rigidities, imply high potential costs of price level overshooting. The Member State suffering from overheating is vulnerable to a protracted period of sluggish economic performance, mainly as a result of poor allocation due to the price disturbances and slow adjustment of relative prices and wages back to equilibrium ⁽¹⁾. Downward adjustment of relative prices vis-à-vis euro-area competitors after overshooting of equilibrium relative price levels is further hampered by the rather low level of average inflation in the euro area. This leaves only limited leeway for a quick adjustment without deflation setting in.

Increased financial sector vulnerability represents another risk of overheating. Financial crises are generally associated with overheating, boom-and-bust cycles and limited -or absent- monetary or exchange rate adjustment in response to the cyclical pressures. The lack of financial adjustment mechanisms and tailored monetary policy in individual euro-area Member States increases the risk of pronounced financial cycles. Both the role of financial cycles in the building up of overheating pressures and the potentially high costs in the downturn require the focus of attention in overheating economies.

⁽¹⁾ Alberola and Marqués (1999), Obstfeld (1998) and Cecchetti et al. (2000) find that deviations of relative prices from equilibrium can be very persistent in a monetary union. Alberola and Marqués analyse regional inflation differentials using data for 50 Spanish provinces, while Obstfeld looks at the individual euro-area Member States as being currency unions to assess the price adjustment capacity and transposes that to EMU. Obstfeld finds that within EMU-Member States, regional real price changes have been relatively small compared to the United States. He finds that this does not reflect efficient operation of natural currency areas, but price rigidities in labour and product markets that impede adjustment. Cecchetti uses a panel of 19 US cities and finds that significant inflation differentials can exist for a long period, with average yearly inflation differences between US cities over a 10-year interval of between 1 and 1.5%. He estimates the half-life of price adjustment at nearly nine years, which he considers to be a lower bound for the euro area.

The occurrence of banking and financial sector crises in the aftermath of overheating is related to the interactions between developments in the financial sector and the real economy. Financial cycles can contribute to the amplification of traditional macroeconomic cycles and in the past have often ended in costly banking crisis, affecting both industrialised and emerging markets ⁽²⁾. Most recent financial and banking crises were preceded by clear overheating and loose credit conditions. At the root of these financial cycles typically lies a wave of optimism, generated by favourable developments in the real economy. This optimism contributes to the underestimation of risk, over-extension of credit, excessive increases in asset prices (including property prices), over-investment in physical capital and overly buoyant consumer expenditures. Eventually, when more realistic expectations emerge, often initiated by an external shock, the imbalances built up in the boom need to be unwound, sometimes causing significant disruption to both the financial system and the real economy ⁽³⁾.

In general, cycles in credit and asset prices are mutually reinforcing. Rising asset prices can stimulate economic activity and, by raising the value of collateral, reduce the cost of borrowing and increase the availability of finance for both firms and households. Faster growth and additional borrowing can then feed back into higher asset prices. These mutually reinforcing cycles exacerbate the effects of the low cost of credit due to the low real interest rate. This interaction between credit and asset markets can be even more powerful when asset prices are falling and economic conditions are deteriorating ⁽⁴⁾.

The financial and banking system often seems extremely healthy in periods of buoyant economic growth and rapidly rising asset prices, as the measures of solvency

⁽²⁾ See BIS (2001).

⁽³⁾ The experiences in the Japanese economy provide further examples of possible strong interactions between credit markets, asset markets and real economic development in an advanced economy.

⁽⁴⁾ See BIS (2001). In particular, falling prices reduce the value of existing collateral held by financial institutions, and can thus lead to substantial losses by these institutions. This, in turn can lead to the need for strengthening BIS solvability rates and 'forced' sale of assets, further depressing the value of collateral. Ultimately, it may result in a significant contraction in the supply of credit. However, not only is the supply of credit affected when imbalances in the economy are unwound. The falling asset prices and deteriorating economic conditions also increase the severity of the recession through credit demand, as it aggravates the financial position of households and firms.

and liquidity tend to be highly pro-cyclical. This procyclicality of capital requirements is challenging for all economies but more so for small Member States in a monetary union that risk overheating, due to the lack of interest and exchange rate equilibration.

Limited cross-border financial integration in EMU and significant home-market dependence of financial institutions imply still important financial sector exposure to country-specific macroeconomic developments and overheating. The extent of the interactions and mutual reinforcement of financial and macroeconomic cycles depends largely on the degree of home-market dependence of the financial sector. The deepness of financial markets and their size, relative to the real economy, are other factors that determine the importance of their influence on real economic developments.

5.2. Identifying overheating pressures in practice

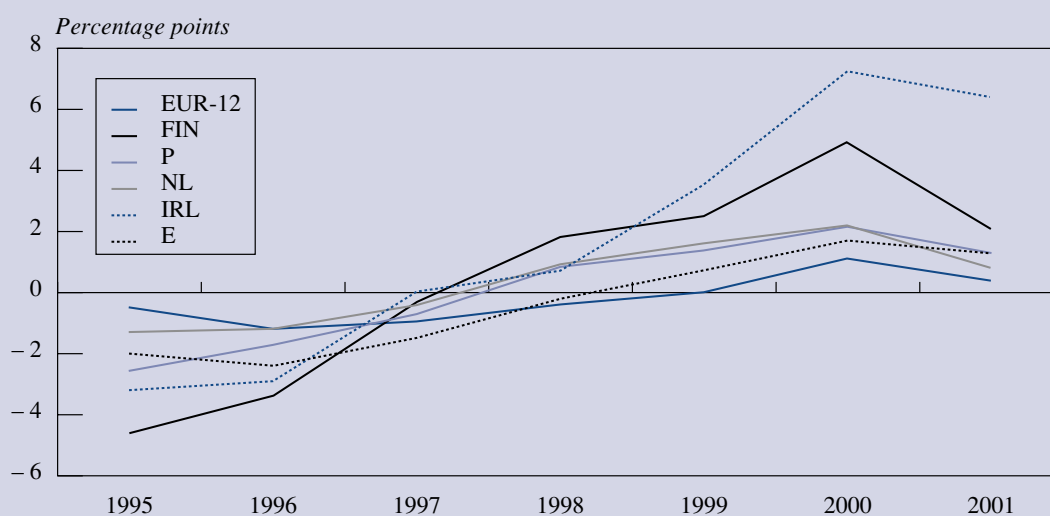
To determine whether and what kind of economic policy is appropriate, the extent to which an economy is facing excessive demand pressures and risks overheating needs

to be assessed. Moreover, a distinction needs to be made between real exchange rate adjustment to equilibrium, which is essential in EMU, and harmful overheating that leads to financial and macroeconomic imbalances. Furthermore, an analysis of the causes and dynamics of overheating can shed more light on the required policy adjustment. Therefore, the traditional indicators of overheating are briefly assessed below for the countries in which excessive demand pressures have been identified. The external balance is analysed to attempt to make the crucial distinction between externally- and domestically-induced demand pressures. To have a firm foundation for policy options, the origins and causes of overheating and its dynamics are examined more thoroughly.

Traditional indicators of overheating

A first glance at developments in the countries in which risks of overheating have been identified, shows that the macroeconomic developments have varied significantly from country to country. Basic indicators of actual overheating pressures, such as the output gap, inflation, wage developments, asset price inflation, unemployment, capacity utilisation and the current account balances, reveal that there are significant differences between the cyclically advanced economies (see Table 9).

Graph 19: Output gap development



Source: Commission services.

Table 9

Qualitative overview of overheating indicators

	Spain	Ireland	Netherlands	Portugal	Finland
Consumer price inflation	+	++	++	++	0
Wage inflation	+	++	+	+	+
Property price inflation	++	++	++	+	+
Domestic credit growth	+	++	++	++	0
Labour market constraints	0	++	++	+	+
Capacity utilisation	+	++	+	+	+
Current account balance	+	0	—	++	—

NB: Of the aforementioned cyclically-advanced economies, Greece and Luxembourg are not analysed here. The indicators are based on the 2001 country-specific BEPGs, Commission 2001 spring forecasts (for 2001) and BIS data. The judgement on consumer price inflation, wage inflation and property price inflation is based on a comparison with the euro-area average. Labour market constraints are characterised as unemployment-below-NAIRU estimates. Capacity utilisation is compared to historical highs. The current account is assessed on the basis of deviation from balance.

Source: BIS and Commission services.

Some have experienced inflationary pressures, while prices were relatively stable in others. In some, asset (house) prices have risen sharply, but in others, asset prices have grown only modestly. The rise in property prices (notably commercial property) and the credit-to-GDP ratio can reveal risks to the financial sector. In the second half of the 1990s, credit growth has grown particularly rapidly in the countries that have also recorded unusual property price inflation, signalling risks of domestic overheating. Again, this cannot be considered conclusive evidence of overheating, as an acceleration of credit growth can be expected in fast growing countries and structural factors might explain rapidly increasing property prices ⁽¹⁾.

Because of this heterogeneity, general conclusions are hard to draw. Furthermore, the assessment of cyclical tensions is subject to significant uncertainties and difficulties. Measures of macroeconomic capacity (e.g. NAIRU, potential growth) are notoriously subject to uncertainty, and other indicators (e.g. asset prices, credit growth, wage and price inflation, and current account balances) lend themselves to ambiguous interpretation. Moreover, the macroeconomic dynamics of overheating economies are complex, as they are subject to various stabilising and destabilising forces.

⁽¹⁾ In Ireland, significant immigration flows have supported labour supply and subdued labour market pressures as the economy was booming. Due to the inelasticity of housing supply, this might have added to price pressures in the property market.

Assessing external balances

The external balance is the most obvious indicator to determine whether excessive demand is primarily externally or domestically caused. At first glance, a noteworthy surplus or deficit on the current account seems a good indicator to determine whether domestic (i.e. policy) or external (i.e. real exchange rate) macroeconomic adjustment is needed. There are however a number of reasons why a current account deficit can be in line with the economic fundamentals, especially in fast growing countries. Savings and investment might develop very differently due — for example — to a relatively slow ageing time path or higher profitability attracting investment. Thus, the welfare- or growth-optimal current account path may deviate considerably from balance. Inflation can therefore be the appropriate adjustment mechanism, even though it leads to a current account deficit at equilibrium output. Determining the appropriate dynamic external balance requires complex modelling. Even such complex models can only present indicative results.

Observing and analysing **changes** in the current account balances over time is an alternative or complement to assessing levels (see Graph 20). If a deterioration in the current account is in line with fundamentals, higher (or increased) profitability prospects in a Member State vis-à-vis others can be expected to induce additional capital formation. As long as the deterioration in the current account is matched by increasing investment, the deterioration may be mainly due to a competitive advantage.

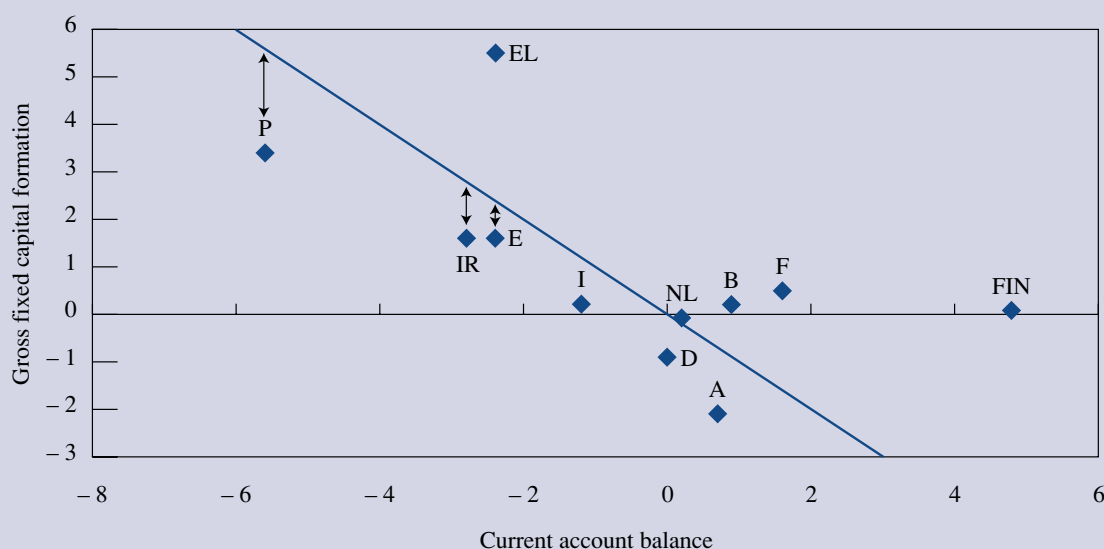
Countries that are in the upper-left quadrant of the graph and below the line (i.e. Portugal, Ireland, Spain) show some signs of domestically-induced overheating, according to this indicator. In these countries, the deterioration in the current account is not matched by an increase in investment.

Unfortunately, like most indicators of overheating, this indicator is subject to ambiguous interpretation. For instance, the **level** (this is not shown in the graph) of the Irish current account, does not seem to call for domestic policy action, as it is still balanced. The balanced current account might indicate that there is still scope for further appreciation of the real exchange rate, before it reaches some equilibrium level. Due to the advanced cyclical state and high level of potential growth, one might expect that a dynamic external equilibrium would imply a significant current account deficit. Portugal, and to a lesser extent Spain, do have both negative and deteriorating current account positions, possibly indicating a need for domestic policy action to reduce the risk of overheating. In Portugal both the level of the deficit (about 10% GDP) and the extent to which the deterioration is not matched by an increase in investment is alarming. The development of the current account

balances shows no signs of stress for the other countries in an advanced cyclical position (i.e. the Netherlands, Finland).

Although an assessment of the risk of overheating by analysing changes in the current account relative to investment can give additional insights, the results have to be regarded with caution. Taking account of the life-cycle hypothesis of consumption, a deterioration in the current account due to increased consumption can be welfare optimal and does not need to trigger policy action. The increased consumption demand can be based on expected higher income in the future due to increases in investment or rapid technological advances, notably catching-up effects. On the other hand, even if the deterioration in the current account is matched by increasing investment, it does not necessarily indicate that no policy action is necessary. If agents — in particular companies, investors and creditors — are to some extent myopic, the increases in investment might reflect misallocation and over-investment, eventually resulting in a bust. During such a period of over-investment and misallocation, inflation can be subdued due to productivity advances as a result of an increase in the capital-intensity above equilibrium.

Graph 20: Changes in investment versus changes in current account



NB: The graph shows the change in the current balances of the Member States between 1995 and 2000, versus the change in gross fixed capital formation. Symmetrical euro-area wide cyclical effects have been filtered out in the graph by adjusting for the euro zone average.

Source: Commission services.

Due to these ambiguous interpretations of current account developments, overheating signals need to be combined with other indicators to determine which policy strategy might be appropriate. Moreover, determining whether overheating stems from external or domestic demand is not sufficient to understand the causes of excessive demand. Excessive external demand can originate from domestic policy action. For example, lowering taxes can reduce unit costs and improve competitiveness, leading to increasing net exports. Similarly, excessive domestic demand can originate from external developments that have initiated internal dynamics (e.g. a financial cycle).

Causal indicators and overheating dynamics

Most existing analyses fall short of determining the causes of overheating. Finding the origins of overheating pressures, might contribute to determining which form of adjustment is necessary; a passive market-based approach or active policy intervention. What might cause significant imbalances in competitiveness in the euro area, requiring external demand adjustment by inflation? And what causes excessive domestic demand and financial cycles?

Improved competitiveness and external demand

When the external demand pressures arise from relatively low unit production costs of tradable goods relative to trading partners, external adjustment through the real exchange rate may be required. Lower unit production costs of tradable goods can be attributed to faster productivity growth (Balassa-Samuelson), nominal and real effective exchange rate effects (such as a low entry rate), and enhanced competitiveness due to tax cuts or wage moderation. The competitiveness vis-à-vis other euro-area Member States, results in upward demand pressures. If improved competitiveness leads to an undervaluation of the real exchange rate, output can increase above potential, implying labour market tightness, resulting in wage and price pressures, and an equilibrating (regarding competitiveness) increase in inflation. The size of the impact of the real exchange rate on demand is related to the openness of the economy. The effect of improved competitiveness on the current account is ambiguous, as investment opportunities within the country increase, while exports strengthen ⁽¹⁾.

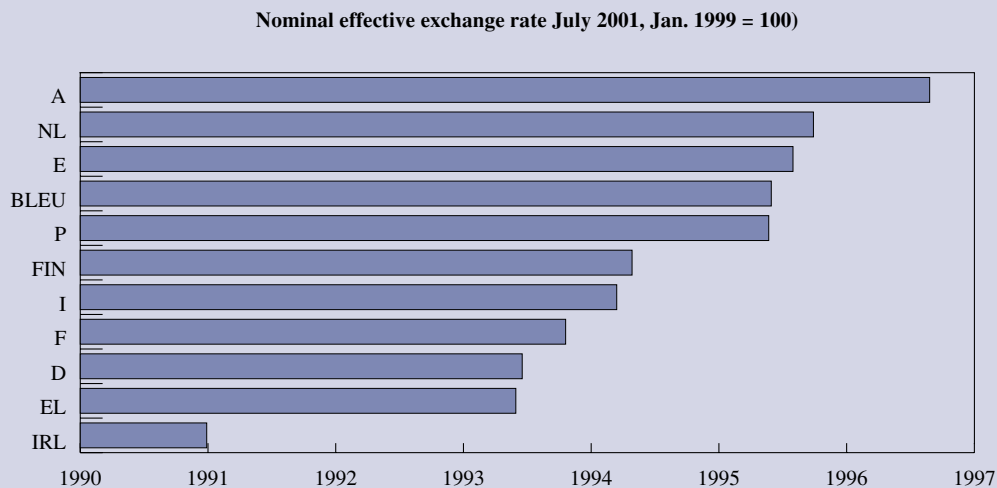
⁽¹⁾ If some large country characteristics were to be assumed for the tradable sector, a terms of trade effect stemming from the improved relative competitiveness could be another depressing factor for the current account.

The real exchange rate at which countries entered the third phase of EMU might not have fully reflected the competitive position of some Member States. Estimates of equilibrium real exchange rates are subject to great uncertainty; confidence intervals are usually very wide. Estimates of the deviation of the observed real effective exchange rate from equilibrium at the start of Stage 3 on 1 January 1999 show large differences between the economies that have been identified as cyclically advanced in late 2000. The Finnish real exchange rate was estimated to be the most undervalued, while the Portuguese was the most overvalued of all euro-area countries. The real exchange rates of Spain, Ireland and the Netherlands were slightly, but not significantly, undervalued vis-à-vis euro-area competitors ⁽²⁾. Thus, among the five analysed cyclically-advanced economies, only the Portuguese real exchange rate was overvalued at the start of Stage 3. However, conclusions can hardly be drawn considering the limited extent of undervaluation in most cases.

Related to this explanation of relative competitiveness differences, the continuing ascent of the pound and the US dollar versus the euro after the introduction of the euro changed the **nominal** effective exchange rates of the euro-area Member States and thereby their equilibrium real exchange rate to the euro. Graph 21 clearly shows how the exchange rate development of the euro has resulted in diverging paths for the nominal effective exchange rates of the Member States. In Ireland the euro depreciation has contributed to a greater extent to increased competitiveness than in other economies, as the nominal effective exchange rate has depreciated 3 to 4% more than the euro-area average. Following the basic theoretical reasoning, an increase in inflation (and thus a real appreciation), would counter the nominal effective depreciation and thus be the appropriate response to the increase in foreign demand in the case of Ireland. To leave the real effective exchange rates unaffected by the nominal effective euro depreciation, prices (or wages) in Ireland should have increased 3 to 4 percentage points more than the euro-area average, regardless of other factors that might have justified higher Irish inflation (e.g. Balassa-Samuelson, low entry

⁽²⁾ See Hansen and Röger (2000) for estimates of the observed and equilibrium real exchange rates of EU Member States, the United States, Japan and Canada, between 1980 and 2000.

Graph 21: Development of nominal effective exchange rates since the introduction of the euro



NB: The nominal effective exchange rates are shown to illustrate the scope for price and wage inflation that leave the real exchange rate at the 1999 level. The different developments of the nominal effective exchange rate are due to the differences in the share of exports to non-euro area countries (mainly US and UK). The influence on aggregate demand depends mostly on the openness of the economy.

Source: Commission services.

rate into EMU, enhanced competitiveness due to tax cuts or wage moderation).

However, if adjustment to the excessive external demand caused by the nominal effective depreciation were to take place through a strong increase in wage and price inflation (i.e. a real exchange rate appreciation), it would leave Ireland vulnerable to a sharp euro appreciation. The extent to which the exchange rate movements are cyclical and can be reversed in the short term is uncertain. Rather surprisingly, the nominal effective exchange rate effect has not played a role in the other countries that seem to suffer from overheating. Their nominal effective exchange rates have not depreciated more than the average of euro-area countries. It might indicate that these countries require a larger domestic demand adjustment, unless other factors have influenced their equilibrium real exchange rate.

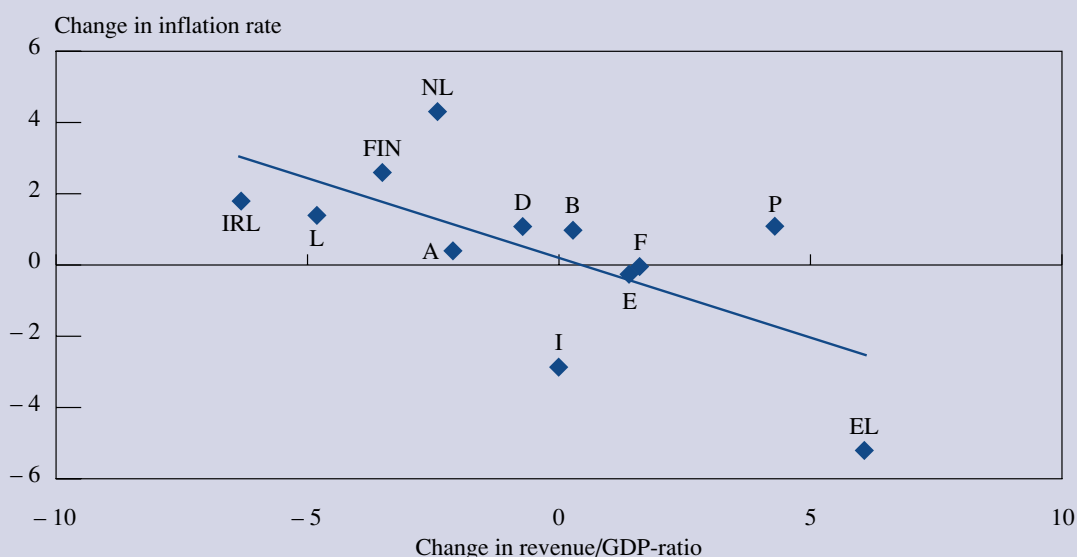
Competitiveness, and thus external demand, can be further shaped by tax and wage developments. Both changes in corporate and labour taxes lower unit costs and thus improve competitiveness, inducing pressures for a real appreciation to restore relative price competitiveness. Graph 22 shows a clear correlation between

changes in taxation (revenue-to-GDP ratio) and relative price developments ⁽¹⁾.

Real wage developments are reflected in real exchange rate developments. The wage moderation in both the Netherlands (since the early 1980s) and Ireland has contributed to a depreciation of the real exchange rate. The upward pressure on wages in recent years due to the tightening labour market contributes to an equilibrium adjustment. Lowering labour tax rates in exchange for continued wage moderation by trade unions is not likely to be sustainable in a stretched labour market. A reduction in labour tax rates may increase labour supply to some extent, but the continued wage moderation also improves competitiveness and further stimulates labour demand. Eventually wages will adjust to ensure a return to equilibrium on the labour market.

⁽¹⁾ Note that a causal relationship in this graph can go either way. The first possibility has been explained, namely that a declining tax burden improves competitiveness and allows or even initiates a real appreciation through inflation. Another possibility is that higher inflation increases nominal growth and improves budget balances, thereby allowing a declining tax burden.

Graph 22: Inflation versus revenue developments 1995–2000



Source: Commission services. Own calculations.

The policy mix and domestic demand

It is not easy to distinguish between domestic and external causes of excessive demand, as the effects may be similar and mutually reinforcing. The abovementioned causes of improved relative competitiveness can also directly contribute to increasing domestic demand. Increasing profitability induces additional investment. Obviously, domestic demand can also be affected through the secondary effects of increased foreign demand, such as employment growth, real wage rises, and growth expectations. Other sources of domestic overheating are more clearly attributable to the domestic side, such as loose monetary conditions or fiscal policy.

Monetary conditions in a single Member State can be inappropriate considering the cyclical conditions, as the single euro-area interest rate may not be in line with the individual needs. This effect can be further analysed using Taylor-rate estimates of the appropriate interest rates in the different individual Member States. Taylor-rate estimates, presented in Table 10, show that monetary policy has been rather appropriate for all large Member States. For the small cyclically-advanced Member States,

a significantly higher interest rate would have been more appropriate.

In some countries, interest rates needed to come down from high levels to converge to the core euro-area level in the run-up to the start of Stage 3 of EMU on 1 January 1999. Due to this monetary policy convergence, interest rates were brought down rapidly in Ireland, Spain and Portugal. Nominal short-term interest rates were brought down from 5 to 6% levels at the start of 1998 to 3% in January 1999. This monetary easing has significantly influenced GDP growth and inflation in 1999 and 2000. Breuss and Weber (2001) estimate the effects in the second year after easing at 0.4 to 0.8% of GDP per 100 basis points decrease. The highest values are found for Portugal and Ireland.

The effects of relatively low nominal interest rates for countries that face overheating are exacerbated by the — often — loose credit conditions in the economic boom. Moreover, increasing inflation rates lower real interest rates further as the extent of overheating increases, thereby providing a destabilising factor. Furthermore, secondary effects of the low interest rates and

Table 10

Required interest rate change relative to euro area

(Taylor rule; annual average)

	2000	2001
Germany	- 1/2	- 1/2
France	- 1/2	- 1/2
Austria	0	- 1/2
Belgium	1/2	0
Italy	0	0
Greece	*	1/2
Luxembourg	1	1/2
Spain	1	1/2
Portugal	1	1
Finland	1 1/2	1
Netherlands	1/2	1 1/2
Ireland	4	3

NB: By presenting the difference between the Taylor rate of the euro area as a whole and the individual Member States, the estimates are rather robust to changes in assumptions on the targeted inflation (in the range 0–2%) and the equilibrium real interest rate (range 2.5–3.5%), as these are levelled out in the comparison. Taking differences with the euro area Taylor rate also diminishes the importance of the lack of an exchange rate variable in the Taylor rule. Symmetric effects of nominal exchange rate developments do not influence the outcomes.

Source: Commission Services.

the financial cycle reinforce the macroeconomic cycle, most notably increasing asset prices.

As overheating sets in, the budgetary position often improves dramatically, as nominal growth exceeds expectations during some years. The political pressure to increase expenditure can mount, such that resisting a pro-cyclical budgetary policy proves to be difficult.

5.3. Difficulties surrounding the required policies

Considering the risks of overheating, an attentive mode by policymakers is essential vis-à-vis overheating and inflation divergence. Even if the theoretically required adjustment mechanism (i.e. active policy intervention or market based real exchange rate adjustment) could be determined despite the difficulties surrounding the different indicators, additional challenges arise when applying these in practice. Both external adjustment through inflation and internal adjustment through budgetary policy face severe pitfalls. This leaves policy measures to prevent pronounced overheating and diminish its risks, such as structural reforms aimed at increasing market flexibility and close monitoring and supervision of the financial sector.

Real exchange rate adjustment and inflation inertia

Adjustment of macroeconomic imbalances through inflation is delicate due to inflation inertia. The empirical importance of inflation inertia and persistence of price level divergence has been elaborated above. The risk of overshooting the equilibrium price level is significant. It is increased by a number of destabilising forces.

The higher inflation in a cyclically-advanced country implies lower real interest rates. If economic agents are to some extent myopic, investment opportunities in a period of overheating thus may seem more rosy than they are in reality. In general, producers tend to be myopic in assessing their profit prospects based on price developments and therefore may over-invest at low interest rates, underestimating a possible build-up of macroeconomic imbalances. The importance of this effect depends on the interest sensitivity of demand and the demand sensitivity of inflation ⁽¹⁾.

⁽¹⁾ If long-term interest rates are most important for demand and if the inflation and wage increases are expected to be temporary, while producers are not myopic, then there may be little effect, as main (long-term) real interest rates remain broadly constant.

Moreover, as asset prices are flexible compared to product prices, demand pressures and wage inflation together with low real interest rates and easy credit conditions may boost domestic asset prices — in particular housing prices — before feeding into product prices. This tends to boost demand by the wealth effect, further pushing up housing prices. So, although inflation might be the theoretically appropriate adjustment mechanism, if it is accompanied by a boom in the asset markets, it sows the seeds for a severe financial cycle. Such asset price inflation makes the return of inflation to the euro-area average at the right time a very delicate and uncertain process.

The overshooting of equilibrium relative price levels when there is real exchange rate adjustment can be costly in terms of lost growth. Therefore, even though external adjustment through inflation might be the theoretically optimal adjustment mechanism, the need for domestic policy action cannot be ruled out.

Disadvantages of discretionary policy adjustment

The disadvantages of using discretionary fiscal policy for economic stabilisation have been widely discussed in economic literature since the 1980s. The dominant view is at present that the expected costs are greater than the benefits. If both fiscal and monetary policy are available, the latter should be used for cyclical stabilisation and the former for structural purposes. But what if monetary policy is not available? A short recapitulation of the main pitfalls of discretionary fiscal policy might give some insights.

First, the time lag between the recognition of the need for action and the actual effect of policy measures on output and inflation can be large. This time lag is likely to be even larger than usual in the case of overheating. As mentioned before, it is difficult to assess the extent of overheating due to uncertainty about potential growth. Moreover, even if output is significantly above potential, policy measures are not necessarily required, if the overheating is externally induced. The appropriate remedy to overheating (inflation or fiscal policy) and its size, have to be determined on the basis of ambiguous indicators. Therefore, policy action to reduce the pace of economic growth is most likely to be very controversial and difficult to implement swiftly. As the current deterioration of economic prospects in the course of 2001 shows, the effect of policy measures targeted at reducing

economic growth may well set in at a time when they are actually pro-cyclical.

Second, the effectiveness of budgetary policy is limited, especially in small open economies, due to import leakage. The short run multipliers are small. On the revenue side usually between 0.1 and 0.2; on the expenditure side around 0.5 ⁽¹⁾. The effect on inflation is also very limited. A very large fiscal contraction is needed to get a significant effect on output.

Moreover, politically, a (large) fiscal contraction might be very difficult to push through, especially as needs for public provisions tend to increase when the economy is growing rapidly. Furthermore, the initial budgetary position when the economy is overheating is likely to be above the long-term requirements due to growth dividends. This might weaken the political case for tightening budgetary policies. However, a minimum requirement for budgetary policy of an economy that shows signs of overheating is the full working of automatic stabilisers and avoidance of pro-cyclical fiscal policy, thereby lessening the risk of further fuelling a potentially overheating economy.

All in all, discretionary fiscal policy adjustment is problematic. Although across-the-board discretionary fiscal policy should be avoided, the effectiveness of addressing the causes of overheating through targeting fiscal measures on microeconomic channels has to be further investigated ⁽²⁾.

⁽¹⁾ See European Commission (2001a). The estimate of short-run multipliers is strongly dependant on the choice of the model. The more traditional Keynesian models have significantly higher estimates than those which attach greater importance to rational expectations. The size of the multipliers also depends crucially on the composition of the budgetary contraction, the kind of expenditure and tax changes.

⁽²⁾ Examples of fiscal measures that affect the economy through micro-channels include: reducing the eligibility, duration or level of unemployment benefits, which will increase effective labour supply (justifiable by the tight labour market); similarly reducing the expenses on labour demand subsidies and other subsidised employment; or reducing subsidies (or tax exemptions) that fuel asset price inflation.

Alternative policy measures: structural efforts and prevention ⁽¹⁾

As policies to counter overheating are subject to numerous drawbacks, the importance of prevention and diminishing the risks is apparent. Considering that the main risks stem from sluggish price adjustment and financial sector vulnerability, prevention policies should aim to increase market flexibility and improve financial sector resilience to shocks.

Increasing flexibility

The merits of improving the functioning of labour, goods and capital markets and increasing flexibility are numerous. Diminishing the risk and costs of overheating by improving the capacity for economic adjustment is one of many, but it is a crucial factor in a monetary union as it facilitates real and price adjustments. The importance of structural reform to improve market adjustment has been stressed by the Cardiff II report: 'Structural reform, in conjunction with a sound macroeconomic policy, is also essential to the success of economic and monetary union; by improving the operation of markets, macroeconomic policy will not be left to bear the burden of market adjustment in the face of shocks alone.' (European Commission (1999a)). The fact that, in the theoretical case of perfectly flexible markets, stabilisation policy is actually irrelevant illustrates this point ⁽²⁾. For instance, increased labour market flexibility may assure that effective labour supply breathes with the economic situation, resulting in smaller swings in the unemployment rate and less severe cycles. Efficient wage formation processes also play an important role in the economic adjustment as wage development are a crucial element, both in the build-up phase and in the adjustment during the unwinding of macroeconomic imbalances.

Illustrative for the importance of flexible markets are the numerous examples of adjustment processes to regional asymmetric shocks and boom-bust cycles in US

states (e.g. California's Silicon Valley boom, Texas' oil cycles, New England's property crisis and the 1980s' Rust Belt's slump). The existence of regional boom-bust cycles cannot be excluded in monetary unions such as the United States and EMU, but the extent of the boom and the risks of the bust can be limited by market flexibility and financial integration. For instance, in the United States, regional wages and migration flows respond rapidly to shifts in regional unemployment, thereby influencing labour supply and demand, and stimulating a rather swift return of unemployment to equilibrium. By contrast, labour markets are much less flexible and migration is very limited in Europe, hampering adjustment ⁽³⁾.

Diminishing financial risks

The most significant risks and costs of overheating stem from the financial cycle that often accompanies it. In principle, supervisory, regulatory and targeted budgetary policies could be used to respond to the problems created by the financial cycle aspects of overheating. The extent to which the economies' sensitivity to financial cycles can be reduced by structural or discretionary changes in regulatory, supervisory or targeted fiscal instruments needs further investigation.

Rigorous financial sector supervision and realistic stress testing of capital adequacy in prolonged recession scenarios is a first requirement in economies that show signs of overheating. With regard to targeted discretionary financial policy changes to counter the build up of imbalances when the economy is overheating, the feasibility and desirability is closely related to that of general discretionary budgetary policy. Again, it depends on the policymakers' ability to identify (financial) imbalances and on the time lag until the measure takes effect. Policymakers' assessments of asset price misalignments and other financial imbalances might be even more uncertain than their assessment of the real economy. As asset prices are more flexible and no rigidities hinder adjustment to equilibrium, policymakers are unlikely to make consistently better judgements about the sustainability of current trends than are private institutions. On the other hand, the effectiveness and political feasibility might be greater than that of general discretionary budgetary policy.

⁽¹⁾ The issue of a European transfer union, a mechanism of cross-border income transfers in EMU, has been debated among academics as a means to cushion the importance of asymmetric shocks. Due to political impracticability in the near or medium term this option is not discussed in this analysis. It should be noted that, apart from political arguments, there are also practical and economic objections to an EMU-wide fiscal stabilisation mechanism.

⁽²⁾ See Beetsma, Debrun and Klaassen (2001).

⁽³⁾ See Fitzgerald et al. (2000).

Structural financial policy efforts may contribute more effectively to diminishing the risk of pronounced financial cycles. The EU's financial services action plan (European Commission (1999b)) summarises a large set of policy initiatives aimed at integrating national financial markets and improving the functioning of the EU financial system. It is to be implemented by the year 2005.

Increased financial integration in EMU diminishes the significance of the interactions between financial and macroeconomic cycles, that represent an important element in the dynamics of overheating and macroeconomic adjustment. Increasingly integrated European capital markets and internationally operating financial institutions decrease the influence of country-specific macroeconomic developments on the vulnerability of the financial sector. Although pro-cyclicality in the financial sector will remain a risk even after full integration of financial markets, financial risks due to asymmetric

conditions in individual Member States will be smoothed out ⁽¹⁾.

Furthermore, the pro-cyclicality of the capital requirements can be reduced. For instance, incentives to increase the ratio of actual versus required capital during periods of strong growth and diminish it during recessions could be strengthened. Additionally, provisioning rules for bank credit can be designed to act as a form of built-in stabiliser.

⁽¹⁾ Moreover, internationally spread equity holdings are a stabilising mechanism as well. They can provide for consumption smoothing as part of the personal income and wealth is insured against domestic slack. The outgoing dividend payments breathe with the economy, while the incoming dividends are rather constant if it is a local boom-bust. More importantly, wealth might not be affected. Although there is increased cross-border shareholding, the size of this adjustment mechanism is still likely to be rather moderate.

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Chapter 3

Determinants and benefits of investment
in the euro area

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1. Introduction

Investment is a crucial element of economic performance. It determines the structure and size of the capital stock and enables the penetration of new technologies in the economy, thereby affecting employment. Therefore, investment is key to the development of the economy's growth potential over the medium and longer term. Moreover, as one of the most volatile components of aggregate demand, it is an important source of short-run fluctuations in economic activity.

The lacklustre investment performance in the euro area during the 1990s is often considered a major factor behind the area's relatively poor economic growth and insufficient growth potential. This raises several related questions on the investment performance of the euro area in the 1990s, both in a historical perspective and in comparison to the United States. What accounts for the weakness of euro-area investment in the 1990s? And what

type of policy measures would create a more investment-friendly environment in the euro area?

Although many empirical studies on investment are available for the individual Member States, relatively limited research has thus far been devoted to investment issues for the euro area as a whole. This chapter elaborates on euro-area investment trends, its determinants and the policy options to improve the investment performance. Thereto, Section 2 sets the stage by assessing trends in gross fixed capital formation in the euro area over the past decade. Section 3 analyses macro- and micro-economic factors that may explain these trends. Section 4 provides insights regarding the effectiveness of possible policy measures to enhance the investment environment in the euro area, focusing mainly on structural policies. Conclusions are drawn in Section 5.

2. Investment in the euro area: some stylised facts

2.1. Investment trends in the euro area in the 1990s

A lacklustre overall investment performance

During most of the 1990s, the euro area posted a lacklustre investment performance. Gross fixed capital formation fell sharply in 1992–93 and was slow to recover after the recession. Between 1994 and 1997, real investment expanded at the same pace as GDP, with average annual growth at about 2%. Capital accumulation only began to post clear signs of a recovery at the end of 1997. However, the recovery proved short-lived, reaching its peak in the third quarter of 2000 after less than three years of existence. Investment growth has been slowing sharply since the end of 2000.

The investment recovery of the late 1990s appears subdued compared to the previous investment cycle. The expansion phase of the previous investment cycle began in 1986 and lasted five years. Peak growth rates for total investment reached or exceeded 7% in 1988–89. In contrast, the recovery of the late 1990s was both shorter and less pronounced, with annual growth rates not exceeding 5% between 1998 and 2000. Investment shares give a similar picture of a more muted recovery in the 1990s. The share of investment in GDP progressed

steadily between 1997 and 2000 but, in the latter year, the investment-to-GDP ratio was still below its peak of the late 1980s. Investment growth was unusually buoyant in the second half of the 1980s. This buoyancy reflected, at least partly, an anticipation effect of the completion of the single market.

Diverging underlying developments of investment components

Decomposing aggregate investment trends gives additional insights into the most important developments. The overall investment trend can be disaggregated into construction investment and equipment investment or, alternatively, into government investment and private investment (Graph 1). Decomposing these elements even further can help to understand the developments, as — for instance — ICT equipment was a main driver behind the growth in equipment investment in the second half of the 1990s. Below, and in the following sections, the main components of investment are discussed further.

The construction sector, representing more than half of total investment, has played an important role in the lacklustre investment performance of the euro area after the 1992–93 recession. Apart from a brief rebound in

Table 1

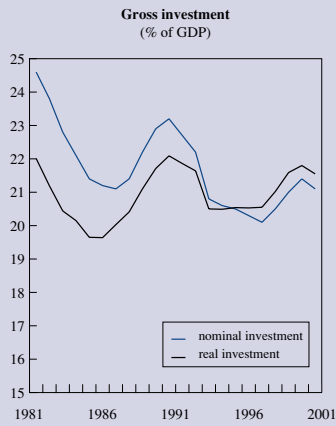
Gross investment (GFCF) in the euro area

(annual change in %)

	1991–95	1996	1997	1998	1999	2000	2001	1997–2001
Total investment	0.1	1.4	2.4	5.3	5.4	4.4	0.4	3.2
Equipment	– 0.8	4.5	5.5	9.6	7.4	7.3	1.3	6.2
Construction	0.9	– 1.0	– 0.4	1.5	3.8	1.7	– 0.6	1.2
— Housing	2.4	0.6	0.8	1.5	3.4	0.7	– 2.1	0.8
— Non-resid. cons.	– 0.6	– 2.7	– 1.7	1.6	4.2	2.7	1.0	1.6
Construction excl. Germany	– 1.2	0.4	0.4	3.5	5.5	4.6	2.4	3.3

Source: Commission services.

Graph 1: Trends in the investment in the euro area

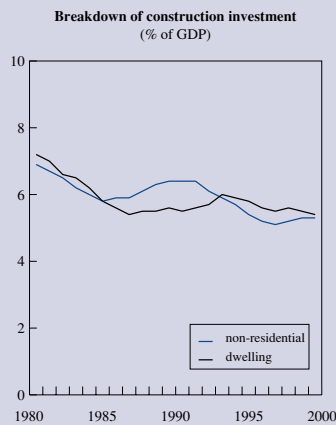


Source: Commission services.

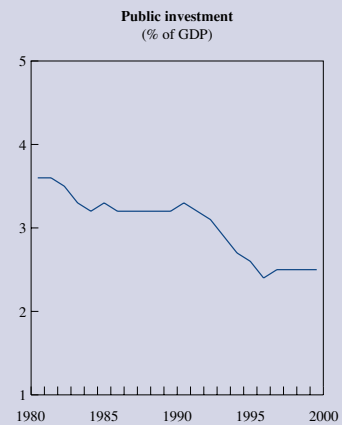


(¹) Including the other category — in that case equipment and construction add up to total investment. Both construction and equipment is excluding B.

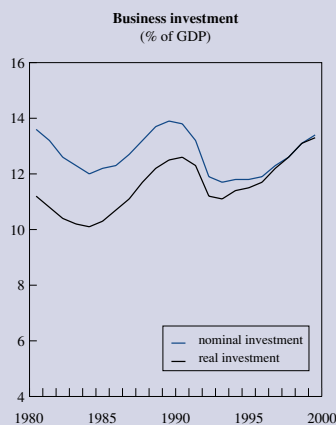
Source: Commission services.



Source: Commission services.

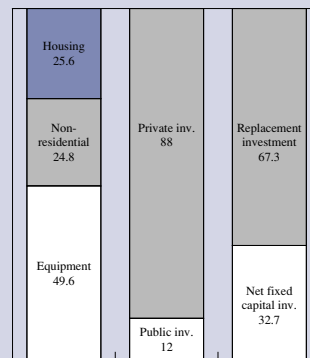


Source: Commission services.



Source: OECD.

Components of total investment in 2001, %



Source: Commission services.

1999, the construction sector suffered from stagnating or contracting activity during most of the second half of the 1990s. Some of this weakness reflects belated adjustments to the real estate boom of the late 1980s. More importantly, the persistent weakness of the construction investment in Germany sliced off nearly two percentage points of annual growth in euro-area construction over the 1995–2000 period ⁽¹⁾. The complement of construction investment, equipment investment, collapsed in the euro area during the 1992–93 recession. It experienced, however, an earlier recovery than total investment. Capital accumulation in equipment increased by more than 6% annually between 1995 and 2000.

An interesting difference between the upswings of the 1980s and the 1990s is the relative contribution of equipment and construction. In the 1980s, the investment recovery was backed both by a surge in equipment investment and by a construction boom, whereas the construction sector experienced only sluggish growth during most of the second half of the 1990s (Graph 2). In contrast, the expansion phases of the equipment investment cycles of the 1980s and 1990s appear pretty similar both in terms of duration and growth rates. Average growth rates were slightly slower during the expansion of the 1990s but, in 2000, real equipment investment was significantly higher as a share of GDP than at the peak of the previous investment cycle.

As business investment takes predominantly the form of equipment investment, its growth pattern is similar. Approximately, three quarters of total corporate investment spending is on equipment. So, business investment, which is the main component of private investment, saw a steep drop in 1992–93 followed by an early recovery in 1995 and sustained growth during most of the second half of the 1990s. Contrary to business investment, government investment did not register any rebound in the late 1990s. Its share in GDP declined continuously

⁽¹⁾ The lasting weakness of construction in Germany can, in part, be traced back to the reunification. Construction investment in the New Länder more than doubled between 1991 and 1994. The weakness of construction in the New Länder during the second half of the decade was the result of the progressive scaling back of public and business investment in construction. As a result, non-residential construction was more severely hit than residential construction, a development which was also visible at the euro-area level. However, in 2000, despite continuous contraction since the middle of the decade, construction investment in the region was still around 70% higher than in 1991.

between 1991 and 1998 and has remained nearly stable thereafter ⁽²⁾.

Investment spending can also be decomposed in replacement investment and net fixed capital formation. Replacement investment is by far the largest share, representing about two thirds of gross fixed capital formation, leaving little more than one third to net fixed capital formation, limiting the effect of investment on the capital stock. The impact of fluctuations in investment on the capital stock is further limited by the relative size of investment flows relative to the capital stock, with total gross fixed capital formation representing less than 10% of the capital stock during investment booms. As a result, changes in investment growth affect the capital stock only progressively.

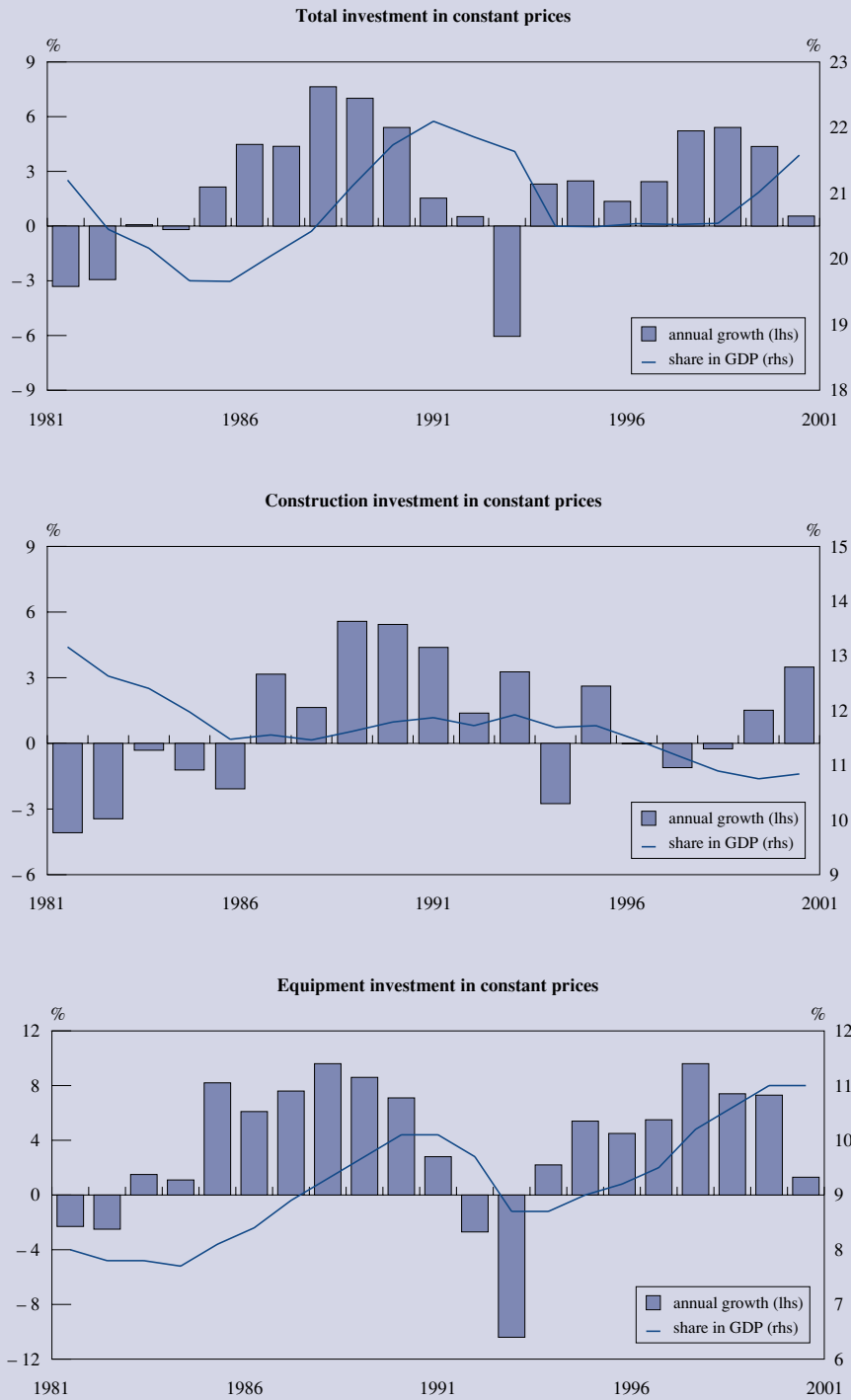
2.2. Different investment cycles in the euro area and the united states in the 1990s

In the 1990s, the contrast in investment growth between the euro area and the United States was particularly striking (Graph 3). Whereas total fixed capital formation expanded by less than 2% annually in the euro area over the decade, it rose by more than 6.5% in the United States. Investment growth clearly exceeded output growth in the United States, resulting in a rapidly increasing share of investment in GDP. In the euro area, the share of investment to GDP decreased or stagnated during most of the decade, edging up again only after 1997. Due to a less capital-intensive production, the US economy has traditionally posted a lower ratio of investment to GDP than its euro-area counterpart ⁽³⁾. Nevertheless, the surge in investment registered in the 1990s pulled

⁽²⁾ This apparent weakness of government investment should, however, be interpreted with caution. It is, to a considerable extent, a consequence of the consolidation of public finances in the euro area but it also reflects accounting problems linked to changes in the nature of public investment. Hence the privatisation of State-owned activities and the more direct involvement of the private sector in the provision of public services have resulted in the transfer of some investment from the public to the private sector.

⁽³⁾ Differences in the relative size of the capital stocks in the United States and the euro area are attributable to three interrelated factors: (1) differences in industrial structure, in particular, the higher weight of services in the US economy; (2) a higher capital-labour substitution in the euro area; and (3) a greater insertion of low-skilled workers in the United States.

Graph 2: Investment cycles, euro area



Source: Commission services. Both construction and equipment investment are excluding B.

the US ratio in real terms above the euro-area level for the first time in 1999.

Investment cycles in the 1990s were quite different in the euro area and the United States. Whereas the euro area experienced a belated and relatively moderate investment recovery, the US economy benefited from nine consecutive years of rapid growth in fixed capital formation between 1992 and 2000, by far the longest expansion period since the early 1960s. The strong investment performance of the 1990s was not just a by-product of robust growth in aggregate demand. A comparison with the growth and investment performance in the 1960s is illustrative to this respect, as US GDP grew slightly faster than during the 1990s while investment expanded at a much slower pace.

Turning to the components of investment, some of the difference in investment growth between the United States and the euro area can be attributed to the construction sector, which was characterised by continuous slack in the euro area. Both residential and non-residential construction fared much better in the United States than in the euro area during the second half of the 1990s. Nevertheless, growth differences between the United States and the euro area are more striking for equipment investment, as it accounts for most of the difference in total investment growth rates.

Annual growth in real spending on equipment investment climbed to double-digit levels between 1993 and 2000 in the United States, a much faster pace of expansion than at anytime in the past 30 years. This surge largely reflects a boom in spending on information and communication technologies (ICT). Based on national accounts data, US ICT investment has expanded at double-digit rates since 1992, with annual growth climbing to 25% during the second half of the 1990s. Double-digit growth rates were also registered in the 1970s and the 1980s but never over such a prolonged period of time. In nominal terms, ICT investment accounted for 42% of private fixed investment in non-residential equipment in 2000 in the United States, a substantial increase on the 32% registered at the end of the previous decade.

The euro area did not experience a boom in equipment investment of the same scale as the United States. Real spending on equipment grew at a healthy rate during the second half of the 1990s but the expansion was not more rapid than during similar upward phases of the business

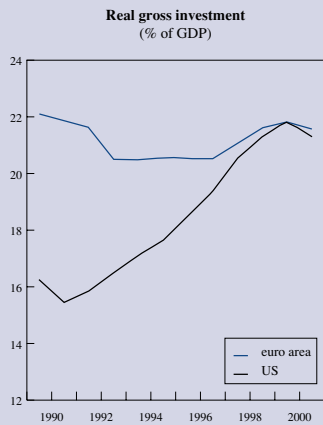
cycle in the past ⁽¹⁾. In terms of ICT investment, the euro area lags substantially behind the United States. Most European statistical institutes do not provide estimates of ICT-related fixed capital formation. However, estimates constructed by the Commission services show that ICT investment in the euro area was worth about 2% of GDP in 2000, against 2.5% for the United States. There were some signs of a pick-up in euro-area ICT spending at the end of the 1990s but it nevertheless has remained lower than in the United States.

With regard to the US business cycle in the 1990s, capital formation played a central role. On the demand side, investment accounted for a much larger share of growth in domestic demand than in the previous cycles. On the supply side, strong investment growth accounted for a substantial share of the acceleration of gains in labour productivity observed during the second half of the 1990s. Overall, the business cycle was largely investment and technology-driven in the United States in the 1990s, with massive spending in ICT accounting for much of the surge in capital formation. However important, ICT investment was not the only determinant of the US investment boom of the 1990s. ICT investment did not expand particularly rapidly, at least by historical standards, during the first half of the decade, a period which nevertheless registered faster growth in overall equipment spending than during comparable periods in the 1970s and the 1980s. Although ICT investment also contributed to growth in the euro area, the impact of technology on the business cycle was much more modest. National accounts data on ICT remain scarce in the euro area but slower growth in equipment investment indicates a more moderate path of development of ICT capital than in the United States.

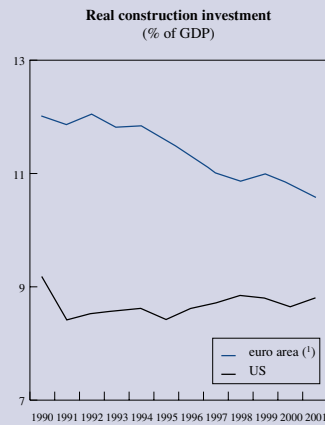
A direct consequence of the surge in equipment investment in the United States in the 1990s was an acceleration of the pace of depreciation reflecting the fact that equipment capital has a much shorter average lifetime than construction capital. This effect is very strong for ICT equipment. Given that the average lifetime of equipment is much shorter for ICT (around 5–6 years) than

⁽¹⁾ It is worth stressing that comparisons of investment performance between the United States and the euro area are fraught with statistical difficulties related to differences in the measurement of investment price deflators. Nevertheless, in-depth analysis shows that although the true difference in investment growth between the two regions is probably less wide than what is indicated by national account data, it cannot be reduced to a simple statistical artefact.

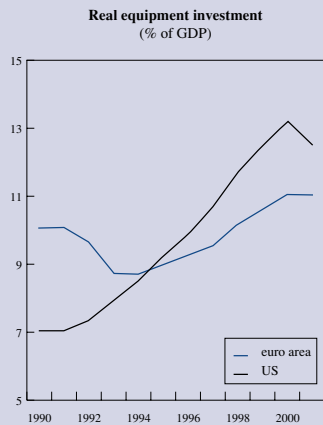
Graph 3: Comparison of investment: the euro area versus the US



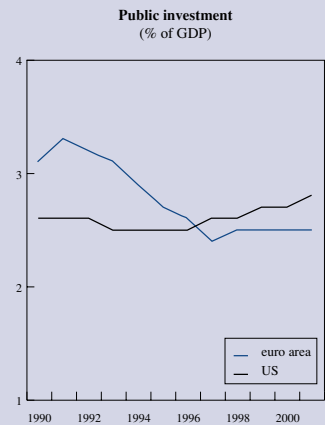
Source: Commission services.



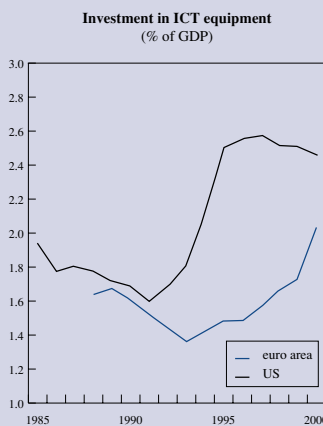
(¹) Euro area is excl. B.
Source: Commission services.



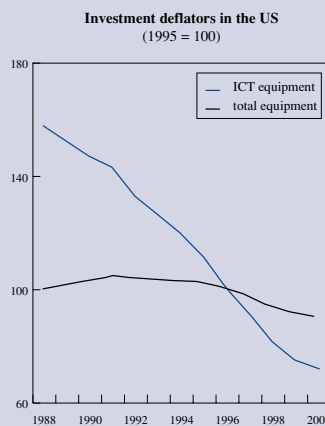
(*) Euro area is excl. B.
Source: Commission services.



Source: Commission services.

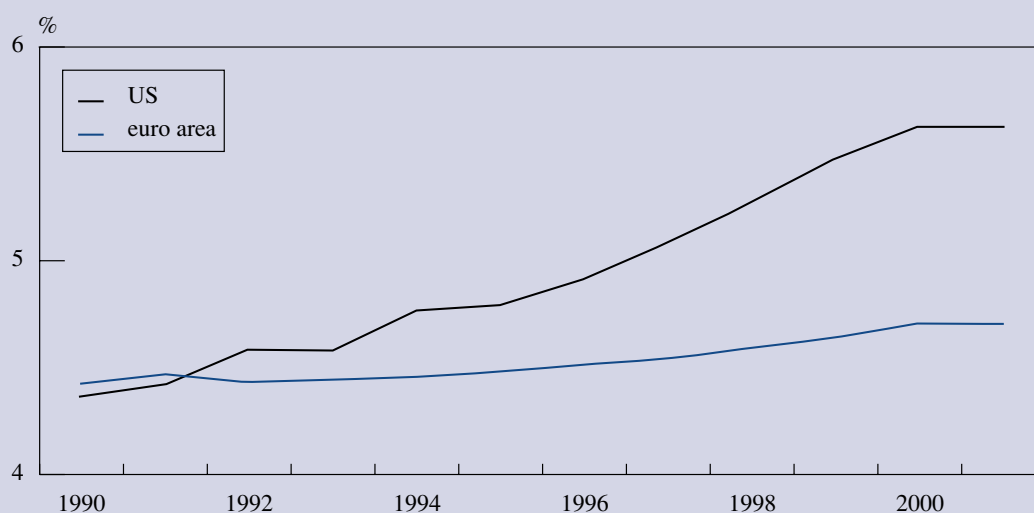


Source: Commission services and REEDS.



Source: Bureau of Economic Analysis.

Graph 4: Annual depreciation rate of total capital stock, euro area and US



Source: Commission services.

non-ICT equipment products (about 20 years), the rising penetration of ICT is lifting the depreciation rate of equipment capital. Such a trend has been particularly clear in the United States in the 1990s (Graph 4). Hence, back-of-the-envelope calculations suggest that the progressive rise of the depreciation rate due to ICT in the 1990s may have accounted for an increase in the ratio of investment to GDP of three percentage points in real terms in the United States ⁽¹⁾. The depreciation rate increased only slowly in the euro area. Given the share of replacement investment in total investment, changes in the depreciation rate may have a significant bearing on investment growth.

The impressive investment growth in the United States in the 1990s was not without its pitfalls. Part of this investment boom probably reflected the usual overestimation of the expected profitability of a new generation of capital, i.e. in this case ICT technology capital stock, in a

sustained expansion and therefore the US economy is now suffering from severe excess capacity. A sharp drop in investment is currently the main driver of the US downturn. Capacity utilisation in the manufacturing has been at or below historical average since the second half of 1998. There has also been a remarkable divergence between the developments in corporate profits and investment in the late 1990s. The economy of the euro area is not plagued by such structural overcapacity problems. Despite slowing GDP growth, capacity utilisation remains close to its long-term average. Contrary to the United States, gross fixed capital formation has not spearheaded the current downturn but has reacted with a lag to the weakening of activity.

2.3. Large outflows of foreign direct investment

A remarkable feature of the euro-area economy in the past few years has been a high level of net outflows of foreign direct investment (Graph 5). Both outflows of FDI from the euro area and inflows into the region increased significantly during the second half of the 1990s, but the former substantially outstripped the latter.

⁽¹⁾ The depreciation data presented here are based on national accounts sources. National statistical institutes may use different depreciation rules and differences between the euro area and the United States should therefore be interpreted with prudence.

Box 1: The measurement of investment in national accounts

Investment as analysed in this chapter corresponds to the national accounts' concept of gross fixed capital formation. According to European System of Accounts (ESA) definition, gross fixed capital formation consists essentially of resident producers' acquisitions less disposals of fixed assets. It also includes certain additions to the value of non-produced assets realised by the productive activity of producer or institutional units (e.g. natural assets, patents, purchased goodwill).

Until ESA 95, the concept of investment had traditionally been restricted to physical or tangible assets in national accounts. A major improvement brought by the ESA 95 standard introduced in the 1990s is the broadening of the coverage of fixed capital formation to encompass the acquisition of some forms of intangible assets. The main categories of fixed assets covered in ESA 95's definition of gross fixed capital formation are listed in the table below.

Despite some improvement, the treatment of intangible assets remains a major weakness of the measurement of

investment in national accounts. Software accounts for much of the spending on intangible assets currently considered as investment while other critical assets, such as research and development, education and training, market research and advertising continue to be counted, at best, as intermediate consumption. As a result, the share of intangible investment in fixed capital formation remains low, at about 10% in the euro area. Nevertheless, other statistical sources suggest that spending on R & D or education and training is nowadays much larger than spending on software. On some measures, the stock of intangible capital might even be larger than the stock of tangible capital in the United States (Mortensen 2000).

Another problem akin to the measurement of fixed capital formation is that international comparisons are sometimes difficult. In particular, there are significant differences between accounting practices in Europe and in the United States, both for the allocation of software spending between intermediate consumption and investment and for the measurement of investment deflators in the area of information technologies

Types of fixed assets covered in gross fixed capital formation

(ESA 95)

Tangible assets	Intangible assets
Dwellings	Mineral exploration
Other buildings and structures	Computer software and large databases
Machinery and equipment	Entertainment, literary or artistic originals
Cultivated assets (such as trees and livestock)	Other intangible fixed assets

Table 2

Euro area FDI outflows to the US by industrial sector

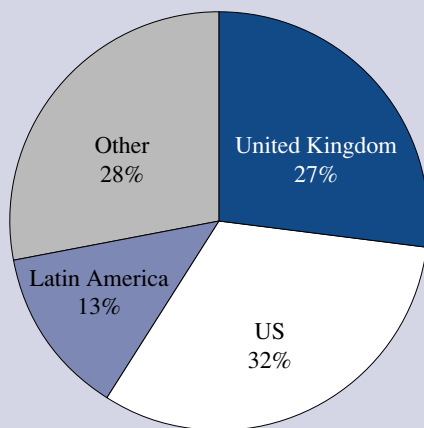
(in billion euro)

	1996	1997	1998	1999
Total	22.7	22.5	60.0	70.4
Manufacturing	8.9	3.9	37.1	18.5
of which transport and equipment	0.7	0.1	28.8	2.6
Electricity, gas and water	0.0	0.0	0.1	14.9
Financial intermediation	6.9	11.4	12.1	19.7
Real estate and business activities	2.9	6.3	6.2	8.0

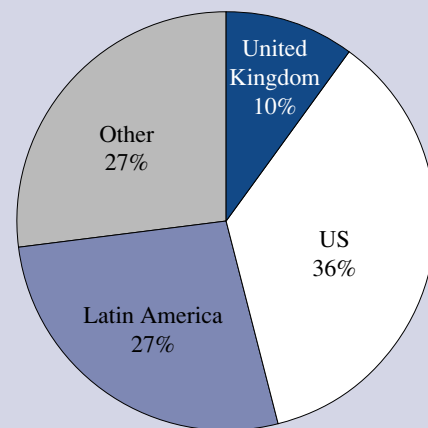
Source: Commission services.

Graph 5: Foreign direct investment (FDI)

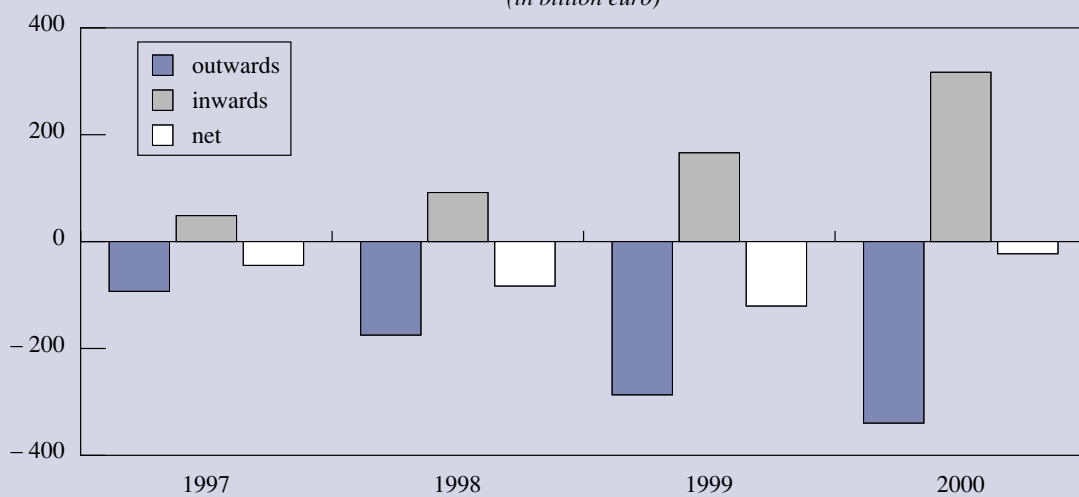
FDI outflows by destination, euro area
(average 1996–99)



Net FDI outflows by destination, euro area
(average 1996–99)



Foreign direct investment, euro area
(in billion euro)



Source: Commission services and ECB.

As a result, net FDI outflows from the euro area surged during the second half of the 1990s, averaging more than 1% of GDP between 1996 and 1999. These FDI data indicate that investment by companies based in the euro area actually recovered much more strongly during the second half of the 1990s than what is suggested by national accounts data on business investment.

Large net FDI outflows may indicate that foreign investors perceive the long-run profitability of investment to be relatively low in the euro area compared to other regions. In this context, the contrast with the USA is particularly sharp. Net FDI inflows financed 30% of the US current account deficit in 2000, pointing a priori to large differences in expected returns on real long-term investments in the United States and the euro area. Still, some prudence is required on the interpretation of the FDI developments. First, the euro area also benefited from a significant increase in FDI inflows during the second half of the 1990s, a fact which does not tally with a decline of the region's attractiveness to foreign capital. Second, in the late 1990s, FDI between industrialised countries took predominantly the form of mergers and acquisitions rather than green-field investment. As a result, FDI flows were strongly affected by a small number of large M & A operations, themselves reflecting global strategies of multinational corporations in a limited number of industrial sectors as much as regional

differences in expected profitability. Furthermore, countries with comparatively large equity markets benefited from a strong advantage in attracting M & A and therefore FDI. In this context, the United States was much better positioned than the euro area.

The analysis of geographical and sectoral data confirms that the surge in net FDI flows in recent years was largely driven by specific strategies of multinational corporations in a limited number of sectors and geographical areas. These strategies had probably more to do with the need to acquire assets and to expand globally than with differences in expected profitability. The US economy was an important beneficiary of euro-area foreign investment during the second half of the 1990s but only in a small number of sectors. The increase in euro-area FDI outflows to the United States essentially reflected large M & A operations in the automotive equipment and utility sectors, combined with a steady increase of investment in financial and business services. In addition to the United States, Latin America and the UK also accounted for substantial shares of the rise in net FDI outflows from the euro area during the second half of the 1990s. Privatisation and the relaxation of regulations on foreign ownership boosted inward investment into Latin America. Large M & A operations in the telecom sector explain the sharp fluctuations in euro-area FDI with the UK in 1999 and 2000.

3. Determinants of investment in the euro area

The overview of investment trends has illustrated the relatively poor performance of the euro area over most of the past decade, especially in comparison to the United States. The relatively slow pace of additional capital formation influences potential economic growth rates, in particular through future productivity growth. In this context the development of equipment investment is most important. Before assessing policy options to enhance the economic environment for investment, an analysis of the determinants of investment is required.

Theoretical models generally point to aggregate demand, capital costs and profitability as main determinants of investment. However, the empirical literature reveals that underpinning the theoretical models with empirical support frequently encounters difficulties. Moreover, these traditional macroeconomic variables seem to have little explanatory power for the different investment performance in the euro area and the United States in the 1990s. Other factors seem to have played a role in these diverging developments. In order to shed some light on the driving forces behind investment expenditure, this section not only investigates the conventional macroeconomic determinants, but also reviews and assesses the underlying structural or microeconomic variables.

3.1. Macroeconomic determinants

Theoretical models

The most straightforward macroeconomic model of investment is known as ‘the accelerator model’. It simply postulates a relationship between investment and changes in output. As its theoretical foundation is rather poor, other models have been developed since the 1960s with a more solid microeconomic basis. The conventional assumption of the microeconomic foundation is that firms only invest if the expected **net present value** of an investment project is positive. Thus, before an

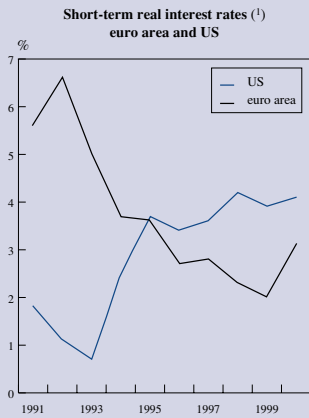
investment project is undertaken, an assessment is made of the expected future revenues that this project would generate and this is compared to its costs. This indicates that factors that influence the expected costs and profitability of investment are crucial determinants.

The **neo-classical investment models** start from this basic assumption, translating the firm-level microeconomic elements to macroeconomic proxies. Economic theory points to three main macroeconomic factors for investment: aggregate demand, cost of capital and profitability. To incorporate the forward-looking nature of investment decisions, expectations are introduced, thereby creating dynamics in the models ⁽¹⁾. Tobin’s Q models, using stock market valuations as a proxy for profitability expectations are most commonly used to this extent.

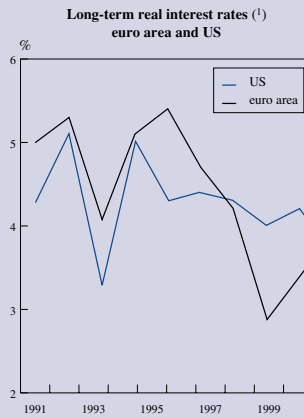
To model market imperfections, such as taxation and imperfect capital markets, extensions have been added to the basic neo-classical model. In practice, not all firms may have access to external finance. This liquidity constraint means that new investment expenditure may have to be financed out of current profits. Therefore, the role of current after-tax profits as a determinant of investment can be much more important as it is a source of internal finance and not only an indicator of expected future profits. Other extensions have been added to take account of adjustment costs, planning and time-to-build lags, irreversibility and uncertainty. These imply lumpiness of investment, leading to thresholds and non-linearities in the relationship between investment and Q, affecting overall investment developments.

⁽¹⁾ The basic **neo-classical model of investment** was introduced by Jorgensen (1963, 1971). For a Tobin’s Q-model, see Hayashi (1982). For other extensions of the basic model, see for example Bertola and Caballero (1990), Abel and Eberly (1994), Dixit and Pin-dyck (1994).

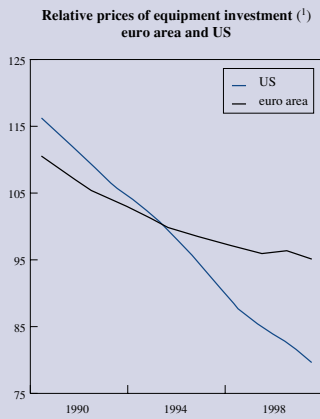
Graph 6: Cost of capital in the euro area and the USA



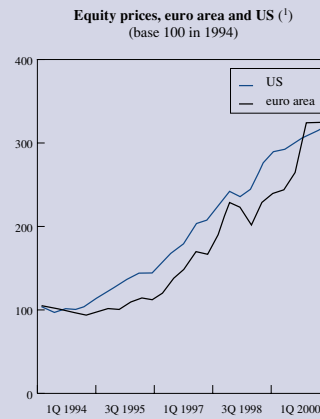
(¹) Inflation based on GDP deflator.
Source: Commission services.



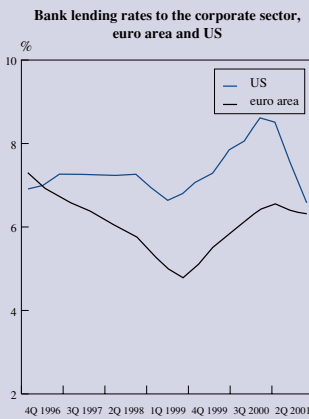
(¹) Inflation based on GDP deflator.
Source: Commission services.



(¹) Deflator of equipment investment divided by GDP deflator — base 100 in 1995.
Source: Commission services.



(¹) Dow Jones broad EURO STOXX index for the euro area and S & P 500 for the US.
Source: ECB.



NB: Loans over 1 year.
Source: ECB and Federal Reserve Board.



Source: Merrill Lynch, Lehman Brothers.

A glance at the main macroeconomic determinants

Consecutively, the three main macroeconomic determinants, aggregate demand, cost of capital and profitability will be assessed separately (Graphs 6 and 7). Thereafter, the explanatory power of the variables will be assessed more formally on the basis of regressions using panel data.

Firstly, concerning aggregate demand, the United States fared much better than the euro area in 1991–2000 with an average real growth of 3.3% against 2.0% for the euro area. However, although the development of demand growth does explain part of the difference in investment growth rates, it does not provide an explanation for the diverging trends in the share of investment to GDP.

Secondly, the cost of capital decreased significantly both in the United States and the euro area during the second half of the 1990s. As explained in Box 2, the cost of capital can be decomposed into different constituents, of which borrowing costs, the relative price deflator of investment and share prices are the most important. Yields on long- and short-term bonds are indicators of the borrowing costs. On average over the 1990s, yields on long-term government bonds were comparable in the euro area and the United States. Real short-term rates were much higher in the euro area during the first half of the 1990s but lower during the second half of the decade. More adequate indicators of true borrowing costs for the corporate sector are bank lending conditions and corporate bond interest rates. Data on corporate bonds and bank lending rates in the euro area unfortunately limited. However, information available since 1999 does not point to conspicuous differences between the euro area and the United States in terms of yields on corporate bonds. In addition, differences in terms of bank lending rates between the two regions have not been extremely large in the past few years ⁽¹⁾. Given the data limitations mentioned above, any comparison between the euro area and the United States over a longer period of time can only be made via the above mentioned standard macroeconomic interest rates such as money market and government bond rates ⁽²⁾.

The second component of the cost of capital, the price deflator of investment, shows distinctly more favourable developments in the United States in the 1990s, as the downward trend was significantly more pronounced than in the euro area, especially for equipment goods and in particular ICT investment goods ⁽³⁾. This is a crucial development insofar as the increasing penetration of ICT seems to have reinforced the link between investment spending and the capital cost (Box 3). Finally, equity prices, the third component of the cost of capital, have evolved in a fairly comparable way in the euro area and the United States over the past decade.

The third main macroeconomic determinant, profitability, provides only limited additional explanation for the US/euro-area divergences (Graph 7). The US economy has traditionally enjoyed a higher rate of return on capital than the euro area. The gap widened somewhat during the first half of the 1990s but has been narrowing since 1998. It is therefore difficult to attribute the superior investment performance in the United States during the 1990s to observed profitability developments. However, expected profitability may have been different from observed profitability. Differences in FDI flows between the United States and the euro area may, to some extent, reflect differences in long-term profit expectations in the two regions. This difference in expected profitability is backed by recent calculations made by the IMF ⁽⁴⁾. On the basis of existing price-earning ratios, the IMF has evaluated the profit forecasts embedded in equity prices in Europe and in the United States. The calculations point to more optimistic profit expectations in the United States than in Europe for the non-technology sector in March 2000. The fall in stock prices which took place after March 2000 seems only to have widened the difference. In contrast, profit expectations in the technology sector were similar in the two regions both at the stock market's peak and in 2001. Similar calculations also show a widening gap in terms of profit expectations for all sectors (technology and non-technology) between the United States and the euro area over the 1995–2000 period.

Overall, a first assessment of traditional macroeconomic variables gives little insights that can explain the different

⁽¹⁾ Note, however, that bank lending rates in the euro area and the United States are not fully comparable.

⁽²⁾ In this context, note that, in the euro area, bank lending rates to enterprises for over one year are closely linked to a combination of money market interest rates and yields on long-term government bonds.

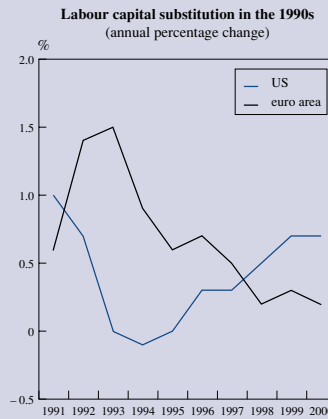
⁽³⁾ Some of this price gap may be attributed to different accounting practices in the United States and the euro area with a more systematic use of hedonic pricing in the former country. Nevertheless, the gap cannot be reduced to accounting problems.

⁽⁴⁾ See IMF (2001).

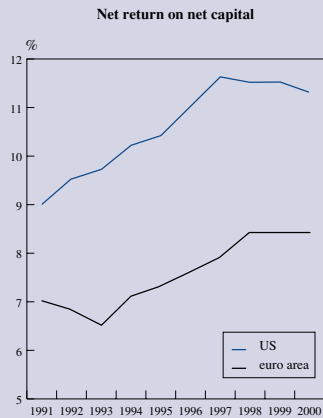
Graph 7: Trends in profitability in the euro area and the US



Source: Commission services.



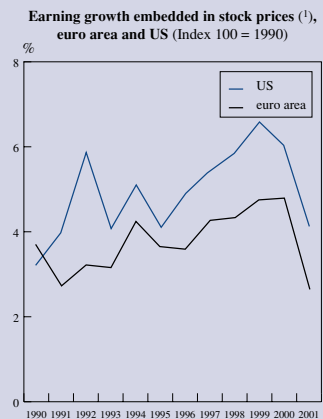
Source: Commission services.



Source: Commission services.



Source: Commission services.



(1) Expected constant earning growth on the basis of existing price earning ratios and interest rates.
Source: Commission services.

Profit expectations embedded in stock prices

	Technology sector		Non-technology sector	
	Price-earning ratio	Implied real earning growth	Price earning ratio	Implied real earning growth
United States				
— March 2000	51.3	7.7	21.0	4.9
— April 2001	25.4	4.4	21.8	3.7
Europe				
— March 2000	74.2	7.9	19.3	4.0
— April 2001	29.5	4.4	16.5	1.8

Source: IMF (2001).

Box 2: The cost of capital

The cost of capital constitutes one of the building blocks of the neo-classical theory of investment pioneered by Jorgenson (1963) and Hall and Jorgenson (1967). In the standard cost minimising model, the firm determines the optimal level of capital and labour necessary to achieve a given amount of output for a given set of factor prices. In this setting, the cost of capital, also sometimes referred to as the user cost of capital, is the total cost associated with the ownership and usage of one unit of capital. In its simplest form, the cost of capital covers three types of elements:

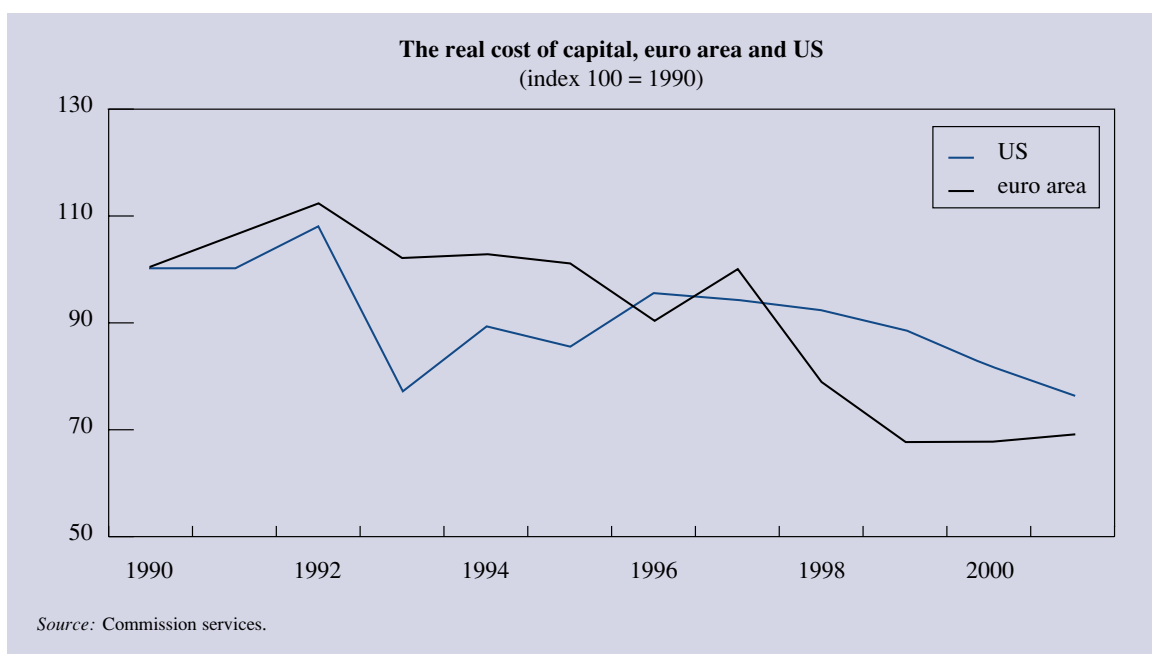
- the financial costs associated with the ownership of the capital stock;
- the losses due to the physical depreciation of the capital stock; and
- the changes in the price of the capital (a drop of the price is an additional cost to the owner insofar as it lowers the revenues from the sale of the capital stock).

Assuming that financial costs can be proxied by long-term interest rates, the cost of capital may be expressed as:

$$C_K = P_1 \times (R - d\log(P_1^e) + \delta) / PGDP$$

C_K : real cost of capital
 R: nominal long-term interest rate
 P_1 : investment price deflator
 $d\log(P_1^e)$: expected changes in the investment price deflator
 δ : depreciation rate of capital
 PGDP: GDP deflator

The graph below illustrates the development in the real cost of capital in the euro area and the United States with the further simplification that expected and actual changes in the investment price deflator are identical. In both the euro area and the United States, the cost of capital decreased sharply during the second half of the 1990s. Looking at the contribution of the various components, the decline was essentially driven by falling interest rates in the euro area. In the United States, it was more or less equally attributable to declining relative investment prices and real interest rates.



The above formula for the cost of capital is designed to be applicable to standard macroeconomic data. Nonetheless, it suffers from two major limitations. Firstly, it ignores that financial costs should reflect the cost of equity capital

as well as borrowing costs. In this context, higher equity prices have a positive impact on the cost of capital. Secondly, it does not take taxation into account. In general, a decrease in taxes reduces the cost of capital.

Box 3: Increasing ICT investment and the capital cost

The increasing importance of ICT investment has a number of implications for total private investment demand, including a potentially higher sensitivity to capital cost or stock market fluctuations.

There is now a broad consensus that rapidly decreasing prices in the USA have been a key driver of demand for ICT equipment in the United States. ICT equipment prices declined by close to 9% annually between 1995 and 1999 compared with 2.5% for the deflator of equipment investment. Investment prices as measured by the deflator of equipment have decreased much less in the euro area than in the United States. This seems partly attributable to the use of different statistical methodologies. Nevertheless, the observed difference between euro-area and US prices cannot entirely be explained by accounting practices and probably also reflects a less steep decline of ICT prices in the euro area.

Although the impact of capital cost on investment is notoriously difficult to identify empirically, the importance of prices in the determination of ICT investment in the United States is backed by a study by Terlin and Whelan (2000). It suggests that ICT investment is more sensitive to price changes than non-ICT equipment investment. Real demand for equipment investment is modelled by breaking it down into two sub-components, computing and non-computing equipment. Each component is estimated separately. While spending in non-computing equipment is found to be mainly explained by fluctuations in GDP (the standard accelerator model), spending in computing equipment is found to be quite sensitive to the capital cost. The overall surge in spending in equipment in the 1990s therefore owes much to the rapid decline of computer prices.

Terlin and Whelan also offer a possible theoretical explanation for these observed differences in the responsiveness

to prices. If the investment process is characterised by adjustment costs and uncertainty, the effect of changes in capital cost will depend on their perceived persistence. A decrease in capital cost will affect investment more substantially if it is perceived to be persistent rather than transitory. Given that technological change is driving the decline in ICT prices and ICT capital costs and given that technological change is generally unlikely to be reversed, drops in ICT capital costs may be considered as permanent. In contrast, changes in non-ICT equipment costs are largely determined by changes in interest rates which can be considered as more transitory. Moreover, the increasing importance of ICT is making the capital stock less subject to adjustment costs and delivery lags, thereby allowing it to respond more rapidly to changes in capital costs or other determinants. Such a trend may have important consequences for business cycle fluctuations.

On top of a higher sensitivity to capital cost, increasing penetration of ICT may also have modified the transmission mechanism between stock markets and investment. Using a VAR approach, Edison and Sløk (2001) conclude that private investment is more sensitive to changes in 'new-economy' than 'old-economy' stock market capitalisation. This difference is particularly large in countries such as Germany and France where old-economy stock market capitalisation has virtually no effect on private investment according to this specific model. It can be explained by differences in investment financing, with a more significant reliance on the stock market in the new-economy sector. Given the comparatively smaller size of the new economy as a producing sector, the impact of 'new-economy' stock market wealth remains smaller in the euro area than in the United States. Nevertheless, a rising share of the new economy in euro-area's output should enhance the sensitivity of private investment to stock market fluctuations even in the euro area.

developments in euro area and the United States in the 1990s. The relative price of investment goods is the main exception. Moreover, expectations might have played a role.

A country panel approach to macroeconomic determinants

As a simple and direct test of the relative importance of macroeconomic variables explaining equipment investment expenditure, an investment equation with as

explanatory variables profitability, relative investment prices and real interest rates, was estimated. Empirical analyses based on a sound theoretical footing, such as the (extended) neo-classical models, have long been largely unsuccessful at finding significant estimates for the responsiveness of investment to the cost of capital (here proxied by relative investment prices and real interest rates). Pitfalls, such as among others, simultaneity, capital market frictions and firm heterogeneity, seriously biased estimates based on traditional macroeconomic data. Since the 1990s, a number of new approaches

have been proved more successful. The first change in approach that enabled finding a significant role for the cost of capital and overcome the econometric measurement problems, shifted the emphasis from aggregate to microeconomic data or focused on 'natural experiments', such as tax reforms ⁽¹⁾. A second option to overcome the pitfalls is the use of country panel data.

This latter approach has been applied here. The focus is on equipment investment. A panel of data is formed consisting of annual data for 16 countries ⁽²⁾ for the period 1970 to 2000. To allow for country differences in the investment levels, fixed effects estimators are used. The dependent variable is the equipment investment to output ratio, while profitability, relative prices and real interest rates are included in the explanatory variables. This type of specification follows from the firm's investment rule in the q model of investment. In theory, the current and expected value of profitability, real interest rates and relative prices determine current investment. Assuming that expectations can be modelled as univariate autoregressive processes, then expectations, conditional on a current information set which includes current and lagged realisations of these variables, can be written as functions of current and lagged variables.

$$\frac{I_t}{Y_t} = a_1 PR_t + a_2 r_t + a_3 PIP_t$$

The investment to output ratio is a function of profits, the real interest rate and the relative price of investment goods ⁽³⁾. The profit rate PR is defined as the ratio between the gross operating surplus adjusted for taxes and the total capital stock ⁽⁴⁾. The relative price of investment goods PIP is the ratio of the deflator in investment

in equipment relative to the GDP deflator and the real interest rate equals the nominal rate minus inflation as measured by the GDP deflator.

The sign of the coefficients a_i is straightforward. An increase in profitability induces firms to increase capital accumulation thus a_1 is positive. Since an increase in the real interest rate r increases capital costs a_2 will be negative. The sign of the relative price of investment goods a_3 is also negative in this model, as in conventional neo-classical investment equations.

Table 4 gives the estimation results for this panel estimation with fixed effects. As expected, the results indicate that investment is positively affected by higher profits and a fall in relative investment prices and negatively by higher real interest rates and higher taxes (column 1). A sustained increase in profitability rates by 1 percentage point would increase the investment in equipment share in GDP by 0.10 to 0.15 of a percentage point. Conversely, a similar change in relative investment prices or real interest rates would decrease the equipment share by about 0.05 of a percentage point. A correction for inflation in investment goods was added to the real interest rate variable, but this term proved insignificant. When instead of short rates, long-term interest rates were used, the coefficient became larger with a similar significance level, while the effect of profitability became smaller (column 2).

These traditional explanatory variables included in the regression appear to explain investment behaviour relatively well. Profitability, as measured by the operating surplus corrected for taxes, relative investment prices and the real interest rate seem to be the most important determinants of investment.

However, an analysis of the residuals shows that the panel regression underestimates United States investment in the second half of the 1990s. This indicates that other unexplained factors may have played a role in the United States. It confirms the evidence of the partial analysis in the previous section. The behaviour of the main macroeconomic variables does not explain the different developments in euro area and the United States in the past decade.

Whereas differences in macroeconomic developments cannot explain the different investment behaviour in the United States and the euro area, structural differences in sensitivity of investment to similar macroeconomic developments can still be at the origin of the divergence. The panel estimation described above can be extended to test whether there exists differences in the elasticities

⁽¹⁾ See e.g. Caballero (1994) for the microeconomic data approach and Cummins, Hassett and Hubbard (1996) for a focus on 'natural experiments', such as tax reforms.

⁽²⁾ The panel consists of each of the EU Member States (except Luxembourg), Japan and the United States.

⁽³⁾ Theoretically, the correct specification would have the investment to capital ratio as a dependent variable. However, at the time of writing we have not been able to obtain a reliable series for the capital stock of equipment investment, and we therefore used the ratio of equipment investment to GDP here. We do not think our conclusions will be altered when capital is used as a scaling variable, as panel regressions using total investment as the ratio of the total capital stock gave very similar results.

⁽⁴⁾ Note that, the major explanatory variable in the model is expected **future** profitability, while these regressions use current profitability under the assumption that expectations can be modelled as autoregressive processes.

Table 4

Estimation results of investment equation
Dependent variable: ratio of equipment investment to GDP (I/Y)

Variable	(1) with short-term interest rates	(2) with long-term interest rates
Pr: Profits	0.140 (**) (0.059)	0.116 (**) (0.056)
PIP: Relative price of investment goods	- 0.048 (**) (0.005)	- 0.051 (**) (0.005)
R: Short-term real interest rates	- 0.043 (**) (0.015)	-
RL: Long-term real interest rates	-	- 0.084 (**) (0.018)
<i>R-squared</i>	0.34	0.35
<i>Sample size</i>	403	403

NB: Panel estimation with fixed country effects, period 1970–99. Panels (1) and (2): EU-15, Japan and USA.

(*) and (**) indicate significance at the 10 and 5% level respectively. Newey-West corrected standard errors in brackets.

Source: Commission services.

and sensitivity of investment in the United States relative to elsewhere. Extending the above analysis, by adding additional dummies to see whether the coefficients in the investment equation are different for the United States, can test this hypothesis.

If the response of investment to, say, profitability was stronger in the United States than in other countries, one would expect a US dummy-coefficient to be positive and significant. However, when this panel approach is applied, the results are inconclusive, not only because no variable is significant, but also because the coefficient for certain variables, such as profitability, appears to have the wrong sign. A smaller panel, consisting of only the euro area and the United States, does not improve the results.

It is worth stressing the limitations of the used approach. Regressions of this type ignore the role of expectations in the determination of investment, by focusing on current profitability, rather than expected future profitability. This assumption of adaptive expectations is most likely to be the source of the underestimation of US investment in these regressions.

3.2. Microeconomic and structural determinants

The role of financial, labour and product markets

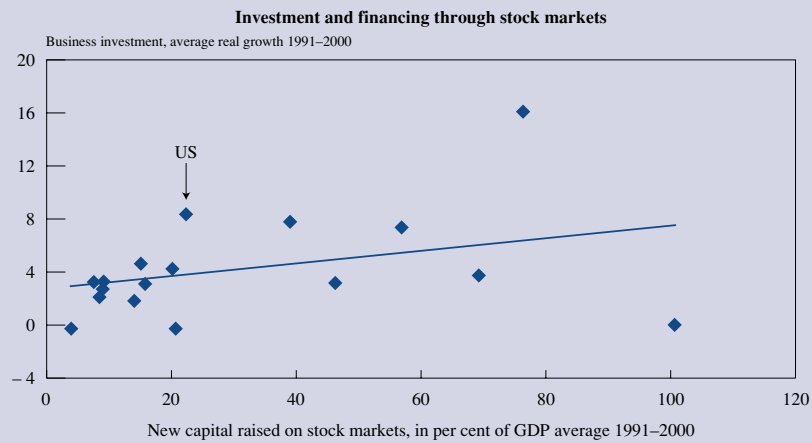
Structural rigidities seem to be at the origin of the rather poor performance of investment growth in the euro area

in the wake of the rapid developments in the ICT sector in the 1990s. Among those structural differences that can potentially explain the discrepancy in the investment performance between the euro area and the United States, financial development assumes a key role. In particular, stock market variables feature a positive relationship with investment growth in cross-country comparisons (Graph 8). Similar linkages exist for indicators of stock market size, liquidity and prices. Evidence in favour of the latter is not surprising as firms invest to increase profits and shareholders re-assess the value of firms according to changes in expected future profits. However, the United States did not outperform the euro area in terms of stock price increases in the 1990s, whereas it is endowed with the most liquid stock market. The available evidence so far suggests that stock markets as a source of financing are particularly important for enterprises in the ICT sector, which have been a main driver of investment growth in the United States.

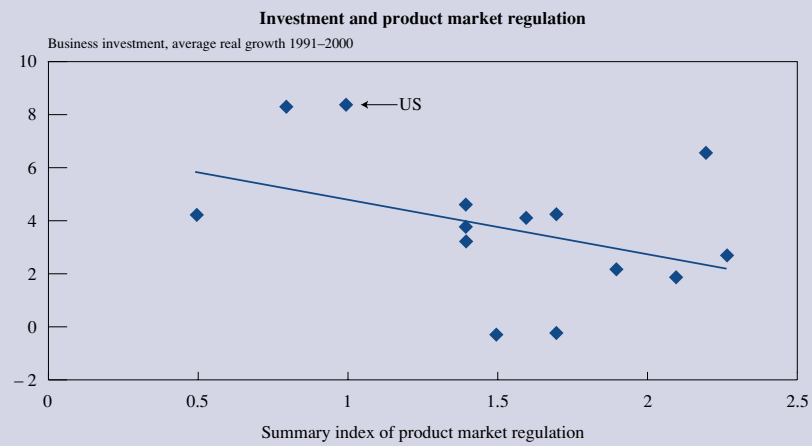
Product market regulation seems to be another structural determinant that has an imperative effect on investment behaviour ⁽¹⁾. Indicators, constructed by the OECD to

⁽¹⁾ Product market regulation affects economic activity mainly through its impact on transaction costs and on the appropriation of profits. Both transmission chains affect the costs of capital. Administrative opacity, for example, directly increases the costs of investment whereas regulations that reduce profit margins weigh on the entrepreneur's incentive to assume risks.

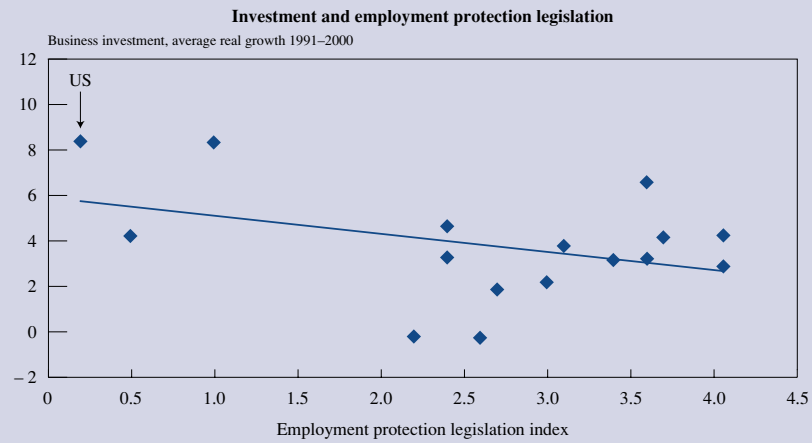
Graph 8: Structural determinants of investment



Source: Commission services.



Source: OECD.



Source: OECD.

Table 5

Estimation results of investment equation. Testing for additional determinants
Dependent variable: ratio of equipment investment to GDP (I/Y)

Variable	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Pr : profits	0.120 (*) (0.073)	0.139 (**) (0.068)	0.156 (**) (0.056)	0.008 (0.092)	0.006 (0.094)	-0.005 (0.083)	0.121 (*) (0.063)	0.086 (0.059)	0.063 (0.071)	0.126 (**) (0.062)	-0.031 (0.073)	0.119 (**) (0.061)
PIP : relative price of investment goods	-0.044 (**) (0.005)	-0.044 (**) (0.005)	-0.038 (**) (0.005)	-0.050 (**) (0.006)	-0.046 (**) (0.005)	-0.041 (**) (0.005)	-0.051 (**) (0.006)	-0.046 (**) (0.005)	-0.051 (**) (0.006)	-0.048 (**) (0.005)	-0.038 (**) (0.005)	-0.053 (**) (0.006)
R: short-term real interest rates	-0.039 (**) (0.015)	-0.037 (**) (0.015)	-0.040 (**) (0.016)	-0.026 (0.057)	-0.054 (0.039)	-0.015 (0.047)	-0.041 (**) (0.017)	-0.034 (**) (0.017)	-0.027 (0.018)	-0.044 (**) (0.016)	-0.037 (0.025)	-0.026 (0.017)
Capacity utilisation	0.020 (0.032)	-	-	-	-	-	-	-	-	-	-	-
Exchange rate volatility	-	-0.279 (*) (0.174)	-	-	-	-	-	-	-	-	-	-
Credit/GDP	-	-	0.577 (*) (0.344)	-	-	-	-	-	-	-	-	-
Capital raised (stock markets)	-	-	-	0.095 (*) (0.057)	-	-	-	-	-	-	-	-
Stock market capitalisation	-	-	-	-	0.019 (**) (0.006)	-	-	-	-	-	-	-
Share price index / P	-	-	-	-	-	0.007 (**) (0.003)	-	-	-	-	-	-
Debt / GDP	-	-	-	-	-	-	-0.004 (0.006)	-	-	-	-	-
Surplus / GDP	-	-	-	-	-	-	-	0.062 (*) (0.034)	-	-	-	-
Tax burden / GDP	-	-	-	-	-	-	-	-	-0.049 (*) (0.029)	-	-	-
Inflation volatility	-	-	-	-	-	-	-	-	-	-0.012 (0.030)	-	-
Econ. Sentiment Indic.	-	-	-	-	-	-	-	-	-	-	0.178 (**) (0.025)	-
NAIRU	-	-	-	-	-	-	-	-	-	-	-	-0.123 (**) (0.012)
R-squared	0.34	0.35	0.31	0.43	0.45	0.43	0.40	0.42	0.37	0.40	0.45	0.43
Sample size	403	403	399	124	137	177	403	432	380	420	222	429

NB: Panel estimation with fixed country effects, period 1970–99. Estimation of the covariance matrix robust to serial correlation. Panel: EU-15, Japan and US; except for (3): EU-15 and US. Due to data availability, the estimation sample is much shorter for columns 6, 7, 8 and 13. (*) and (**) indicates significance at the 10 and 5% level respectively. Newey-West corrected standard deviation in brackets.

Source: Commission services.

gauge differences in regulatory patterns across countries, consistently show that more restrictive regulation goes hand in hand with lower rates of investment growth. In particular, indicators linked to the extent of public ownership (size, scope of public enterprises and their corporate control), the state's involvement in business operation (price control, use of command and control regulation) and barriers to entrepreneurship (regulatory and administrative opacity, administrative burden on start ups and barriers to competition) are negatively linked with investment activity.

Finally, labour market rigidities may have held back investment in the euro area ⁽¹⁾. Indeed, the OECD employment protection legislation indicator is negatively related

⁽¹⁾ Strict employment protection legislation makes it burdensome for entrepreneurs to lay off workers when investment decisions need to be reverted. Labour supply side factors have an effect on the incentive to take up jobs and the efficiency of job search. In consequence, a high reservation wage and a long duration of benefits may inhibit those forms of investment that require the hiring of low-skilled or specialised skilled labour.

to real investment growth. Other quantitative structural labour market variables point to the same direction, for instance the 'tax rate on low wage earners' and the 'duration of unemployment benefits'.

Thus, there is some partial evidence that the incentive to invest has been weighed down by the more rigid product and labour markets in the euro area relative to those in the United States.

Econometric analysis of structural determinants

To determine whether other than the traditional macroeconomic factors play a significant role in the determination of investment, some additional variables were tested (Table 5). First, capacity utilisation was added to the regressions and found to be significant. However, when it is included, the profitability term becomes insignificant and wrongly signed. Profitability and capacity utilisation are strongly correlated. Therefore, adding capacity utilisation to the regression does not improve the overall fit of the equation. Variables that could capture **uncertainty** were tested as well by adding variability of the real effective exchange rates as an

additional term in the regressions. Exchange rate volatility is measured as the quarterly variation in the real effective exchange rate (vis-à-vis 24 industrialised economies, using GDP deflators, and corrected for relative openness) within a year. This term is only weakly significant in the regressions.

Experiments with other microeconomic variables proved to be more significant. Credit to the private sector has the expected positive sign and is significant at the 10% level. Coefficients on other financial variables appear also significant but at the expense of the profitability term and the real interest rate. Economic sentiment indicators which may reflect 'animal spirits' of entrepreneurs are also found significant at the 10% level. Fiscal variables such as budget surplus and overall tax burden, which may be proxies for the crowding out impact of fiscal policy on private investment behaviour, are significant as well. NAIRU is also found significant at the 10% level, indicating the role of labour market flexibility in investment decisions. All in all, some of these microeconomic or structural variables seem to have an impact on investment behaviour via their effect on the 'catch-all' profitability variable.

4. Enhancing the investment environment in the euro area

4.1. The benefits of investment

Investment plays a crucial role both on the demand and the supply side of the economy. Gross fixed capital formation only accounts for about 20% of GDP. It is, however, together with inventories, the most volatile component of domestic demand and therefore a key element of business cycle fluctuations. In a more medium to long-term perspective, gross fixed capital formation is a main determinant of the economy's supply potential. There are basically three channels through which investment affects the economy's supply side: firstly, it determines the size and the composition of the capital stock; secondly, it improves the diffusion of technological progress; and thirdly, it facilitates employment growth. Below, these supply side benefits of investment are discussed. Given that public investment is sometimes considered to play a special role in the capital accumulation process, the contribution of public investment to growth is also examined.

Investment and the capital stock

There is no undisputed theoretical view of the contribution of capital to the supply potential. The role of capital formation in the growth process depends closely on the type of growth theory considered. In the standard neo-classical growth model, the main driver of growth is technical progress, which is considered to be fully exogenous. In this context, investment affects GDP only through the direct impact of changes in the capital stock. As a result, the impact of an increase of the investment rate on potential growth remains relatively limited.

In the framework of the standard neo-classical growth model, the so-called growth accounting framework is a useful empirical tool to quantify the sources of growth. It relates changes in GDP to changes in labour, the capital stock and a residual, called total factor productivity (TFP), measuring technological progress. Such a growth accounting exercise for the euro area is presented in

Graph 9. The direct contribution of capital to growth has remained broadly stable in the past 15 years, at slightly below 1% ⁽¹⁾. This relative stability may seem surprising given the wide fluctuations of investment spending across the business cycle. It reflects, however, the fact that investment represents only a small part of the capital stock, more so if replacement investment is deducted ⁽²⁾.

Investment and technical progress

Despite a deceleration in the 1990s, TFP remains the single largest contributor to GDP growth in the euro area. A strong contribution of TFP relative to capital and labour is a common feature of western economies since World War II. From a conceptual point of view, the exogenous nature of the main source of growth may be considered as highly unsatisfying. Hence, many different types of models have been proposed to provide explanation, thereby reducing the size or even eliminating the TFP residual. Among these models, several tend to attribute a more prominent role to capital accumulation in the growth process, either for physical capital or for broader definitions of capital (i.e. including human capital).

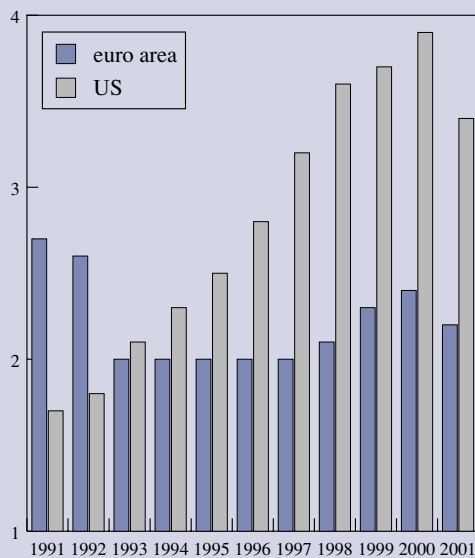
The so-called vintage models constitute a particular class of these models. Vintage models rest on the assumption that technical progress is partly embodied in physical capital. In this context, investment affects GDP not only through its direct impact on capital stock, but also through the indirect impact of the capital stock on TFP. A younger (older) capital stock is associated with faster (slower) TFP growth. Hence, investment makes a more substantial contribution to the growth process in these vintage models than in the neo-classical model. Given the weight generally attached to the capital stock in production

⁽¹⁾ However, in the 1960s and 1970s, this contribution was much higher.

⁽²⁾ In 2000, total fixed capital formation represented less than 7% of the capital stock in the euro area and net fixed capital formation less than 2.5%.

Graph 9: Trends in capital stock

Growth in capital stock, euro area and US
(annual % change)



Source: Commission services.

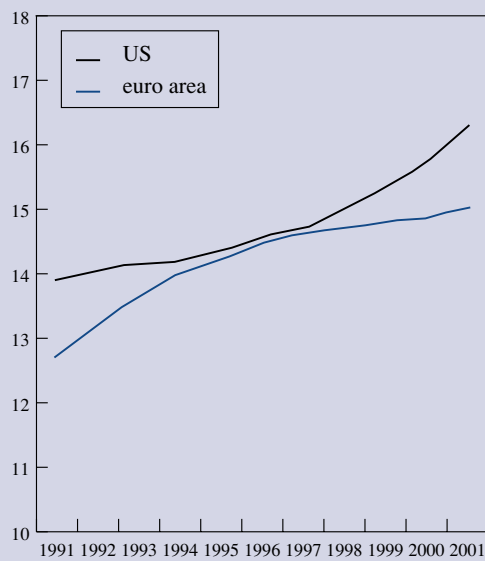
Contribution of capital and labour to growth in the euro area

(annual average change in %)

	1986-90	1991-95	1996-2000
GDP growth	3.3	1.5	2.5
— Capital	0.9	0.8	0.8
— Labour	0.9	-0.2	0.7
— Total factor productivity	1.5	0.9	1.0
Growth in capital stock	2.5	2.3	2.2

Source: Commission services.

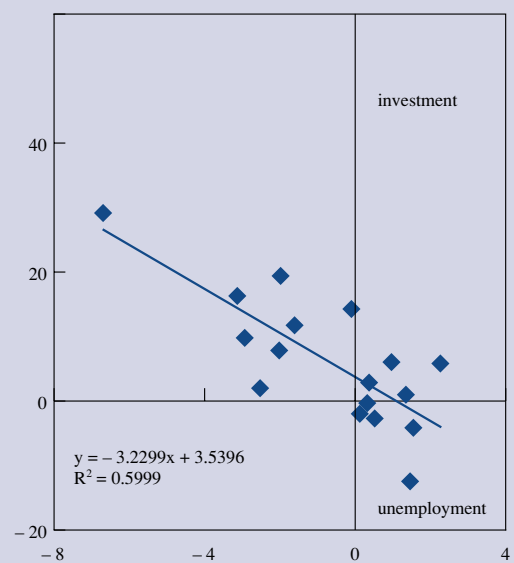
Capital stock per worker, euro area and US
(index 100 = 1995)



Source: Commission services.

Investment to capital ratio and unemployment rate

(average change 1996-2000 v 1991-95)



Source: Commission services.

functions, the elasticity of GDP relative to the capital stock is relatively low in the standard neo-classical model, at about 0.35 in the euro area. It is much higher in the case of vintage models where the additional impact of investment on TFP may lift it to about 0.8–0.9.

To illustrate the respective contribution of investment to growth in the standard neo-classical and the vintage models, several scenarios of potential growth for the next years have been constructed for the euro area. Table 6 provides an assessment of the investment growth necessary to achieve an annual growth of potential GDP of respectively 2.5% (moderate growth scenario) and 3% (optimistic growth scenario) over the period 2000–10. Columns 1 and 2 of Table 6 are based on the assumption that the capital stock does not affect TFP (no vintage effect). In columns 3 and 4, capital affects TFP through a vintage model estimated at the European Commission ⁽¹⁾. All scenarios are based on the same projections in terms of labour supply. All in all, although there is clearly a lot of uncertainty associated with these calculations, this analysis suggests that to achieve sustained growth in the euro area, investment growth of 4–6% is necessary, according to the size of the link between capital and TFP.

⁽¹⁾ See Mc Morrow and Roeger (2001) for a discussion of the vintage model.

Investment and employment

The link between capital and employment is another important channel through which investment affects the supply potential. The concepts of equilibrium unemployment or NAIRU are frequently discussed without taking into account capital formation. Given that adjustments to the capital stock are slow, such an approach is valid in the short run. However, in a medium- to long-run perspective, the capital stock cannot be considered as fixed anymore. In this context, under rather general conditions, an increase of the capital stock increases the demand for labour, allowing for higher wages and a higher employment level.

In the euro area there was a relatively strong negative correlation between investment rates and unemployment in the 1990s. Correlation does however not imply a causal link. On the contrary, there is now a significant amount of empirical evidence backing the investment-employment channel described above. This channel explains the persistence of high unemployment in the euro area rather well, at least in the 1970s and the 1980s ⁽²⁾. It is probably also one of the key mechanisms explaining the persistence of a low unemployment rate in the United States during the second half of the 1990s.

⁽²⁾ See Blanchard (1998).

Table 6

Investment required for sustained long-term growth in euro area

(annual growth in %)

	Without vintage effect		With vintage effect	
	Moderate growth (1)	Optimistic growth (2)	Moderate growth (3)	Optimistic growth (4)
<i>Capital accumulation</i>				
Investment	1.7	5.9	1.6	3.5
Capital stock	2.2	3.6	2.2	2.8
Investment/GDP ⁽¹⁾	20.6	25.3	20.5	22.0
<i>Contributions to growth</i>				
Labour	0.3	0.3	0.3	0.3
Capital	0.8	1.3	0.8	1.0
TFP	1.4	1.4	1.4	1.7
Potential growth	2.5	3.0	2.5	3.0

⁽¹⁾ The scenarios are based on the cautious assumption of employment growth of 0.5% per annum. If employment growth were higher, thanks to accelerated labour market reforms, the contribution of investment to growth required to accomplish potential output growth of 3% would be lower.

Source: Commission services.

As a result of fast growth in the capital stock, the second half of the 1990s was characterised by a substantial amount of capital deepening in the United States, with a rapid increase of the capital stock available per worker. This capital deepening was one of the causes of a substantial acceleration of gains in labour productivity and in real wages during that period. The channel is also backed by a recent empirical study carried out for the European Commission. That study identifies a causal link from investment to employment and concludes that ‘a policy that encourages investment is good for both wages and employment’ ⁽¹⁾.

The role of public investment

Factor accumulation can be directly enhanced by public investment in physical (infrastructure, human (education and training) and knowledge (R & D and innovation) capital. However, the growth-enhancing effects of public investment can be offset by the reactions of private agents. Empirically, there is no clear pattern associating the time evolution of the public investment ratio and growth, either in the long run or in shorter periods. Although preliminary analyses revealed a positive correlation between public investment and growth, more detailed studies suggest that the relationship between both variables is somewhat ambiguous. The positive insight is that there is also no clear evidence of long-run crowding-out effects between public and private investment. The correlation between both categories of investment, albeit very low, is not negative.

However, empirical evidence also suggests that public investment is subject to diminishing returns, so that as the stock of infrastructure capital increases, the effect of public investment on growth falls. It therefore turns out that a fall in public investment in countries with large stocks of infrastructure, as is the case of most EU Member States, may not have a pervasive effect on growth in the long run. Moreover, an increase in public investment may lower growth in the long run if it is financed through distortionary taxes and/or through deficit spending. This link has been confirmed by econometric analyses, showing for instance that the negative response of growth to distortionary taxation and to deficit spending is three times larger than the positive response of growth to public investment spending.

⁽¹⁾ See Pissarides (2001).

4.2. Policy scenarios to enhance the investment environment in the euro area

Focusing on structural policies

Based on the analyses in the previous sections, there seems to be both a need and a scope to improve the investment environment in the euro area. For a sustainable increase in economic growth, a significant increase in the rate of fixed capital formation is indispensable. To attain, for example, a sustained growth rate of 3% in the euro area, a rate of investment growth of about 4 to 6% per cent seems necessary, representing a significant acceleration from the average over the 1990s of about 2%. Regarding the scope for enhancing the investment climate, evidence on the determinants of investment presented in Section 3, point to structural rigidities and structural differences with the United States that could be tackled on a micro-level to increase profitability and reduce the cost of capital on the macro-level. The focus in this section will thus be on micro-oriented and structural policies, providing some insights on options for structural reforms that could be implemented in the coming years in order to further enhance the investment environment.

A number of illustrative scenarios are discussed in which different types of structural reforms that would boost investment in the euro-area economy are presented. Using the Commission’s macroeconomic model QUEST, the impact of several possible structural reform measures is analysed, such as a reduction in corporate taxes, a product and/or financial market reform that increases competition, reduces monopoly rents and the cost of capital and finally a labour market reform scenario that lowers real wages.

All these measures could help directly or indirectly to enhance after-tax expected profitability of new investment or reduce the cost of capital, thereby raising fixed capital formation in the euro area. No scenario refers separately to more competitive and efficient financial markets, as the QUEST model does not incorporate a separate financial sector. However the impact on investment and growth prospects linked with more efficient capital markets are of the same order of magnitude as product market reforms.

The scenarios presented here are of a purely illustrative nature, describing the macroeconomic effects of such changes on the euro-area economy in general terms.

Table 7

Policy scenarios 2010

	Tax reduction with stable public deficit	Tax reduction with increased public deficit	Product market reform	Wage moderation
Total GDP	1.74	1.47	1.06	0.64
Capital stock	7.69	5.50	1.39	0.50
Private investment	16.70	11.15	2.97	1.12
Employment	0.39	- 0.34	0.94	0.75
Real wages (*)	2.14	1.87	1.74	- 0.08
Consumer price level	0.71	2.08	- 0.17	- 0.00

(*) Deflated by private consumption deflator.

Source: Commission services.

A more rigorous quantitative assessment of the macro-economic impact of specific reform measures would have to deal with precise assumptions on fiscal and monetary policy responses and falls beyond the scope of this section. The simulations described here merely serve to illustrate the effects of these types of measures on the euro area economy and in particular in boosting the investment to GDP ratio. As regards monetary policy, an inflation targeting regime is assumed. This is less restrictive than a fixed money supply rule when potential output expands as a result of these reforms. The long-run effects of inflation targeting and money targeting regimes are very similar though.

A corporate tax reduction accompanied by a government expenditure cut

The first scenario considered is a reduction of the average effective corporate tax rate by half. The tax reduction is accompanied by an equally large reduction in government expenditure, such that the deficit and the debt to GDP ratio remain roughly constant. The results of this simulation are presented in the first column of Table 7, as percentage deviations from the baseline scenario. The simulated corporate tax reduction increases the level of output, compared to the baseline scenario, by 1.74% of GDP in 2010. Average annual growth is thus increased by almost 0.2%.

This budgetary neutral tax cut lowers the overall tax burden, thereby raising profitability and positively affecting growth and investment. It thus has an impact on investment expenditure and consumption. The increase in expected after-tax-profitability increases investment spending directly. Through its effect on the value of

equity wealth in total financial wealth held by households, it also stimulates consumption and further enhances investment via a surge in expected demand.

A corporate tax reduction with increasing public debt

To illustrate the effect of the fiscal policy assumption, the second variant shows the same reduction in corporate taxes without an accompanying reduction in expenditure (column 2 of Table 7). For a 10-year period, the debt to GDP ratio rises in this simulation. This rise in debt leads to an increase in the real interest rate and therefore reduces the size of the positive effects from this reform. Hence this simulation shows that, by comparison to the scenario above, the effect of a rise in government debt of this scale can be quite substantial, which is in line with the positive impact of fiscal variables found in the previous section on determinants of investment.

Competition effects from product market and financial markets

The third simulation shows the effects of possible structural reforms enhancing product and financial markets functioning in order to increase competition and reduce barriers to entry. Examples of this are deregulation, liberalisation and the removal of entry barriers into sheltered sectors. These greater competitive pressures in product markets, while enhancing household demand via lower prices and higher quality, raise also the expected profitability of investment by forcing firms to restructure, so as to lower production costs. This simulation can also illustrate the potential benefits of more competitive and

efficient financial markets which will diminish the cost of capital, while deeper markets facilitate access to capital for a larger number of firms, reinforcing investment potential.

The estimated increase in GDP (column 3 of Table 7) comes about by a reduction in the price cost mark-ups of 1 percentage point. As regards monetary policy, an inflation targeting regime is again assumed. Fiscal policy variables are kept exogenous in this scenario and the output expansion is thus accompanied by a reduction in deficits and debt ratios, reinforcing to some extent the positive effects from this product and financial market reform.

This type of competition-promoting reforms boosts not only investment but also labour demand. Both the capital stock and employment are higher than on the baseline. However, the implied reduction in mark-ups is relatively large, of an extent which has not been experienced by

EU countries over the last decade. For instance, the estimated impact of the single market was a reduction in the mark-ups of only 0.5 of a percentage point, which would raise the investment-output ratio in the long run by 0.2 of a percentage point.

Wage moderation

The results of a labour market reform shock (column 4 of Table 7) on investment are also briefly discussed here. A fourth scenario simulates a labour market reform shock. A 1% shock is given to the wage-setting rule. This ex-ante shock to real wages leads to a smaller fall in effective real wages in the medium-term, of around 0.5%, as wages and prices adjust. In the long run, real wages return to their baseline level as unemployment falls. This wage moderation stimulates employment by increasing employment content of growth and boosts also output via the reduction in production costs, but has only an impact on investment via a higher profitability.

5. Conclusions

The investment recovery of the 1990s in the euro area appears somewhat subdued compared to the previous one in the 1980s. The relative brevity and a slower rate of expansion of capital formation is largely attributable to the mediocre performance of the construction sector and lower government investment. There is no clear evidence of a change in the equipment investment behaviour in the euro area after the 1993 recession. Nevertheless, equipment investment in the euro area has been rather lacklustre compared to the steady and marked recovery of equipment investment in the United States.

Traditional macroeconomic variables cannot explain these diverging developments of investment growth in the euro area and the United States in the 1990s. The results of a country panel approach that explains investment behaviour in general relatively well, confirm that unexplained factors have played a considerable role in the United States in the second half of the 1990s. Diverging expectations about future profitability, related to structural differences between the two areas, have probably played a role. Thus, structural rigidities seem to be at the origin of the lacklustre performance of investment growth in the euro area.

There is both a need and a scope to improve the investment environment in the euro area. Hence, structural reforms such as a reduction in corporate tax, increased competition in the product market and the more efficient financial market should be actively pursued. A corporate tax reduction accompanied by a government expenditure cut seems the best possible fiscal policy to create a more investment-friendly environment. When the tax reduction is not accompanied by expenditure cuts, adverse effects through the real interest rate limit the effectiveness, resulting also in a negative employment effect. Competition effects of product market and financial market reform can also boost investment. Labour market reforms leading to wage moderation stimulate more the employment content of growth than direct investment.

All in all, the implementation of these reforms can help to reach a sustainable increase in euro-area medium-term growth prospects. For instance, to attain a growth rate of 3% in the euro area, a rate of investment growth of about 4 to 6% per year seems necessary, which represents a significant acceleration from the 2% average over the 1990s.

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Chapter 4

Financial market integration in the EU

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1. Introduction

The structure of the EU financial system has changed significantly since the beginning of the 1980s. This change can be attributed to several factors. First, a process of financial globalisation has been fostered by the liberalisation of international capital movements, financial deregulation and advances in information technology. Second, the EU has made progress in creating a common regulatory framework for the provision of financial services as part of the Internal Market programme. Third, the Member States have implemented significant financial reforms at the domestic level. The combined effect has been a progressive integration of the various national financial systems within the Union, which has accelerated with the introduction of the euro in 1999. The elimination of exchange risk in most intra-EU financial flows (i.e. those within the euro area) has stimulated investor interest in cross-border activity and so has highlighted the costs of continued fragmentation in the financial system. In response, financial integration has been assigned a high priority on the EU economic reform agenda as adopted by the Lisbon European Council in 2000 and reaffirmed by the Stockholm European Council in 2001.

The objective of this chapter is to review some important aspects of EU financial integration, notably the economic case for integration, the progress achieved to date and some recent policy developments to move the integration process forward. The analysis focuses mainly on developments and prospects in the EU, although some of the conclusions can be applied equally to the wider process of financial globalisation. In Section 2, the economic motivation for proceeding with EU financial integration is explored with particular attention given to the theoretical and empirical evidence supporting the existence of a link between financial development and economic performance. In this context also, the implications of integration for financial efficiency and stability in the Union receives particular attention. Sections 3 and 4 examine the extent of progress in EU financial integration by reference to recent trends in financial markets, financial intermediaries and the international ownership of assets. Progress is assessed more indirectly in Section 5, on the basis of tests for cross-border convergence in the price of financial assets and for divergence in national savings and investment levels within Member States. Section 6 focuses on recent policy developments and challenges in financial integration and Section 7 concludes.

2. Economic aspects of financial integration

The priority assigned to financial integration as part of the EU economic reform agenda reflects an expectation of significant economic benefits from a single EU financial system. However, the economic aspects of financial integration are not straightforward. The transmission channels from financial integration to changes in economic performance remain open to debate on both the theoretical and empirical levels, not least because the importance of these channels can vary with time and with the level of development in the economy concerned. In assessing the economic aspects of financial integration, therefore, it is necessary to begin with a more basic examination of how financial development relates to economic performance. If this relation is positive, it would be reasonable to conclude that financial integration improves economic performance to the extent that it contributes to a higher level of financial development. However, it is clear that financial integration creates economic challenges as well as opportunities. One of these challenges relates to systemic stability, as evidence suggests that the financial globalisation of recent decades has coincided with a higher frequency of international financial crises. Thus, a major concern in the EU context is that the arrangements for regulation and supervision should be adequate to guarantee stability in a substantially more integrated financial system.

2.1. Theoretical approach on the finance-growth linkage

A smoothly-functioning financial system is universally accepted as a prerequisite for realising an economy's growth potential. Theoretical analysis stresses various channels through which an efficient financial system may influence the two fundamental sources of economic growth, capital accumulation and technical progress. Efficiency in the financial system not only maximises the opportunities for capital formation but is essential for embedding technical advances in the capital stock — especially in periods of rapid technological change — thereby

allowing countries to convert technical development into higher rates of economic growth ⁽¹⁾. Traditional growth theory has focused on the role of the interest rate as the main financial determinant, sustaining growth by equilibrating an economy's savings and investment. More recently, however, the design of the financial system has come to be regarded as a growth determinant also. This broadening in the focus of growth theory has been associated with increased interest in the existence of information asymmetries among investors, borrowers, savers and lenders within the financial system. As the assumption of perfect financial markets is relaxed, the value of an efficiently designed financial system will be seen in reducing the transaction costs that emanate from such information asymmetries.

Clearly, the more efficiently the financial system can intermediate savings (i.e. the lower the transaction costs and the higher the return available to the savers), the more savings are available to support productive investment ⁽²⁾. In addition to these effects in allocating savings

⁽¹⁾ For the importance of financial markets for the diffusion of new technologies and the specific financial demands of technology intensive enterprises see Chapter 3 of the EU Economy 2000 Review.

⁽²⁾ Two caveats need to be spelled out. First, since it is well-known from microeconomic theory, that the interplay of substitution and income effects determines whether an increase in the return on savings induces individuals to save more or less and while one can assume that a higher return on savings mobilises additional savings at early stages of development, it is far from obvious that this relation also holds for mature industrial economies. For instance, a high rate of stock price growth in the United States in recent years coincided with a drastic fall in the private saving ratio. Second, one cannot exclude that investment is higher, if the efficiency of the financial system is lower. The reason lies in the incentive of managers to reinvest profits in firms rather than to channel them to the owners of the firms. In consequence, the less efficient the control of managers, the more leeway they have to invest. The establishment of efficient monitoring and corporate control through financial intermediaries tends to reduce this kind of over-investment.

to investment, the financial system can improve investment performance via three channels:

- **Portfolio diversification** — The opportunity to share risks via the financial system may induce savers to allocate a higher fraction of savings to riskier projects, which on average tend to be more profitable. Furthermore, a capacity to hedge against project-specific events tends to stimulate the undertaking of specialised investments with a beneficial impact on the economy's division of labour and growth ⁽¹⁾.
- **Enhanced quality of investment** — The availability of financial intermediaries may allow an enhanced evaluation and selection of projects, raising the profitability of investment. Average capital productivity will be raised through the selection and monitoring of the most profitable projects, while more unprofitable investment projects will be disregarded ⁽²⁾.
- **More long-term projects** — The availability of a liquid financial market allows a larger proportion of savings to be invested in projects of a longer-term duration, which are typically more productive than shorter-term projects ⁽³⁾.

These three channels improve investment performance not by increasing the amount of available capital but by raising the productivity of that capital. While these capital productivity channels are likely to be most significant in mature economies, they are also the most difficult to assess empirically.

⁽¹⁾ A model linking financial markets' technological choice and economic development, in which financial development induces increasing specialisation and the improved division of labour raises growth, was set up in Saint-Paul (1992). For an empirical estimate on the link between risk-sharing and industrial specialisation, see Kalemli-Ozcan et al. (2001). Stulz (2000) reports evidence that stock markets appear to value specialised firms higher than diversified ones, which suggests a positive relation between specialisation and growth prospects.

⁽²⁾ See Leland and Pyle (1977), Diamond (1984), Greenwood and Jovanovic (1990).

⁽³⁾ The microeconomic motivation of liquidity is the provision of insurance against uncertain timing of consumption. In case an individual agent is required to bring forward consumption, he can do so by simply transferring assets to other agents instead of eliminating his investment projects. This permits physical investment to be continued and a shorter amount of savings held in liquid form. In this regard, the provision of liquidity raises the average duration of investment projects. See Diamond and Dybvig (1983).

2.2. Empirical evidence on the finance-growth linkage

Empirical research on the finance-growth nexus has expanded rapidly in recent years ⁽⁴⁾. The main approach to this research has been to use cross-country growth regressions, in which financial variables (e.g. bank loans to the private sector, stock market capitalisation relative to GDP) are regressed on proxies of economic development while controlling for different economic and social factors. Estimates for a large panel of (mainly developing) countries typically yield a significant positive coefficient for financial variables, which has been interpreted as evidence of a positive relation between financial development and growth. For instance, Levine and Zervos (1998) have conducted cross-country growth regressions with data from 49 countries, in which they found a significantly positive relation between several combinations of financial variables and economic growth (see Table 1).

In respect of transmission channels, the research suggests that financial development is a determinant of the investment level and productivity growth but does not significantly affect the level of savings. However, these results are sensitive to the choice of proxy for financial development (e.g. bank credit to the private sector is a significant variable only if stock market capitalisation is excluded), which highlights the difficulty of empirical work in this area. In sum, the more recent research has confirmed the earlier assessment of Levine, one of the most prominent researchers in this area, that 'a growing body of empirical analyses (...) demonstrates a strong positive link between the functioning of the financial system and long run growth. (...) There is even evidence that the level of financial development is a good predictor for future rates of economic growth, capital accumulation, and technical progress.' ⁽⁵⁾

While the positive link between financial development and economic growth at early stages of economic development is widely accepted, the evidence for industrial

⁽⁴⁾ Empirical analysis along the lines sketched above has received a major impetus from the construction of the World Bank's financial structure database. For a description of the database see Beck et al. (1999). The data bank is displayed at <http://worldbank.org/research/projects/finstructure/database.htm>. For a review on the finance-growth nexus, see Thiel (2001).

⁽⁵⁾ See Levine (1997), pp. 688 and 721.

Table 1

Significance of the initial value of financial variables on growth performance indicators (average 1976–93) in cross-country regressions

Model	Independent / Dependent variable	Real output growth	Capital stock growth	Total factor productivity growth	Private savings ratio
1	Bank credit to private sector	*	*	*	ns
	Stock market turnover	**	*	ns	ns
2	Bank credit to private sector	**	*	**	ns
	Value traded on stock markets	**	ns	**	ns
3	Bank credit to private sector	ns	ns	ns	**
	Stock market capitalisation	**	*	*	ns
	Bank credit to private sector	ns	*	ns	ns
4	Stock market capitalisation	*	**	ns	ns
	Value traded on stock markets	*	*	**	ns

NB: ns indicates that the coefficient is not significant at the 10% level; ** = positive and significant at 1% level; * = positive and significant at 5% level. The independent financial variables are all expressed as a share of GDP. In addition to the independent financial variables stated above, the regression also included initial output, education, political instability, government consumption, inflation, and black market premium as control variables. It covers 49 countries.

Source: Levine and Zervos (1998).

Table 2

Estimated contribution of financial development indicators to GDP per capita in OECD countries

	Estimated contribution of a permanent increase of one percentage point in financial development indicators to GDP per capita (in % point change)			Memoranda items	
	Investment channel	Other channels	Total	Sample means	Range in 1997
	Private bank credit	0.05	0.07	0.11	0.59
Stock market capitalisation	0.07	0.26	0.33	0.35	0.17–1.53

Source: Leahy et al. (2001).

countries remains controversial ⁽¹⁾. A cross-country growth study by Andrés et al. (1999) found no significant link between financial development and economic growth in a sample of OECD countries. On the other hand, a more recent OECD research project, using more advanced estimation techniques, found robustly significant financial variables in regressions of investment and

economic growth ⁽²⁾. While the OECD results must be treated with caution ⁽³⁾, they suggest that a permanent increase of 1% in the ratio of private bank loans to GDP would raise per-capita GDP by 0.1% and a corresponding increase in stock market capitalisation relative to GDP would raise per-capita GDP by 0.3% (see Table 2). In addition, the OECD results point to the availability of bank credit as relatively important for investment levels

⁽¹⁾ In an analysis of the linkage between finance and growth in Sweden between 1930 and 1990, Hansson and Jonung (1997) find evidence that the choice of time periods crucially affects the results. They find the largest impact of the financial system in the period 1890–1939, but no stable relation for the whole period. Similarly, Rousseau and Sylla (2001) yield the best results in favour of the finance-growth nexus for the time prior to 1914.

⁽²⁾ See Leahy et al. (2001), Bassanini et al. (2001).

⁽³⁾ The estimates were derived from combination of the long-run coefficients obtained from the estimate of an investment function and of a growth regression, both based on panel estimates covering 21 OECD countries and the period starting in 1970 and 1976 respectively, and ending in 1997.

and stock market capitalisation as relatively important for other growth channels.

The main sources of controversy in the empirical research covering industrialised countries are problems in identifying the relevant financial and control variables, the limitations of the methodologies used and, not least, the issue of causality. In cross-country growth regressions, the significance of financial variables is assumed to indicate a causal link from financial development to growth. However, a causal link in the opposite direction cannot be ruled out. Studies at the industry or firm level offer a clearer picture of causality because it is highly unlikely that the performance of an individual industry or firm will be reflected in the level of financial development in the economy as a whole. Several studies have been conducted at a disaggregated level in recent years and have reached a general conclusion that firms dependent on external financing grow faster in a more developed financial system ⁽¹⁾. In a sample restricted to 14 OECD countries, Carlin and Mayer (1999) analysed the relation between growth rates of 27 industries and the interaction of industry-specific characteristics with financial variables. They found that, in particular, the growth of industries relying on research and development (R & D) is strongly affected by financial variables, whereas the estimates are less robust in respect of fixed capital formation. Accordingly, they conclude that financial development stimulates economic growth in industrial countries more by promoting investment in R & D than by facilitating physical capital accumulation.

2.3. Does financial structure matter?

A further controversy in the context of financial development and economic growth in the industrialised countries surrounds the relative merits of so-called market-based financial systems and more bank-based systems. The relative strength of the US economy since the early 1990s is often cited as evidence that market-based systems are superior. Support for this view has come from empirical analysis at the macroeconomic level, which has typically found stock market variables to be a more important determinant of economic growth than banking

variables. On the other hand, macroeconomic analyses that have focused more explicitly on the relevance of financial structure for growth have been inconclusive ⁽²⁾.

At the microeconomic level, differences in financial structure are relevant to the evaluation and selection of investment projects or to the provision of corporate control. The superiority of a market-based or bank-based system depends on the specific features of investment projects, e.g. whether they imply the disclosure of proprietary information or require a long-term commitment from the capital provider.

- A market-based system is usually regarded as more efficient in dealing with economic uncertainty. The larger the number of participants with an independent opinion about a future event, the more likely it is that the aggregate view will reflect the true probability distribution for that event. For example, a market-based system can better aggregate views on new technologies and by reflecting the aggregate view in prices stimulate market participants to acquire information about firms.
- Bank financing may be more efficient for longer-term projects. The commitment of a bank to an investment project tends to attract other smaller investors, perhaps allowing them to avoid the costs of screening and monitoring the investment project themselves. Furthermore, firms may fear disclosure of confidential information and thus prefer relations with a smaller number of lenders than direct access to the market.

In view of the above, the absence of conclusive empirical evidence in favour of a particular financial structure is not surprising. As financing needs change over the life cycle of firms, the effectiveness of financial structures appears to depend more on features such as completeness and adaptability in the financial system. A firm is likely to benefit from bank financing in its early stages of development, while more mature (and larger) firms may find direct access to financial markets attractive as a means to raise large sums e.g. for re-structuring, merger

⁽¹⁾ See Rajan and Zingales (1998), Demirgüç-Kunt (1998, 2000), Beck and Levine (2000), Cetorelli and Gambera (2001).

⁽²⁾ Levine (2000) at the aggregate level and the studies by Beck and Levine (2000) and Demirgüç-Kunt and Maksimovic (2000) at the industry and firm level see no evidence for a better economic performance in market-oriented financial structures.

and acquisitions etc. A complete financial structure offers the firm financing through markets and intermediaries with the best correspondence to its needs. An adaptive structure provides leeway for the evolution of new forms of financial intermediaries or contract forms, if the business environment changes ⁽¹⁾.

Within the EU, national differences in financial structures would seem to derive largely from differences in their respective legal systems. The degree of investor protection and transparency (e.g. through authoritative accounting standards or a strong position of shareholders relative to managers) seems to have an important impact on the emergence of market-based financing, and in particular on the development of stock markets. Graph 1 reveals the linkage between the size of the financial sector and selected legal variables in the Member States. In the graphs, the proxy for financial-sector size is the sum of stock market capitalisation and bank loans, both as a percentage of GDP. Contrary to theoretical and empirical predictions, the index of creditor rights is the only legal variable not positively related to financial sector size ⁽²⁾. Accordingly, policies aiming to influence financial structures and to stimulating financial development need to take into account these and other legal determinants.

2.4. Financial integration and financial development in the EU

Despite the caveats discussed above, it is reasonable to conclude that financial development is positively related to economic growth. In going beyond this conclusion to assess the economic benefits of financial integration, a two-step rationale is required. First, financial integration can be expected to enhance the development of the EU's financial system which, in turn, will result in an improved economic performance. Empirically, the benefits from financial integration are difficult to disentangle

from other forces ⁽³⁾, but integration is likely to develop the EU financial system through two main channels, i.e. the exploitation of the scale and scope effects inherent in financial activity and increased competitive pressure on financial intermediaries.

Much of the benefit from financial integration will stem from scale effects that emerge through the increase in the number of actual and potential counterparts for financial transactions. In banking, the average costs for the administration of savings as well as for the evaluation, selection and monitoring of investment projects should become smaller, the larger is the number of depositors and borrowers. Furthermore, an increase in the breadth and depth of financial markets should allow for a reduction in transaction costs and — assuming an adequate level of competition — should translate into lower cost of capital for borrowers and higher returns for investors. By expanding the pool of liquidity in markets, financial integration provides greater scope for diversification and should make possible a more efficient pricing of risk. The enhanced possibility to shelter against risk on an integrated financial market provides an incentive for agents to invest in more long-term, risky and specialised projects, which on average tend to be more profitable.

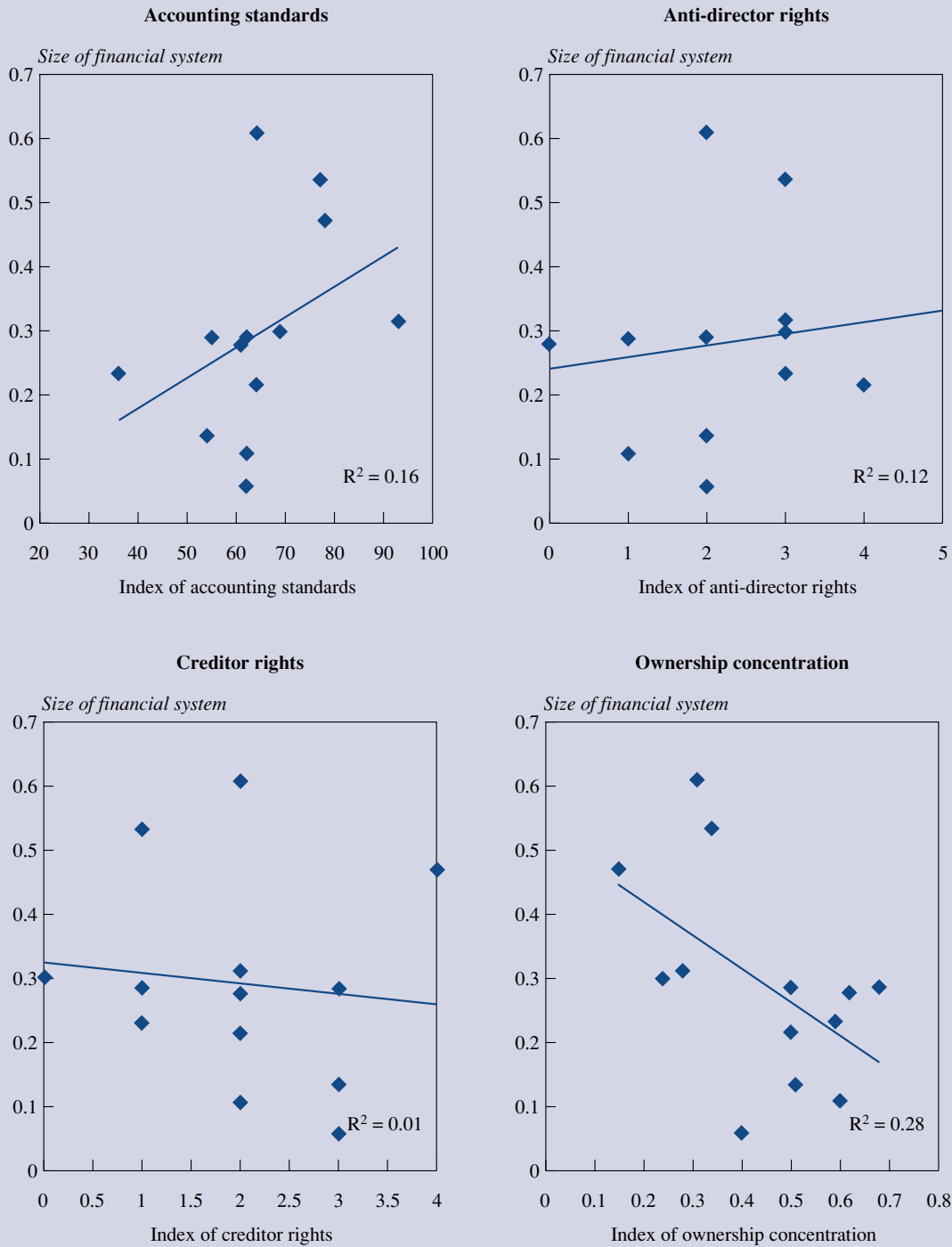
Survey-based evidence suggests that financial integration is perceived by managers as an opportunity to exploit economies of scale in terms of cost and revenue and economies of scope through consolidation. However, there is little theoretical or empirical evidence to support this perception. A more likely source of savings from integration may be the elimination of x-inefficiencies in management and from rationalisation of the labour force. Indeed, labour rationalisation has been identified as one of the major cost savings from integration in the United States but the scope for corresponding savings may be less in Europe because of tighter labour protection laws.

⁽¹⁾ The development of a corporate debt market and of venture capital firms could be considered as improving the completeness and adaptability of a financial system.

⁽²⁾ See La Porta et al. (1998), Beck and Levine (2000). According to the study by Carlin and Mayer (1999), the quality of accounting standards goes hand in hand with high stock market capitalisation and is negatively related with banking indicators. In Rajan and Zingales (1998), the interaction of accounting standards with financial variables has a significant impact on industry growth.

⁽³⁾ Recently, the economic performance of countries prior and posterior to equity market liberalisation was analysed by Bekaert et al. (2001), which estimated the gains from liberalisation to be 1 percentage point of GDP per capita growth over a period of five years. It found financial liberalisation to be significant in cross-country growth regressions covering a large set of industrial and emerging economies. Concerning the transmission channels of financial integration, countries benefited mainly through the attraction of savings from abroad as evidenced by a rising investment share and a worsened trade balance post liberalisation.

Graph 1: Legal determinants of financial activity in the EU



NB: The size of the financial system is proxied by the logarithm of the sum of the share of stock market capitalisation and bank loans in GDP in 1999.
Source: Commission services for financial variables, La Porta et al. (1998) for legal variables.

Financial integration will also improve efficiency of intermediation by intensifying the competition among financial intermediaries. The financial system must be remunerated for its role in the efficient allocation of capital and this is reflected in bid-ask spreads, transaction fees, the difference between lending and deposit rates, commissions, etc. Competition among intermediaries eliminates quasi-rents to intermediaries, maximises the transmission of savings into investment and delivers benefits to investors in the form of the highest possible returns and to borrowers in terms of the lowest possible cost of capital. Moreover, enhanced competition among intermediaries provides greater scope for financial innovation. The availability of new financial products and innovations in the delivery of those products (e.g., over-the-counter (OTC) derivatives, electronic trading) will offer the possibility of more efficient financing of investment and risk management especially to small and medium-sized enterprises by expanding the range of financing opportunities at their disposal.

As financial integration facilitates the allocation of savings across borders, investment will flow to projects offering the highest rate of internal return to investors. In this context, it is likely that integration will also enhance the competition for funds among borrowers, with spillover effects on management efficiency, innovative capacity, accountability and transparency towards shareholders and stakeholders. In this way, integration can be expected to spur technical progress, structural change and may even make the business environment more conducive to growth.

2.5. Financial integration and financial stability in the EU

Whatever caveats may apply to the economic benefits of financial integration, there will be important implications for financial stability in the EU. Bordo et al. (2001) ⁽¹⁾ define financial crises as ‘episodes of financial market volatility marked by significant problems of illiquidity and insolvency of financial market participants and/or by official intervention to contain such consequences.’ Several of the more recent financial crises have been notable for their international nature as globalisation of financial flows, trade and investment have increased the scope for spillovers from country to country ⁽²⁾. Thus,

⁽¹⁾ See Bordo, Michael et al. (2001).

⁽²⁾ See De Bandt and Hartmann (2000).

the issue of whether integration will strengthen or weaken the European financial system is of major significance.

As a matter of fact, the trend towards global financial integration seems to have coincided with an increased prominence of financial crises. In 1997–98, several countries in East Asia suffered financial crises involving a collapse of the currency and systemic failures of the banking system. In 1998, Russia and subsequently Brazil were hit by financial crises. Since the end of 2000 the financial system of Argentina and Turkey have remained under great pressure. Europe itself has been not been safeguarded from financial crises. The banking crises in Finland, Norway, and Sweden in the early 1990s are still fresh memories. Europe also has had its share of exchange rate crises, most notably with the currency crisis of 1992–93 (see Box 2).

The question whether European financial market integration will probably increase or decrease the probability and impact of financial crises requires a look at the causes of financial crises, which are generally triggered by a sudden and sharp loss in the value of financial assets. This can concern either currency, equity or in case of a banking crisis the assets and also the liabilities of financial institutions. The vulnerability of financial assets towards sudden and unexpected losses stems from the uncertainty attached to the underlying investment projects in combination with an asymmetric distribution of information between those who invest and those who provide the financing. Furthermore, the possibility to exchange financial assets on liquid markets exposes financial assets to potentially large changes in valuation ⁽³⁾. Thus, financial crises may occur as some kind of market failure, in that an initial liquidity shock is interpreted by financial market participants as a re-assessment of risk,

⁽³⁾ The reason is that liquidity — in microeconomic terms — is similar to an implicit insurance contract, allowing all agents to revert investment plans at a minimum costs provided that only a small share of them uses this opportunity. If instead a large number of assets are liquidated on the market at the same time, prices fall spectacularly. Although the feature of liquidity is welfare increasing, it introduces the potential for large and fundamentally unjustified changes of financial prices. It is in particular the joint determination of risk and liquidity that leads to problems in identifying whether an initial random change in asset valuation is attributable to a transitory liquidity shortage, in which more agents liquidate their investment than foreseen, or to a general and lasting re-assessment of business prospects.

Box 1: The Bordo study on financial crises over the last 120 years

By compiling a history of financial crises over the last 120 years, a recent study by Bordo et al. (2001) attempts to place the financial crises of the 1990s in perspective. The authors make a distinction between banking and currency crises and twin crises (combining the two). For an episode to qualify as a banking crisis, the authors state that they need to observe financial distress resulting in the erosion of most or all of aggregate banking system capital. For an episode to qualify as a currency crisis, they

need to observe a forced change in exchange rate parity, abandonment of a pegged exchange rate, or an international rescue. Alternatively, the authors construct an index of exchange rate pressure (calculated as a weighted average of exchange rate change, short-term interest change and reserve change). A crisis is said to occur when this index exceeds a critical threshold. In sum, a currency crisis is said to occur if an episode shows up according to either or both of the mentioned indicators.

Starting years of banking and currency crises, 1972–98

	Banking crisis		Currency crisis	
B		82		
DK	87	76	92	93
D	77			
EL		83	85	
E	77	76	82	92
F	94	92		95
IRL		76	86	92
I	90	76	92	95
NL		92		
A				
P		76	78	83
FIN	91	86	91	93
S	91	92		
UK		76	82	92
US	84	85		
JP	92	79		

Source: Bordo et al. (2001, web appendix).

Applying these criteria, Bordo et al. score the incidence of financial crises for a wide set of countries over the last 120 years. Banking and currency crises suffered in Europe in the 1972–98 period are represented in the table for Box 1. Of the countries in the table, only Austria has suffered no financial crisis during this period ⁽¹⁾. Of the remaining EU Member States, seven were found to have suffered a banking crisis, including the Nordic countries (Denmark in 1987, Finland in 1991, and Sweden in 1991).

Currency crises are shown to have been even more numerous than banking crises. The collapse of the Bretton Woods system in 1972, and later major realignments in the European Monetary System (EMS) account for many of these currency crises. Prominent among these is the forced exit of the pound sterling from the EMS in 1992. As seen in the table, the precipitous fall of the dollar after the Plaza agreement of 1985 is counted as a currency crisis for the United States. The Japanese banking crisis of 1992 is still unresolved.

The compilation of historical precedents allows to draw some insights on the likelihood and severity of financial crises. On the basis of their overall historical data, Bordo

⁽¹⁾ Luxembourg is not considered in the study.

(Continued on the next page)

Box 1 (continued)

et al. conclude that the crisis frequency since 1973 has been double that of the Bretton Woods era of 1945–71 and the gold standard period of 1880–1913, while it is comparable to that of the crisis-ridden 1920s and 1930s.

For each crisis, Bordo et al. compute the economic cost in terms of forgone output (by comparing the actual output path following the crisis to the trend output path before the crisis). Output cost estimates are provided separately for banking and currency crises in the various historical periods, but not by geographical region. On the basis of the overall evidence, however, the authors conclude that there is little evidence that output losses have become larger. Thus crises in recent decades have become more frequent, but they have not grown more severe. The authors attribute the increased crisis frequency to a combination of capital mobility and extension of the financial safety net, including the implicit insurance against exchange rate risk provided by an ex ante policy of pegging the exchange rate. Insurance of this type encourages banks and corporations to accumulate excessive foreign currency exposures. Several of the European banking crises listed in the table above, such as the Swedish crisis of 1991 and the

Finnish crisis of 1994, were exacerbated by currency collapses (giving rise to currency crises) ⁽¹⁾.

A further measure of the cost of a banking crisis is the fiscal costs stemming from the crisis resolution. Such costs to some extent represent transfers to depositors and to a lesser extent to bank shareholders, and thus can not be seen as national costs. Fiscal costs, however, are real to the extent that they require increases in distortionary taxation. For several banking crisis episodes, the table below provides the estimated fiscal costs as a percentage of GDP. These fiscal costs include fiscal and quasi-fiscal outlays for financial system restructuring, including the recapitalisation costs for banks, bailout costs related to covering deposits and creditors, and debt relief schemes for bank borrowers. The several reported cases already indicate that these fiscal costs vary widely, with the still ongoing resolution of the Japanese banking crises estimated to carry a fiscal cost of 20 % of GDP.

⁽¹⁾ Exchange-rate adjustments within the euro area are, of course, no longer possible, but large swings of the euro exchange rate may still pose risks to euro-area banking systems.

Fiscal costs of select banking crisis

	Period	Fiscal cost (% of GDP)	Blanket guarantee for depositors and creditors	Extensive liquidity support to FIs
E	77–85	5.6	no	yes
F	94–95	0.7	no	no
FIN	91–94	11.0	yes	yes
S	91–94	4.0	yes	no
US	81–91	3.2	no	no
JP	92–ongoing	20.0	yes	yes

Source: Honohan and Klingebiel (2001).

which demands a re-balancing of the portfolio. In consequence, rather trivial price changes may trigger massive and fundamentally unjustified changes in asset valuations ⁽¹⁾ and make financial crises difficult to predict or to prevent.

⁽¹⁾ Bank run models employing this feature have been constructed by Diamond and Dybvig (1983), Jacklin and Bhattacharya (1988) and Chari and Jagannathan (1988).

The fiscal costs of financial crises seem to depend on the strategies used to resolve them ⁽²⁾. Resolution strategies can, for instance, differ in whether blanket deposit guarantees are provided and in whether there is open-ended liquidity support for the distressed financial institutions.

⁽²⁾ Evidence has been provided by a paper by Honohan and Klingebiel (2001), which relates the measured fiscal costs of banking crisis resolution to qualitative indicators of the crisis management strategies chosen by the authorities.

Box 2: Are there workable ways to predict and prevent financial crises?

To answer this question, one needs to do statistical work that relates crisis incidence to variables that may help to explain these crises. Ideally, the set of potential explanatory variables would include relevant macroeconomic variables (such as the rate of output growth, profitability indicators and interest rates) and variables that measure the vulnerability of the financial system to shocks (such as the credit to GDP ratio and the average maturity of bank liabilities). Statistical work of this type has to use information on a sufficiently large set of crisis episodes to be meaningful. Unfortunately, high quality data on national banking systems that are comparable across countries for a sufficient number of years are often not available. This is the reason that actual studies that attempt to explain financial crises rely mostly on a set of macroeconomic indicators. Kaminsky (1999), for instance, looks at a variety of variables related to domestic borrowing, monetary policy, the current and capital accounts, and growth performance in isolation and in combination (in so-called composite indicators). It is fair to say that data problems as well as the different natures of financial crises at this point make such crises notoriously difficult to predict.

One issue related to crisis prediction that has received much attention is whether a financial crisis in one particular country helps to predict a crisis somewhere else. This is the issue of 'contagion', which may arise for a variety of reasons ⁽¹⁾. Trade links among the concerned countries, macroeconomic similarities, and linkages through financial markets may explain why the occurrence of a crisis in one country helps to predict a crisis in other countries. Different types of linkages may in fact help to explain contagion concerning different types of financial crisis. Crises that are defined by changes in bond market interest rates, for instance, may be transmitted internationally primarily through financial linkages (such as competition for the same funds in the international capital market), while crises defined by (negative) stock market returns may be propagated mostly through trade linkages.

A key issue is the role of bank regulatory policies in causing as well as curing financial crises. Regarding the first question, Demirgüç-Kunt and Detragiache (2000) examine to what extent the existence of an explicit system of deposit insurance helps to explain banking crises. The

study is based on data for a sample of 61 countries during the 1980–97 period. The authors conclude that explicit deposit insurance is detrimental to bank stability, especially if the overall institutional environment is weak ⁽²⁾. The quality of the institutional environment here is measured by indices of the degree of law and order, the quality of contract enforcement, the quality of bureaucracy, the extent of bureaucratic delay, and finally the degree of corruption. In Europe, deposit insurance schemes potentially may also contribute to the occurrence of financial crises, even if the overall high institutional environment lowers the probability of such a chain of events.

In another recent paper, Sundararajan, Marston, and Basu (2001) consider whether good bank regulatory practices help to maintain financial system soundness. Good regulatory practices are defined as a high degree of compliance with the so-called Basel core principles of banking regulation and supervision. The 25 core principles cover a variety of aspects of bank supervision and regulation, including the definition of permitted activities, capital requirements, the nature of ongoing supervision, requirements as to bank record keeping, and the supervision of cross-border banking. The authors have scored compliance with these core principles for 35 countries for the year 1999–2000.

In their statistical work, the authors use two different measures of financial market soundness: the ratio of non-performing loans to aggregate loans of the banking sector, and the difference between the short-term local currency denominated lending rate over the corresponding risk-free interest rate. The regressions use a variety of control variables including per capita GDP and the real exchange rate. The regression analysis, however, fails to find a direct discernible association between the extent of compliance with the Basel core principles and the mentioned indicators of financial soundness and risk. The authors, however, claim that compliance with the core principles may influence risk and soundness indirectly through its influence on the impact of the other variables (as evidence of this they find that a high rate of loan growth may serve to reduce financial risk more, if compliance with the core principles is higher).

⁽¹⁾ For a detailed analysis of contagion, see Hernández and Valdés (2001)

⁽²⁾ Demirgüç-Kunt and Detragiache (2000) use indices of law and order, contract enforcement, bureaucratic delay and quality of bureaucracy and corruption to measure the weakness of the institutional environment.

The second table in Box 1 also provides information on these two dimensions of the crisis resolution strategies followed during the listed banking crisis episodes. Statistical work by Honohan and Klingebiel (2001) shows that blanket deposit guarantees open-ended liquidity support as well as repeated recapitalisations, debtor bail-outs, and that regulatory forbearance adds significantly and sizeably to costs.

Assessing the findings above, economic and financial integration in Europe may serve to enhance as well as to reduce financial stability as it has implications for the likely causes, nature and the consequences of any future financial crises. First, the introduction of the euro eliminates the possibility of exchange rate adjustments or collapses among the euro countries. However, the euro exchange rate has been far from stable vis-à-vis other key currencies, and thus exchange rate risk as a potential cause of banking crises is not entirely eliminated. In the EU, bank supervision continues to be at the national level, and in principle banks are supervised by their home country supervision authority. Needless to say, for this arrangement to work, national supervisory authorities have to collaborate effectively. A major area for discussion is whether current collaborative arrangements in the EU are adequate to prevent as best as possible banking failures in the EU.

Then, financial integration in principle offers financial institutions increased opportunities to diversify their asset portfolios leading to increased financial stability. At the same time, cross-border activities may lead to important foreign currency exposures with negative consequences in case of large currency swings. Within the euro area, financial integration intensifies competition among financial institutes, which tends to erode profit margins and

may induce individual institutions to restore profitability by accepting a higher risk exposure. Cross-border activities by the banks themselves and international economic and financial linkages in general can also lead to contagion, or the transmission of a foreign financial crisis to the domestic financial system. While financial integration may change the nature of risks to the financial system, at the same time it makes the job of bank supervisors more difficult. To do their job well, bank supervisors have to rely on useful and timely information regarding banking sector health. Internationalisation of the banking system poses new challenges in this regard.

As for the cost of financial crisis, in Europe, guarantees for deposits are at present subject to the deposit guarantee scheme directive of 1994, which stipulates a minimum coverage level of EUR 20 000. This guarantee should be borne by member credit institutions. The directive provides for the possibility to limit the coverage rate of the guarantee to 90% below the stipulated minimum level and to exclude interbank deposits. Member States are free to set a deposit guarantee level above the EU minimum level. In crisis periods, it is possible for the State to intervene at its own discretion to provide reimbursement to depositors beyond the *de jure* levels of the national deposit guarantees. However, such an intervention does not form any part of the national deposit guarantee. Extensive reimbursement of deposits, not surprisingly, can come at a high fiscal cost at the time of crisis resolution. In the euro area, decisions regarding the liquidity support to ailing banks continue to be made at the level of national central banks, and in principle the costs of such support remain to be borne at the national level. Differences in national policies regarding liquidity support to distressed banks may thus continue to exist in the euro area.

3. Recent financial market developments in Europe

The effect of the euro in accelerating the process of financial integration is already evident in the main financial markets (money/derivatives, bonds and equities), among the main financial intermediaries (banks, insurance companies and other institutional investors) and in market infrastructure (e.g. clearing and settlement arrangements). Recent developments in each of these main areas are summarised below revealing that the extent of integration across market segments is not uniform.

3.1. Integration in the euro-area money market

The introduction of a single monetary policy in EMU has ensured a substantial integration of the euro-area money market. With ECB monetary operations being conducted exclusively in euro, the national money markets of the participating Member States were denominated in the single currency from 1 January 1999. The euro-denominated money market has functioned smoothly since then, apart from problems with the ECB's liquidity allotment procedures, which were resolved by moving to floating rate tenders in June 2000.

Although the market is functioning well, the degree of integration varies across the different segments. In the market for unsecured inter-bank deposits, integration is complete and there is virtually full convergence in very short-term interest rates across the euro area. The high degree of convergence in these rates reflects the full acceptance of EONIA (Euro overnight index average) and Euribor (Euro inter-bank offer rate) as uniform price references by operators in this market segment. Convergence has also been helped by the efficient distribution of liquidity area-wide, as reflected in a high proportion (about 60 %) of cross-border transactions in the total inter-bank activity of the largest participants in the market. In this context, it is notable that the inter-bank market has developed a two-tier structure in distributing liquidity,

with relatively large banks dominating cross-border transactions and smaller banks relying on domestic transactions with these larger banks for their funding. Interest-rate convergence is also evident at somewhat longer maturities in the money market. Recent analysis by the BIS (2001) points to the decline of 40% in bid-ask spreads on three-month euro-currency deposit rates in 2000 relative to 1996 as further evidence of integration in the euro unsecured money market.

In parallel to the developments in the unsecured money market, the euro-area derivatives market is also highly integrated. The cross-border market for euro interest rate swaps has expanded sharply since the introduction of the euro, and the high degree of market integration is reflected in very narrow bid-ask spreads and relatively large issue sizes. Activity in other derivatives markets has also increased, with Euribor-based futures contracts displacing all futures contracts in legacy currencies that existed before EMU.

The secured money market segments (e.g. private repurchase agreements, treasury bills, commercial paper and certificates of deposit, which involve the exchange of liquidity for collateral) remain considerably less integrated. The continued fragmentation in these segments reflects difficulties in the cross-border use of collateral due mainly to national differences in market practices and regulation and the tax/legal treatments that apply to the securities used as collateral. In particular, these national differences — reflected in segmented national-based market infrastructures — can create important practical difficulties in cross-border clearing and settlement (See Box 3).

3.2. The euro-denominated bond market

EMU and the introduction of the euro have integrated the 12 national bond markets of the participating Member States. The result has been a substantially more homoge-

Box 3: Initiative on cross-border clearing and settlement in the EU

Investor demand for cross-border transactions is increasing as the EU financial system becomes more integrated. Where transactions are unsecured, cross-border activity is relatively free of problems and the relevant markets, e.g. the euro-area interbank deposit market, are already highly integrated. More serious problems have arisen with cross-border transactions that involve the transfer of securities and, as a result, these markets (and particularly markets involving the use of collateral) remain relatively fragmented.

The main source of problems in conducting cross-border securities transactions within the EU is to be found in the clearing and settlement infrastructure. An efficient clearing and settlement infrastructure is essential for a smoothly functioning securities market. In brief, the process of clearing and settlement of a securities transaction begins when a trade has been executed and involves the following main steps:

- confirmation of the terms of the securities trade;
- clearance of the terms of the trade to establish the obligations of the counterparts;
- delivery of the securities from the seller to the buyer; and
- payment of funds from the buyer to the seller.

Settlement of the trade occurs when the transfer of both securities and funds is final and only when the settlement is final is the securities transaction complete.

The current EU clearing and settlement infrastructure is the product of a fragmented financial system. Historically, the pattern of European securities trading has followed national lines, a pattern of segmentation reinforced by the existence of many different currencies (for a long time accompanied by exchange controls) and rather basic tools of communication. The result was the emergence of efficient structures for securities transactions at the national level, most often comprising the vertical integration of the trading, clearing, settlement and depository functionalities. These nationally-based structures — offering only very limited scope for cross-border trading — have remained the architecture of choice for EU investors until very recently.

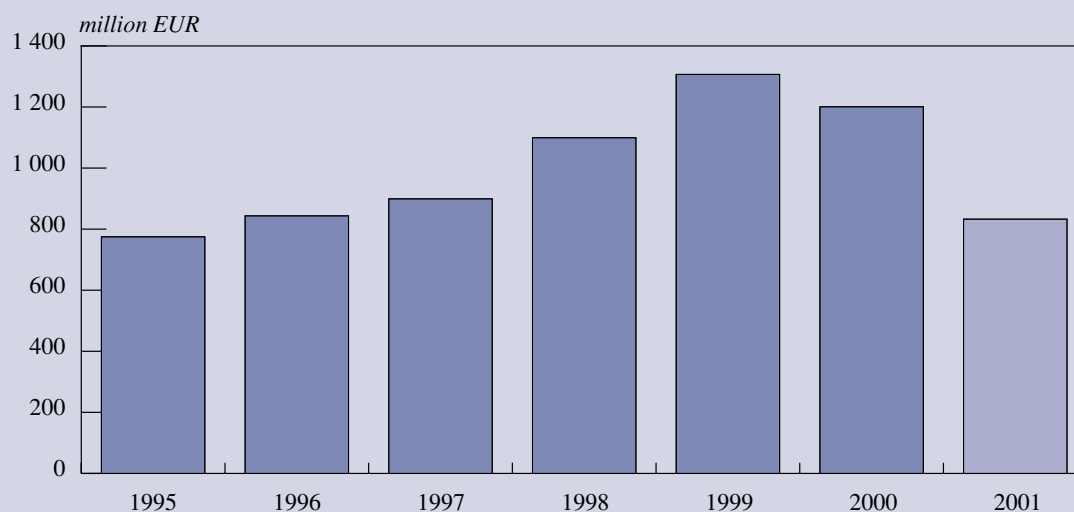
The vertical integration of national trading, clearing and settlement infrastructures has resulted in a wide variation in the procedures and requirements associated with the provision of these services across the Union. This variation reflects not only specific market practices in the Member States but also more fundamental differences in national frameworks for the regulatory, legal and fiscal treatment of securities. The additional cost — both direct in the form of higher prices for the services provided and indirect in the form of inefficiencies in the functioning of the financial system — associated with the fragmented clearing and settlement infrastructure represents a major limitation on the scope for cross-border securities trading in the EU (for recent policy initiatives on clearing and settlement see Giovannini Group (2001) and part 6.3. of this chapter).

nous euro-denominated bond market. The effects of integration are evident in many aspects of market activity.

First, the greater liquidity and depth of the euro-denominated market has been reflected in higher issuance rates. Total issuance volume in euro since January 1999 has exceeded the combined issuance in legacy currencies during the years immediately preceding EMU, although the trend in euro issuance has varied over the period. Euro issuance was particularly strong in 1999, rising by 18.9% relative to 1998. This surge in issuance reflected the release of pent-up demand on the part of both issuers and investors, who had delayed their entry into the market because of turbulence in the international financial system and uncertainty surrounding the changeover to the euro. Corporate issuers were particularly active in the early months of 1999, as many endeavoured to establish a posi-

tion in the new and potentially more liquid market. In 2000, however, there was a trend decline in euro issuance. The decline in issuance was attributable to a return to a more normal rhythm of issuing activity, reduced government borrowing needs and a progressive deterioration in market sentiment as interest rates and oil prices moved steadily higher. Overall, euro issuance declined by 7% in 2000 relative to 1999. Somewhat unexpectedly, the trend in euro issuance reversed sharply in 2001 with a series of record monthly totals recorded in the first quarter. While issuing activity decelerated in subsequent months, total issuance in the first nine months is up by 11% over the corresponding period in 2000. The strength of euro issuance in 2001 can be traced to the corporate and financial issuers, who have responded to the improved bond market conditions and weakness in global equity markets.

Graph 2: Total bond issuance volumes



NB: Data for 2001 only for period January to September.

Source: Commission services.

Second, as issuance volumes have risen, the euro has emerged as the second most important currency for international bond issuance behind the US dollar⁽¹⁾. The US dollar and euro now dominate international issuance, representing a combined 80–85% of total. The euro's share of international issuance almost matched that of the US dollar in 1999, but fell back subsequently and was about 39% compared to 51% for the US dollar in the first nine months of 2001.

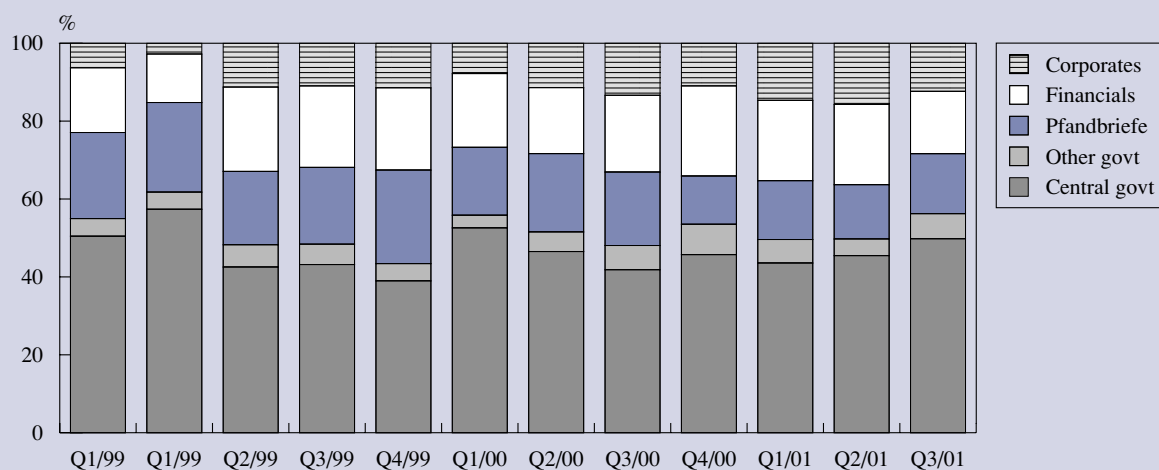
Third, there have been several notable changes in the composition of bond issuance relative to the pre-EMU situation. The most significant change has been a sharp rise in non-sovereign issuance, with the combined issuance of the corporate and financial sectors more than quadrupling since 1998. Further evidence of increased liquidity in the corporate and financial segments of the market is to be found in the progressively larger size of individual issues, with tranches above EUR 1 billion now commonplace. A substantial share of lower-rated

issues in total (about 20–25%) would also suggest a relatively liquid corporate market, although it should be noted that high-yielding issues represent only about 6% of the total volume of euro issuance. The trend toward greater securitisation in the EU financial system was predictable following the introduction of the euro. However, the acceleration in non-sovereign issuance has exceeded expectations and probably reflects the coincidence of higher investor demand in the more liquid euro-denominated bond market and other factors not directly related to euro, such as the need to finance increased M & A activity and UMTS auctions that have stimulated the supply of corporate and financial bonds. In contrast, Pfandbriefe⁽²⁾ and other asset-backed issuance has been more variable since the introduction of the euro.

⁽¹⁾ For a thorough review of the impact of the euro on international capital markets, see Detken and Hartman (2000).

⁽²⁾ A Pfandbrief security is a collateralized bond backed by either mortgage loans or loans to the public sector. Originated in Germany it is now spreading throughout Europe. The most important difference to traditional asset-backed securities is that Pfandbriefe carry no prepayment risk since they remain on the balance sheet of the issuing institution. In general, Pfandbriefe are highly rated and show relatively small spreads to the government benchmark bond.

Graph 3: Composition of euro-denominated bond issuance



Source: Commission services.

The variable performance in these sectors is not attributable to market integration but can be traced to a widening yield spread relative to government bonds and market concern about the credit quality of these securities and the appropriateness of their very favourable credit rating.

Despite the growth of issuance in other market segments, sovereign issuance remains a dominant source of supply to the euro-denominated bond market. Government issuance in euro represents 51.5% of total and is on a par with the corresponding issuance in dollars by the US Treasury. Nevertheless, government issuance in euro has been on a declining trend due to an ongoing process of budgetary consolidation in the euro area and better-than-expected revenue growth (due to strong economic growth, a widening of the tax base, high UMTS-related flows in some countries, etc.). Net issuance in euro has declined more sharply than gross issuance due to the effect of buybacks and exchange offers.

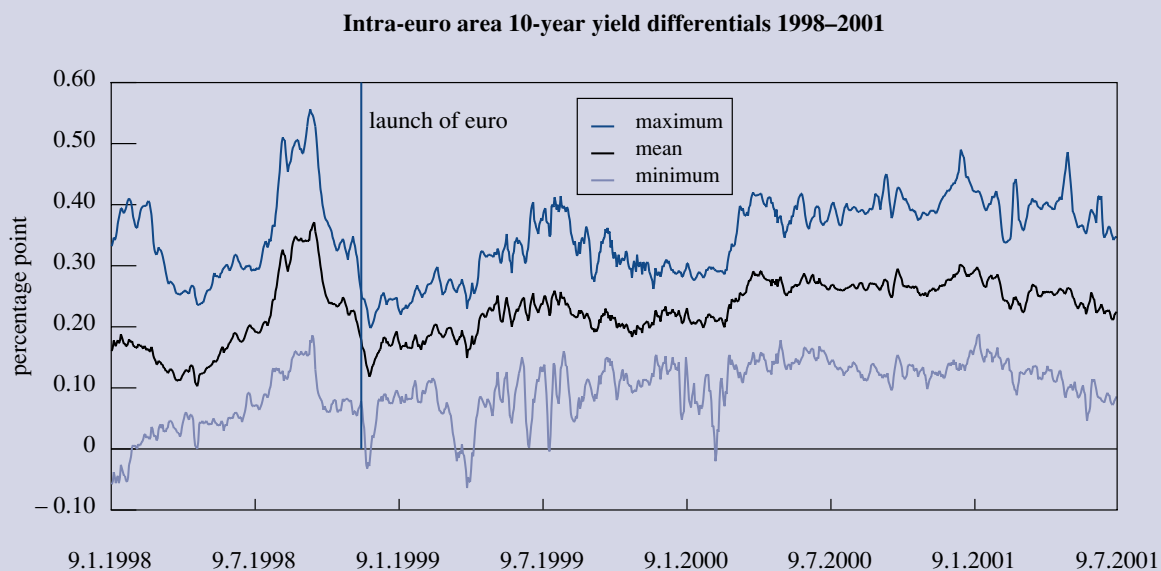
The homogeneity of the euro-area government bond market is evident in highly convergent yields across the

Member States, which is in marked contrast to the situation that existed as recently as the mid-1990s.

The convergence in yields can be attributed to the elimination of exchange risk in EMU and to the relative improvement in budgetary conditions in several of the Member States. However, there is still evidence of fragmentation in this market segment, much of which reflects the fact that government bonds are still issued by 11 separate agencies with different needs, strategies, procedures and instruments. The effect of this separate issuance is to fragment liquidity in the market and liquidity premia have emerged as an important determinant of the euro-area government yield spreads, which have actually widened since the end of 1998. The smaller-issuing Member States have been most vulnerable to liquidity premia, with many unable to provide the necessary volume of issuance in all maturities across the yield curve.

A possible response to the evolution in euro-area government bond yields since 1999 would be to further integrate the market by more coordinated issuance. Such

Graph 4: Yield spreads on government bonds in the euro area



Source: Commission services.

a possibility was examined by the Giovannini Group ⁽¹⁾ (2000), which acknowledged the liquidity concerns for smaller issuers but concluded that yield spreads were probably not sufficiently large to justify the significant and time-consuming reforms required to put in place the necessary mechanisms for coordinated issuance. However, it was acknowledged that the context for assessing the merits of coordinated government bond issuance might change significantly as financial markets evolve and that the topic should be kept under review (see Box 4).

Issuance by sovereigns other than government has been relatively stable since 1998. While the European Investment Bank and Kreditanstalt für Wiederaufbau remain the dominant issuers in this segment, liquidity has been boosted by the entry of Freddie Mac, the US quasi-governmental mortgage agency, which began a significant euro issuance programme in September 2000. The programme foresees issuance of EUR 5 billion per quarter in varying maturities.

⁽¹⁾ A group of market participants, under the chairmanship of Alberto Giovannini, established to advise the Commission on financial-market developments.

3.3. Equity markets

As with the other main financial markets, the pressure for integration within EU equity markets has also intensified since the introduction of the euro. It is, however, more difficult to isolate the influence of the euro on equity markets from that of other unrelated developments. While the elimination of exchange risk has stimulated demand for cross-border equity investment, the trend toward cross-border trade is also driven by the broader internationalisation of equity issuance, more mergers and acquisitions across borders and the need for formal stock exchanges to expand market share as new entrants create an increasingly competitive business environment. In particular, many smaller electronic trading networks have been established in recent years, albeit with varying degrees of success.

The response of the formal stock exchanges to the changes in the financial environment has been to consolidate. Once again, consolidation must be seen as a global rather than EU-specific phenomenon, with several proposals to link exchanges worldwide so as to create the

**Box 4: Summary of the report by the Giovannini Group on
'Coordinated government debt issuance in the euro area'**

The Giovannini Group examined the scope for more coordinated issuance of euro-area government debt in the context of persistent intra-area yield spreads. As the extent to which more coordinated debt issuance could reduce market fragmentation would depend upon the degree of coordination involved, the Group considered four hypotheses:

1. Coordination on technical aspects of debt issuance.
2. Creation of a joint debt instrument with several country-specific tranches.
3. Creation of a single euro-area debt instrument backed by joint guarantees.
4. Borrowing by a Community institution for lending to euro-area Member States.

While not exhaustive, these hypotheses were deemed to cover a broad spectrum of possible arrangements, ranging from a limited extension of current procedures to the most advanced form of coordination involving the establishment of a single benchmark issuer for the euro area as a whole. In assessing the four hypotheses, the Group distinguished between looser coordination arrangements, which could be agreed outside the framework of the Treaty, and more advanced arrangements that would be likely to require legal or institutional changes.

There was recognition within the Group that the market for euro-area public debt remains fragmented, but views on the benefits of more coordinated debt issuance were mixed. Coordinated debt issuance was seen as most attractive for the smaller issuers and there was a relatively detailed discussion of the possibilities for joint issuance by the relevant Member States. For joint issuance to be successful in boosting liquidity in the cash market and in allowing deliverability into an actively traded futures contract, single issues of between EUR 15 billion and EUR 20 billion would be required on a regular basis. It was felt that most (if not all) of the smaller Member States would need to participate in the joint issuance to ensure the necessary size and regularity in issuance. Without wide participation,

it could take too long to build up liquidity in any jointly issued instrument, given differences in maturity profiles among the participants and other constraints. In terms of narrowing of spreads, there was scepticism about the scale of benefits to be derived from increased coordination in debt issuance, even for the smaller issuers.

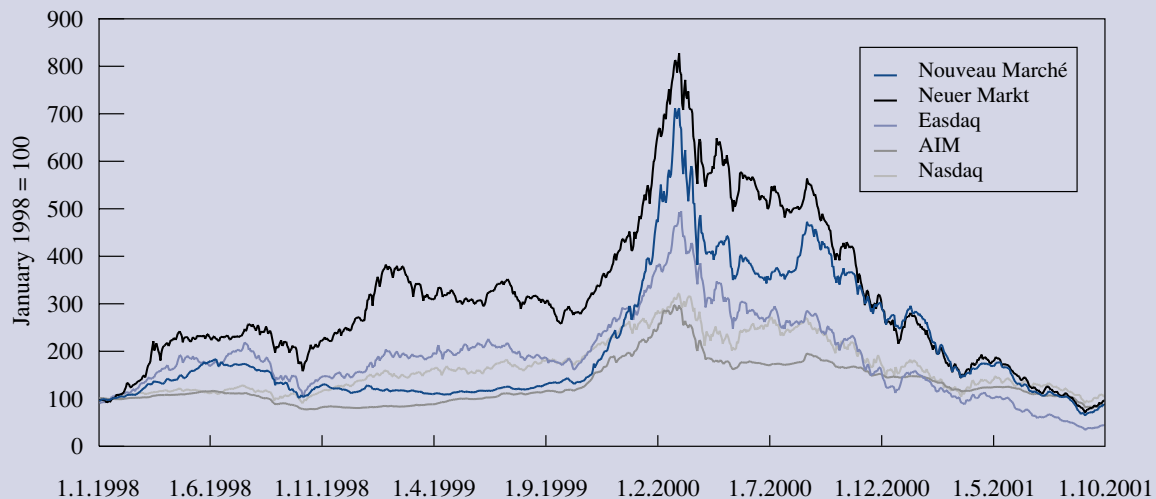
The advantages of creating a single euro-area debt instrument that could successfully compete for funds on the global capital market in competition with US treasuries and Japanese government bonds were acknowledged in principle. It was also agreed that the euro-area market could benefit from the establishment of a clear 'benchmark' issuer, e.g. through facilitated pricing of non-sovereign issuance and the creation of a homogeneous euro yield curve. However, there was a broad consensus that there would be difficulties associated with such far-reaching coordination that are of a nature which go beyond the remit of the Group. In this context, it was argued that any proposal requiring significant and time-consuming change would face scepticism in markets that are evolving so rapidly.

The Group also drew attention to an important caveat to these findings: financial markets are experiencing significant changes as a result of globalisation, structural change, deregulation and, of course, the impact of the euro itself. Any analysis therefore risks being by-passed by events. In this context, the Group noted the development of non-public debt markets and the decline in the share of government issuance in total debt issuance as having important implications. Debt issues of US institutions such as Fannie Mae and Freddie Mac, or European Pfandbriefe, to the extent that they have characteristics similar to those of government issues, may eventually act as substitutes for government debt and obtain benchmark status. The US swap market has indeed already become a benchmark for pricing corporate debt. In the secondary markets, the development of electronic trading systems has important implications for liquidity and has already led to changes in issuing strategies and techniques.

so-called 'global equity market' and the possibility of 24-hour trading. On the other hand, there have been several high-profile consolidation efforts in Europe. Most notable of these has been the creation of Euronext, which merged the Amsterdam, Brussels and Paris exchanges in mid-2000 and was floated as a public company in mid-2001. Euronext has recently signed a memorandum of understanding with the Lisbon exchange, which is

seen as presaging a formal merger in the future. There has also been evidence of consolidation within Member States, most recently in Spain, where the four regional exchanges are to merge. The process of integration also goes beyond traditional exchanges, as illustrated by the Virt-x merger that combined the Swiss exchange and the UK-based electronic exchange Tradepoint. Not all consolidation efforts have been successful, however, with

Graph 5: 'New economy' stock market indices



Source: Commission services.

the failed merger of Deutsche Börse and the London stock exchange being a notable example.

Apart from these structural developments, the integration in EU equity markets has been mainly evident in a more sectorally correlated movement in equity prices across the various Member State markets. This would suggest a change in investor behaviour away from country-based investments and toward sector-based investments, with divergence in the evolution of indices explained mainly by differences in composition. The use of equity related derivatives has also significantly increased in the last years. Options and futures on the main European stock indices are now available, by that way also enhancing primary equity market liquidity. Due to the relative large share of over-the-counter (OTC) and not exchange-traded stock market derivatives, statistics on the development of this market section remain, however, incomplete.

The effect of the euro in encouraging cross-border equity investment has been a factor in stimulating activity in the new-economy stock markets of the EU which — in line with US developments — have exhibited rather extreme behaviour in recent years. The EU new economy stock indices rose explosively in the period around the launch

of EMU, although the capital flows into these markets were as much a reflection of overheated demand for TMT (technology, media and telecommunications) securities than of enthusiasm for euro investments. The German Neuer Markt was a particularly strong performer and enjoyed an increase of nearly 850% in market capitalisation between end-1997 and March 2000. The subsequent slump in performance in the TMT sectors globally has impacted heavily on the new economy markets in both the United States and Europe, with the Neuer Markt surrendering all the gains since end-1997.

3.4. Financial intermediaries

The impact of financial integration has not been confined to the different financial market sections but has extended also to the activities of financial intermediaries. Banks are increasingly involved in offering financial services to foreign businesses and individuals. The introduction of the euro has further intensified competition in an already highly competitive environment for financial intermediaries by facilitating price transparency, by reducing foreign exchange revenues, by eliminating the competitive advantage for domestic players associated

with the existence of national currencies and by promoting the development of much broader and liquid securities markets which foster securitisation and disintermediation. The most visible response of financial intermediaries to these pressures has been consolidation either through mergers and acquisitions or through cross-shareholdings. Consolidation has been accompanied by a restructuring process and a reorientation of activities from 'traditional' bank lending towards 'investment banking' style activities such as enhancing financial market intermediation by creating and selling new capital market products or advising clients on the pricing and structuring of a merger or acquisition, which is, in turn, reflected in a shift in their revenue flows from interest income to non-interest (fees and commission) income.

Consolidation among financial intermediaries has so far taken place mainly within national boundaries, implying a significant increase in industry concentration at the national level particularly in the smaller Member States. The trend towards domestic conglomeration (i.e. consolidation across financial sectors) is also increasing in many parts of the EU. On the other hand, cross-border mergers and acquisitions between large universal banks have been the exception ⁽¹⁾. As the significant differences

in national legal and regulatory environments (e.g. consumer and competition laws) make a pan-European product range impractical at this time, the scale and scope economies from cross-border mergers would seem to be less than those from domestic mergers. Cultural factors and differences in the framework for corporate governance would also tend to discourage cross-border consolidation. In these circumstances, financial intermediaries may prefer to engage in defensive mergers at the domestic level in preparation for pan-European competition when integration of the EU financial system is more advanced.

The trend toward consolidation of financial intermediaries operating within the EU is set to continue, given the strength of the underlying forces in their operating environment. The key question is how this consolidation will proceed. Further mergers and acquisitions between big institutions in smaller Member States are unlikely given the already high concentration in their financial sectors. Consolidation is more likely in the wholesale sectors than in the retail sectors and conglomeration is also expected to intensify. As an alternative to full-scale mergers across borders, some institutions have focused on building up a network of minority stakes and joint ventures. The Internet may also provide a cost effective alternative to mergers for some institutions by enabling them to gain access to new, or retain existing, corporate and retail customers. It should be noted that the phenomenon of consolidation in financial intermediaries is not confined to the EU and reflects the search for economies of scale and scope at the global level. There have been several high-profile financial mergers involving only US-based financial institutions, as well as many cross-border mergers involving institutions based in the EU, the United States, eastern Europe, Latin America, etc.

⁽¹⁾ The absence of more cross-border consolidation can be explained by reference to the benefits to be expected from mergers and acquisitions among financial institutions. The rationale for a financial merger or acquisition is mainly to be found in (i) the cost savings resulting from economies of scale and scope; (ii) revenue and risk diversification (e.g. development of 'bancassurance'/asset management); (iii) achievement of critical mass/reputation building (especially in investment banking); (iv) preservation of market share in a larger market (defensive mergers); and (v) the intention to restore market power.

4. Evidence on the international ownership of assets

4.1. Theoretical approach

As far as the ownership of financial assets is concerned, full integration implies that investment portfolios are well diversified internationally. Portfolio diversification would, in fact, require that the bulk of the portfolios of residents in a particular country be allocated to foreign assets. In practice, however, financial portfolios appear to be heavily biased towards domestic assets. This so-called 'home bias' has a variety of possible explanations. The main ones relate to the existence of barriers to international portfolio diversification. Such barriers can be explicit, in the form of foreign exchange controls, withholding taxes, and other directly observable barriers. In addition, one can distinguish implicit barriers in the form of political, or country, risks and informational asymmetries. There are also potential reasons for the home bias that do not stem from explicit or implicit barriers, but rather from the non-tradability of particular assets. For example, human capital and the shares of privately held companies are not tradable. The holders of these non-tradable assets aim to structure their portfolios of tradable assets so as to achieve the best attainable combination of risk and return for their overall asset holdings. A home bias could then be explained if the return to domestic tradable assets tends to be negatively correlated with the return to domestic labour.

4.2. The internationalisation of European banking

In an integrated European financial market, one would expect the banking sector to become more international. Such internationalisation can take a variety of forms. First, mergers by banks from different national banking markets could create international or even pan-European banks. The ECB (1999), for instance, foresees the creation of a two- to three-tier banking system in the EU consisting of national, EU-regional, and several large EU-wide financial institutions. In addition, there would

be room for niche players and specialised institutions on the fringes. While there has been some international merger activity in the European banking market in the last several years, this has so far failed to produce any truly European bank. The purchase by banking institutions of existing foreign banks is generally an expensive road to expansion, which tends to limit the scale of M & A activity. In recent years, several European banks have instead indicated their intention to become truly European banks by offering banking services to an international clientele through the Internet. However, this route to international expansion is fraught with difficulty, as few European banks have sufficient international name recognition to successfully attract international business and retail customers through an Internet expansion strategy. In practice, brick-and-mortar establishments continue to instil confidence in banking customers and hence are important in attracting new customers.

Summary information on the extent of foreign ownership of banks in 11 EU Member States is provided in Table 3. For each country, information is given on the share of banking assets in total banking assets belonging to the branches and to subsidiaries of international banks. Also, there is a breakdown of foreign branches and subsidiaries from EEA countries and third countries ⁽¹⁾. The data indicate that the foreign banks in these 11 EU countries are predominantly subsidiaries of banks in EEA countries. The asset share of foreign banks is 95% in Luxembourg, and little more than half and a third in Ireland and Belgium, respectively. No exact information is available on how the activity mixes of foreign banks differs from that of purely domestic banks. However, one expects that foreign banks are relatively heavily engaged in servicing the needs of businesses and perhaps wealthy individuals given the high costs of attracting local retail customers.

⁽¹⁾ The European Economic Area (EEA) covers the EU plus Norway, Iceland and Liechtenstein.

Table 3

Share of foreign banks

	From EEA countries		From third countries		Total
	Branches	Subsidiaries	Branches	Subsidiaries	
Belgium	9.0	19.2	6.9	1.2	36.3
Germany	0.9	1.4	0.7	1.2	4.3
Greece	:	:	:	:	:
Spain	4.8	3.4	1.6	1.9	11.7
France ⁽²⁾	2.5	:	2.7	:	9.8
Ireland	17.7	27.8	1.2	6.9	53.6
Italy	3.6	1.7	1.4	0.1	6.8
Netherlands	2.3	3.0	0.5	1.9	7.7
Luxembourg	19.4	65.7	1.4	8.1	94.6
Austria	0.7	1.6	0.1	1.0	3.3
Portugal	2.5	6.8	0.1	1.0	10.5
Finland	7.1	0.0	0.0	0.0	7.1
Euro area	3.4	:	1.6	:	12.7

(1) Market share of branches and subsidiaries of foreign credit institutions as a percentage of the total assets of domestic credit institutions, end-1997.

(2) 1996 figures.

Source: ECB.

Table 4

Merger and acquisition activity in the euro area financial industry

	Same country		Other euro area country		Other non-euro area country		Total	
	Number	Value ⁽²⁾	Number	Value ⁽²⁾	Number	Value ⁽²⁾	Number	Value ⁽²⁾
Banks — banks								
— 1998	7	7.5	1	131	12	800	20	20.0
— 1999	9	38.7	4	8.9	15	3.9	28	54.6
— 2000 ⁽³⁾	3	4.9	0	0	5	708	8	17.6
Banks — non-bank financial								
— 1998	4	25.5	1	576	3	1.1	8	27.8
— 1999	3	19.5	1	751	12	20.5	16	24.1
— 2000 ⁽³⁾	8	5.2	1	1.8	4	492	13	7.6

(1) Either acquirer or target company is resident in the euro area. Only completed or pending deals; announcement date volumes.

(2) In billions of EUR.

(3) January to 10 April.

Source: BIS Annual Report 2000.

Foreign branches and subsidiaries can result from international takeovers or through ‘greenfield’ investments in new entities. A relatively quick international expansion strategy will require international mergers and acquisitions. Data on bank mergers — including mergers between banks and non-banks — in the euro area is presented in Table 4. When looking at the value of merged companies, we see that domestic mergers continue to

dominate international mergers. Among international mergers, there tend to be more mergers involving institutions from two or more euro countries and institutions from non-euro countries than mergers involving institutions from different euro countries.

The relatively modest volume of international banking mergers suggests that domestic bank mergers are per-

ceived to be more advantageous than international banking mergers. This conforms to the reasoning of Danthine et al. (1999), who argue that individual European economies are rather heterogeneous — compared for instance to US states. This heterogeneity implies that purely domestic banking mergers offer ample opportunities for asset risk diversification. Domestic mergers will then be preferred to international mergers, as they avoid the problem of blending different culture and languages while offering the prospect of increased market power. Several studies of the consequences of European bank mergers have attempted to distinguish between the effects of domestic and international mergers. The evidence on the relative merits of international mergers is somewhat mixed. Examining EU bank take-overs, Vander Venet (1996) concludes that domestic mergers, particularly among equal-sized partners, have significantly improved the performance of the merged banks. However, cost efficiency gains were also found in cross-border mergers and acquisitions. Cybo-Ottone and Murgia (2000) conclude that there are abnormal stock market returns — pointing to increased shareholder wealth — associated with domestic bank-to-bank deals and with the diversification of banks into insurance. Given the relatively few international bank mergers in the EU, evidence of this kind is necessarily preliminary in nature.

The relative advantages of international versus domestic expansion can be assessed directly by comparing the average profit performance of domestic and foreign banks in EU countries. Average profit and some other accounting information for domestic and foreign banks in the EU is provided in Graph 6. This summary information is based on annual reports of domestic and foreign banks in Member States, where a foreign bank is a bank that is at least 50% foreign-owned. On an EU-wide basis, foreign banks have achieved net profits equal to 0.3% of assets, compared to 0.4% for domestically-owned banks over the years 1988–95. This relatively low profitability of foreign banks is shown to reflect lower net interest income, as well as lower non-interest income. Despite the possible shortcomings in accounting data (e.g. the possibility that international banks manipulate transfer prices so as to minimise their worldwide tax liability), the apparently lower profitability of foreign-owned banks suggests that their international expansion strategies of banks have not been very successful on average.

Further evidence on the internationalisation of EU banking can be derived from balance sheet data provided by the Bank for International Settlements. Specifically, data on the external positions of banks in individual countries (the EU-15, the United States and Japan) vis-à-vis

Graph 6: Bank spread and profitability, EU ⁽¹⁾



⁽¹⁾ EU-15 foreign excluding IRL and FIN.

Source: Demirgüç-Kunt and Huizinga (2001). ta = total assets.

Table 5

External positions of banks in individual countries vis-à-vis non-banks (*)

	Assets (as a percentage of GDP)		Liabilities (as a percentage of GDP)	
	1990	1999	1990	1999
	B	28.5	47.8	18.4
DK	4.8	8.9	1.9	5.0
D	4.1	18.0	3.2	13.4
EL				
E	2.6	6.8	5.2	12.7
F	6.4	16.7	3.7	4.2
IRL	3.8	85.0	11.8	27.5
I	0.3	4.7	1.0	1.4
NL	14.7	25.1	14.4	14.2
L	982.5	1 091.8	982.5	767.5
A	8.8	14.0	7.6	5.0
P	:	10.2	:	10.4
FIN	3.4	6.3	2.0	3.6
S	6.2	6.3	5.1	4.1
UK	26.4	43.3	33.3	27.9
EU-15	11.7	20.9	12.0	13.1
US	1.6	1.8	1.4	1.5
JP	5.9	11.7	0.4	0.7

(*) The non-banking sector includes individuals, non-financial businesses, and non-bank financial firms such as mutual funds and insurance companies. There are separate data on the external assets and on the external liabilities of national banking systems. External assets include loans and the ownership of foreign marketable securities such as government and corporate bonds, while external liabilities include deposits, bonds and other marketable short-term securities.

Source: BIS.

the non-banking sectors is represented in Table 5. The non-banking sector includes individuals, non-financial businesses, and non-bank financial firms such as mutual funds and insurance companies. There are separate data on the external assets (including loans and the ownership of foreign marketable securities such as government and corporate bonds) and on the external liabilities (including deposits, bonds and other marketable short-term securities) of national banking systems. The external assets of EU banks more than tripled from 1990 to 1999 (from EUR 529 billion to EUR 1 813 billion), while the external liabilities about doubled during the same period (from EUR 541 billion to EUR 1 132 billion). The strong internationalisation of the asset side of bank balance sheets may be due to the ongoing integration of the European money market, and increased issuance activity in the European corporate debt market (especially by the telecom sector).

The increased external liabilities of banks may reflect changes in the various motives for maintaining bank

balances abroad such as to conduct trade in goods and services, to undertake subsequent financial investments, and to evade domestic income and wealth taxation. Table 5 also indicates how important banks' external assets and liabilities are relative to the country's GDP. This data confirms that in the 1990s external bank assets in the EU have almost doubled relative to GDP, while external bank liabilities increased only slightly relative to GDP. Also, the figures indicate that international deposits by non-banks — relative to GDP — are far more important in the EU than in the United States and in Japan.

4.3. The international ownership of EU government debt

Domestic residents do not have a clear advantage over foreign residents in assessing the creditworthiness of their own governments. Hence, foreign residents do not face substantive barriers of information when considering

Box 5: Taxes as a specific reason to hold cross-country deposits

There are a variety of possible motives for economic agents to borrow and depositing abroad. Motives related to international borrowing have mostly to do with the availability and cost of capital. Large firms and governments, specifically, may need to tap the international capital market to be able to attract the financing they require. The motivations behind international depositing are more varied. As indicated, such depositing serves to facilitate other economic activities such as international trade and investment. Not unimportant, however, is the desire — in the case of individuals — to evade taxation.

Recent research by Huizinga and Nicodème (2001) examines the determinants of bilateral deposit flows of non-banks among BIS reporting countries with data for the period 1983–99. The study specifically examines to what extent tax policy as well as tax enforcement influences the pattern of international deposits. Tax policy consists of interest withholding taxes in the country of residence of the depositor as well as regular wealth taxes in this country. Tax policy in the country where the bank is located is instead summarised by the non-resident interest withholding tax relevant for interest on bank deposits. The average income taxes and wealth taxes, as well as the average non-resident withholding tax on interest have almost been halved during the 1983–99 period on account of international tax pressures. This is reflected in the figures below.

Efforts to enforce the domestic interest taxation are supported by requirements on banks to report interest payments to the tax authorities. Within a domestic context, banks in many EU countries were required in 1999 to report interest paid and to whom it is paid to domestic tax authorities, as seen in the table below. These policies date from many years ago for some countries (for instance, from 1954 for the UK), while other countries adopted such policies in the 1980s and early 1990s (for instance, Ireland in 1992). Potentially equally important to the enforcement of residence-based taxation of interest is the international exchange of interest payment information among national tax authorities. The table below also indicates which countries are in fact providing bank interest payment data to at least one foreign tax authority. From the table, we see that international information exchange on cross-border interest payments is still far from the norm as of 1999. In November 2000, the European Council, however, agreed that from 2010 onwards the EU will rely on generalised information exchange to shore up the taxation of international interest flows. Until then, several countries, namely Austria, Belgium and Luxembourg, will be free to levy a

minimum withholding tax instead, with the understanding that 75% of the tax revenues are passed on to the residence-country tax authority. This set of policy intentions is to be laid down in a binding directive by the end of 2002, on the condition that the EU reaches agreement with several third countries, notably Switzerland, on the adoption of similar anti-evasion measures in these countries.

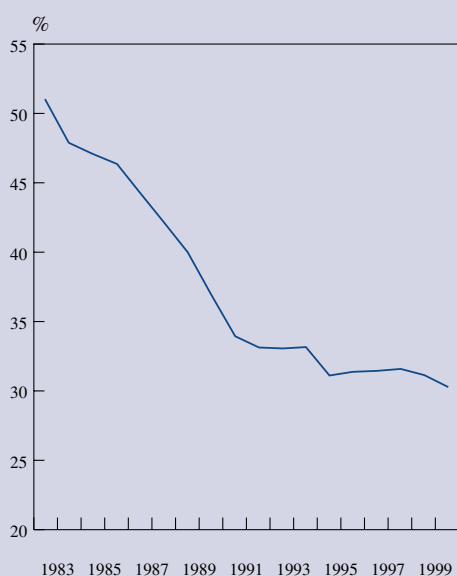
Is there any empirical evidence that tax policies in the depositor and the bank countries and efforts to enforce depositor country taxation through information provisioning actually affect deposit flows? Huizinga and Nicodème (2001) find evidence that depositor country policy measures do matter — in fact both interest income and wealth taxes and domestic information provision by banks appear to contribute to the foreign depositing of domestic residents. Using data for the 1983–99 period, the evidence suggests that a 1% increase in the tax burden (measured as a percentage of the deposited fund) leads to a somewhat modest 4.3% increase in foreign bank placement. A 1% increase in the wealth tax burden (again measured as a percentage of deposited funds) has an impact on foreign placements that is about four times as large, perhaps because the wealth tax is borne by relatively wealthy people who may be more prone to shift their savings abroad. Finally, the introduction of domestic information provisioning is estimated to increase external bank placements by 28%. These figures are estimated with a sample of almost 20 years of data. There are reasons to suspect that the responsiveness of international deposits to domestic tax policies has increased in recent times. Lower telephone and other communication costs, for instance, make it relatively easy now to be a depositing customer at a foreign bank. Indeed, estimation with data for only the year 1999 suggests that the tax elasticity of international deposits, as reported above, is now much larger.

While saver-country tax policies and information collection appear to be factors behind international depositing, there is less evidence to suggest that banking country policies — the non-resident withholding tax and the international exchange of information on a bilateral basis — are very effective. At least there is no statistical evidence that these policies materially affect the pattern of bilateral depositing. An obvious reason is that there remain ample opportunities at this point to place savings abroad that are not subject to either a non-resident interest withholding tax or international exchange of information. As long as tax evaders place most of their funds in several of such countries, one indeed would not expect tax and enforcement policies in several other countries to have much effect on

(Continued on the next page)

Box 5 (continued)

Tax rates on interests payments from domestic deposits received by resident individuals
(non-weighted average — selected BIS countries)



Wealth tax on financial wealth
(BIS countries)
non-weighted average



Average withholding tax on interest from bank deposits to non-residents



Source: Huizinga and Nicodème (2001).

Information regarding bank interest payments

	Information to domestic tax authorities	Information to any foreign tax authority
Belgium	N	N
Denmark	Y	Y
Germany	N	N
Greece	N	N
Spain	Y	N
France	Y	Y
Ireland	Y	N
Italy	N	N
Luxembourg	N	N
Netherlands	Y	N
Austria	N	N
Portugal	N	N
Finland	Y	Y
Sweden	Y	Y
United Kingdom	Y	Y
US	Y	Y
JP	Y	Y

Source: OECD (2000).

(Continued on the next page)

Box 5 (continued)

at least the total volume of international depositing. This conclusion, of course, does not mean that a generalised introduction of a non-resident interest withholding tax or international exchange of information — as foreseen in the EU — would equally not affect the total volume of tax-evading international deposits. A generalised withholding tax or information exchange policy would be unavoidable, and the impact of such a policy is a priori expected

to be as important as domestic tax policies appear to be at present, as such domestic tax policies are equally difficult to avoid if the savings remain located at domestic banks. A generalised policy of information exchange in the EU clearly requires that other banking centres undertake similar measures — as has been accepted by the European Council as a condition for the introduction of generalised information exchange within the EU by 2010.

adding domestic government debts to their portfolios. In several countries, however, there are still interest withholding taxes that apply to foreign residents. As shown by Eijffinger, Huizinga, and Lemmen (1999), withholding taxes on government debts appear to lead to increases in pre-tax, gross yields on these debts that fully compensate foreign investors for the taxes paid. The net impact on the domestic treasury of taxing foreign holdings of government debt thus may be zero, as the increased interest burden tends to offset the withholding tax revenues. In these circumstances, international interest withholding taxes are no longer a barrier to the diversification of international bond portfolios. For the impact

of taxes on the cross-border investment in assets, see Box 5.

Data on public indebtedness and the foreign ownership of central government debts are presented in Table 6. While public indebtedness in the EU-15 and in the United States has been on a downward path, the share of central government debt owned by foreign residents has increased in several EU countries (notably Germany, Greece, and Sweden) and declined in others (notably Austria, France and Finland). The foreign ownership of US government debt has increased significantly from 19% in 1990 to 33.6% in 1999.

Table 6

Public indebtedness

	Foreign residence (as a percentage of total debt)			
	1990	1995	1997	1998
B	14.5	10.7	7.5	:
DK	:	:	:	:
D	32.5	40.9	46.7	51.0
EL	:	:	:	:
E	6.3	22.6	23.0	24.3
F	2.2	1.8	1.5	1.2
IRL	:	:	:	:
I	:	:	:	:
L	12.0	:	20.4	:
NL	0.0	0.0	0.0	0.0
A	15.6	22.0	20.4	12.0
P				
FIN	51.6	51.7	49.9	49.8
S	19.8	45.4	48.8	49.5
UK	14.8	16.9	15.0	:
EU-15	:	:	:	:
US	19.0	22.6	32.1	33.6
JP	:	:	:	:

Source: Commission services, IMF IFS.

4.4. The international nature of venture capital raised and invested

Venture capital is the private equity that is provided to mostly young firms to finance early-stage investments. Venture capital is private capital in the sense that it is not publicly traded on an exchange. Private capital is also used to take over family-owned businesses, to buy-out publicly traded companies, etc. In 2000, a record amount of EUR 48 billion was raised by private equity management funds in the EU (compared to EUR 25 billion in 1999). The volume of funds actually invested rose to 35 billion in 2000, up 40% from EUR 25 billion in 1999.

Private equity firms raise as well as invest funds internationally. Figures on both aspects of the management firms' internationalisation are presented in Graph 7. The table indicates, that the total volume of EU funds raised increased from 0.23% of GDP in 1998 to 0.31% of GDP in 1999, while the total share of funds raised domestically increased from 51 to 57%, thus rendering the private equity sector somewhat less international. In both 1998 and 1999, management firms located in the UK raised the largest volume of funds (relative to GDP), and mostly from foreign sources. In Portugal, Denmark and the Netherlands, most of the funds under management are raised domestically. With respect to funds invested, the total for the EU rose from 0.19% of GDP in 1998 to 0.31% of GDP in 1999, while the share of funds invested domestically was about 78%, for both years. The tendency of private equity firms to invest domestically is a reflection of the fact that it is important for the capital providers to be close to their portfolio companies for the purpose of monitoring their investments.

The international patterns of funds managed and funds invested may well reflect comparative advantages in providing fund management services, as well as differences in economic fundamentals that are relevant to investment decisions. It is equally plausible, however, that the pattern of internationalisation of private equity management and investment is in part driven by differences in the regulatory, tax and legal infrastructure of the EU countries. Such differences, where they exist, can hinder the smooth functioning of the European venture capital sector. The key regulatory issue is whether pension funds and insurance companies are allowed to invest in private equity. National regulators retain considerable discretion in determining investment restrictions applying to their domestic insurance companies and pension funds. In the area of taxation, an important objective would be

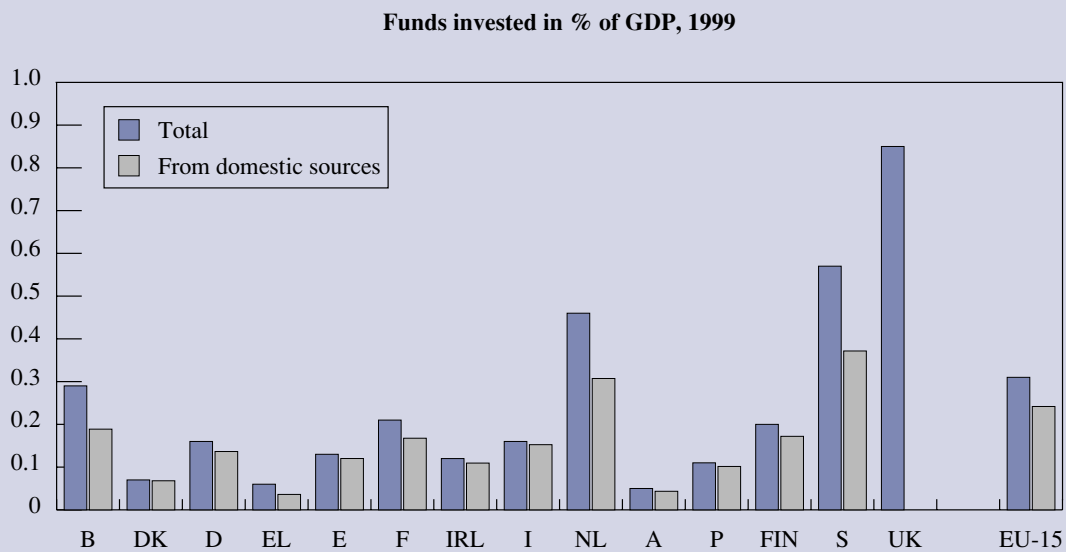
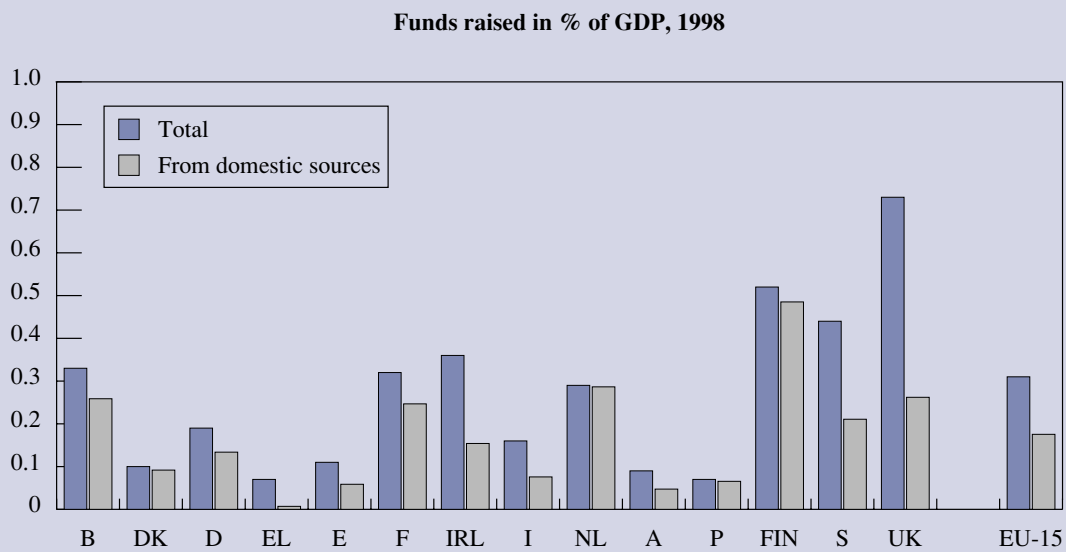
to ensure that capital management firms are transparent so that investors pay the same tax on the return to their capital, irrespective of whether they invest directly in particular firms or through an equity management firm. A key legal issue concerns the range of organisational forms that are available for venture capitalists. In the United States and the UK the dominant organisational form has been the closed-end fund structure, which is a fund structure that self-liquidates, say 10 years, after its inception. The proven success of this model would suggest that closed-end fund structures should be available throughout the Union to avoid a situation in which the location of venture capital funds might be influenced by the differences in legal forms available in EU Member States.

4.5. Cross-border portfolio allocation

Detailed information on cross-border equity transactions is limited and characterised by the distortions due to the effects of large-scale M & A transactions. However, a recent study by Danthine et al. (2001), comparing the magnitude of foreign financial asset holding across eight industrial countries (D, E, F, I, NL, UK, United States and Japan), found that the international diversification of assets had increased in the past decade. Nevertheless, the share of international financial assets in total financial wealth in 1998 was relatively small, ranging from 15% in the Netherlands, Germany and the UK to about 5% in Spain and the United States. These figures confirm the prevalence of home bias. Since 1996, however, there has been a notable acceleration in the trend towards internationalisation of asset holdings for all the EU countries considered in the study. A sectoral breakdown of asset holdings, reveals a varying degree of home bias. Households and banks show a quite pronounced home bias, while investment companies and pension funds hold a relatively large share of their portfolios in foreign assets. In consequence, cross-country differences in the degree of home bias tend to reflect differences in the sectoral distribution of wealth.

In explaining the differences in portfolio allocation among institutional investors, the study identifies two crucial characteristics. First, investment by insurance companies and pension funds is subject to national regulations that restrict the opportunity of holding international assets. Second, the higher the investment in equities, the lower the home bias. The degree of international diversification is close to the predictions of portfolio theory in the case of equity investment by institutional investors, which

Graph 7: Venture capital funds raised and invested



Source: EVCA (2000) and Commission services.

varies between 40 and 80% within countries and financial institutions.

Danthine et al. (2001) gathered the data from different national sources. Graph 8 replicates the first step of their study with the data from the EU's financial accounting system. This data is available for 12 EU Member States and covers the years 1995 to 1999. It differs in the levels

and the order of countries from those used by Danthine et al. This is partially due to the inclusion of the government sector and the central bank. Overall, the data on the share of financial assets in total financial wealth validates the finding that the holdings of foreign assets have increased remarkably over time. (For two case studies covering cross border investment in Belgium and Sweden, see Box 6.)

Box 6: Two case studies on foreign ownership and cross-border investment

A recent study by Timmermans (2001) demonstrates that international investments in Belgium have increased notably ahead of EMU. In 1998, almost a quarter of individuals' holdings of financial assets was in foreign currency, up from only 7% in 1980. As regards the composition of financial wealth, direct purchases of securities account for the largest share of foreign assets held by Belgians. Furthermore, investment in investment funds, which was almost non-existent in 1980, has become an important vehicle for investments abroad. In 1998, more than 50% of the investment in investment funds (UCITS) was held in foreign currency. But the rise of investment funds in Belgium is only partially attributable to the trend towards international financial integration. The fact that capitalised investment gains in UCITS are exempted from withholding taxes suggests that it was strongly driven by fiscal motives ⁽¹⁾.

A similar trend towards internationalisation is evident on the Belgian economy's liability side. Between 1980 and 1998, foreigners increased their holding of Belgian assets, most visibly in the acquisition of government bonds and a pick-up in foreign direct investment. With a share of less than 3% in 1980, the holding of public debt by non-residents was almost negligible. Until 1998, the proportion has increased to almost 10%, with foreigners having revealed a preference towards debt denominated in foreign currency ⁽²⁾. The trend towards internationalisation is also evident in the Belgian equity market. While in 1980 less

than 13% of the shares of the Belgian enterprises were owned by foreigners, their stake increased to almost 30% in 1998. The listing of a company doesn't seem to have influenced its exposure towards foreign ownership, since the shareholder structure of unlisted companies does not differ significantly from that of listed ones.

A close examination of the shareholder structure of Swedish listed enterprises between 1991 and 1997 was conducted in a recent enquiry by Dahlquist and Robertsson (2001). They found that between 1991 and 1997 foreign investors increased their holding of Swedish stocks from SEK 44 billion to SEK 692 billion. This expansion by a factor of 15 compares to an increase of the Swedish stock market capitalisation by a factor of four and an increase of the Swedish weight in the world stock market index by a factor of four. Accordingly, international ownership increased much faster than would have been predicted by financial market developments. While in 1991, 70% of Swedish firms had at least one foreign owner, it was 99% from 1995 onwards ⁽³⁾. In fact, only two of the 282 enterprises, covered in the study, were without foreign investors in 1997. On average, foreigners held about 32% of Swedish stocks, ranging from 16% in the construction industry to 37% in the engineering sector.

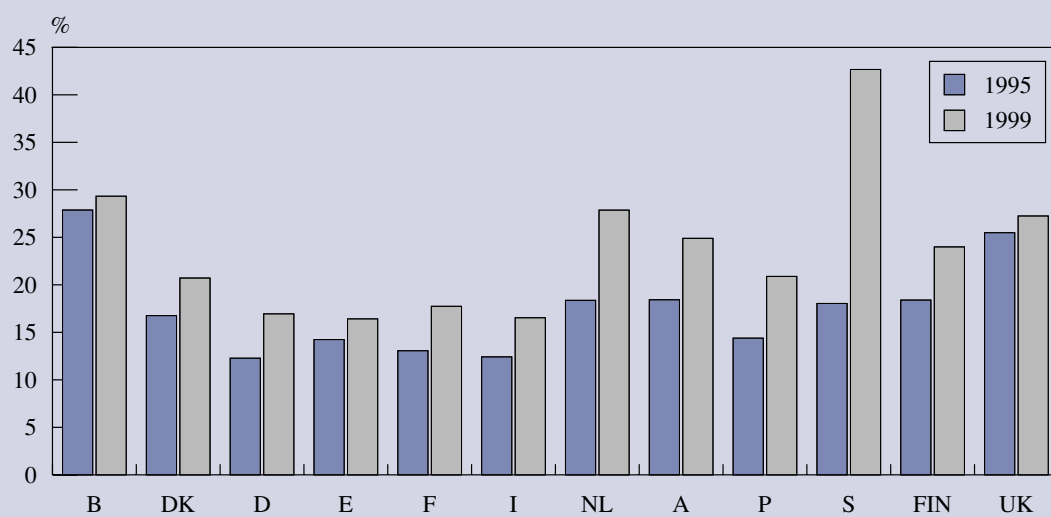
By relating firm characteristics to the magnitude of foreign ownership, the study elaborated specifically on the determinants of cross-border stock holdings. It found that foreign owners typically were institutional investors and seemed to have a preference for (a) large firms, (b) firms that pay low dividends and (c) firms with large cash positions. The more detailed analysis suggested that rather than sheer size, market liquidity and the presence of the firm in international markets are conducive to foreign ownership.

⁽¹⁾ On the other side of the spectrum, investments with credit institutions, insurance companies and pension funds is of less prominence for cross-country investments and in particular the market share of banks has declined over time. This must, however, be assessed against the fact that investment funds have almost exclusively been established and run by banks.

⁽²⁾ Non-residents held 85% of debt denominated in foreign currency. The share of debt denominated in foreign currency increased to 6.3% in 1998 from 5.7% in 1980. The number of domestic holders includes investors from Luxembourg.

⁽³⁾ The design of the study did not allow to identify the usage of Swedish funds by foreigners to invest in the Swedish market. But it covered the usage of foreign funds from Swedish investors to invest in the domestic market.

Graph 8: Share of financial assets held against the rest of the world (total economy, non-consolidated)



Source: Commission services.

5. Tests of financial market integration

5.1. Tests of price convergence of financial assets

On an integrated financial market, homogeneous assets should have the same price irrespective of the location of trading. Testing for the degree of financial market integration by comparing the prices or returns of assets across borders requires the identification of homogeneous assets. Prior to EMU, this used to be complicated because prices and payoffs were denominated in different currencies. Consequently, estimates of deviations from interest parities, e.g. for government bonds, suffered from the need to disentangle the effects of incomplete financial integration and currency risk. In the run-up to EMU, euro-area government bond yields substantially converged, indicating either rising financial market integration or the disappearance of currency risk.

However, the spreads of government bonds have not decreased further since the introduction of the euro, notwithstanding the complete elimination of exchange rate risk. In the first half of 2001 the yield of government bonds with a maturity of 10 years was on average 0.3 of a percentage point higher than on their German counterpart, pointing to additional factors that might indicate either a lack of homogeneity among these assets or incomplete integration of this market segment (see Graph 9). Part of the yield difference is certainly related to the heterogeneity of government bonds caused by differences in risk, benchmark status and liquidity. For instance, some of the euro-area government bonds are rated AA only but do not have the highest possible AAA credit ranking. This difference accounted for approximately 15 to 20 basis points. Moreover, German 10-year government bonds benefit from the benchmark status they have acquired. The fact that they are frequently used for pricing and hedging non-government bonds offers them a yield advantage over for instance Dutch and French bonds. Finally, bonds are endowed with different liquidity as large issuers simply benefit

from scale effects, which make them cheaper relative to smaller emissions. Taking these aspects into account, the euro-area government bonds markets do not appear to be segmented by national borders ⁽¹⁾.

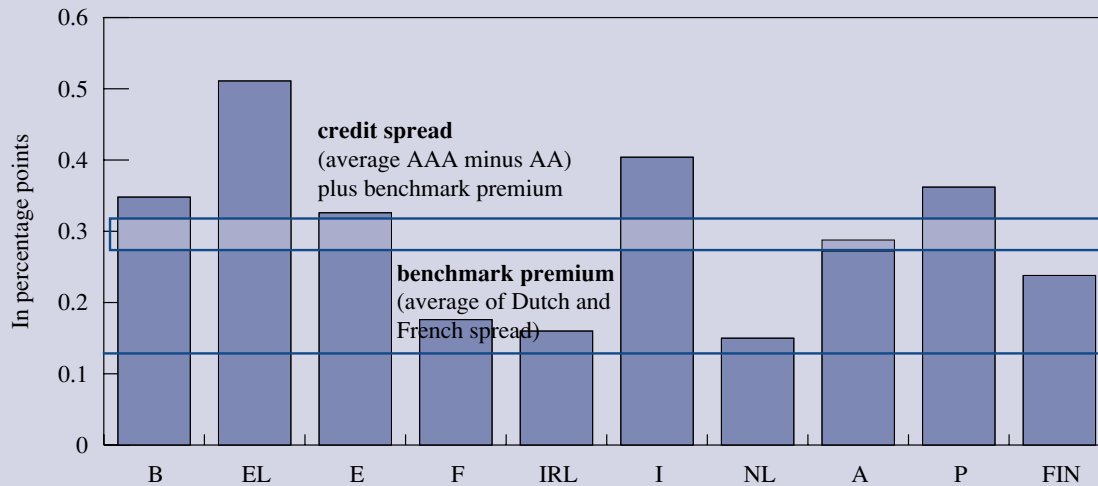
Financial integration should make the returns of comparable but not completely homogeneous financial assets more similar. Consequently, the dispersion of interest rates should decline over time. The occurrence of such a trend is shown in Graph 10, using the interest rates from retail banking in euro-area Member States for three different banking products. The left hand side shows that the dispersion of yields measured by the standard deviation declined well ahead of EMU — interrupted only by the financial turmoil around the Asian crisis in autumn 1997 — and continued to fall since the introduction of the euro with the exception of mortgage rates to households.

Taking into account that overall interest rates declined in the second half of the 1990s, the coefficient of variation ⁽²⁾ on the right hand side represents a more accurate image. Abstracting from the decline of interest rates, mortgage rates and time deposit rates have converged ahead of EMU whereas interest rates on short-term loans to enterprises don't seem to have done so before 2000. Afterwards, their standard deviation fell despite rising rates indicating a growing integration of retail banking markets in the euro area. Somewhat surprisingly, the dispersion of mortgage rates, which might have the strongest link with local or regional conditions, is the smallest in Graph 10. However, the absolute level of these indicators depends on the retail rates selected for the Member States and, consequently, the lower standard deviation may

⁽¹⁾ Bonds issued by EU Member States outside the euro area have a similar size of spreads compared to those of the euro-area Member States. But their denomination in national currency makes it difficult to establish whether they are equally well integrated.

⁽²⁾ The coefficient of variation is the standard deviation divided by the average.

Graph 9: Yield spreads of 10-year government bonds with Germany, first half of 2001



Source: Commission services.

represent nothing but the usage of a rate, which is more uniform across countries than that of the other categories.

Whether EMU has spurred the integration of financial markets should also be discernible in a rising coefficient of correlation of the returns after the introduction of the euro. Applying this measure on the main stock indices of the euro-area Member States, national stock market returns are not closer correlated than during the run-up to EMU. This does not necessarily indicate disintegration. Instead, stock markets could have been differently exposed to common or country-specific trends over time. Specifically, the convergence of interest rates prior to EMU had a common impact on stock returns whereas the recent ICT euphoria yielded more country specific impulses on stock market indices, probably depending on the weight of ICT in national industry ⁽¹⁾.

An alternative approach is the measurement of the explanatory power of foreign stock market returns on domestic stock market returns, which should be higher in EMU than before if stock markets have become more

integrated. To this end, Graph 11 compares the residuals of an auto-regression of stock market returns with those of a vector-auto-regression including all other euro-area Member States' stock market returns. The number given in Graph 11 is the percentage decline of the forecast error (sum of the squared residuals) yielded from using foreign returns as additional variables. The variable of interest is the change of this number between the first and the second period. It turns out that in all euro-area stock markets except the Dutch, the explanatory power of foreign returns is indeed higher in EMU than before.

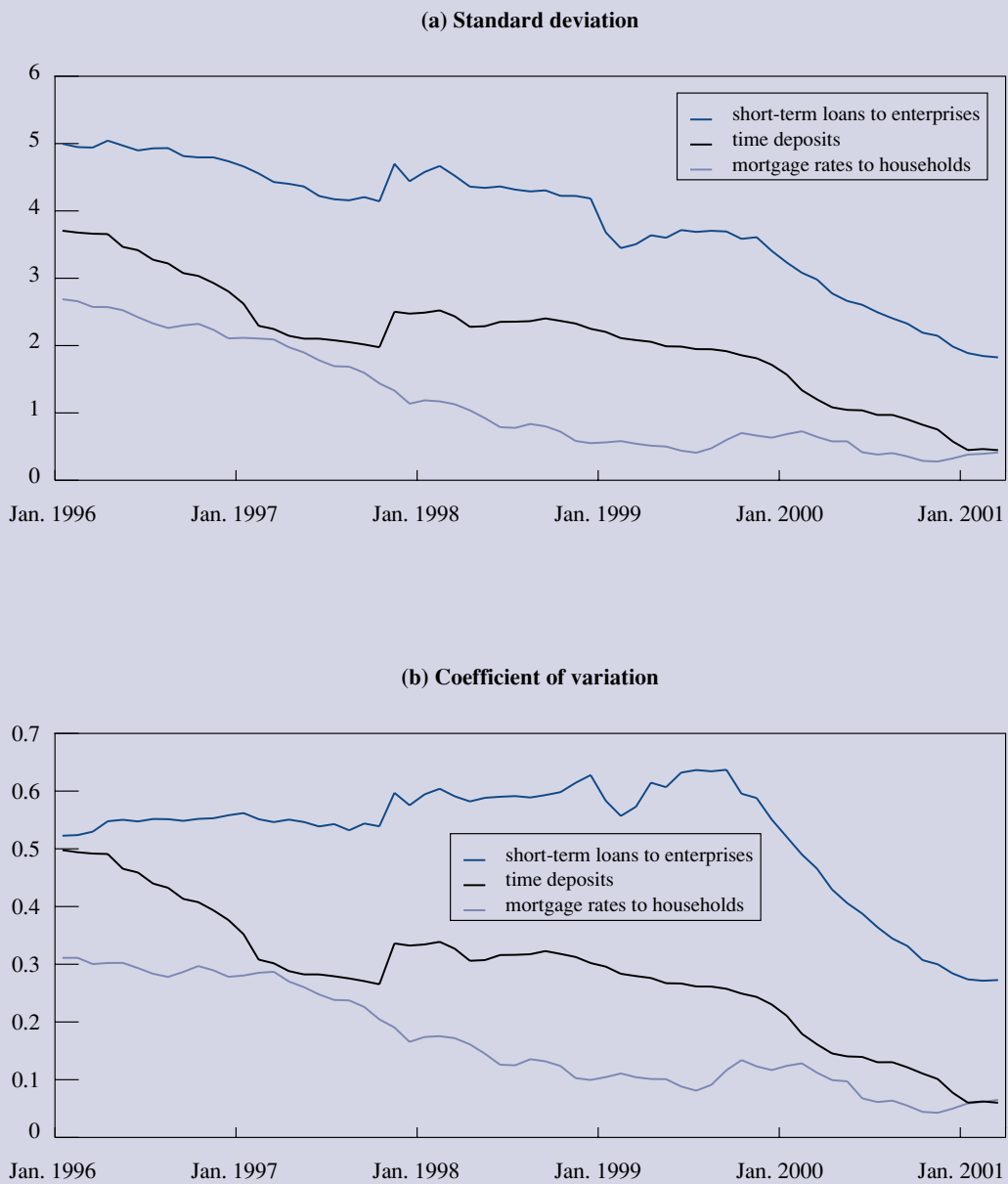
On average the explanatory power of foreign market developments increased by 57%, which indicates a considerable increase in the sensitivity to cross-border determinants of stock prices ⁽²⁾.

Further, more sophisticated measures have been applied in the academic literature on stock market integration.

⁽¹⁾ ICT stands for information and communication technology.

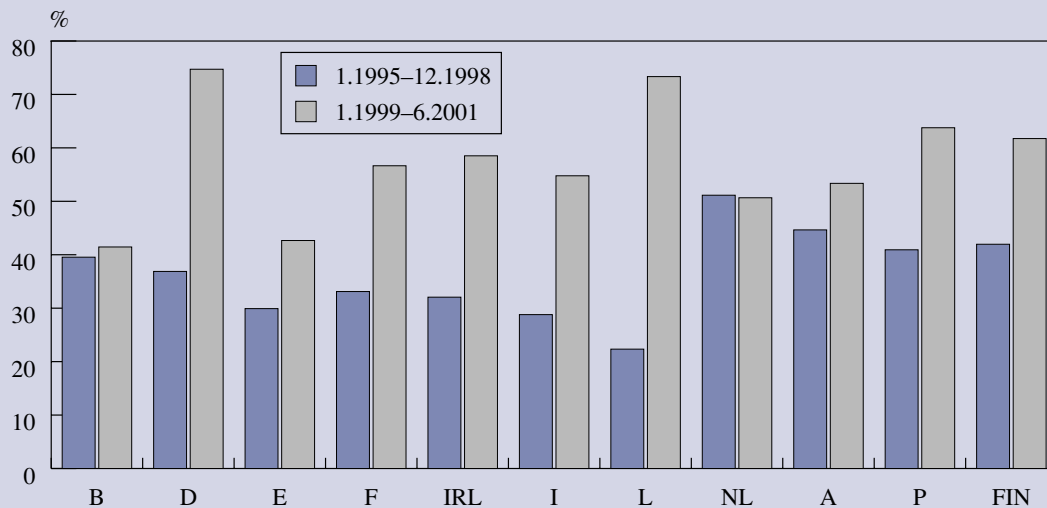
⁽²⁾ Ayuso and Blanco (2000) use this methodology for their analysis of the linkage between daily stock returns of seven stock markets (United States, Japan, UK, D, F, I, E), coming to the conclusion that the linkage of these markets has increased in 1995–99 compared to 1990–94.

Graph 10: Interest rate dispersion in retail banking in euro-area Member States



NB: Due to an incomplete series, Greece is not included in the series of the mortgage rate.
Source: ECB.

Graph 11: The explanatory power of other market return on the national market return



Source: Commission services.

Most find a rising degree of financial integration prior to EMU but do not embrace the period since 1999. Hardouvelis et al. (1999) estimated a conditional CAPM model and decomposed the expected returns into a local risk premium and an EU risk premium ⁽¹⁾. They found that the former substantially fell in the second half of the 1990s compared to the first half and that equity market integration reduced the costs of capital by around 2%, mainly originating from the reduction in the country-specific risk component.

By employing a Garch model on the uncovered asset return parity, Fratzscher (2001) discovered that European equity markets have been highly integrated since 1996 ⁽²⁾. The behaviour of time-varying coefficients indicated that the path towards EMU has fundamentally changed the nature of financial integration, namely through

⁽¹⁾ The capital asset pricing model (CAPM) is a standard model used in empirical finance to estimate risk-adjusted returns of assets.

⁽²⁾ Generalised auto regressive conditional heteroskedasticity (Garch) models are tools to analyse the determinants of financial market volatility.

the elimination of currency risk and monetary policy convergence.

More sceptical results were presented by Rouwenhorst (1998), Ménil (1999) and Oh (2001), who all three tested for the convergence of returns on the sectoral level and the firm level, respectively. Both Ménil (1999) and Oh (2001) find strongly significant country-effects in estimations of the CAPM model over the period 1988–95 and Rouwenhorst (1998) failed to find evidence that the industry-effects have become more important than country-effects in the 1990s. Regarding potential determinants of cross-country effects, Ménil (1999) found that the GDP gap and two indices of labour and product market regulation explain differences in the rates of returns.

An alternative test of financial market integration was developed by Portes and Rey (1999). Instead of focusing on asset returns and the significance of country-specific coefficients, their approach applies the gravity model, a well-established tool for analysing international trade flows, on cross-border equity transactions. They are able to explain a large proportion of equity flows among 14 countries in the period 1989–96 by employing only a

few variables. In addition to market size, openness, an index of the sophistication of financial markets geographical distance has a strong negative impact. Geographical distance is significant for the whole sample as well as for a European sub-sample. It even remains so after variables controlling the effect of common language, currency or trade bloc are introduced. The segmentation of financial markets by distance is considered by Portes and Rey as evidence that information asymmetries are key in explaining cross-border financial transactions.

5.2. Tests of the macroeconomic implications of financial market integration

At the aggregate level, the most prominent test of financial market integration originated from an article by Feldstein and Horioka (1980). These authors argue that for a closed economy, the balance of payments is zero by definition and consequently, investment and savings are

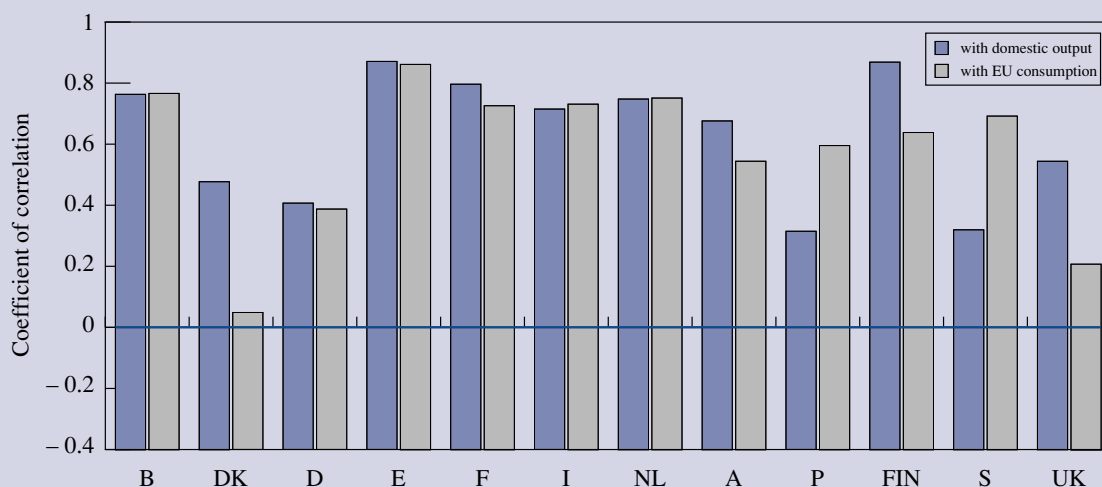
Table 7

Feldstein-Horioka test of financial market integration

Sample coverage	Cross-country OLS regression: $I/Y = \text{constant} + \alpha(S/Y)$			
	EU-15 Member States		US, CA, JP, CH, NO, AU, NZ	
	α		α	
1960s	0.80	(0.060)	0.91	(0.053)
1970s	0.67	(0.051)	0.83	(0.077)
1980s	0.61	(0.070)	0.50	(0.051)
1990s	0.41	(0.068)	0.36	(0.049)
1996–2000	0.18	(0.108)	0.20	(0.067)

Source: Commission services.

Graph 12: Correlation of domestic consumption growth with 'Rest of EU' consumption and domestic output growth



NB: Sample Q1–1992 to Q4–2000, except P which starts in Q1–1996.

Source: Commission services.

equal. Consequently, in a regression of the investment share, the coefficient of the saving share α should be 1. On the other hand, the more integrated the financial market, the less national investment and savings should be related and the closer the coefficient α is to zero. In fact, Table 7 shows a gradually declining value of this coefficient since the 1960s in the EU as well as in a control panel consisting of seven industrial economies. For the period covering 1996–2000, the coefficient of the EU estimate is not significantly different from zero for the first time, indicating that financial market integration successfully drove a wedge between national investment and saving in the EU economy.

The home bias puzzle states that investors hold too large a share of domestic assets and too few international assets. By doing so, their consumption pattern is vulnerable towards domestic output whereas holding more international assets would provide an opportunity to cushion the impact of domestic economic shocks on consumption. Instead, the holding of an optimal international portfolio implies that all domestic shocks would be eliminated and consumption would respond only to uninsurable global shocks. This idea is the background of a second macroeconomic implication of integrated financial markets, namely the degree of risk-sharing against economic shocks. This can be measured by the extent to which domestic consumption is correlated with domestic output and international consumption.

Complete risk sharing in the EU implies that a country's consumption growth should be perfectly correlated with EU consumption growth, whereas its correlation with national output growth should be negligible. Graph 12 shows how national quarterly consumption growth is correlated with its EU counterpart and with domestic output growth ⁽¹⁾. To eliminate the impact of country size on the EU aggregate, the latter is calculated without the country concerned. Evidently, the correlation of domestic consumption growth with the EU aggregate is clearly below the value of 1, which would indicate a perfect risk-sharing. Furthermore, almost all countries display a higher correlation with domestic output than with European consumption. This finding is invariant to the time period chosen. On average, the coefficients of correlation decline over time and the only indication of a euro effect is that the coefficients are higher in the euro-area countries than for Denmark, Sweden and the UK.

⁽¹⁾ The data used is the growth rate over the same quarter of the previous year. For most countries, growth rates are available from 1992 onwards, Portugal starts in 1996 and Ireland, Luxembourg and Greece were excluded from the sample due to a lack of data. Their share was, however, estimated in the EU aggregate. Alternative calculations were conducted for the periods starting in 1992 and in 1999.

6. Recent policy developments

Despite the progress made in integration since the introduction of the euro, the EU financial system remains largely fragmented. More specifically, there remain regulatory, tax and legal barriers to a truly unified system. For example, national requirements on the structure and content of equity prospectuses make it difficult for firms to raise equity on a pan-EU basis. Legal restrictions on the cross-border provision of financial products and services continue to frustrate EU-wide strategies of financial intermediaries, while wide divergences in taxation can distort the international allocation of savings and investment. With market operators seeking to pursue more pan-European objectives in a single currency environment, pressure to address these sources of fragmentation has grown. Policymakers have responded by assigning a high political priority to the completion of the internal market for financial services. In addition, the introduction of the euro and the growth and stability pact leading to less crowding out by public authorities of domestic financial markets has focused policymakers on the need to intensify domestic reforms as a means to preserve the competitiveness of national financial systems that are no longer as highly protected. The policy objective is to transform the EU financial landscape within the coming years, implying a need for consequent action on the part of national authorities and an acceptance of sometimes painful adjustment on the part of market participants.

Although financial market integration in Europe is to a large extent market-driven, it is important that efforts to eliminate the barriers to financial market integration are to be continued. In the broad field of financial markets, there are several areas of discussion and a range of concrete EU policy initiatives to facilitate market integration. The EU's financial services action plan summarises a large set of policy initiatives (> 20 legislative proposals) aimed at improving the functioning of the EU financial system and is to be implemented by the year 2005. The Lamfalussy Committee of wise men has proposed fresh thinking on how to improve the procedure for the

regulation of EU securities markets. The Giovannini Group of market experts is also advising the Commission on specific aspects of financial integration, notably in the areas of government debt markets, the private repo market and clearing and settlement arrangements. These initiatives are discussed in more detail below.

6.1. The financial services action plan

Efforts to integrate the various national financial systems in the EU date back to the launch of the internal market programme in the mid-1980s. The objective has been to exploit the efficiency gains of an EU financial system in supporting higher rates of sustainable growth and employment creation in the EU economy. Despite the liberalisation of capital movements within the EU and substantial progress in creating an integrated EU market in goods, the internal market programme has been notably less successful in respect of services and particularly in respect of financial services. However, as indicated earlier, the euro has stimulated investor interest in cross-border financial activity within the EU and has led to increased urgency in efforts to complete the integration of national financial systems. Interest has been stimulated further by a widespread belief that there are significant medium term macro/micro economic gains to be captured if this can be achieved. The Commission is now estimating these gains.

The blueprint for an integrated EU financial system is the financial services action plan (FSAP), which was adopted by the European Council in 1998. The FSAP covers a vast area of financial market activity and comprises 41 separate measures (EU directives and Commission communications) that are designed to complete the legislative framework for the internal market in financial services. These measures relate to both wholesale and retail markets and are categorised under a series of general priorities for action.

- For wholesale markets, the priorities are: (i) establishing common rules for integrated securities and derivatives markets; (ii) facilitating the raising of capital on an EU-wide basis; (iii) setting common standards for financial reporting; (iv) establishing a single-market framework for supplementary pension funds; (v) ensuring legal certainty in the cross-border use of collateral; and (vi) creating a secure and transparent environment for cross-border restructuring.
- For retail markets, the priorities are: (i) ensuring transparency and customer access to information in the provision of financial services; (ii) providing appropriate procedures for customer redress in the event of a cross-border contractual dispute; (iii) ensuring a balanced application of consumer rules; (iv) facilitating e-commerce-based retail financial business; (v) establishing a common regulatory framework for the cross-border provision of insurance services; and (vi) facilitating cross-border retail payments.

The FSAP also contains measures relevant to the prudential supervision of an integrated financial system, as well as measures that are designed to improve the general conditions for financial efficiency, notably in the areas of corporate governance and taxation.

The Lisbon European Council (2000) and the Stockholm European Council (2001) have reaffirmed the political and economic priority attached to completing the internal market for financial services. In this context, a deadline of 2005 was set at Lisbon for the full implementation of the FSAP, implying the adoption of all necessary EU Directives by the Council (in agreement with the European Parliament) and their full transposition into national law. At Stockholm, Heads of State or Government urged an acceleration of an integrated securities market by 2003, the same date set for the completion of the risk capital action plan. Progress is being made toward these deadlines, with 25 of the 41 measures in the FSAP having been implemented and the Commission having already proposed 18 of the 24 legislative measures for adoption by the Council. As the locus of work in relation to the FSAP gravitates from the Commission to the Council and the European Parliament, the responsibility for sustaining progress will fall increasingly on these institutions.

While implementation of the FSAP is progressing, there have been some recent setbacks. Among the more

important are the delay in reaching agreement between the Commission, the Council and the European Parliament on implementing the recommendations of the Lamfalussy Committee (see below) and the European Parliament's decision not to agree the proposed EU Directive on takeover bids in July 2001 after conciliation. This proposal, which had been under discussion for more than 12 years, would have guaranteed legal certainty for takeovers by setting minimum guidelines for corporate conduct. Another setback is in processing proposed legislation in the area of pension funds. There is clearly the need to accelerate work if the 2003–05 European Council deadlines are to be met on time.

6.2. The lamfalussy committee recommendations

The process of implementing legislative measures for financial services tends to be slow and lacking in flexibility. The average period between the adoption of a proposal by the Commission and its transposition into national law is about three years. During this period — which has been as long as 12 years for the Directive on takeovers and even 30 years for the EU company statute — the Commission proposals are typically subjected to intense scrutiny by the Council and Parliament. Apart from the delay involved, the current process frequently results in compromise legal texts that are inconsistent, ambiguous and usually unevenly transposed into national law. Moreover, this cumbersome legislative procedure significantly constrains the ability of EU legislation to respond to market developments. Furthermore, technical implementing legislation, delegated to regulatory agencies in all Member States, is subject in the EU to exactly the same lengthy procedures as any other 'political' legislation. It was in response to these problems that the Lamfalussy Committee on the regulation of EU securities markets was established in mid-2000. The mandate of the Committee was to:

- assess the current conditions for the implementation of the regulation of the securities market in the European Union;
- assess how the mechanism for regulating the securities markets in the EU can best respond to developments underway on the securities markets, including the creation of markets resulting from either the alliance of European (and non-European) stock exchanges or from technical innovation (ATS), while

still guaranteeing the effective and dynamic operation of markets throughout the EU to achieve a level playing field;

- in order to eliminate barriers and obstacles, propose as a result scenarios for adapting current practices in order to ensure greater convergence and cooperation in day-to-day implementation and to take into account new developments on the markets.

In responding to this mandate, the Committee proposed a new approach to EU regulation of securities markets. The proposed new approach reflected the consensus view that the current system is unable to respond adequately to the challenges posed by rapidly changing financial markets. The adoption of legislation at European level is seen as too slow, with each legislative measure requiring an average of three years from proposal to implementation. Moreover, there was a view that the drafting of EU legislation is too detailed, resulting in the need for ambiguous compromises. Member States or regulatory authorities then exploit this ambiguity to the maximum when it comes to implementation. The new approach would have four levels:

- Level 1: the adoption of framework principles using the normal legislative procedures (i.e. proposal by the Commission to the Council and European Parliament for co-decision);
- Level 2: the adoption of implementing legislation, as prepared by the Commission with the assistance of a new EU Securities Committee (with a regulatory function) and a Committee of EU Regulators (with an advisory function);
- Level 3: the consistent transposition of Level 1 and Level 2 legislation into national law on the basis of enhanced cooperation among national securities regulators;
- Level 4: strengthened enforcement of legislation by the Commission in cooperation with Member State governments, national regulators and the private sector.

In proposing the new approach, the Committee emphasised the need for transparency at all stages of the legislative process, extensive consultation, and strict deadlines. The focus on an open and accountable approach was a response to concerns, notably on the part of the

European Parliament and market participants that the legislative process should be open and subject to public scrutiny. The Stockholm European Council endorsed the new approach. Noticeably, the resolution stated that the Commission committed itself, for particularly sensitive implementing measures in the field of securities markets, to avoid going against predominant views which might emerge in the Council, as to the appropriateness of such measures. The European Parliament has not yet taken a decision on whether it will agree to implement the Lamfalussy proposals. The negotiations are continuing. The European Parliament's Constitutional Affairs Committee is now examining the matter.'

6.3. The Giovannini Group of financial market experts

The Giovannini Group was formed in 1996 to advise the Commission on issues relating to EU financial integration and the efficiency of euro-denominated financial markets. The Group consists of financial-market participants and meets under the chairmanship of Dr Alberto Giovannini. The Group has produced three previous reports. The first report (1997) considered the likely impact of the introduction of the euro on capital markets ⁽¹⁾. The report helped to forge a common approach to the re-denomination of public debt in euro and in establishing common bond-market conventions for the euro area. The second report (1999) addressed problems in the EU repo market relating to differences in infrastructure, market practices and legal/fiscal frameworks among the Member States ⁽²⁾. The third report (2000) examined the scope for improving the efficiency of euro-denominated government bond markets by means of more coordinated issuance among the euro-area Member States ⁽³⁾. The Group has just examined the efficiency of current arrangements for clearing and settlement of cross-border securities transactions in the European Union.

Deficiencies in the arrangements for cross-border clearing and settlement within the EU have been highlighted by market participants and by public policymakers.

⁽¹⁾ 'The impact of the introduction of the euro on capital markets', A communication from the Commission — COM(97) 337 of July 1997.

⁽²⁾ 'EU repo markets: opportunities for change', October 1999.

⁽³⁾ 'Coordinated public debt issuance in the euro area', November 2000.

While several, often conflicting, proposals for a more efficient EU clearing and settlement architecture have been proposed by market participants, there has been little progress in implementing any of the proposals. The Giovannini Group of financial-market experts has studied several of the issues relating to EU cross-border clearing and settlement. The Group's choice of EU cross-border clearing and settlement arrangements as a topic of analysis responds to issues that have emerged in the context of earlier work, particularly on the repo market. More generally, the Lamfalussy report on the regulation of European securities markets (February 2001) has underlined the role of more efficient clearing and settlement arrangements in delivering the economic benefits from the broader process of EU financial integration. The Lamfalussy Committee argues that further restructuring of clearing and settlement is necessary in the EU and stresses that 'the process of consolidation should largely be in the hands of the private sector'. While clearly favouring a market-driven restructuring of clearing and settlement arrangements, the Committee highlights the public policy interest in having the most cost-efficient, accessible, safe and prudentially sound arrangements possible.

Against the background of consensus for change in EU cross-border clearing and settlement arrangements, the objective of the Giovannini Group's work is to inform the ongoing debate by reviewing the current arrangements in the markets for fixed-income securities, equities and exchange-traded derivatives; by considering the requirements against which the efficiency of possible alternative arrangements for clearing, settlement and depository services can be assessed; and by identifying some possible future arrangements for the provision of clearing and settlement services in these markets. Input to the Group's work has come from several sources. Three working groups, representing the main users of cross-border clearing and settlement services, were set up to focus on developments and prospects in each of the three markets under consideration. A questionnaire focusing primarily on potential obstacles to cross-border clearing and settlement and drivers for change to current arrangements was circulated to market participants via the Internet. In addition to responding to the questionnaire, several formal submissions were made to the group by the main suppliers of clearing and settlement services. An analysis comparing the costs of cross-border clearing and settlement services with the costs for the corresponding services for domestic transactions was provided by the Centre for Economic Policy Studies.

The Group's report is in two parts. The first part reviews the current arrangements for cross-border clearing and settlement in the EU, particularly highlighting the main inefficiencies in terms of national differences in market practice and national differences in the regulatory, fiscal and legal treatment of securities transactions. A second report — to be published in 2002 — will be more forward-looking and will examine issues relating to the future infrastructure for providing clearing and settlement services in the EU. On the basis of the Giovannini Group's work and the work in other fora, the Commission will issue a communication to the Council and Parliament outlining the problems and possible courses of action.

6.4. Supervisory arrangements regarding cross-border banking

As discussed in Section 2, the integration of the EU financial system poses particular challenges in respect of prudential supervision. With the focus of supervision shifting progressively from the national to the pan-EU level, concern has been expressed about the adequacy of existing arrangements for the prevention and management of potentially systemic crises. More specifically, the decentralised and sectorally-based institutional structure has been highlighted as a potential weakness of the current supervisory arrangements, creating the risk of delay and confusion in responding to problems with financial institutions operating across borders and/or financial conglomerates.

In response to these concerns, the Ecofin Council reviewed existing arrangements for the prevention and management of financial crises within the EU and concluded that existing EU arrangements for prudential supervision are largely adequate. This conclusion was based on two separate reports on financial stability (i.e. the so-called 'Brouwer reports') carried out by the EU Economic and Financial Committee (EFC). The first report was published in April 2000 and focused on arrangements for the prevention of financial crises. This report provided a favourable assessment of current arrangements, stressing in particular that no institutional changes are necessary. However, it was recommended that the practical functioning of the institutional arrangements should be enhanced by (i) strengthened cross-sector cooperation at international level, and greater use of 'coordinating' supervisors for large cross-border/cross-sectoral financial groups; (ii) improved and regular

information exchange among supervisors and between supervisors and central banks; (iii) a regular exchange of views between finance ministries and supervisors on the adequacy of financial regulation at national and European level and on any necessary adjustments; and (iv) a convergence in supervisory practices to enhance the efficiency of the national supervisory authorities involved in monitoring cross-border financial institutions. Finally, the report argued that there is a need to keep existing arrangements for crisis prevention under review to ensure that they are adapted to a continuously changing environment.

The second EFC report was published in April 2001 and focused on financial crisis management. This report had two parts, assessing the implementation of the recommendations of the previous report and analysing crisis management procedures respectively. The assessment of implementation of the first report was again favourable. The report concludes that substantial progress is being made in improving information exchanges but that continued efforts should be pursued to improve further the functioning of existing institutional arrangements. On the institutional framework for crisis management, the report concluded once again that institutional changes are unnecessary but that closer cooperation among the authorities (supervisors, central banks and ministries) is required.

Noting that each crisis is *sui generis* and is transmitted primarily via monetary financial institutions, there were five specific recommendations:

- supervisory authorities should ensure that the management information systems of financial institutions and groups are able to generate accurate information on their financial position at short notice; in this context major institutions should perform stress tests and have contingency procedures for addressing specific crisis scenarios, both of which should be shared regularly with their main supervisors;
- in a crisis situation, all authorities likely to be involved should be informed in a timely manner, with any remaining legal impediments to the exchange of information among supervisors to be removed; in addition, each authority should develop its own checklist, identifying the main issues to be addressed in a crisis and the other authorities to be informed;
- for the major financial institutions (including conglomerates) which are domiciled in the EU,

agreement should be reached on the coordinating supervisor and its responsibilities including information gathering and communication, particularly in crisis situations;

- supervisory authorities should further develop memoranda of understanding (MoUs) to deal more concretely with issues related to crisis management; the procedures for information exchange when a major financial institution runs into trouble should be agreed upon in advance and the relevant fora could be requested to describe the main elements of such procedures; supervisors should also consider extending MoUs into agreements among competent authorities of a number of countries, particularly where the structure of specific institutions demands so; and
- competition authorities are called upon to maintain timely and robust procedures for considering the competitive implications of crisis management measures.

The reassuring message from the two EFC reports addresses the main concerns about the current arrangements for prudential supervision in the context of current prospects for EU financial integration. While the scope for improvement in the functioning of existing institutional arrangements is recognised, the arrangements themselves are seen as adequate. This conclusion applies in particular to cross-border arrangements and reflects the fact that the consolidation of financial institutions has been largely confined to the national level. As a reflection of this fact, however, institutional changes have been made or are being considered within many Member States so as to streamline crisis prevention/management and address the supervisory implications of financial conglomeration. As the pace and pattern of future financial integration are difficult to predict at this early stage, the conclusions of the EFC report are likely to be kept under regular review. Should consolidation among financial institutions become a more cross-border phenomenon, it may be necessary to reassess the conclusions of the two EFC reports.

Related to the discussion of EU arrangements for prudential supervision has been a focus on the procedures for emergency lending assistance (ELA) by the Eurosystem. The Eurosystem has laid down general principles to govern the granting of emergency lending assistance (ELA) in the euro area, as well as indicating the division of responsibilities between the ECB and the national central banks (NCBs). In summary, the NCBs are mainly

responsible for offering liquidity assistance and will bear any associated costs. Information mechanisms have been put in place between the NCBs and the ECB to ensure that any emergency liquidity creation is consistent with safeguarding monetary stability in the area as a whole. In addition, the NCBs must take into account any cross-border effects that might be implied by the provision of ELA. It has been argued that such measures are unlikely ever to be used because of the low probability of a bank being solvent but illiquid and with insufficient collateral

to access regular central bank funding. Others have focused on the scale of unsecured cross-border exposures in the functioning of the euro-area inter-bank market as increasing the risk of a national financial crisis becoming systemic for the euro-area as a whole. In addition, it has been noted that consolidation has created institutions whose liabilities in some cases represent a significant fraction of a country's GDP, thus potentially complicating the resolution of troubled banks at the national level.

7. Conclusions

The EU financial system is being transformed by the interaction of several phenomena, including the wider process of globalisation, the harmonisation of the regulatory framework across the Union and the implementation of financial reforms in the Member States. The combined effect of these developments is to progressively integrate the EU financial system, a process that is reflected in more homogenous markets, a wave of consolidation among intermediaries and the emergence of new and innovative products and techniques. Since 1999, the euro has also helped in this transformation by eliminating exchange risk for financial flows across most of the Union.

There are important economic benefits to be gained from the integration of the EU financial system. While the link between financial development and economic growth is still underdeveloped in the economic literature, there is increasing evidence to suggest that the **long-term** performance of an economy is positively related to the level of development of its financial system. By extension, it is reasonable to conclude that financial integration will also result in an improved economic performance to the extent that integration raises the level of financial development. Financial market integration in Europe forces financial market institutions to adapt to a larger market with more competition. The resulting pressures on financial institutions compel them to reorganise, to adopt new technologies, and to take other measures to cut costs. While this process may be painful for some financial institutions, it should lead to benefits to savers and investors through broader choices at lower transaction costs. These benefits are, in the first instance, 'micro' based and difficult to quantify. The improved choices for economic agents, however, will lead to behavioural responses that potentially affect aggregate macroeconomic variables. Hence, financial market development in general, and financial integration in particular, potentially lead to higher saving, investment, and improve economic growth performance.

To a large extent, financial market integration is market-driven, as the financial institutions themselves take

advantage of the opportunities offered by financial market integration. However, in several areas there is a need for policy action to facilitate market integration. The economic benefits of financial integration have been recognised by successive European Councils, and facilitating the integration process has been established as a priority of economic reform. This priority is reflected in the deadline of 2005 set for implementing the FSAP as the blueprint for an integrated EU financial system. However, progress in implementing the FSAP has been slow and risks being even slower in the context of slow economic growth and an uncertain financial environment in the coming year. Against such an unfavourable background, it is clear that any weakening in the commitment of Member States to the integration process would be likely to undermine financial-market confidence. Three main lines of action can be identified as a means to reassure financial markets.

First, there is a need to accelerate the implementation of the FSAP so as to ensure that the Lisbon deadline is respected.

Second, the adoption of the Lamfalussy proposals on the regulation of EU securities markets is an essential step in accelerating implementation of the FSAP.

Third, some issues relating to arrangements for cross-border financial supervision should be resolved. The higher systemic risk associated with financial-sector integration and consolidation points to a need for close cooperation among national supervisors and the central banks in preventing and managing financial crises. Accordingly, the recommendations made in the EFC reports on financial stability should be implemented in full and as rapidly as possible.

The introduction of the euro has established a single currency but without a single financial market. Accordingly, the potential of the euro has not been exploited to the full. The process of EU financial integration has been underway since the mid-1980s, but is far from complete. Much remains to be done if the economic benefits of a truly integrated EU financial system are to be realised.

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Chapter 5

Reforms of pension systems in the EU —
An analysis of the policy options

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1. Introduction

There is widespread consensus on the extent of the ageing problem in Europe, which is a result of the baby-boom in the early post-war period, the subsequent fall in fertility rates from the end of the 1960s and increasing life expectancy. This will begin to affect public finances significantly as the baby-boom generation reaches retirement age over the next few decades. The impact of these developments on public finances and pension systems is a particular issue of concern and debate in all Member States, but the effects of ageing will be far more widespread in the economy and society generally. Ageing will pose challenges for budgetary, labour and financial market policies as well as for overall economic performance. The need for a comprehensive reform strategy to cope with all these challenges is largely acknowledged.

Ageing and pension systems are high on the political agenda in the EU. In particular, the European Council in Santa Maria da Feira in June 2000 stressed that ‘particular attention should be given to the sustainability of pension schemes through defining two action lines aimed at improving forecasting of future trends and at obtaining in-depth knowledge of recent, actual and expected national pension reform strategies’. All the subsequent European Council meetings have addressed the ageing problem with regard to the issues of the sustainability of pension systems and public finances as well as the future evolution of social protection. The Commission has provided to the Council a progress report on the impact of ageing populations on public pension systems as well as

communications on how Member States should report on their reform strategies in the field of pensions.

This chapter aims to address issues related to reforming current pension systems. It focuses, in particular, on the policy choices within the pension system itself. First, it discusses in broad terms the advantages and disadvantages of the various reform options. A basic distinction is made between parametric and systemic reforms, in other words, whether the reforms are undertaken within the existing pension systems or whether they involve a switch from a current system to a new one. The relative merits of these options regarding a number of issues and challenges facing pension systems and the ageing problem are discussed. Second, it presents some empirical simulations of selected reforms, which further illustrate the effects of reform options. These simulations focus on the effects on some key economic variables, namely, economic growth, the sustainability of public finances and the income distribution between the working-age population and pensioners.

The remainder of this chapter is structured as follows. Section 2 outlines the challenges for future pension reforms, generally. Section 3 provides a review of parametric and systemic reforms with reference to the advantages and disadvantages related to public and private pension schemes. Section 4 presents the results of some empirical estimations of the likely effects of the selected policy choices. Section 5 draws the key conclusions to be retained from the analysis.

2. Challenges for pension reform

Awareness of the problems associated with demographic developments and the current pension systems has been growing in the EU. Member States have already launched reform processes in order to meet these challenges. The main driving force for reforms undertaken until now has been the fiscal consolidation, which has also led to major changes in policies affecting the structure of retirement income financing through the promotion of private pension schemes and improving the operation of financial markets. Another pronounced direction of reforms is that the policy tide has clearly shifted as regards the transition from work to retirement. Unambiguously, the policy is now to encourage a later and more gradual transition. In particular, reforms have been introduced which aim to support the employability of older workers and to respond to the future health and long-term care needs of old people ⁽¹⁾.

Despite the efforts made to reform pension systems, there is little evidence yet of a firm trend towards later and more flexible retirement. Many countries also face problems of over-use of invalidity and disability pensions and alternative pathways to retirement. Meanwhile, the time spent in retirement is still increasing due to growing life expectancy.

Table 1 illustrates the challenges for pension reform as revealed by some indicators. The projections for old-age dependency ratios illustrate the demographic challenge. Increases in public pension expenditure indicate the need for policy adjustment. The low employment rates of older workers indicate the disincentive challenge. The shares of pension fund assets and public pension expenditure, together, point to the challenge for risk diversification. In general, in countries which rely heavily on the public pension system and where public pension expenditure is large pension fund assets tend to be small.

⁽¹⁾ See OECD (2000a), European Commission (2000b and c).

The economic implications of ageing populations on public finances during the first half of this century have been investigated recently in a joint project of the EU and the OECD ⁽²⁾. The main results are presented below.

- Demographic projections show shrinking labour forces after 2010 and shrinking populations after 2020, large increases in the old-age dependency ratios, and particularly rapid increases in the very-old-age dependency ratios due to the post-war ‘baby-boom’ generation, as well as decreased fertility rates and increased longevity. According to the baseline projection, the old-age dependency ratio will double, from the present 24 to 49 % in 2050. Despite the sensitivity of the results to various assumptions in the projections, the basic message of increased dependency ratios holds.
- Currently, pension provision in the EU relies heavily on public pension systems. Only in the Netherlands and the UK is the private component of pension provision well developed. Under the current structure of pension provision in most Member States, demographic developments will inevitably increase the burden of pensions on public finances.
- Under a ‘current policy’ scenario ⁽³⁾, public pension expenditure as a percentage of GDP will rise in all Member States, except the UK. In the majority of countries, the effects of ageing will increase pension expenditure by 3–5 percentage points, with the highest upward pressure occurring in Greece (12.2 percentage points) and in Spain (7.9 percentage points).
- Average effective retirement ages are far below the statutory old-age retirement age in all countries, thus

⁽²⁾ See European Commission (2001b), Economic Policy Committee (2000), OECD (2001a and 2001b).

⁽³⁾ The scenario assumed no further reforms but included the effects of the reforms legislated by the end of 1999.

Table 1

Main indicators of pension reform challenges

	Dependency ratio ⁽¹⁾		Empl. rate 55–64 yrs ⁽²⁾	Pension fund assets, % of GDP	Public pensions, % of GDP	
	In 2000	In 2050	2000	1998 ⁽³⁾	2000	Change 2000 — peak year ^(*)
B	26	45	25.0	4.8	10.0	3.7
DK	22	36	54.6	21.5	10.5	4.1
D	24	49	37.4	3.3	11.8	5.0
EL	26	54	39.0	11.9	12.6	12.2
E	25	60	39.6	2.1	9.4	7.9
F	24	46	29.3	:	12.1	4.0
IRL	17	40	45.1	:	4.6	4.4
I	27	61	27.3	3.2	13.8	2.1
L	21	38	27.2	:	7.4	2.2
NL	20	41	37.9	85.6	7.9	6.2
A	23	54	29.2	2.6	14.5	4.2
P	23	46	51.7	12.0	9.8	4.1
FIN	22	44	41.2	:	11.3	4.7
S	27	42	64.3	2.7	9.0	2.6
UK	24	42	50.5	83.7	5.5	– 1.1
EU	24	49	37.5	:	10.4	3.2

(*) The peak year is the year when the pension expenditure is the highest (the lowest in the UK) within the period 2000–50.

Sources:

(1) European Commission (2001b).

(2) Eurostat.

(3) OECD (2000b), *Institutional investors statistical yearbook*. The OECD figures do not cover the funding of social security schemes which are imposed, controlled or financed by general government.

increasing the portion of life spent in retirement, decreasing the period in employment, and making the economic dependency ratios significantly higher than the old-age dependency ratios. Policies aimed at increasing employment rates, if successful, can partially alleviate the problem. A gradual 5-percentage-point increase in the employment rate would, on average, reduce the rise in pension expenditure by about 0.5 of a percentage point of GDP with respect to the baseline scenario.

The above findings clearly indicate that the implications of ageing are deep and pervasive. They pose major challenges for policies in many areas, notably in labour markets, financial markets and public finances, all of which are interlinked. Labour market reforms need to address incentives for later retirement, employability of older workers and their job opportunities. Financial market infrastructure needs to be strengthened in order to provide a safe framework for private pension schemes and better possibilities for diversified and flexible retire-

ment income provision. The challenges for public finances range from fiscal consolidation to restructuring of expenditure and improving the cost-effectiveness of care services ⁽¹⁾.

The Commission and Council in a joint report to the Stockholm European Council on the quality and sustainability of public finances outlines a three-pronged strategy to tackle the budgetary implications of ageing populations ⁽²⁾:

- Member States should reduce public debt levels in order to pre-empt the budgetary consequences of ageing populations.
- Member States should undertake comprehensive labour market reforms, including tax and benefit

⁽¹⁾ See OECD (1998).

⁽²⁾ Council of the EU (2001) and European Commission (2000d).

systems, in order to reach higher employment rates, in particular among older workers and women.

- Member States should undertake ambitious reforms of pension systems in order to contain pressures on public finances, to place pension systems on a sound financial footing and ensure a fair intergenerational balance.

In addition to the economic challenges posed by ageing populations, the design of pension systems also poses

problems. These have been identified as follows: (i) there are distortive elements in pension systems that affect labour market behaviour and the retirement decision; (ii) all risks, particularly the demographic (increased longevity and shrinking labour force due to decreased fertility) and public debt risks, are not adequately covered in the present systems; and (iii) funding poses the risk of the future value of assets, and risk diversification related to funding requires institutional improvements, especially in the area of financial market infrastructure.

3. Advantages and disadvantages of parametric and systemic reforms

Solutions to the challenges identified above are being sought from: (i) within the present pension schemes through parametric reforms (subsection 3.1), (i.e. changes in the key parameters such as the replacement ratio, the retirement age, the contribution rate and taxation of pensions); and (ii) more radical systemic reforms of the various types of pension schemes (subsection 3.2). While parametric reforms can help to put future pension expenditure on a sustainable footing and reduce labour market distortions within the existing systems, systemic reforms respond to the need for risk diversification across several systems, and the need to investigate the whole retirement income provision framework with a view to finding a fair balance between different types of retirement income sources. As the great majority of existing pension systems in the EU are defined benefit and pay-as-you-go schemes, the discussion of parametric reforms is largely associated with reforms of these schemes.

3.1. Parametric reforms

The essential feature of parametric reforms is that they aim to maintain the basic structure of the existing system while attempting, through changes in parameters, to influence the costs, financing or incentive structures of the scheme in order to adjust it to foreseen circumstances. Sometimes, however, the line between parametric and systemic reforms is rather ambiguous. In particular, this is the case when reforms are implemented within an existing scheme but they involve elements, which do not inherently belong to the system. An example of such a reform is the placing of greater weight on advance funding within essentially pay-as-you-go (PAYG) schemes ⁽¹⁾.

⁽¹⁾ In particular, these mixed elements are to be found at present in the recent Italian and Swedish pension reforms, which both introduced a notional defined contribution principle into the existing public PAYG schemes. This involves individual accounting of lifetime contributions, which define the total amount of benefit to be paid for the expected time to be spent in retirement. Then, at the time of retirement, the annual benefit is adjusted to the lifetime expectancy.

Despite such ambiguities, the categorisation of pension reforms into parametric and systemic reforms is helpful for the purpose of describing how the present challenges can be addressed by various types of reforms. As far as parametric reforms are concerned, they can be classified according to the basic parameters through which any pension scheme is defined, that is, the retirement age, the replacement ratio and the contribution rate. In addition, taxation is a factor that intervenes in many ways, including partial financing of PAYG schemes. In the following sections, a range of parametric changes is described under these headings. The channel through which they influence human behaviour, and the cost or financing of the scheme is also discussed.

Retirement age — Retirement age covers both the statutory old-age retirement age and the effective retirement age. Some countries have taken steps to increase the statutory retirement age, or at least to raise the retirement age of women to that of men. In most EU countries, the general statutory retirement age is now 65 years ⁽²⁾. However, taking into account increased and ever-increasing life expectancy ⁽³⁾ and improved health status, a case can be made for an even higher statutory age and for upward flexibility in the application of this age limit. This could be achieved, for instance, by promoting a more gradual transition to retirement and allowing for bonuses for those working after the age which would allow a retirement.

The effective retirement age, i.e. the age at which people retire de facto, is below the statutory retirement age in all

⁽²⁾ In France it is 60 and in Denmark it is 67, to be reduced to 65 from 2004.

⁽³⁾ Since 1960, in the OECD area, life expectancy of the population at retirement age has risen by four years, from 79 to 83 years. During the same period, the age of retirement has decreased by about three years, leading to an increase in the average duration of receipt of pensions by some seven years, from 13 to 20 years (Visco (2001)).

European countries; in many countries the gap is as much as six to seven years. This is because pension schemes provide alternative pathways to retirement, through schemes other than the old-age scheme, such as early retirement, pre-retirement and disability pension schemes. Such schemes, or relaxation of their eligibility rules, were often introduced in order to facilitate the exit of older workers in firms affected by industrial restructuring. In addition, these schemes tend to offer substantial incentives for early retirement. For instance, once the eligibility conditions for retirement have been met, there may be very little, if any, incentives to continue to work, because the pension rights may not continue to accrue although contributions would continue to be paid if the individual continued to work. With ageing populations, however, pension systems will no longer be able to support the cost of shedding older workers. Most countries have already moved in the direction of restricting, or even closing, supplementary pathways to retirement and also increasing the age limits for these schemes.

Reforms aimed at delaying retirement are beneficial in many ways. Firstly, the number of years in employment rises, which, simultaneously, increases the number of contribution years ⁽¹⁾. Secondly, the number of years spent in retirement decreases and, hence, also the pension costs (although this is partially offset through a higher benefit owing to an increased accrual of pension rights). Several simulations suggest that delaying retirement is a more efficient way to improve the financing situation of pensions than reductions in benefit levels ⁽²⁾.

Gross replacement ratio — The gross replacement ratio of pensions is the level of pensions relative to earnings. In Member States, the target replacement ratio for a full pension is generally 60–70 per cent, while the maximum rates are allowed to reach as high as 80–90% in some countries and, for some groups of employees, even 100%. However, the average gross replacement rates are generally lower. According to the report of the Ageing Working Group of the Economic Policy Committee (EPC), the average gross replacement ratios for old age pensions ranged from 33 to 85 + % in the 10 Member

States that provided this information ⁽³⁾. Apart from direct reductions in pension benefits or the introduction of ceilings for maximum pensions, the replacement ratio can also be reduced, de facto, through changes to the indexation rules for pensions and changes in the reference earnings or in the accrual rate for calculating pensions.

The indexation of pensions determines how pensions evolve relative to wages over time, but it does not affect the initial pension level. If pensions rise less than wages over time, the effective replacement ratio will decline. Reforms that aim at reducing the replacement ratio tend to encourage a switch from wage indexation towards price indexation. Such reforms are supported by the argument that the primary purpose of pensions is to preserve the purchasing power of pensions and not to compensate pensioners for future productivity improvements. On the other hand, from the equity perspective, a redistribution of increased economic prosperity to pensioners would be better ensured if pensions were indexed to wages. Many countries have taken steps to reduce the indexation of pensions to wages. However, in most cases, they have not shifted completely to price indexation but to a variety of mixed indices in which the weight and form of the wage index vary and the former has been reduced.

Reductions in the reference earnings used for calculating pensions affect the initial level of pensions, and hence the effective replacement rate. They can be achieved, for instance, by increasing the number of years used to define the reference earnings or attempting to define the average earnings over the whole employment career instead of taking into account only the ‘best’ or most recent years. Moreover, the reference earnings can be modified through deducting certain items from the wages, notably pension contributions. The motivation for such reforms is to make benefits commensurate with lifetime earnings and to improve incentives to stay longer in the labour force, through reducing overly generous benefits. The level of pensions and incentives to work can also be improved through the differentiation of the accrual rate of pension rights. For instance, some countries have introduced lower accrual rates for periods spent on disability pensions compared to those in employment, or higher accrual rates for the years in

⁽¹⁾ In addition, there is the advantage that it raises the living standard of the elderly, both through greater earnings during the years spent in employment and through increased pensions when retired.

⁽²⁾ See OECD (2001), Börsch-Supan and Winter (2000), Gruber and Wise (2000).

⁽³⁾ The reported gross ratios in 1998 were: Germany 33, Belgium 35.5, Finland 50, Italy 53, Denmark 56, Spain, Austria and Sweden 65, the Netherlands 70 (with a range 54–109), and France 85 +.

employment after a certain age limit, as well as increasing the minimum number of years in employment for entitlement to a full pension.

The replacement rate can also be used as a means to respond to the challenge of increased life expectancy by establishing a close link between lifetime earnings and lifetime pensions. In this case, the actual replacement rate for the initial pension level would be defined only at the time of retirement, when the annual benefit would be adjusted to the expected lifetime in retirement.

Contribution rate — Contributions are defined in order to cover benefit payments from a particular scheme. In a PAYG scheme, there is no direct link between contributions and benefits at the individual level because, primarily, the contributions are defined to cover the concurrent payment of benefits. Sometimes, additional adjustments in contribution rates can be made in order to partially pre-fund future pension spending and to improve the link between contributions and benefits at the individual level and, thus, to improve intergenerational fairness. In general, reforms aimed at increasing actuarial fairness, i.e. bringing lifetime contributions closer to lifetime benefits, are deemed to improve the financial reward for working longer. Tightening the contribution rules, for example by increasing the number of contribution years required for a full pension, works in the same direction.

Taxation — Taxation provides governments with additional means to finance pension systems. A significant part of public pensions can be financed directly from tax funds. In addition, taxation of public pensions alters the picture concerning the projections of pension expenditure, when considered from the point of view of the sustainability of public finances. If public pensions are taxed, part of the government's gross pension expenditure and liabilities will be returned to the government through taxes paid from pensions. Thus, taxation provides additional means to manage public pension payments and pension liabilities ⁽¹⁾. It is recognised, however, that taxation may create disincentives or incentives for labour mobility across countries, or may lead to an unbalanced sharing of taxes and concessions between Member States.

⁽¹⁾ A further question concerning public pensions is whether the taxation of pensions is appropriate relative to other types of income, notably wages.

Where private pension schemes are concerned, taxation rules can play an important role in creating incentives to participate in these schemes, by allowing for a more favourable taxation of the investment income from pension funds compared with that of other investment income. This can be particularly important where governments promote a shift from public to private schemes. Hence, this question is closely related to systemic reforms.

Pensions are broadly subject to income taxation in all Member States, although tax concessions are allowed to various degrees, including tax-exemptions for minimum (or small) benefits or for certain types of benefits or for social security contributions ⁽²⁾. An indication of differences in the level of the taxation of pensions between Member States is provided by the OECD (2001c). In general, the tax rules applied to pensions are favourable compared to those applied to earnings. Among the countries investigated, taxes paid on public pensions varied from 1–2 % (Ireland, UK) to 26 % (Denmark, Sweden). The ratio of taxes to gross benefit spending for private pensions was higher than for public pensions in most countries ⁽³⁾.

Arrangements for the taxation of occupational pensions vary across the EU. Table 3 provides an overview of the taxation arrangements for occupational pensions (the second pillar schemes) in Member States. However, it should be noted that much of this applies also to social security pensions (the first pillar schemes), especially to those based on occupational activity. There are three elements of pension systems, according to which the taxation of pensions may differ: (i) the contributions to a pension scheme, (ii) the investment income of the pension institution, and (iii) the benefits paid by the

⁽²⁾ See EPC (2000), OECD (2001e).

⁽³⁾ An alternative way of estimating the magnitude of tax allowances for social purposes is provided by the calculations of tax expenditure, i.e. the revenue foregone due to reductions, exemptions, deductions or postponements of taxes granted with the aim of pursuing certain policy objectives through the tax system. Some countries provide estimates of such tax breaks for pensions, for instance, 0.1 % of GDP in Germany, 2.7 % in Ireland, 1.2 % in the Netherlands and 2.7 % in the United Kingdom in 1997 (OECD, 2001c). When interpreting these results, especially those which appear to be conflicting at first glance, one has to bear in mind the normative tax system of the country. For instance, in Germany, both the taxation of pensions and tax subsidies to pensions are low because the norm (until now) is that the contributions are taxed and pensions are exempt.

Table 2

The ratio of direct taxes to gross benefit spending in 1997

(%)

	All public transfers	Public pensions ⁽¹⁾	Private pensions
B	9.0	:	:
DK	23.9	25.8	36.8
D	7.6	:	17.1
IRL	2.5	0.9	10.1
I	12.8	13.3	16.0
NL	23.0	22.6	25.4
A	12.4	15.4	15.4
FIN	19.5	22.3	22.3
S	22.1	26.5	29.7
UK	2.8	2.1	11.4

⁽¹⁾ Covers public spending on old-age cash benefits, survivors, disability cash benefits and occupational injury and diseases.

Source: OECD (2001c).

institution. Each of these elements can be either exempted from taxation or taxed. The tax treatment is described by giving each of these elements a symbol E or T, depending on whether the contribution/income concerned is exempted (E) or taxed (T). Thus, an EET treatment means that contributions are exempted, investment income is exempted and benefits are taxed.

Different levels and systems of taxation of pensions have implications for labour mobility across countries ⁽¹⁾. In addition, from the point of view of Member States' tax revenues, the mobility of labour and retired people poses the question of the fair share of tax revenues among countries concerned, because persons may draw a pension in a country other than the one in which it has been earned. Even in the case of similar tax treatment of pensions, where the individual would not face distortive effects when moving from one country to another, the country which would receive the tax revenues would differ from that which had allowed exemption from contributions.

In order to reduce the double taxation and non-taxation that may occur as a result of diverging tax arrangements

⁽¹⁾ Where diverging systems of pension taxation are applied to the same individual during the periods in employment and retirement, there can be problems of double taxation or no taxation for migrant workers and persons retiring to another Member State. 'Double taxation' could occur, for example, if someone pays contributions in Luxembourg and draws a pension in Belgium, while 'no taxation' could occur if the move is in the opposite direction.

in Member States, a recent Commission communication investigated differences in the taxation of pensions from the point of view of single capital and labour markets ⁽²⁾. To make progress in reducing the differences in tax arrangements, the communication calls for a broader acceptance of the EET principle, on a voluntary basis, since it is the most widely applied tax system.

Tax incentives for funding — Taxation affects incentives associated with different kinds of pension systems. Theoretically, the question of how private pension schemes should be taxed is an important one: should the returns of the funds be taxed as they accrue, or should taxation apply to benefits? The most common model is that in which pensions are taxed when the benefits are paid and, correspondingly, the contributions are exempt from taxes on wages. On one hand, this arrangement can be seen as helping to cope with demographic ageing, as it reduces tax revenues today in exchange for increased tax revenues at the time when the demographic dependency ratio will be more unfavourable. However, one should bear in mind that this is only a shift of tax revenues into the future, not an increase in the net present value of tax revenues. Another issue is that funding, if it is assumed that funding in pension funds creates increased saving (not a shift from other savings to funds), also shifts consumption in the future and, thus, changes the spread of indirect tax revenues over time.

⁽²⁾ See European Commission (2001a).

Table 3

Overview of taxation arrangements of occupational pensions ⁽¹⁾

	EET	ETT	TEE
B	X		
DK		X	
D	X ⁽²⁾		X
EL	X		
E	X		
F	X		
IRL	X		
I		X	
L			X
NL	X		
A	X		
P	X		
FIN	X		
S		X	
UK	X		

⁽¹⁾ EET: contributions and investment income exempted, benefits taxed.

ETT: contributions exempted, investment income and benefits taxed.

TEE: contributions taxed, investment income and benefits exempted.

⁽²⁾ The German government's proposal for a pension reform indicates a shift to an EET tax regime.

Source: European Commission (2001a).

On the other hand, the EET tax treatment of pensions implies significant tax subsidies in favour of such pension schemes and, hence, for retirement savings. The tax subsidies occur because, firstly, there is a tax shift into the future and, secondly, in a progressive tax system it implies a lower tax rate because the pension is smaller than the wage from which the contribution is paid. Thirdly, if the investment income on the pension fund is not taxed, it implies an additional tax subsidy in comparison with other investment income. However, neutrality vis-à-vis public pension schemes would support a tax exemption for this source of income. One should also take into consideration the counter-arguments that the absence of a subsidy might mean inadequate investment in private pension funds or that the subsidy, finally, has welfare enhancing effects ⁽¹⁾.

The question of whether the build-up of funded pension schemes can contribute to financing the long-term increase in old-age public expenditure and, hence, help to cope with demographic ageing has been illustrated by a numerical example provided by the Danish Ministry of Finance ⁽²⁾. A simulation, which assumes that the same

tax rate is applied to deductions of contributions and to taxation of pensions, shows that the deferred income tax in an EET system would have no effect on the net present value of tax receipts, but it would have consequences for fiscal consolidation. A longer period of consolidation would be required, because the reduction in government debt would be lower during the period of accumulation of funds owing to the reduced tax revenues, as a result of deductions granted to contributions.

Another simulation covered the case of applying higher tax rates to deductions of contributions than to pension benefits (i.e. a progressive tax system) and a more favourable taxation of institutional savings of pension funds, assuming no revision in the public pension provision. This simulation shows that the present net value of tax receipts would be reduced and strong incentives for asset diversion would be created. These subsidies would negatively affect fiscal sustainability and, if the asset relocation were strong, tax concessions to funded pensions would have the potential to seriously undermine long-run fiscal solvency. Thus, in fact, the creation of tax subsidies for private pension provision would necessitate either tax increases or expenditure cuts. The latter could be achieved, for instance, through a reduction of public pension provision. Thus, the simulation suggests that

⁽¹⁾ See Bohn (2001).

⁽²⁾ See Fredriksen (2001).

such a reform in favour of private pensions should be accompanied by a reform of public pension provision. The conclusion of this exercise is that the establishment of funded pension schemes cannot alleviate the fiscal impact of population ageing, unless it is combined with reductions in public pensions.

3.2. Systemic reforms

Systemic reforms concern the diversification of retirement income provision and risks involved in various types of schemes. These reforms try to respond to questions such as the weights to be given to basic income security, retirement income based on occupational activity (in mandatory and voluntary schemes) and income from own sources such as capital income, savings and private pensions. A specific question is how systemic reform can help resolve problems stemming from the existing pension system and population ageing and whether it has relative merits over parametric reforms regarding the challenges faced by pension systems.

Systemic reforms are much related to pension provision and its financing by different types of schemes which can be described using the following categorisation of pension pillars:

- Pillar I: social security pension schemes, which imply public compulsory schemes.
- Pillar II: occupational pension schemes, which involve privately-run pension schemes, based on collective agreements or (voluntary) contracts between employers and employees or on unilateral promises by employers.
- Pillar III: private pension schemes, which cover individual pension plans ⁽¹⁾.

⁽¹⁾ The terminology relating to different pension schemes and pillars can be ambiguous. For instance, the term 'occupational pensions' is sometimes used to cover, in addition to schemes based on collective agreements or contracts between employers and employees (second pillar), compulsory schemes based on occupational activity and run by social security institutions. Also the term 'supplementary pensions' is used in a specific and general sense. Where pension pillars are concerned, such pension schemes cover those included in the second and third pillars, i.e. occupational and private pension schemes (European Commission (1999a and 2000a)).

It is not easy to define these pillars in terms of characteristics that are common to all schemes in a single pillar. Pension schemes can combine different characteristics in many flexible ways. For instance, first pillar schemes, with the key characteristics of being 'publicly managed' and 'mandatory', are often erroneously confused with certain features of implementation of some of the schemes, such as financing through a pay-as-you-go (PAYG) system and having a defined benefit formula. Even though first pillar schemes may be associated with these features in most cases, there is, in practice, a far broader spectrum of choices. In particular, many schemes have moved from unfunded in the direction of pre-funding and partial funding. In addition, it is important to note that the pensions can be either flat-rate basic social pensions (minimum pensions) or earnings-related pensions based on occupational activity. In the latter case, they need to be mandatory and part of the social security system. Although the first pillar is regarded as public, while the second and third pillars cover the private component of the pension system, the division is not so clear cut. In some cases, privately-run pension institutes can manage both social security and voluntary pension schemes.

In the general debate, the method of financing has been used as the crucial differentiation between the various schemes. However, this discussion is often blurred by interrelated aspects of the schemes under different pillars, such as public vs. private, unfunded vs. funded, mandatory vs. voluntary, defined benefit vs. defined contribution. In particular, the discussion of increased funding too often leads to an inference being drawn that a switch from a public (social security) scheme to a private (voluntary occupational or private pension) scheme should follow.

The discussion on the relative merits of PAYG and funded schemes deals mainly with the following issues and challenges of pension systems:

- Universal coverage
- Minimum pension and redistribution
- Fairness across generations
- Transparency and actuarial fairness
- Demographic challenge
- Labour market effects
- Financial market risks
- Higher returns on funded schemes

- Rule changes and political risks
- Administration costs
- Transition costs

Compared with private (funded) systems, public (PAYG) systems offer a number of advantages, such as universal coverage, minimum pension, redistribution and solidarity goals and coping with financial market risks, while the funded system is seen to have advantages in dealing with the goals of transparency and actuarial fairness, as well as fairness between generations. For these reasons it is often claimed that the latter copes better with demographic risks and distorts labour market behaviour less. However, in a number of areas, the economic literature is not conclusive. These issues are discussed in more detail below.

Bohn (2001) argues that an important question in designing pension reforms is how they share the aggregate risks related to pensions between the working-age population and pensioners. The main sources of the aggregate risk related to pensions are the uncertainties about future productivity growth, population growth, longevity and the valuation of capital assets. Government policy can reallocate these risks across generations, either through taxes and transfers or by changing the market portfolio, i.e. the capital stock and the government debt, through debt management. Bohn asserts that different types of reforms share the risks between generations in different ways, and hence, they involve different outcomes in terms of incentives and distortive effects for various groups of people. Therefore, according to Bohn, an optimal pension policy should seek for reforms that share the financial risks of aggregate productivity, asset valuation and demographic shocks in the most equal way across generations.

As a point of departure, it is recognised that the initial choice between various pension systems has already been made in all Member States. No country can start from a *tabula rasa*. Therefore, it is assumed that we are dealing with questions related to transformation, such as a partial shift from public into private or from unfunded to funded schemes. However, one should bear in mind that much of the theoretical considerations on the relative merits of different systems are based on a pure comparison between the systems in a hypothetical situation, where a choice could be made in a *tabula rasa* situation. In practice, countries face the question of whether a shift from one particular system to another would be beneficial.

In addition, it is recognised that achievements and common values related to present pension systems are important. In the following analysis, we assume, for instance, that the goals of having a universal minimum pension and combating poverty among old people will be retained and that these objectives will be preserved in publicly managed, social security schemes.

Demographic challenge — Demographic challenge ⁽¹⁾ stems from decreased fertility and increased longevity. Much of the literature does not make a distinction between the different sources of demographic changes. Some economists, however, argue that these sources have different implications for the economy. Decreased fertility affects primarily the working-age population through the change in the size of the labour force and, hence, has more direct effects on production and labour income, whereas increased longevity affects mainly retirees. Through these different influence channels, different government policies share the risks of shocks between workers and retirees in different ways ⁽²⁾.

It is often claimed that funded schemes cope better with demographic changes. The argument is that fully-funded schemes usually provide benefits which are contribution defined and there is an explicit link between contributions paid in advance and benefits received in retirement, while such a link is missing from defined benefit systems.

Some economists argue that this is true only in nominal terms, whereas in real terms, the funded schemes are also affected by demographic changes, because the crucial underlying problem caused by a demographic change is a fall in output, which affects both types of pension schemes. In a PAYG system, a demographic change affects output by reducing the size of the contribution base, i.e. the wage bill. If the PAYG system were balanced, it would correspondingly reduce the pensions bill which could be supported by a given contribution rate. In a funded system, the mechanism is more subtle and less

⁽¹⁾ Some economists make a distinction between ‘demographic challenge (or change)’ and ‘demographic risk’. According to them, strictly speaking, risk is associated with uncertainty, while a challenge or a future change implies that a great part of the expected value is already known. The expected changes in demographic development — baby-boom generation, increased life expectancy and decreased fertility — are largely known, although there is some degree of uncertainty regarding the magnitude of changes.

⁽²⁾ See Bohn (2001).

transparent, but equally inescapable. It operates through a mismatch between demand and supply in the assets market. Excess supply reduces asset prices and the return on funds, thereby reducing pension accumulations and hence the resulting annuity. In both systems, the reduction in pensions can be avoided if output grows. Barr (2000) concludes that: (i) in the face of demographic problems the key variable is output; (ii) the policy choice should consider all policies which promote output growth; and (iii) from a macroeconomic perspective the choice between PAYG and funding is secondary.

Some simulations provide support for the above conclusion and state that as ageing affects savings, it also affects interest rates. Brooks (2000) has produced simulations showing that the 'baby-boom' generation loses out significantly in the funded system due to a fall in interest rates owing to population ageing. The Merrill Lynch scenario (2000) also produces the same result.

However, in the real world, PAYG systems may not be balanced since they are usually benefit-defined systems, including promises of future pensions. If future pension contributions or taxes cannot be raised sufficiently to pay for pensions and the pension levels cannot be reduced, the system may appear to be unsustainable. Thus, PAYG systems may be more vulnerable to demographic changes than funded schemes. The key issue is, however, the sustainability of PAYG schemes. This suggests that the pensions and the public debt should be considered together, since demographic shocks can affect either one of these. In addition, they are the two main instruments for intergenerational transfer schemes and, therefore, are central in making future liabilities sustainable.

Labour market effects — Labour market distortions related to pension systems are manifested in retirement decisions and the individual's labour market responses during working life, e.g. how an increase in earnings affects future pensions. As PAYG schemes usually have a defined benefit pension formula in which the link between contributions and benefits is weak, the distortive elements for labour market behaviour are more apparent than in a funded scheme. In the latter, the actuarial link between contributions and benefits inherently reduces distortive effects. A strong relationship between contributions and benefits is regarded as reducing these distortions. However, achieving a full actuarial relationship between contributions and benefits is not possible if we accept a universal minimum pension provision irrespective of labour force participation.

Studies provide strong evidence that there is a relationship between the design of public pensions and early retirement ⁽¹⁾. In general terms, people tend to leave the labour force at the age at which their pension wealth is maximised, i.e. when delaying their exit from the labour market is not rewarded by an actuarial amount. However, private pension schemes may also include an incentive to retire early, or certain kinds of disincentives, e.g. pension penalties for leaving the company to work for another employer. In fact, the method of financing the pension system, *per se*, is not crucial for incentives to work; what matters is the incentive structure that is built into the pension system ⁽²⁾. Both the PAYG and funded schemes may involve disincentive effects. Notwithstanding this, in practice, PAYG schemes may involve more disincentives, not only due to the deficiencies in the design of pension benefits, but also due to the perception that a contribution to a public scheme is a tax, whereas a contribution to a scheme based on actuarial principles is more likely to be regarded as saving. This argument, however, is controversial, especially in the case of private occupational schemes, which may include almost mandatory elements in the form of collective agreements, and in which the contributions are largely similar to contributions to or tax financing of public PAYG schemes.

Financial market risk — Pure public PAYG schemes do not operate in the financial market, while private funded schemes operate fully there. Thus, financial market risk is primarily an additional risk component for funded schemes. It arises from the fact that in a defined contribution pension scheme, the retirement income is derived from the value of the fund emerging at the time of retirement, and hence, the retiree bears the risk of the rate of return for pension fund investments.

In general, diversification of investments should produce higher financial returns over long periods of time. However, if the capital markets are functioning perfectly, the higher return should correspond to a higher risk on investment. In addition, the rates of return can vary substantially from year to year. Indeed, some ex post studies of the yield of investments in stock index funds in the United States show significant differences over different time periods. One study examined the replacement rates that workers would have achieved if they had invested

⁽¹⁾ See e.g. Blöndal and Scarpetta (1999), Gruber and Wise (1999), Börsch-Supan and Winter (2001).

⁽²⁾ See Orszag and Stiglitz (2000).

2% of their earnings in stock index funds each year over a 40-year work career and converted the accumulated balance to a retirement annuity upon reaching the retirement age. It found that workers retiring in 1968 would have enjoyed a 39% replacement rate, but those retiring in 1974 — only six years later — would have received only 17% ⁽¹⁾.

Notwithstanding the above, in reality, the risk of diversification can also be met in a PAYG scheme, if it is partially funded and invests its funds in risky assets. However, such an investment undertaken through a public defined benefit system involves less financial risk for any single individual than the investment undertaken through a private defined contribution system. This is because a public defined benefit system can spread risk across generations in a way that is not possible under a private defined contribution system.

The issue of managing financial market risk is an important one, not least because there are already a great number of private pension funds operating in the market, and in addition, public schemes are collecting reserves and investing them in different kinds of assets. The issue is one of adequate consumer protection, especially in the case of a defined contribution system. The question is how to minimise the risk of a low return on pension funds and, ultimately, the risk of bankruptcy of a pension fund. This depends on pension fund management and its investment policy, on the particular features of long-term investments, as well as on financial market regulation and the creation of proper infrastructure for the effective and sustainable functioning of financial markets.

⁽¹⁾ See Orszag and Stiglitz (1999).

Higher returns on funded schemes — The advocates of funded schemes tend to claim that the rates of return on pension funding are higher and, hence, accumulated funds allow lower pension contributions than in PAYG schemes. Moreover, the evidence that rates of return from equities have been higher than those on government bonds has been used to provide support for the superiority of private pension funds over funds run by the government under strict rules.

From the macroeconomic point of view, a fundamental question is whether funding increases saving and, hence, investment and economic growth. The current policy debate often claims that PAYG schemes reduce savings rates and, consequently, individual savings accounts should be established in order to increase funds for long-term investment and to strengthen economic growth. However, the argument is a partial one. Firstly, increases in aggregate savings can occur only during the build-up of the fund, because, in a steady state, savings by workers are matched by dissavings by pensioners. Secondly, increases during the build-up can occur only if the increase in mandatory saving is not offset by a reduction in voluntary saving, such as other types of saving for retirement or bequests to future generations. Barr (2000) summarises a large, complex and controversial literature on this subject, as follows: The magnitude of the impact of funding on growth is controversial. There is some evidence of higher savings in the USA but not elsewhere. Growth policies should encompass a whole range of growth-promoting policies and consideration should not be focused only on whether savings in pension funds generate growth.

The comparison of explicit rates of return on accumulated pension funds with implicit rates of return on a mature PAYG scheme — which is equal to the rate of

Table 4

Average annual real returns on capital and real wage growth in selected countries 1971–90

	Return on equities	Return on government bonds	Wage growth
Denmark	9.4	4.5	2.5
Germany	9.3	2.6	3.6
France	9.6	1.3	4.0
Netherlands	8.6	1.8	1.4
United Kingdom	10.8	1.6	2.4

Source: World Bank (1994).

real increase in the wage bill — is not conclusive on the question of whether the claimed superiority of funded schemes over unfunded ones is justified. For example, Orszag and Stiglitz (1999) argue, along with Sinn (2000), that the present value of the lower rate of return on the PAYG scheme over all future generations is the cost of the ‘introductory gain’ to the first generation of pensioners who received benefits from the scheme but did not have time to build up contribution records. These introductory gains led, at the time, to an accumulation of implicit debt, and the difference between the two rates (on funded and unfunded schemes) covers the interest on this debt. The fundamental point is that once the gift to the first generation under a PAYG scheme has been made, there is a cost which future generations cannot escape. Funding would convert an implicit government obligation to future generations into explicit debt. Funding could alter the total amount of liabilities only if the funding were also to lead to higher rates of growth ⁽¹⁾.

The advocates of funded schemes argue that funding leads to the development of the capital markets and their more efficient functioning, and consequently, to higher GDP growth and welfare gains in the economy. The argument is largely based on the hypothesis that increased capital accumulation due to funded pension schemes will change the production process in an economy, with important beneficial side effects in terms of developing financial markets, increasing capital efficiency and total factor productivity. This is viewed as happening through the following process. Firstly, funding alters savings behaviour and households’ portfolio composition; secondly, active institutional investors in pension funds demand higher returns to capital, thereby influencing corporate governance; and thirdly, improved corporate governance allocates the capital more efficiently, leading to improvements in aggregate productivity. However, even the advocates of funded schemes admit that the evidence is not yet conclusive and that there are risks of a failure in this process. More specifically, they point to the importance of financial market regulation and adequate competition between actors in the financial market ⁽²⁾.

Rule changes and political risk — Public pensions are subject to many sources of political risk. The first is that relatively high benefits have been granted to the first generation of retirees from a pension system at the time

when the system was created and when the contribution revenue easily covered expenditures. The second is the excessive responsiveness of benefits to short-term conditions of government budgets, for example, long-term promises in benefit schemes on the basis of short-term economic developments. The third source of political risk could be their excessive responsiveness to long-term conditions. The fourth is that many schemes that have been funded to some degree have been depleted of accumulated assets through outright diversion or a low rate of return, making the originally promised benefits unsustainable ⁽³⁾.

It is claimed that the benefits of PAYG schemes are more vulnerable to rule changes in case of economic crisis and, once this is done, there is an adverse impact on the credibility of politicians and of the democratic system. In contrast, in a funded scheme, both liabilities and assets are explicit and, consequently, rules such as those on accrual and indexation cannot be changed. In this sense, they are said to provide more stable rules for pension provision and more protection against government involvement. On the other hand, the ability of governments to change rules is not only a risk for pensioners but can also be seen as an advantage of the PAYG scheme, which provides leeway to adapt to unforeseen changes. Through a number of rule changes, such as indexation rules, retirement age, eligibility rules and replacement rates, governments can change their future liabilities and, hence, make the pension system more sustainable in the long run.

Finally, the effects of possible government failures and economic crisis would not be limited to public pension schemes but would also be harmful to private pension funds, probably leading to lower returns and a depreciation in the value of the funds. Therefore, effective government is essential both for public and private schemes for two strategic reasons: (i) to ensure macroeconomic stability, which underpins well-run PAYG schemes and which is also necessary to protect pension accumulations that are sensitive to unanticipated inflation; and (ii) to ensure appropriate regulation of financial markets for reasons of consumer protection ⁽⁴⁾.

Administrative costs — No pension system can work for free. However, the management task is different in PAYG and funded schemes. In addition to the collection of contributions and the payment of pensions, a funded

⁽¹⁾ See Barr (2000).

⁽²⁾ See Börsch-Supan and Winter (2001).

⁽³⁾ See Holzmann (1999).

⁽⁴⁾ See Holzmann (1999).

scheme has to take care of the investment of contributions and management of funds. In a competitive market with a large number of actors, there are also marketing costs associated with pension insurance policies. For these reasons, assuming equal administrative efficiency, the administrative costs are higher in a funded than in a PAYG scheme ⁽¹⁾.

An OECD study on administrative costs of private pension schemes shows significant differences in charge levels and in the method of levying charges on pensions, often subject to claims of intransparency. The estimated charge ratio, i.e. the ratio of charges to contributions, varied between 10 and 35%. This converts into administrative costs of 0.5–2% of assets. Clearly, charges of this magnitude have a major impact on the net returns to savings. Even a seemingly innocuous charge of 1% of assets reduces the pension benefit by 20%. The study also established that the relationship between charges and retirement benefits is approximately linear, so that a 2% charge equals to a drop of around 40% in the pension benefit ⁽²⁾.

Transition costs — A straightforward comparison of the relative merits, notably the rate of return, between PAYG and funded schemes is not sufficient to advocate switching from one system to the other. Once a system is already in place, a change to another one inevitably involves transition costs. More specifically, once a PAYG system is in place and the payments to the first generation under a PAYG scheme have been made, there is a cost for future generations to be paid. It is possible only to alter the time path of this burden, by either (a) transferring it to the current (second) generation through a default on promises, i.e. reduced pension benefits, (b) transferring it to the following (third) generation through increased contributions or taxes in order to finance the pensions of the current generation, or (c) transferring it to several successive future generations by financing the transition through public borrowing. Thus, the cost of financing the transition is one essential element in a comparison of PAYG and funded schemes. In other words, the benefits of the switch should exceed the transition costs.

We therefore come back to the question of what justifies a switch from a PAYG scheme to a funded scheme. A basic motivation seems to be rooted in the inefficiencies

of a PAYG scheme, such as its over-generosity, leading to unsustainable financial consequences and adverse labour market effects, and its unfairness across generations. As already discussed above, these features are not inherently related to the method of financing and can exist in both types of schemes. Also, these drawbacks can be tackled within the PAYG system. The link between contributions and benefits can be strengthened, incentives for early retirement and other adverse labour market effects can be reduced, the funding element can be enhanced through pre-funding, and the financial position of the government can be strengthened by reducing public debt. However, the question remains as to whether a funded scheme provides a better framework for avoiding or reducing these inefficiencies.

3.3. Arguments for a more funded and more diversified pension system

There is general agreement that measures to address the ageing problem should include amortisation of current public debt, pre-funding of future expenditure in the form of collecting a surplus in special reserve funds or partial funding in pension funds ⁽³⁾.

Funding vs. pre-funding — Funding, through better transparency and actuarial fairness, has been seen as a useful way to address the problems of sustainability and intergenerational fairness. However, as discussed above, a switch into funded schemes is not a guarantee of better performance. An additional question is whether pre-funding, for example in the form of amortising public debt or collecting reserve funds for future financing of pensions, has advantages over funding. Under the circumstances of equally efficient management of the funds, this question is reduced to the rate of returns on funds. Sceptics also ask what guarantees can be given, in the case of public funds, that these funds will be used for the purpose of financing future pensions.

Increased partial funding — Regarding the issue of intergenerational fairness stemming from population ageing, it is true that as the generation size diminishes, *ceteris paribus*, in a PAYG scheme the working generations pay more than they will receive when retired. One way to improve equity across generations is partial

⁽¹⁾ See Orszag and Stiglitz (1999).

⁽²⁾ See OECD (2001d).

⁽³⁾ E.g. OECD (1998), European Commission (2000c), Group of Ten (1998), The World Bank (1994), Orszag and Stiglitz (1999).

funding, i.e. contributions exceed the concurrent pension payments, in order to balance the changes in the size of generations. Sinn (2000) argues that it is only fair that the generation that chooses not to raise as many children as the previous generation, pays part of its own pensions by saving when at work and uses these savings when retired, in exchange for lower child rearing and education costs. In the overall generation balance, one should take into account the fact that the previous generation has made a significant voluntary transfer to the current generation in the form of child rearing and education expenditure. Oksanen (2001b) has demonstrated with a simplified numerical simulation that, under declining fertility, a PAYG system would require increased contribution rates and funding in order to keep the contribution rates fair across generations, that is, each generation with the same fertility should contribute to pensions at the same rate of their wages.

A further general argument in favour of increased funding is that policies that increase flexibility regarding the response to future events should be promoted ⁽¹⁾. Funding is seen to increase risk diversification because part of implicit government liabilities will be converted to explicit pension fund liabilities. Hence, a more balanced portfolio of pension claims can be achieved than under any single type of scheme alone. Some economists point out that this argument only justifies partial funding. They argue that diversification between the unfunded component, the yield of which is tied to the growth of wages, and the funded component, the return on which is defined in the market, provides further diversification relative to the set of assets available on financial markets ⁽²⁾. Some

other economists feel that a partial shift into funded schemes will increase flexibility and contribute to a more equal income distribution across generations ⁽³⁾, while the advocates of funded schemes consider the risk diversification as an essential advantage to be gained from a more radical change in pension schemes.

In the face of population ageing, due to the shocks of decreased fertility and increased longevity, both of which involve large financial implications across generations, government policies managing public pensions, public debt and taxation are of crucial importance. Bohn (2001) argues that these changes are triggering a policy change where most households will participate in financial markets. The government supply of savings instruments will then play a critical role in allocating risks. Optimal public debt management should supply securities to savers that reflect the aggregate risk exposure of productivity, population growth and longevity. According to Bohn, government bonds indexed to wages and demographic variables offer a flexible set of instruments to share risk.

A complete switch to funded schemes remains controversial. As discussed above, the risks faced under different types of schemes are partly different, partly common. All pension systems face macroeconomic, demographic and political shocks, although the degree of vulnerability may be different. In addition, funded schemes are more liable to fund-management and financial market risks. These considerations have to be balanced against the advantages to be gained from the funded scheme.

⁽¹⁾ See Orszag and Orszag (2000).

⁽²⁾ See Orszag and Stiglitz (1999).

⁽³⁾ E.g. Lindbeck (2000), Oksanen (2001a).

4. Empirical assessment of selected pension reform options: series of illustrative simulations

In Sections 2 and 3 the essential background details have been provided in terms of the advantages and disadvantages of the different pension reform strategies. Given the conflicting signals coming from the literature review, it is clear that the final choice in terms of the actual pension reforms to be implemented rests to a large extent on the empirical supporting evidence. Using a new ageing model which has been constructed for this analysis (see the Annex for an overview of the key features of the model), this present section will describe the models baseline growth and pension expenditure projections for the EU-15 as a whole to 2050, in order to underline the size of the demographic challenge to be faced over the period, and will in addition summarise the results of a number of simulations which systematically address the key questions underlying the pension reform debate.

Furthermore, in order to show that the model is calibrated on realistic parameter values and to ensure that the simulations themselves are as realistic and policy relevant as possible, the model is used to assess the economic and budgetary implications of the key assumptions underlying the pension scenarios recently prepared by the EPC's ageing working group. Finally, it is important to

stress at the outset that all the simulations in this section refer to the EU-15 as a whole and consequently, as with all averages, some of the assumptions/results may appear substantially at odds with the specific circumstances of individual EU Member States. In fact, given the marked differences between the pension systems of the 15 EU countries, these simulations can only be associated with a 'stylised' EU Member State.

This section is subdivided as follows: (4.1.) ageing model, description of baseline growth and pension expenditure scenario for EU-15 for the period 2000–50; (4.2.) models assessment of EPC's pension expenditure projections for 2000–50; and (4.3.) empirical assessment of individual pension reform options using the ageing model.

4.1. Ageing model: description of baseline growth and pension expenditure scenario for 2000–50

In order to be able to show the basic mechanisms at work in the ageing model and to provide an appropriate reference framework for the pension reform simulations,

Table 5

Baseline scenario ⁽¹⁾

	Growth	Budgetary impact		Income distribution	
	GDP per capita	Social security contributions (% of wages)	Public pension expenditure (% of GDP)	Working age population consumption	Pensioners consumption
2000	0	16.1	10.5	0	0
2030	- 12.0	22.9	15.0	- 11.9	- 15.5
2050	- 19.0	26.9	17.6	- 19.6	- 19.5

⁽¹⁾ Compared with a technical scenario where no 'ageing' is assumed i.e. the population trends evident in the most recent decades are simply extrapolated forward.

it is important to describe the key assumptions on which the models baseline scenario is based and the impact of these assumptions in terms of the overall growth, pension expenditure and income distribution effects of ageing populations.

In terms of the assumptions used, the demographic context for the baseline scenario is provided by Eurostat's population projections to 2050, which were specially prepared in 2000 for the EPC for their ageing analysis. In terms of future labour force developments, the baseline assumes that participation rates will stay at their 2000 levels over the next 50 years and that there are no further reductions in the effective retirement age, which is consequently predicted to remain at close to 60 over the period.

The model also makes important assumptions regarding the generosity of the pension system. In this regard, in calculating pension expenditure as a percentage of GDP, it is well known that the key determinants are the old age dependency ratio and the generosity of the pension system, as measured by the pension income replacement ratio relative to wages in employment. Because of the many difficulties in calculating this replacement ratio it was decided to work back from the pension expenditure figures for 2000 provided by the Member States in the EPC's Working Group. Using the EPC's expenditure to GDP ratio for the EU as a whole of around 10 1/2% in 2000 ⁽¹⁾ and using the model's old-age dependency ratio would imply a net replacement ratio (NRR) for the EU of about 74% in 2000 which is equivalent to a gross replacement ratio of 54%. This 20 percentage points difference between the gross and net concepts reflects the much higher taxation levels on workers compared with pensioners, with the NRR of the EU as a whole assumed in the baseline to stay at its 2000 level of 74% for the next 50 years.

⁽¹⁾ It should be noted that the EPC expenditure to GDP ratio projections not only cover old-age pensions but also other replacement income to people aged 55 and over, i.e. early retirement pensions, disability and survivors' pensions and other transfers to the elderly. Entitlement to this additional replacement income is not determined on the same basis as for old-age pensions. Moreover, it should be mentioned that most, though not all, of these government expenditures are financed on a PAYG basis. A proportion of these expenditures in some Member States may be financed on a funded basis and/or through transfers from the general government (i.e. not directly from social security contributions).

What are the economic and budgetary implications of these demographic and pension generosity assumptions over the simulation period. As shown in Graph 1, the models baseline scenario assumes a fall in the level of GDP in the EU over this period of 19% ⁽²⁾, with pension expenditure as a percentage of GDP rising by 7 percentage points to 17 1/2% of GDP. This rise in pension expenditure is due uniquely to the rise in the old age dependency ratio since the generosity of the system is kept constant at its 2000 level. In terms of the burden of ageing on workers, the doubling in the old age dependency ratio is forecast to increase the taxation burden significantly, with social security contributions (as a percentage of wages) needing to rise from 16% in 2000 to nearly 27% in 2050 in order to meet the pension expenditure obligations operating under the PAYG system. Given the dramatic deterioration in the financing costs of the public pension system, as represented by the nearly 70% increase in the rate of SSC's paid by workers and the equivalent hike in pension expenditure commitments of governments to 17 1/2% of GDP, it is not surprising to find that the overall implicit debt of the PAYG system rises dramatically over the period from a figure of about 180% in 2000 to 280% in 2050.

As well as the growth and budgetary implications of ageing, the baseline also contains important information in terms of the evolution of the internal rates of returns of both the PAYG and funded systems over the coming decades (this is discussed in more detail later on in the section):

- With regard to the PAYG system, while real wages are expected to rise slightly, reflecting changes in relative factor endowments, the growth in the wage bill is expected to decline due to the demographically-induced fall in the number of people employed.
- As regards the return on funded schemes, the real interest rate is expected to decline over the period but not significantly, with rates of return only falling from 5 1/2 to 5 1/4%. With regard to the real interest

⁽²⁾ This result is very similar to that reported in the '1999 Review' based on Eurostat's 1996 population projections for the period 2000–50. This similarity in terms of the GDP loss associated with ageing is not that surprising however given that, while individual EU country population projections have in some cases changed quite significantly between the 1996 and 2000 Eurostat exercises, the population projections for the EU-15 as a whole have remained very similar, in terms of both the overall population total and its decomposition into the various age cohorts.

rate, it is important to underline that movements in the latter reflect developments in terms of both the supply and demand for funds, with overall national savings as a percentage of GDP forecast to decline in the baseline due to falls in private savings ⁽¹⁾, but with the demand for savings also falling due to the expected decline in GDP growth rates. In overall terms therefore it is projected that the rate of return differential enjoyed by funded schemes compared with the PAYG system over the last number of decades is likely to persist over the simulation horizon to 2050, with a differential in favour of funding of the order of 3 ¼ to 3 ½ percentage points predicted by the model over the coming decades.

Finally in terms of income distribution, the baseline scenario to 2050 assumes that the working age population and pensioners will both be affected to the same extent by the ageing phenomenon.

4.2. Assessment of the economic and budgetary impact of the labour market and pension generosity assumptions underpinning the recent pension expenditure projections of the EU's Economic Policy Committee (EPC)

EPC pension projections 2000–50 — As explained earlier, new projections for the EU's Member States have been recently published by the EPC's ageing working group regarding the pension expenditure implications of ageing populations over the period 2000 to 2050. As shown in Graph 2, these projections suggest that expenditure on pensions in the EU will rise by about 3 percentage points of GDP over the period 2000–50 to reach 13 ½% of GDP in 2050. This increase is much lower than the 7 percentage points of GDP increase in pensions expenditure estimated under the baseline scenario in subsection 4.1. The much lower EPC pension projections largely result from the fact that although the EPC forecasts are based on the assumption that pension policies remain unchanged over the next 50 years (i.e. the forecasts are based on legislation in force in 2000), key

underlying parameters will nevertheless change over the forecast period since:

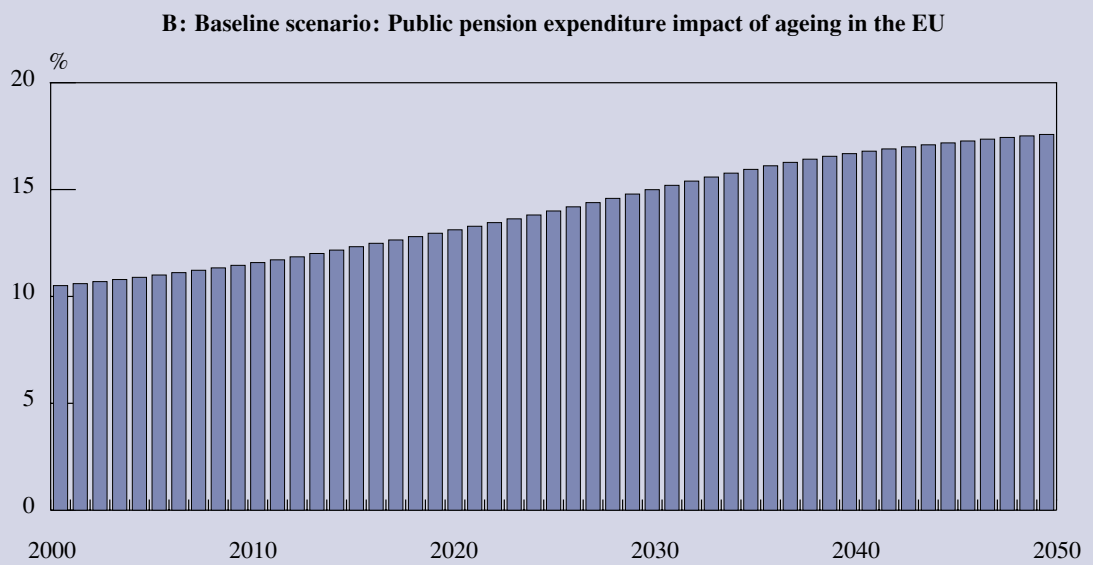
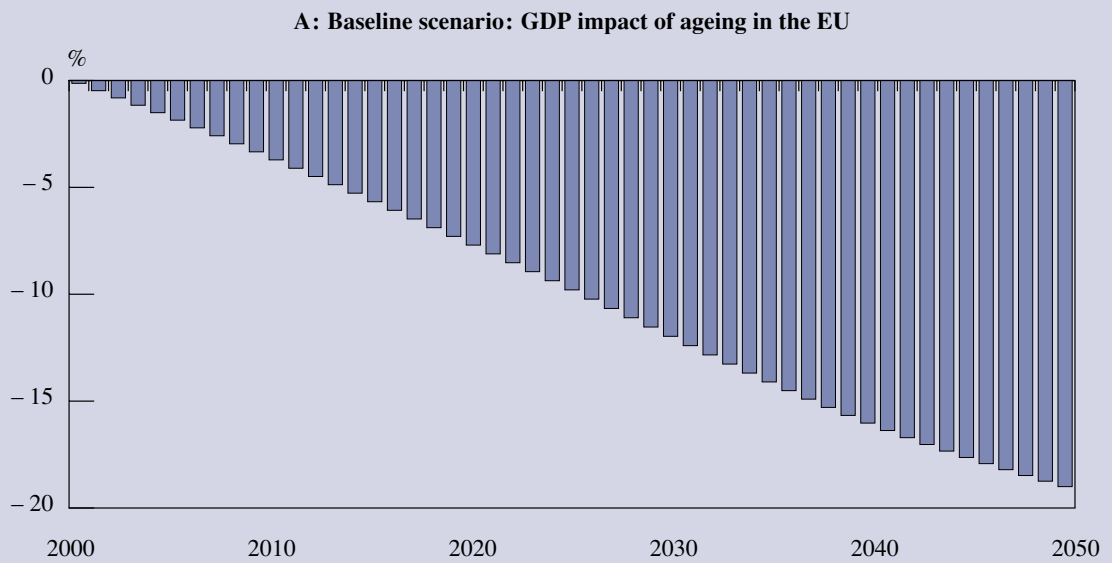
- Firstly, the EPC projections are based on the assumption of a large increase in labour force participation rates over the forecast period (due to higher participation rates amongst younger, female, age-cohorts compared with earlier generations) and on reductions in structural unemployment.
- Secondly, the parameters of the pension system itself are not static but incorporate to some extent the lagged effects of recently-introduced reforms. In particular, many reforms incorporate a transition period of several years to a new less 'generous' pension regime. Over time, increasing numbers of pension entitlements will be calculated on this less generous basis. As an example of the latter changes, many countries have already altered the rules relating to the indexation of pension benefits from wages towards prices, and consequently, on the assumption that wages will continue to grow faster than prices, this will inevitably lead to a decline in the real value of the average pension received by pensioners relative to the average real wage received by workers.

The above factors go a long way towards explaining the differences between the EPC pension projections and those contained in the baseline scenario of the ageing model described in subsection 4.1. However, in addition to these clarifications, given the need to be able to assess the effectiveness of individual pension reforms, a quantification of where the pension expenditure changes in the EPC's scenario are emanating from would be particularly useful. In this regard, in the report of the EPC's ageing working group, a further breakdown of the EPC's pension projections were provided for the EU Member States.

Graph 2 shows a weighted average of the EPC's figures for the EU as a whole (although there were large differences between individual Member States), broken down into their various contributing components, namely changes in the old age dependency, employment, benefit and eligibility ratios. This breakdown allows one to quantify the relative importance of the labour market and generosity changes that are expected to take place in EU countries and provide a useful backdrop for an empirical assessment of the individual reform options in subsection 4.3. Graph 2 shows that governments intend to implement a significant package of labour market

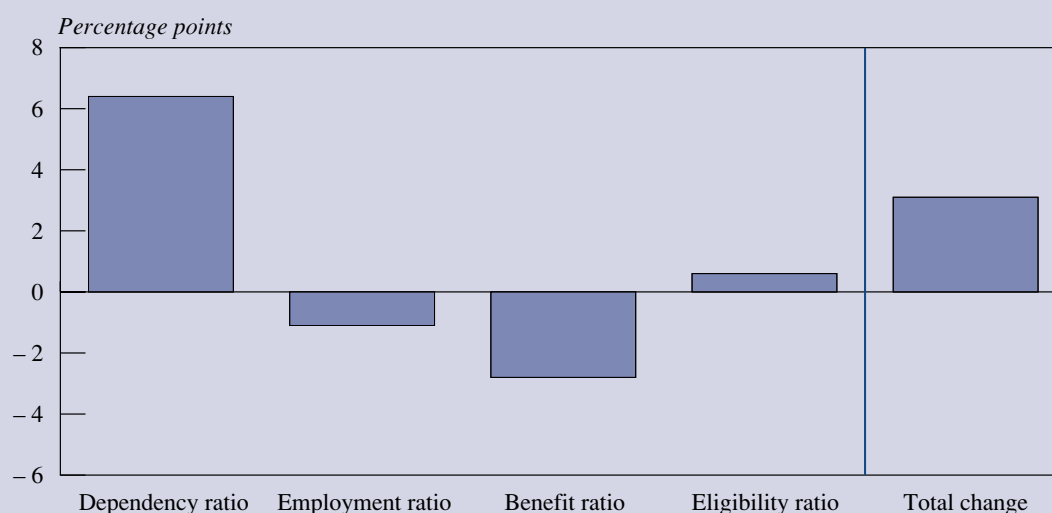
⁽¹⁾ The consumption to GDP ratio rises in the baseline due to the higher marginal propensity to consume (MPC) of retirees, with the share of retirees in the overall population rising steadily throughout the period.

Graph 1: Baseline scenario 2000–50



Source: Commission services.

Graph 2: EPC pension projections 2000–50 (EU-15) (contributions to change in pension expenditure)



Source: EPC Ageing Working Group.

reforms, with changes in the employment and eligibility ratios highlighting the labour force participation rate and structural unemployment improvements referred to earlier. Unfortunately, from the point of view of pension expenditure, one can see that the employment and eligibility ratios tend to offset each other to a certain extent. It is also clear from Graph 2 that the two big driving factors in determining the overall change in pension expenditure over the next 50 years will be the old age dependency ratio and the benefit ratio (i.e. defined by the EPC as the average pension relative to GDP per worker) ⁽¹⁾.

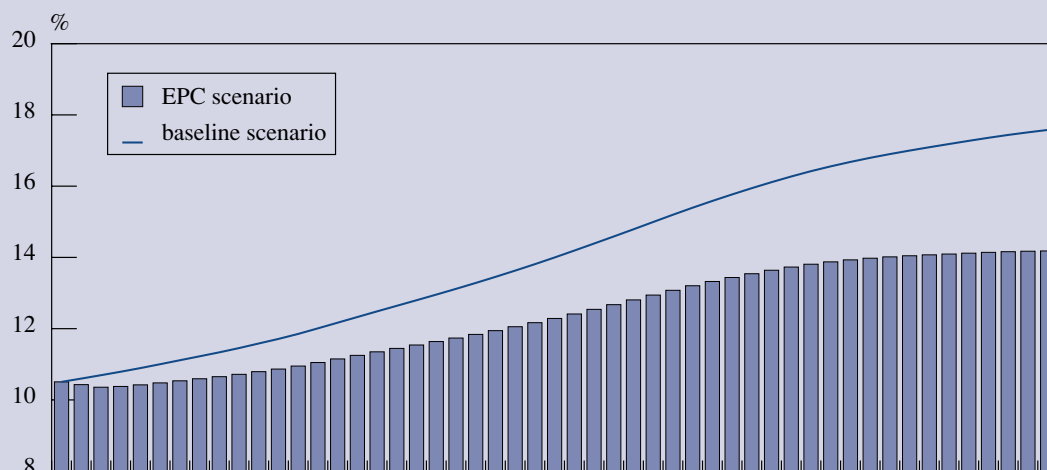
EPC Scenario: Budgetary and economic implications of the EPC's labour market and pension generosity forecasts for 2000–50 — In order to show the simulation properties of the model before using it to assess the var-

ious pension reform options in subsection 4.3., it was decided to analyse the impact of introducing into the model the assumptions used by the EPC for their own pension expenditure exercise. While the same population projections from Eurostat are used in this 'EPC' scenario as in the EPC work, using the EPC assumptions for participation rates, structural unemployment and pension generosity ensures that there are a number of key differences between the 'EPC' scenario and the baseline simulation:

- With regard to the labour market, as against an assumption of no change in participation rates in the baseline, the 'EPC' scenario assumes an increase in EU participation rates of 4 percentage points and that structural unemployment in the EU will fall by 2 percentage points compared with 2000.
- On the question of replacement rates, as referred to earlier, the EPC projects a significant fall in the generosity of the pension system over the next 50 years, with the benefit ratio expected to reduce the increase in EU pension expenditure by 2 ¾ percentage points. It should also be reiterated that this decline in generosity in the EPC scenario does not appear to be due to new policy reform decisions but

⁽¹⁾ It should be noted that while the EPC definition of the benefit ratio (average pension/GDP per worker) can over particular periods of time deviate markedly from the more commonly-used replacement rate definition (average pension/average wage), nevertheless the evolution should be broadly similar over a period of 50 years if one assumes, as is the case with the ageing model, that real wages and productivity grow in line with each other over the long run.

Graph 3: Pension expenditure impact of ageing in EU-15 (2000–50)



Source: Commission services.

reflects more the current policy situation that most countries apply pension indexation mechanisms which amount to less than full real wage indexation. In terms of the ageing model, this EPC assumption regarding generosity would be equivalent to a drop in the net replacement ratio for EU-15 from 74 % in 2000 to about 58 % in 2050.

When the above labour market and benefit changes were introduced in the model the change in pension expenditure over the period to 2050 was reduced from an increase of 7 percentage points in the baseline to 3 3/4 percentage points and the overall loss in terms of living standards (GDP per capita) due to ageing populations was cut to 9 % compared with a decline of 19 % in the baseline (see Graphs 3 and 4). While it is not possible to compare the GDP loss produced by the model with anything equivalent from the EPC's work, it is feasible to get a rough indication of the budgetary impact of the respective labour market and pension generosity assumptions. In this regard, the budgetary gain from running the EPC changes through the ageing model works out at approximately a halving of the pension expenditure costs of ageing, with this estimate of the fiscal gain being very similar to the estimates produced by the EPC using the

national models of the individual Member States ⁽¹⁾. Consequently, in terms of pension expenditure projections, the model's parameter settings would appear to be realistic, with the model thereby constituting a credible framework for pension reform analysis, at least at the aggregate EU level.

⁽¹⁾ Using Eurostat's latest demographic forecasts there is a sharp upward movement in the old age dependency ratio over the period 2000–50. On the basis of the national models used for the EPC's analysis, this rise in the dependency ratio is forecast to increase pension expenditure by nearly 6 1/2 percentage points over the next 50 years. Using a slightly different definition of the old age dependency ratio but one which nevertheless produces a similar absolute change in the ratio over the period 2000–50 to that used by the EPC, the ageing model forecasts an increase in pension expenditure of 7 percentage points over the same period. These increases are expected to be reduced significantly on the assumption that the EPC's labour market changes and pension generosity reductions are introduced, with the national models used by the EPC predicting that the pension expenditure increase will be roughly halved to an increase of about 3 percentage points and with ECFIN's ageing model suggesting an increase of 3 3/4 percentage points compared with the dependency ratio-induced increase of 7 percentage points if none of the EPC changes are introduced.

Finally, while it is clear that the EPC scenario, which in effect summarises the labour market and pension generosity assumptions already introduced or in the pipeline in the Member States, will have large budgetary and growth consequences over the coming decades, it is important to understand the specific nature of the effects. In this regard, the impact of the individual reforms

are very different, with the reduction in the generosity of the pension system providing 80% of the gain in terms of the public finances but only about 20% of the improvement in growth whereas the opposite is discernible for the labour market reforms. The budgetary impact of the latter reforms is small with any gains in terms of a larger taxable base being offset by increases in

Table 6

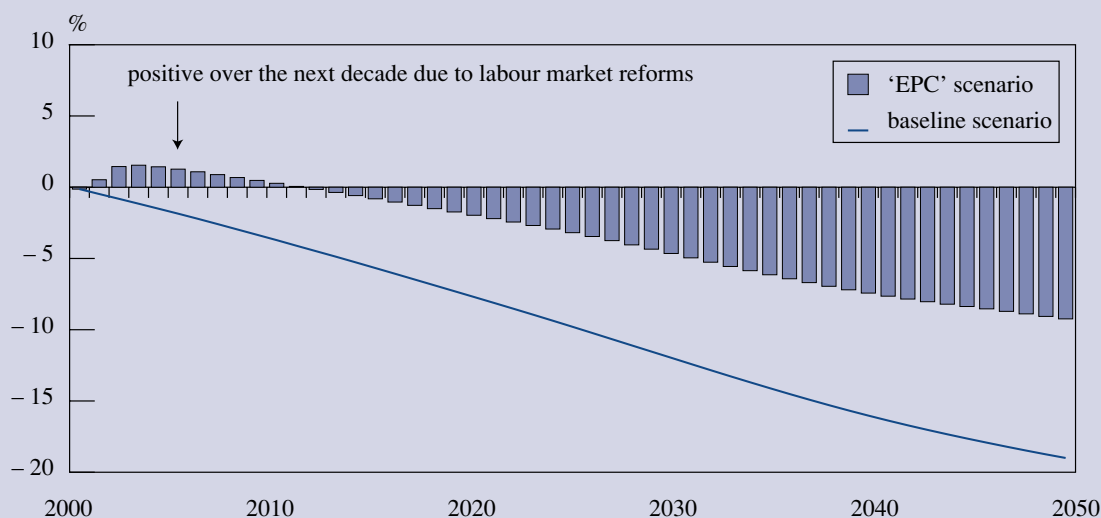
‘EPC’ scenario ⁽¹⁾

	Growth	Budgetary impact		Income distribution	
	GDP per capita	Social security contributions (% of wages)	Public pension expenditure (% of GDP)	Working age population consumption	Pensioners consumption
2000	0	16.1	10.5	0	0
2030	- 4.6	19.8	12.9	- 2.0	- 16.6
2050	- 9.2	21.7	14.2	- 5.1	- 21.2

⁽¹⁾ Compared with a technical scenario where no ‘ageing’ is assumed i.e. the population trends evident in the most recent decades are simply extrapolated forward.

Source: Commission services.

Graph 4: GDP impact of ageing in EU (2000–50)



Source: Commission services.

the pension eligibility ratio. On the basis of the EPC's own decomposition of the source of the budgetary gain it is clear that the net effect of the labour market reforms will be equivalent to only about half a percentage point off the increase in pension expenditure, with the ageing model suggesting a slightly higher reduction of $\frac{3}{4}$ of a percentage point. However, with regard to the growth impact, the participation and structural unemployment improvements will deliver 80% of the gain in living standards relative to the baseline scenario.

4.3. Empirical assessment of individual pension reform options using the ageing model

The simulation results in subsection 4.2. suggest the possibility of a substantial degree of success for policy makers in terms of easing future fiscal and growth concerns if all the 'EPC' labour market reforms and generosity changes are successfully introduced. In addition, this last sub-section succinctly underlined the difficulty of introducing pension related reforms, which simultaneously ease the budgetary and economic consequences of ageing populations. Subsection 4.3. will examine in more detail the various pension reform options available to governments as they struggle to cope with shrinking labour forces and the growing number of elderly in the total population.

Amongst the questions to be addressed are the following:

- Should Member States consider further 'parametric' reforms, in addition to those referred to in the 'EPC' scenario, such as increases in the effective retirement age, or go for more ambitious systemic reforms?
- What criteria should be adopted by policy makers in deciding which of the reform options should be ultimately introduced?

This present section will try to answer these questions by assessing the individual reforms referred to earlier in the paper in the context of a range of policy objectives, thereby establishing the relative potency of the various options. In this way it is hoped to have a more complete evaluation of the implications of the various pension reform choices available to governments, avoiding a narrow focus on just one single objective such as, for example, the budgetary gain. In fact, all of the various pension reforms presented in this section will be assessed from the perspective of the following policy objectives:

- economic growth;
- budgetary sustainability; and finally,
- distributional fairness (as measured by changes in income distribution between the working age population and pensioners — in effect a measure of the political sustainability of any reform measures).

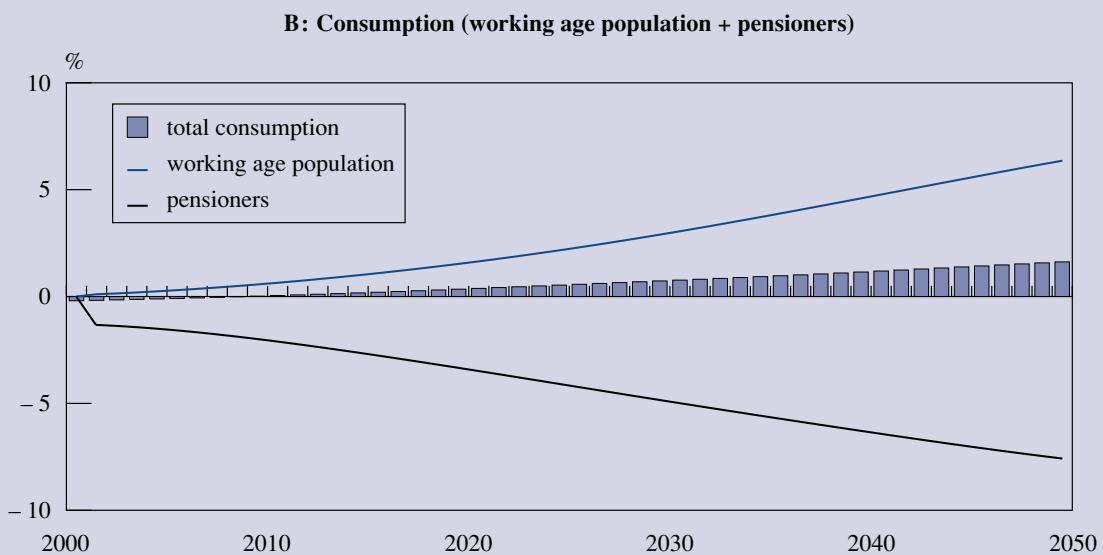
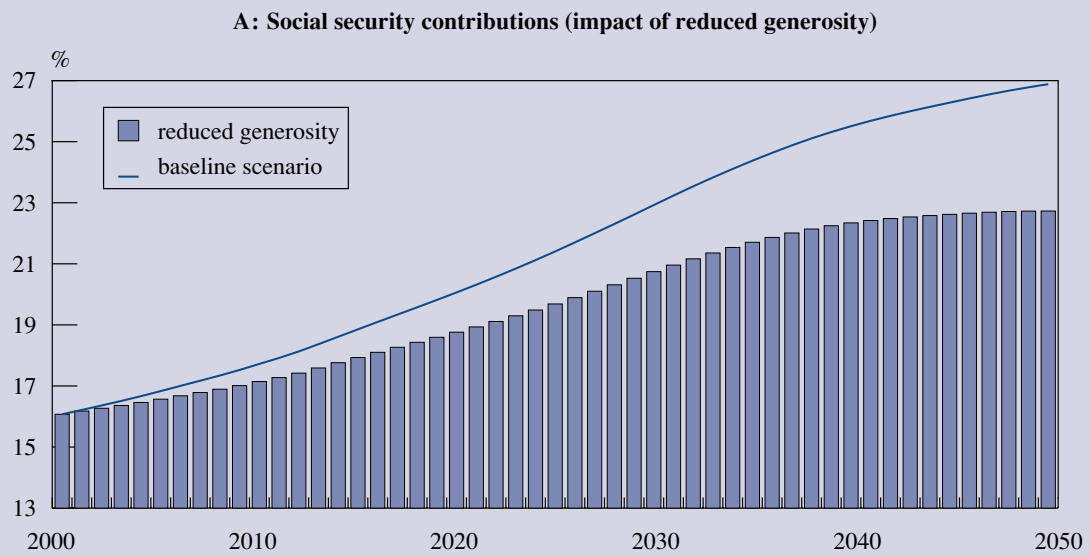
By using this multi-faceted assessment approach and in particular by extending the analysis to beyond the normal measuring rod of budgetary issues, it is hoped to provide policy makers with a more complete picture of the implications of the different parametric and systemic pension reforms, with the various scenarios being grouped under the following broad headings:

- **Parametric reforms of the PAYG pension system:** (1) reduction in generosity, (2) increase in the effective retirement age, (3) a broad package of parametric reforms.
- **Systemic reforms:** (1) a complete shift from PAYG to a funded (i.e. accumulated assets) pension system (2) mixed pension system — involving a partial shift to funding combined with a stabilised PAYG system (i.e. 25% Funded / 75% PAYG).

4.3.1. Parametric reforms of the PAYG pension system to bring it back into equilibrium

In addition to labour market reforms which impact on the underlying fundamentals of a country's pension system, a large number of parametric reforms of the PAYG system itself are possible, with the following paragraphs confining themselves to an examination of firstly the implications of a reduction in the generosity of the pension system and secondly the effects of an increase in the effective retirement age up to the statutory age of 65. At the end of this section an attempt is also made to summarise the overall budgetary and growth effects of introducing a broad package of parametric reforms. This final parametric scenario combines the EPC's labour market and generosity assumptions with an increase in the retirement age to 65 in order to see whether such a comprehensive overhaul of the PAYG system would firstly be successful in stabilising the financial side of the public pension system, and secondly whether it would result in large gains in growth whilst simultaneously avoiding problems in terms of income distribution.

Graph 5: Cut in pension generosity



Source: Commission services.

Parametric simulation No 1: Reductions in generosity (replacement rate) achieved via a partial shift from wage to price indexation

This simulation simply takes the EPC's own figures for the change in pension expenditure over the period 2000–50 which is due to changes in the benefit ratio, and uses these figures to work out what is the implied change in the systems net replacement ratio (NRR), which as explained earlier is equal to the gross replacement rate adjusted for differences in the effective rate of taxation imposed on workers and pensioners. In order to reduce the increase in pension expenditure by 2 2/3 percentage points, as suggested in the EPC's simulations for the next 50 years, EU governments, according to the model, would have to cut the net replacement rate (NRR) of the system from its present level of 74% down to 58% in 2050.

This NRR figure of 58% would still be considered by many commentators to be generous and of course only reflects the proportion of retirement income coming from the public PAYG system since it does not include private pension provision ⁽¹⁾. In the present simulation, the reduction in generosity assumed by the EPC could be achieved in a large number of ways including cutting benefits directly, changes in the eligibility criteria, such as the number of years needed for full pension entitlement, or by changes to the rules applied with regard to indexation. For simplicity it is assumed that all of the decrease in generosity, to a NRR of 58%, is achieved

⁽¹⁾ Figures published by the European Commission (2000a) suggest that PAYG pensions represent roughly 88% of all pensions in the EU, although the country variation is quite large, especially for countries such as the UK and the Netherlands which have a much higher proportion of private pension provision compared with the EU average and in fact have levels closer to those of the United States.

through a movement on behalf of public pension schemes towards some form of price indexation. As an additional simulation showed, however, this drop of 16 percentage points in the NRR is not equivalent to a shift to full price indexation. Full price indexation would in fact result in the net replacement rate falling to 45% which therefore implies that relative to our baseline assumption of no change in the NRR over the next 50 years, that the present 'reform' efforts in terms of the generosity of the PAYG system are equivalent to the introduction of a 'hybrid' form of indexation, hybrid in the sense that governments may not wish to go for full price indexation but instead may decide to partially retain the link between pensions and wage developments.

What are the budgetary, economic and income distribution consequences of such a significant decline in the net replacement ratio? In terms of the budgetary consequences, would a move from a system assuming 100% real wage indexation to a hybrid wage/price system or more dramatically a move to full price indexation lead to a stabilisation of the pension system in terms of social security contributions (SSCs)? In terms of SSCs, a move to a hybrid index would have the effect that the increase in SSCs as a percentage of wages will be about 4 percentage points less in 2050 than in the baseline scenario, whereas even with full price indexation, while SSCs will fall by 8 percentage points relative to the baseline, there would still be an increase in contributions from 16 to 18 1/2% of wages. Consequently, while the budgetary gains are significant, stabilisation of the EU's PAYG pension system would not appear to be achievable solely by shifting from a system which is 100% indexed to wages to one based exclusively on prices.

In addition, as one can see from Table 7, a decline in the generosity of the PAYG pension system, equivalent

Table 7

Cut in pension generosity

	Growth	Budgetary impact		Income distribution	
	GDP per capita (% diff. from baseline)	Social security contributions (% of wages)	Public pension expenditure (% of GDP)	Working age population consumption (% diff. from baseline)	Pensioners consumption (% diff. from baseline)
2000	0	16.1	10.5	0	0
2030	+ 1.1	20.7	13.6	+ 3.0	- 4.9
2050	+ 2.1	22.7	14.9	+ 6.4	- 7.6

Source: Commission services.

Table 8

Increase in effective retirement age to 65

	Growth	Budgetary impact		Income distribution	
	GDP per capita (% diff. from baseline)	Social security contributions (% of wages)	Public pension expenditure (% of GDP)	Working age population consumption (% diff. from baseline)	Pensioners consumption (% diff. from baseline)
2000	0	16.1	10.5	0	0
2030	+8.7	18.3	12.0	+ 5.2	+ 13.8
2050	+13.1	20.5	13.4	+ 10.8	+ 16.3 ⁽¹⁾

⁽¹⁾ Given that pensioners do not receive any additional pension entitlements from working five extra years, this higher level of consumption relative to that of the working age population simply reflects the fact that life cycle consumers will have a shorter period over which to consume their accumulated lifetime wealth.

Source: Commission services.

to a move to a hybrid indexation system, will have an insignificant impact in terms of living standards, with the fall in the replacement ratio only marginally offsetting the GDP loss associated with ageing. Furthermore, such a decline in pension generosity will have implications in terms of income distribution since while the fall in SSCs will ensure that the consumption of the working age population actually increases relative to the baseline over the next 50 years, these reforms will have big negative implications for pensioners consumption which is expected to fall by over 7 1/2% over the same period.

Parametric simulation No 2: Increase in retirement age

In this retirement simulation, the effective retirement age, which is presently close to 60 in the EU, is brought back up to the average statutory retirement age of 65 gradually over the next 10 years. Part of the rationale for this simulation is the fact that since the 1960s there has been an enormous deterioration in the so-called 'passivity' ratio that measures the number of years worked relative to the number of years spent in retirement. In the 1960s the passivity ratio was about three ⁽¹⁾ but by 2000 this ratio had fallen to less than two due to increases in life expectancy and falls in the effective retirement age to less than 60.

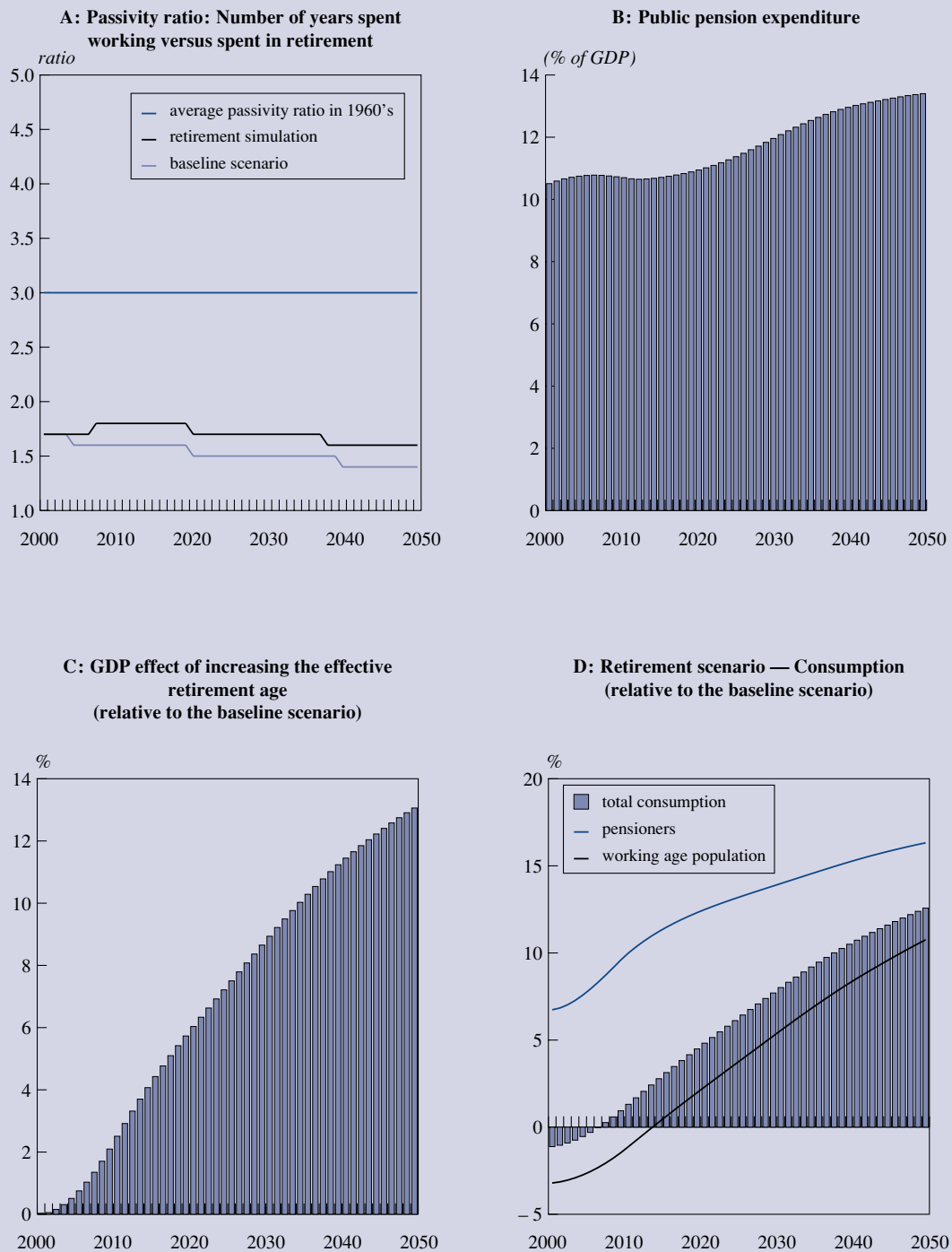
⁽¹⁾ In other words workers spent three years in employment for every year spent in retirement.

As Graph 6a shows, under the retirement scenario, the passivity ratio is expected to improve over the next 10 years but to deteriorate again over subsequent decades. This pattern of change is driven by two essential factors: firstly, by the increase in the effective retirement age, which will impact strongly only in the period up to 2010 and secondly, the ongoing increase in life expectancy over the period as a whole. Under the retirement simulation the number of years spent in work rises to the 1960s level of 45, which unfortunately is still insufficient to stabilise the passivity ratio. The latter objective can only be achieved if governments were to link the retirement age to changes in life expectancy.

From the graphs shown for the retirement simulation, it is clear that an increase in the effective retirement age (ERA) to the statutory age has major benefits in terms of growth and budgetary sustainability, as well as being relatively favourable with regard to income distribution.

In terms of budgetary developments, the impact is quite dramatic with the increased burden on workers over the period, in terms of SSCs, being reduced to 4 1/2 percentage points versus 11 percentage points in the baseline and with an equivalent strong improvement in terms of public expenditure on pensions which would fall by over 4 percentage points in 2050 compared with the baseline. As a rough rule of thumb the public expenditure impact of an increase in the ERA is of the order of 1 to 1 (i.e. if workers were to work, on average, one additional year before retiring, the increase in public expenditure on pensions over the period to 2050 would be reduced by

Graph 6: Retirement scenario — increase in the effective retirement age to the statutory level of 65



Source: Commission services.

0.84 of a percentage point of GDP). This strong budgetary gain is however predicated on the assumption that any additional years in employment do not yield any additional pension benefits ⁽¹⁾.

In addition to the very favourable public finance impact, the increase in the average working life also appears to simultaneously meet the other key policy objectives of boosting growth and avoiding big changes in income distribution, which in the longer term could call into question the political sustainability of any pension reforms that have been set in place. In terms of GDP, the increase in the retirement age has a significant effect on the level of GDP, with the latter growing by over 13% compared with the baseline, thereby on its own going a long way towards offsetting the GDP loss associated with ageing.

Finally, as shown in Graph 6d, this parametric reform is also relatively good from an income distribution perspective, with the consumption of both the working age population and pensioners rising relative to the baseline.

Parametric simulation No 3: Stabilising the PAYG pension system through a broad package of parametric reforms: ('EPC' Scenario an increase in the retirement age)

What is required to restore equilibrium to the PAYG system? There are many possible ways to measure equilibrium in the PAYG system but one of the most commonly adopted in the literature and also one of the most intuitive is a stable contribution rate (i.e. SSCs as a percentage of wages do not change over time). As discussed earlier, the equilibrium PAYG contribution rate under the 'EPC' scenario of labour market reforms and reduc-

tions in pension generosity will not be stabilised, with SSC's expected to grow by about 5 1/2 percentage points, from around 16 to 21 1/2% over the next 50 years. As mentioned previously, while the labour market reforms will undoubtedly ease the decline in living standards, such reforms unfortunately do relatively little in terms of reducing the budgetary impact of ageing. On the other hand, while it is clear that the reduction of more than 20% in the net replacement rate of the PAYG system, which underpins the EPC's pension expenditure projections, will do little to ease the GDP loss associated with ageing, it will significantly help the financial position of the PAYG system. Nevertheless, this reduction in the generosity of the system is still not sufficient to bring the system back into financial equilibrium. Consequently, it is clear that additional reforms are necessary to achieve this latter objective with the increase in the effective retirement age being the option chosen in the present simulation to achieve this.

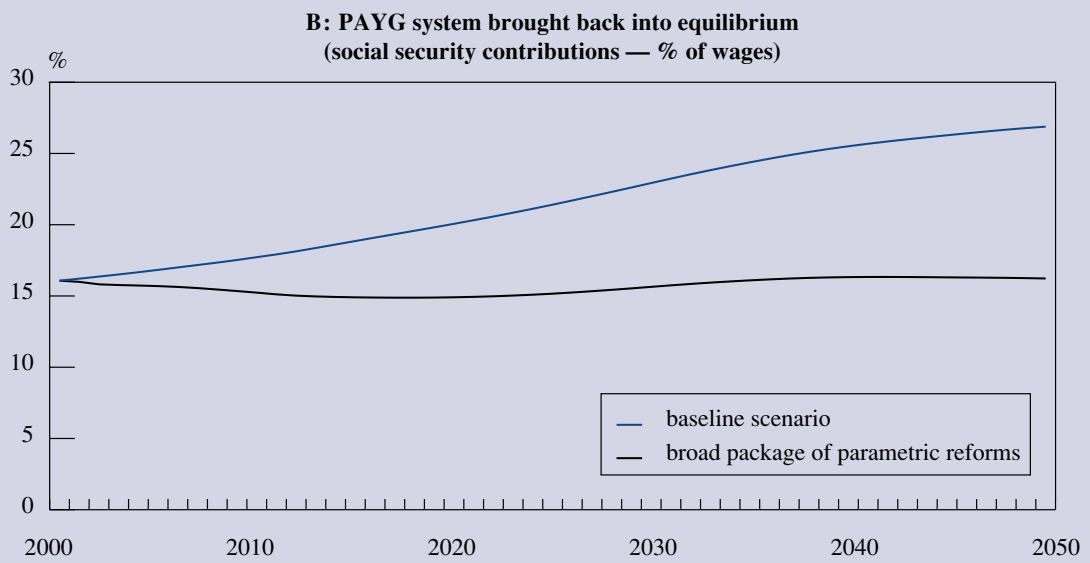
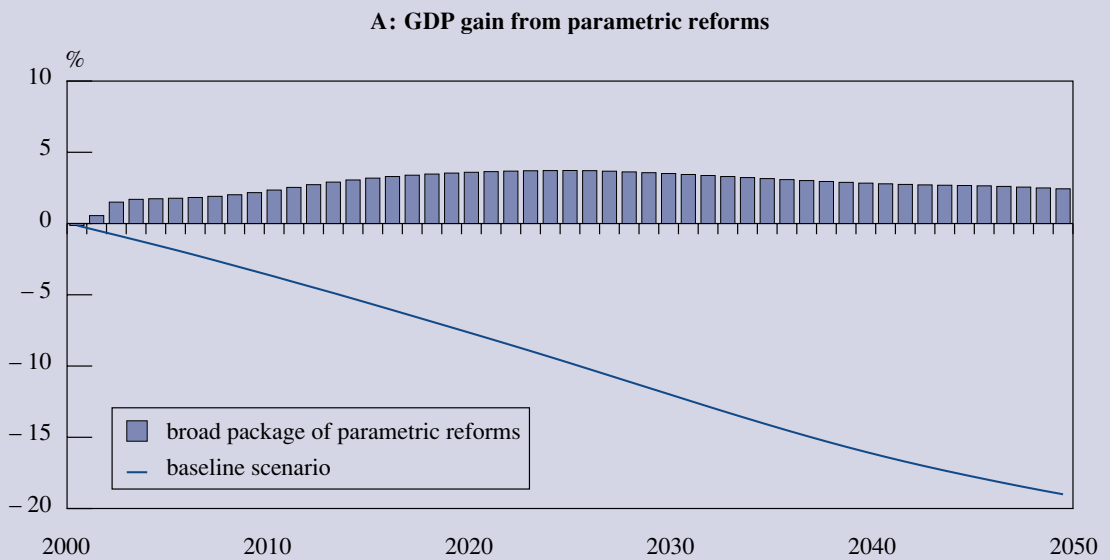
The results of this final parametric simulation, where the 'EPC' scenario is combined with an increase in the effective retirement age to 65, are shown in Graph 7. The essential points are as follows: if such a broad package of parametric reforms can be introduced, then, firstly, the negative effects of ageing on living standards in the EU, which was assumed in the baseline to be a loss of about 19%, will be more than offset, and secondly, the equilibrium contribution rate paid by workers to fund the PAYG system can be stabilised at its 2000 level of 16%. In terms of income distribution developments, the working age population will still do better than pensioners due to the impact of the fall in the net replacement rate on pensioners' income. Despite this reduction in pension generosity, pensioners will nevertheless witness a 13 1/2% increase in their consumption relative to the baseline, compared with a gain of over 28% for the working age population. In terms of stabilising the equilibrium contribution rate, it is interesting to note in the graph that the rate actually falls over the period to 2020, reflecting the front-loaded nature of both the EPC and retirement age reforms, but then goes back up to 16% as a result of, amongst other things, the influence of ongoing increases in life expectancy.

4.3.2. Systemic reforms: Complete shift from PAYG to a funded pension system V Mixed System (25% Funding/75% PAYG)

Before going on to present the specific systemic reform simulations, it is important to briefly discuss two crucial factors in determining the desirability and extent of any

⁽¹⁾ This assumption is crucial since in a separate simulation based on an actuarially fair adjustment of pensions to reflect the increased number of contribution years, the budgetary gain from an additional year of work falls from 0.84 of a percentage point of GDP to 0.6 while the GDP gain stays roughly the same as in the main simulation. The definition of 'actuarially fair' used in this simulation is based on the assumption that in return for the extra five years of contributions that the generosity of one's annual pension would increase by slightly less than 12% relative to what it would otherwise have been but pensioners will receive this higher pension for, on average, five years less than in the baseline scenario. Consequently, while the fiscal gain is reduced it still remains relatively substantial.

Graph 7: Stabilising the PAYG pension system through a broad package of parametric reforms



Source: Commission services.

Table 9

Broad-based parametric reforms ('EPC' scenario + increase in retirement age)

	Growth	Budgetary impact		Income distribution	
	GDP per capita (% diff. from baseline)	Social security contributions (% of wages)	Public pension expenditure (% of GDP)	Working age population consumption (% diff. from baseline)	Pensioners consumption (% diff. from baseline)
2000	0	16.1	10.5	0	0
2030	+ 17.6	15.6	10.2	+ 16.2	+ 12.3
2050	+ 26.5	16.2	10.6	+ 28.3	+ 13.6

Source: Commission services.

systemic reforms to be implemented, namely what will happen to the internal rates of return (IRR) of both the PAYG and funded systems over the next 50 years and secondly what is the likely size of the transition burden associated with a scrapping or significant shift away from the PAYG system in favour of a funded alternative.

Forecasts for the internal rates of return of the PAYG and funded systems 2000–50

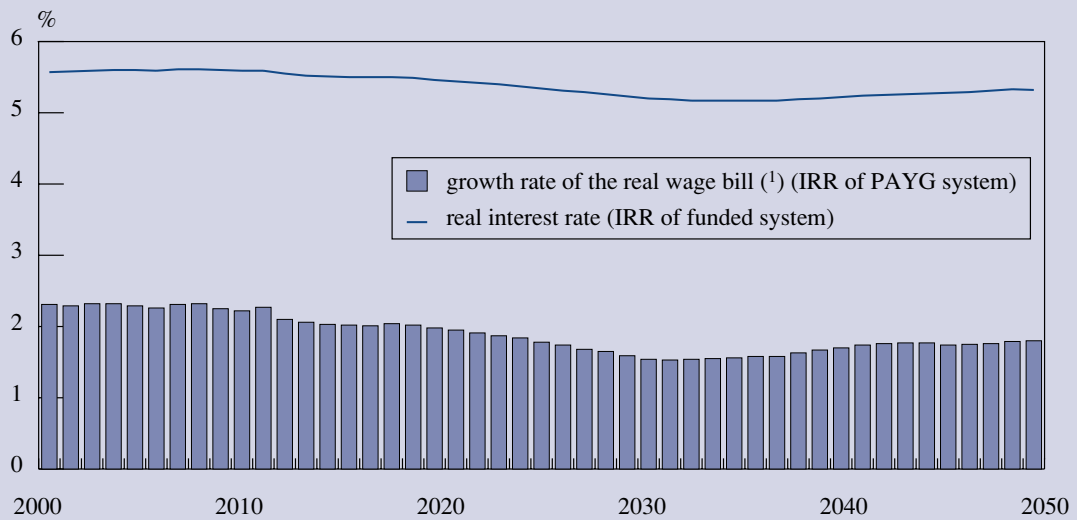
Evolution of the internal rate of return (IRR) of a funded system 2000–50 — The effect of ageing on the real interest rate is difficult to predict a priori, since while the direction of change for some of the key determining factors can be predicted, this is clearly not the case with all of the concerned variables, thereby introducing a large element of uncertainty regarding the future evolution of real returns. However, while accepting the high degree of uncertainty surrounding the direction of change for real interest rates due to ageing, the baseline scenario for the EU produced by the model predicts that the real return on pension fund assets over the next fifty years will fall but not dramatically so. Real interest rates decline by only a 1/4 of a percentage point between 2000 and 2050, with this estimate being consistent with similar estimates produced by Brooks (2000) and Borsch-Supan (2001).

In the baseline simulation, while the overall supply of savings does decline due to ageing, this does not lead to an increase in the real interest rate since the demand for savings, in the form of investment, falls by even more, reflecting the fact that less capital is required for a declining population. The low interest rate effect emanating

from the OLG (i.e. overlapping generations) model used for this chapter's simulations essentially reflects the fact that ageing is increasingly being driven by steady increases in life expectancy rather than ongoing falls in the birth rate. These demographic changes ensure that the interest rate effect is muted since the group of pensioners is growing relative to the working age population and consequently the savings pool is falling since the fraction of dissavers (pensioners) to savers (working age population) is rising. At a wider level this real interest rate result is also credible if one believes in the benefits of investment portfolio diversification at the global level in terms of its effects in maintaining relatively high real returns over the coming decades.

Evolution of the internal rate of return (IRR) of the PAYG system 2000–50 — The IRR of the PAYG system is often proxied by real wage growth or real GDP growth although the most correct measure is the growth of the real wage bill (i.e. the taxable base). With regard to real wages, the model expects the latter to grow at an annual average rate of a little over 2% over the period, which is somewhat higher than in the past, in order to reflect a premium for the growing scarcity of labour over the simulation horizon. This result is also of course consistent with the assumption that ageing will lead to capital deepening (i.e. more capital per worker), which in turn leads to higher labour productivity and consequently to higher real wages. As can be seen from Graph 8, in terms of the real wage bill, while real wages will grow at a slightly faster rate compared with the last 10–20 years, this rate of increase will not be sufficient to stop the growth of the real wage bill declining in relative terms since overall employment is due to fall over the next 50 years.

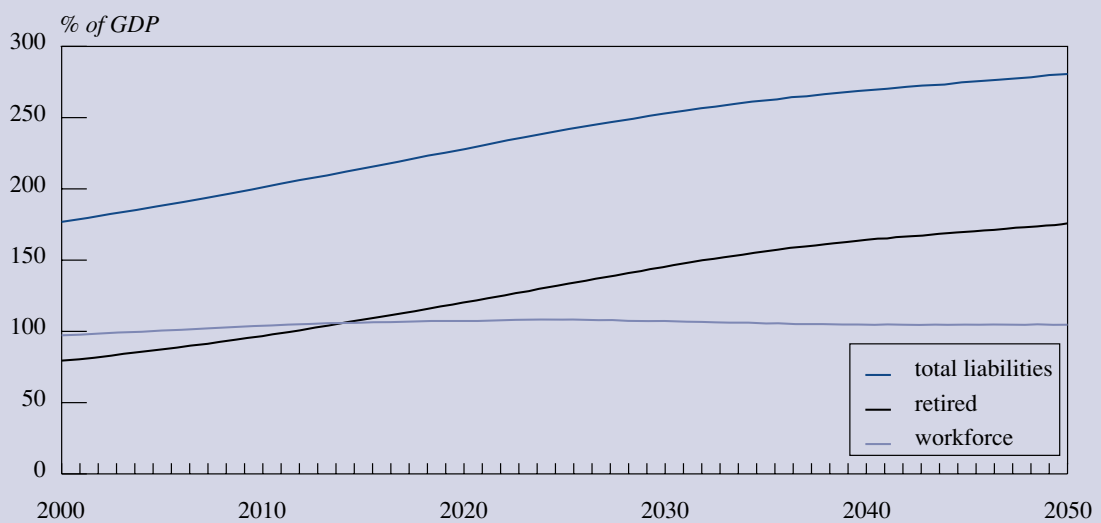
Graph 8: Internal rate of return (IRR) of PAYG and funded systems



(1) Real wages plus employment with real wages defined as growing in line with real GDP per person employed.

Source: Commission services.

Graph 9: Change in transition burden: 2000–50 (1) (baseline scenario)



(1) Net present value of pensions to be paid, if the PAYG system continues to function on the basis of the pension rules operating under the baseline scenario.

Source: Commission services.

Forecasts for the transition burden in 2000 and its evolution to 2050

Transition burden (making the implicit debt of the PAYG system explicit) — The transition burden is equivalent to the liabilities/accrued rights of the PAYG system at a particular point in time, with the level of the burden determined by the net present value of pensions to be paid to contributors who are still in the workforce and those which have retired. This transition burden, like the equilibrium contribution rate, can be used as a measure of the extent of equilibrium/disequilibrium in the whole PAYG system between contributions going in from workers and payments going out to pensioners. There are a number of different methods for calculating the transition burden, with the present paper using the ‘accrued-to-date’ liabilities method since this is the preferred approach in the literature when analysing the implications of a systemic shift from an unfunded to a funded system ⁽¹⁾.

Transition burden (indicator of equilibrium in the PAYG system) — To show how this concept of the transition burden can be used as an equilibrium indicator for the PAYG system as a whole, Graphs 9 and 10 show the change in the transition burden under both the baseline and under the alternative scenario of a broad package of parametric reforms (i.e. parametric simulation No 3), where the EPC reforms have been introduced and the effective retirement age has been increased to the statutory age of 65. A number of points are evident from the graphs:

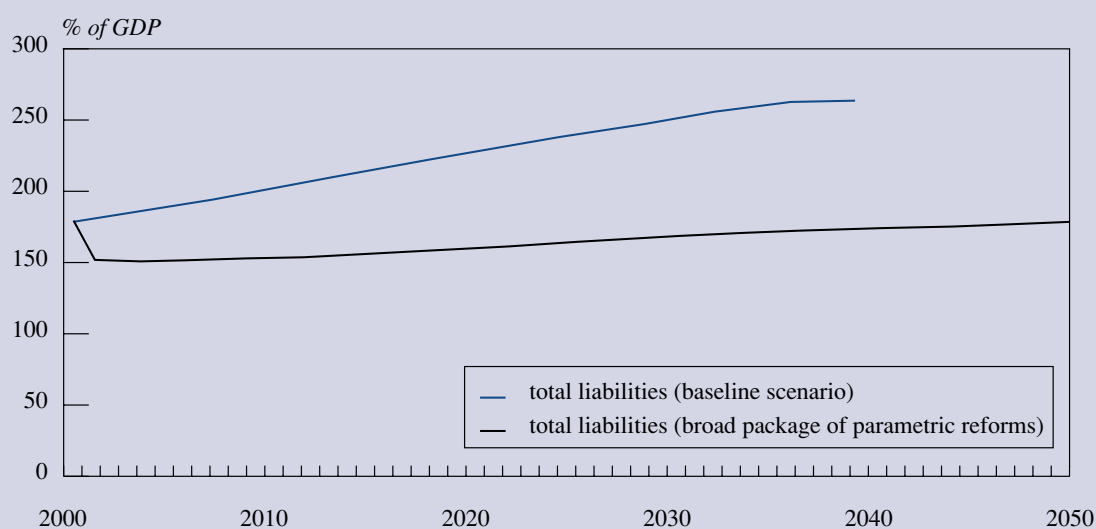
- The EU-15 as a whole has a large implicit debt burden in its PAYG system with the baseline assuming a figure of the order of 180 % of GDP in 2000. While comparable estimates of the EU’s PAYG debt burden do not exist, van den Noord and Herd (1993) produced estimates for the pension liabilities of the four largest EU Member States, with estimates for the year 1990 ranging from 156 % for the UK to 242 % for Italy. A simple average for these four EU countries (used as a proxy for the average of the EU-15 as a whole) suggests an overall burden of around 190 % in 1990, with equivalent figures for the same year using the methodology adopted in the

present paper pointing to a figure of 160 %. Such differences are not surprising however since a direct comparison between the two sets of results is not possible given differences in terms of a number of crucial assumptions between the present study and the van den Noord and Herd analysis, including differences regarding the effective retirement age, the level of the replacement ratio, the pension indexation method and finally the discount rate. While a number of other studies have addressed this issue of the implicit pension debt of the PAYG system, such as Kane and Palacios (1996) and Holzmann (1997), unfortunately in terms of providing alternative estimates for the level of the EU’s implicit debt, both of the latter papers mainly use the 1993 figures from van den Noord and Herd as the basis for their analysis.

- As Graph 9 clearly indicates, the transition burden in the baseline scenario continues to rise from 180 % of GDP in 2000 to 280 % in 2050. As against this, however, if one examines the ‘EPC’ scenario, while the present set of EPC reforms do not result in a stabilisation of the transition burden, the reforms have at least the effect of slowing down the degree of financial deterioration in the PAYG system, when one compares the model results from 2000 up to 2050 compared with the deterioration experienced over the 1970–2000 period. Part of the reason for the failure of these reforms to stabilise the situation reflects the fact that while the economic gains from increasing the employment ratio through increases in participation rates and falls in structural unemployment are significant, the budgetary benefits of increasing the employment ratio are not as striking since, as discussed earlier, these are partially offset by increases in the eligibility ratio.
- Finally, from Graph 10 it can be discerned that the ‘EPC’ reforms, allied to an increase in the effective retirement age up to the statutory age, does result in an effective stabilisation of the transition burden and consequently a prolongation of the average working life appears to be a necessary complement to the EPC reforms in order to bring the PAYG system back into equilibrium. In addition, even with such a large package of parametric reforms one can see clearly from the graph that the transition burden is displaying a small, yet clear, upward momentum in the period up to 2050 reflecting the effects of ongoing increases in life expectancy. Consequently,

⁽¹⁾ See Franco (1995) and Holzmann (1997) for further details regarding the accrued-to-date liabilities method in particular and for a general discussion of the alternative estimation approaches.

Graph 10: Transition burden (impact of broad package of parametric reforms)



Source: Commission services.

if policy makers wish to keep the PAYG system in equilibrium over time then the retirement age will have to be adjusted periodically for changes in life expectancy.

Systemic simulation No 1: Immediate 100% switch to a fully funded pension system in 2000 allowance for transition costs to a funded approach

In this first systemic scenario, the impact of an immediate 100% switch to a fully funded pension system is simulated, with the PAYG system abolished completely in the year 2000, and with the accrued rights (i.e. the transition burden) built up under the latter system fully taken into account. While it could be argued that it would be more realistic to abolish the PAYG system over a period of decades rather than immediately, the underlying explanatory variables would not change. Consequently, the purpose of the present simulation is simply to illustrate the main mechanisms at work using as simplified a framework as possible.

There are a number of alternative approaches to present such an illustrative scenario but the one preferred here is in terms of the costs to workers of making the transition since it is the latter group which will be faced with the so-called 'double' burden. This 'double' burden is imposed on the generation that decides to make the switch to a fully-funded system, with workers having to fund not only their own pensions under the new system but also having to continue to finance, through some form of taxation or social security contributions, the pensions of those who retired under the PAYG system as well as part of the future pensions of existing workers who had built up rights in the previous system.

As can be seen from Graph 11a the overall pension contribution rate for workers is therefore made up of two separate components:

- firstly, a component which is essentially a mandatorily imposed form of savings, with the latter savings

being placed by workers in a private or government controlled pension fund ⁽¹⁾, and

- secondly, a further contribution rate, which could take the form of SSCs, which is used to fund the implicit debt of the previous PAYG system.

As can be seen from the graph, the ‘savings’ contribution rate for workers to fund their own pension rises over the next number of decades before falling slightly and stabilising. This is a pattern which one should not find that surprising since it is based on a typical worker, making 40 years of contributions, at a contribution rate relative to wages which would give him a defined net replacement rate when he retires which is broadly equal to that of the PAYG system in 2000 (i.e. 74%). Of course to be able to fix the contribution rate the pension fund must assume a certain average real return / GDP growth rate over the period of years to be covered. In the model this real return is set equal to the real interest rate which in

⁽¹⁾ Since this simulation is purely illustrative, there are a number of simplifications introduced. Firstly, while such a mandatorily imposed form of retirement savings would, in practice, undoubtedly be implemented with the help of government tax incentives or subsidies, this extra cost is not allowed for here. Secondly, the contentious issues of both the relatively high administration costs associated with funded pension schemes and the issue of replacing a defined benefit (DB) PAYG system with a defined contribution (DC) funded approach is to a certain extent avoided in this simulation exercise. Both these latter concerns can be excluded from the explanation, for ease of exposition, by modelling this shift to funding through the use of a perfectly competitive annuities market where the contributor and the pension fund operator basically enter into a formal contract where a net replacement rate is agreed and the required annual contribution rates (as a percentage of wages) needed to achieve this degree of pension generosity are fixed accordingly. While this particular annuities market approach simplifies the explanation of the basic mechanisms at work in a shift to funding, it is still a close reflection of what happens in practice, with workers normally agreeing to pay a pension fund or insurance company a set percentage of their salary for an agreed number of years and with the final pension paid being dictated by the rate of return earned on the accumulated assets. In the present example, it is assumed that the rate of return will be equivalent to the $5\frac{1}{4} - 5\frac{1}{2}\%$ real interest rate assumed in the baseline. One important difference with the real world situation however is that the model does not allow for uncertainty in that it assumes that the real rate of return will not be as volatile as it is in practice and consequently this methodology will produce results which are closer to a DB, rather than a DC, funded scheme. A more detailed description of this annuity market approach is given in the Annex.

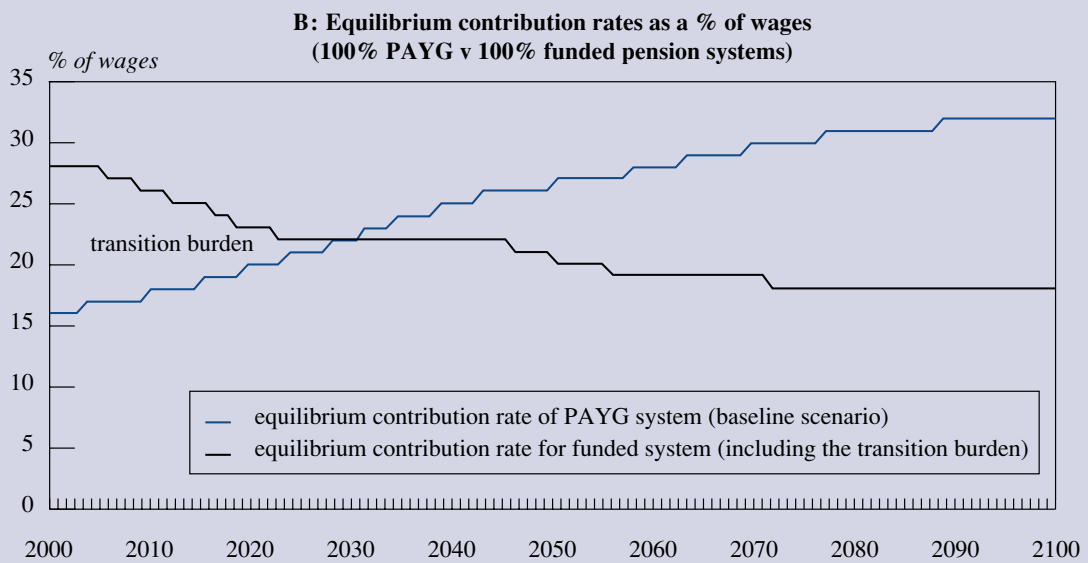
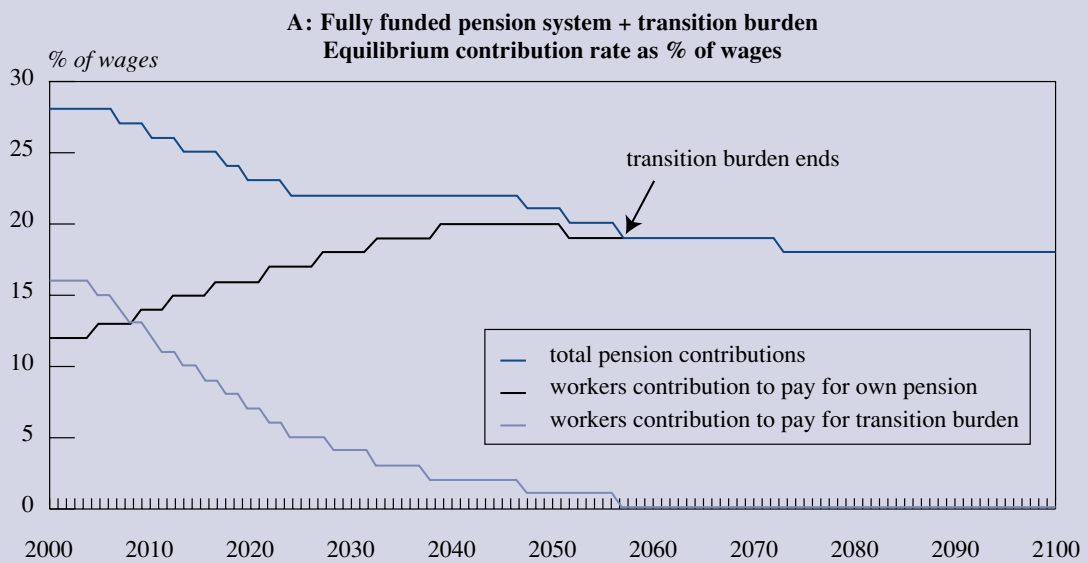
fact is very similar to the average pension fund returns achieved in a number of EU countries over the last 35 years ⁽²⁾. However, the real rate of interest declines substantially over the transition period due to the abolition of the PAYG system and this decline in the rate of return, coupled with the ongoing increase in life expectancy, is reflected in the upward movement in the equilibrium contribution rate for the funded system over the initial 40 years of the 100-year period shown in the graph. It is interesting to remark that following 2050, the real interest rate starts to rise again reflecting the fact that the additional savings generated over the transition period to a funded system start to be gradually unwound. This increase in the real interest rate after the end of the transition period is shown in Graph 11a as a fall in the equilibrium contribution rate for the funded system. Finally, it should also be clear from the graph that if both life expectancy and the real interest rate remain constant then the ECR of the funded system also remains unchanged over the period in question.

As regards the contribution rate to cover the implicit debt of the PAYG system, as the graph shows, this burden on workers declines gradually over the period until the last person under the previous system dies. This transition burden could of course be financed by instruments such as ‘recognition’ bonds etc. but given the magnitude of the implicit debt which would have to be made explicit in 2000 (i.e. of the order of 180% of GDP), efforts to simulate such a financing option proved impractical and consequently financing is assumed to occur through labour taxation, i.e. SSCs.

In broad terms what this simulation is saying, and as shown graphically in Graph 11b, is that the overall pension contribution burden on workers over the next number of decades under a funded pension system would initially (because of the ‘double’ burden) be close to 12 percentage points higher, as a proportion of wages, than in the baseline PAYG system, with the burden easing gradually over the subsequent 25–30 years until the combined contribution rate for the funded system, in other words the cost of the new pension system, would finally fall below that of the PAYG system. It is only when this

⁽²⁾ According to research quoted in Miles and Timmermann (1999), the average return on a diversified portfolio of equities and bonds was of the order of $5\frac{1}{4}\%$ in Europe over the 30 year period up to 1995 and the real interest rate in the model is also of the order of $5\frac{1}{4} - 5\frac{1}{2}\%$ and consequently represents a good proxy for expected pension fund returns over the next 50 years.

Graph 11: Immediate switch to fully funded system in 2000 + transition burden



Source: Commission services.

cross-over point occurs that workers would see a gain from moving to a funded scheme, with the space in Graph 11b between the two lines which represent the 100% PAYG and 100% funded systems providing a clear graphical representation of the cost of moving to a fully funded approach, as measured by the additional costs imposed on workers of the transition generation.

Furthermore, it should be underlined that the above scenario only allows for the transition burden of moving from the PAYG to a funded system. For some commentators this is not a sufficiently ‘realistic’ scenario since in order to ensure that the comparison with the PAYG approach is a fair one, allowance must also be made for additional costs often linked with the move to funding, namely the budgetary costs associated with the government tax incentives or subsidies needed to boost the take up of funded schemes, the high level of administration costs associated with such schemes relative to those of a centralised system such as PAYG ⁽¹⁾, and finally for the cost of an insurance scheme to underwrite the defined contribution (DC) pension schemes since in this reform proposal one is replacing a defined retirement income under the PAYG system with a system which historically has returned higher, but much more volatile, returns. Consequently most DC schemes around the world have a system of insurance in operation to recognise the greater risk associated with DC schemes, with these insurance instruments having the effect of smoothing out the volatility of returns, thereby limiting the potential losses which any individual could be faced with in a funded scheme. If one was to allow for the impact of all these additional costs in terms of further reducing the internal rate of return differential in favour of funded schemes relative to the PAYG system, the transition burden or cost imposed on workers would be significantly higher than that indicated in Graph 11b ⁽²⁾.

⁽¹⁾ See for example Murthi, Orszag and Orszag (2001).

⁽²⁾ Even if one accepts, after taking account of the additional costs mentioned in the text, that the positive return differential in favour of funded systems will persist over time, which is in fact a necessary condition for a dynamically efficient long run growth path, systemic reform in the EU aimed at exploiting this cost advantage will be complicated politically by the fact that allowing for the large transition debt burden inevitably means that at least one generation of workers must lose in any transition process. In addition, the mechanics of any shift to funding need to be carefully examined in order to ensure that the natural benefits of funding are not partially or, in some cases, completely eroded.

In overall terms, therefore, while funded (i.e. investment based) schemes have a favourable return differential relative to the PAYG system ⁽³⁾, the size of the transition burden, in the form of the implicit debt of the old PAYG system, coupled with any additional budgetary, administration and insurance expenses associated with the move to funding, is so high that even if the EU wished to completely scrap the PAYG system it would not be feasible to do so given the unrealistically heavy burden placed on the generation of workers on which the transition is imposed. In addition, the gains in terms of GDP are relatively limited — with a full shift to funding giving only an increase of a little over 5% in level terms relative to the baseline, thereby boosting the EU’s potential growth rate over the next 50 years by a small, but nevertheless very welcome, 0.1 of a percentage point on an annual average basis. By comparison, the return from parametric reforms is substantially greater, with a GDP gain of over 26% relative to the baseline, which is equivalent to a boost to annual growth rates of 1/2 of a percentage point over the period 2000–50.

The growth implications of different types of pension reforms depend crucially on the following factors:

- Change in the effective labour force.
- Change in aggregate savings.
- Output elasticity of capital and labour.

The parametric reform package scores particularly high when one takes the first factor into account in terms of

⁽³⁾ It can be argued that the return differential is the only intrinsic difference between the PAYG and funded systems in an EU context since many of the other, often quoted, advantages of funded systems in terms of greater labour supply incentives etc. can essentially be provided by the PAYG system by addressing existing design flaws such as the lack of a clear actuarial basis linking contributions to benefits. Reforms along these latter lines in countries such as Sweden and Italy, with their ‘notional’ DC schemes underline the fact that it is the incentives built into the pension system which are important rather than the financing method per se. Such reforms will also hopefully help dispel the notion that social security contributions (SSCs) paid into a PAYG scheme are simply another form of taxation, compared with similar pension fund contributions which are clearly seen by workers as savings for retirement. Other suggested benefits of funded schemes such as aiding the development of financial markets are more difficult to assess and while benefits have been found in certain South American countries it can be argued that any gains for a highly developed financial system, such as that which operates in the EU, would be of a substantially smaller order of magnitude.

the growth impact. Due to increases in both the retirement age and the labour force participation rate, coupled with a decline in the rate of structural unemployment, the effective labour force increases significantly under the broad based parametric reforms simulation. For the systemic reform simulation involving a 100% move to funding, it is assumed that there is no change both with respect to labour force participation, structural unemployment or the retirement age (i.e. no real economy reforms are introduced into the system).

With regard to the second growth promoting factor (i.e. savings), since the fraction of low saving retirees is reduced and that of the relatively high saving working age population is increased, aggregate national saving increases under the broad-based parametric reform option relative to the baseline. In the first systemic simulation the effects on aggregate savings are not as significant as one would imagine given the large increase in mandatory savings imposed on the wages of workers. This somewhat surprising savings effect is due to a number of factors, including the fact that both existing and 'new' pensioners (with high marginal propensities to consume) are not suffering any income loss in the shift to funding. Furthermore, there is no reduction in the share of pensioners in the overall population equivalent to that which occurs in the broad based parametric reforms scenario (i.e. due to the increase in the effective retirement age). As against this, the aggregate savings rate for the population as a whole clearly increases in the transition phase to the creation of a funded system due to the sharp increase in the savings rate of workers which boosts the overall savings of the population of working age ⁽¹⁾.

⁽¹⁾ It is important to be aware that there could be an additional factor at play in terms of reducing the savings and growth impact from a move to funding which is linked to the way consumption is modelled. Consumers in the model are forward looking and find it optimal to smooth consumption over time. Once the decision is taken to set up the funded system and once households realise that they are in effect building up a future stock of financial assets, their behaviour will change because of the associated wealth effects. These wealth effects are triggered by the fact that consumers perceive the created fund as an increase in their permanent income and consequently households will start to spend a share of this future financial wealth, with this additional consumption being financed from reduced levels of savings out of current income or even by liquidating certain financial assets which they hold, other than of course the pension fund assets. While this wealth effect is theoretically plausible the size of the effect is essentially an empirical issue. Other simulations which were carried out with the model to see the sensitivity of the savings effects from varying the

Finally, regarding the third growth factor mentioned earlier, the GDP effect of any additional capital accumulation depends crucially on its output elasticity and the effect of new investment on the rate of technical progress. While the growth effects emanating from the increase in the capital stock are taken into account in both the parametric and systemic simulations, the possibility that this increase in the technical capacity of the economy would in turn impact on economy-wide productivity growth through embodiment effects is excluded in these simulations. Allowing for this latter channel of 'vintage'/efficiency effects would of course boost the growth effects from both the parametric reforms and from the move to funding.

Systemic simulation No 2: Mixed pension system (25% shift to funding parametric reforms to bring the PAYG system back into equilibrium)

Following on from the first systemic simulation and due to the transition problems with a full shift to funding and the low GDP gain associated with such a move, an alternative systemic approach is described in the final simulation which examines the possibility of a less radical partial move to funding, combined with a broad range of parametric reforms of the PAYG system itself. In this second systemic scenario therefore a two-pronged pension reform strategy is tested, with firstly the PAYG system being brought back into equilibrium through the introduction of the broad package of parametric reforms described in Simulation No 3 in subsection 4.3.1. (i.e. the 'EPC' scenario + an increase in the retirement age) and secondly, a partial move to funding is introduced in the model in order to avail of the higher historical returns which have been achieved by funding and which, on the basis of the simulations in this paper, are likely to persist over the next 50 years. In simple terms therefore this simulation assesses the case for pension reforms, which try to retain or to exploit the natural advantages of both the PAYG and funded pension systems.

relative proportions in the model of wealth and liquidity constrained households (i.e. the proportion of consumers which base their consumption decisions on calculations of lifetime wealth — human and financial wealth — versus those which essentially consume out of current income) suggest that the savings and growth effects could be increased significantly if a large share of households were deemed to be liquidity constrained. In the case of a 100% shift to funding, for example, plausible parameter settings suggest that the annual average growth rate effects could be increased from the 0.1 predicted in this study to as high as 0.2.

In terms of bringing the PAYG system back into equilibrium, in operational terms this can be achieved by stabilising the transition burden (or equivalently the contribution rate), with a clear preference expressed in Simulation No 3 (subsection 4.3.1.) that this should be achieved through supplementing the EPC reforms by bringing the effective retirement age (ERA) back up to the statutory level. Indeed, an even bolder move should not be ruled out, namely to reduce the transition burden by delaying retirement until even later through, for example, linking the effective age of retirement to future changes in life expectancy.

While this equilibrium in the PAYG system is being achieved, governments can simultaneously shift out a proportion of the system to a funded pillar. The case for this partial shift to funding is based on the results of the baseline scenario in which it was shown that the funding option, as mentioned earlier, is likely to retain its cost advantage over the next 50 years (i.e. in terms of a lower equilibrium contribution rate — ECR — relative to the PAYG system) and consequently there will always be an incentive to avail of the higher returns from an investment-based approach. However, as shown in the first systemic simulation, it is not feasible (although it is technically possible) for the EU to move to a fully-funded system over the next 50 years given the very large burden imposed on the transition generation which such a move would engender and consequently the present simulation just looks at the impact of moving to a 75 % PAYG + 25 % funded system, with governments free to choose how to set up the 25 % funded part.

In terms of a move to funding, countries have a wide range of options to choose from, ranging from establishing a funded system within the public sector or by going

for a system of private ‘own’ accounts, although the experience so far with a completely decentralised version of ‘own accounts’ has shown it to be an expensive option in terms of administration costs. Apart from the complication imposed by the size of the transition burden in the EU, this suggestion to initially restrict the funded proportion of any mixed system to 25 % is linked to a possible cost saving compared with a move to 100 % funding. In a fully-funded system the case for some form of insurance scheme to be imposed to smoothen out the highly-volatile returns from defined contribution schemes is large. With this section’s proposal, however, the necessity to have such an insurance scheme is significantly lessened by the fact that workers will be guaranteed 75 % of their retirement income, with only 25 % subject to the normal vagaries of the stock market.

The key conclusions to be retained from this final scenario are as follows:

- In terms of growth, the EU economy makes a large gain from pension reform, with the level of GDP rising by close to 28 % relative to the baseline scenario, thereby more than wiping out the negative effects of ageing in terms of growth. If one compares this result with the GDP gain associated with introducing the ‘EPC’ scenario plus an increase in the effective retirement age (i.e. parametric simulation No 3), one can see clearly that in terms of the relative contribution, parametric reforms contribute roughly 95 % of the gain in growth, with the partial shift to funding contributing the remaining 5 %. Consequently, while growth is not the only measuring rod in terms of a shift to funding, policy makers should not expect enormous gains in terms of living standards from simply adopting a different pension financing strategy

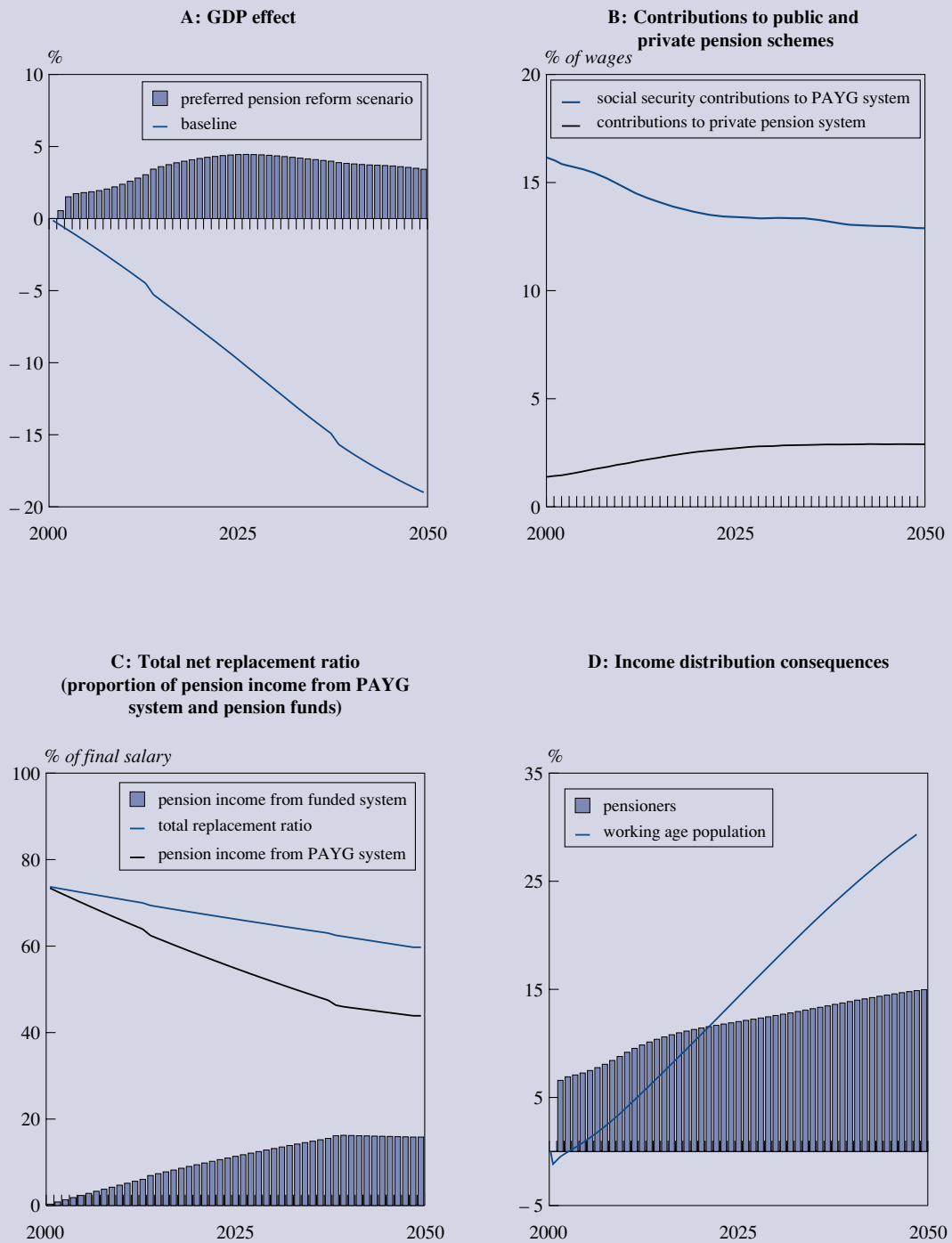
Table 10

Systemic reforms: mixed system (75 % PAYG / 25 % funded)

	Growth	Pension provision costs		Income distribution	
	GDP per capita (% diff. from baseline)	Public PAYG pension contributions (% of wages)	Private pension contributions (% of wages)	Working age population consumption (% diff. from baseline)	Pensioners consumption (% diff. from baseline)
2000	0	16.1	0	0	0
2030	+ 18.5	13.3	2.8	+ 17.1	+ 12.6
2050	+ 27.7	12.8	2.9	+ 29.3	+ 15.0

Source: Commission services.

Graph 12: Preferred pension reform scenario: PAYG in equilibrium + 25% funding



Source: Commission services.

since the final growth impact is essentially dictated by the increase achieved in terms of national savings ⁽¹⁾.

- In terms of the real interest rate, while this second systemic scenario experiences a decline in the returns for pension funds, the reduction in the yield is not as

⁽¹⁾ The importance of keeping the savings issue to the forefront of discussions needs to be underlined since this is the factor which will ultimately decide the success of a funded approach. While credible arguments can be made in favour of funded schemes in terms of their potential benefits in terms of savings, unfortunately a review of the empirical literature in this area points to no conclusive evidence to this effect. In this regard the systemic simulations in this chapter have been carried out on the assumption of a mandatory increase in the savings of workers to fund their own pensions with, unrealistically, no provision for tax or interest rate incentives from governments which should of course be taken into account. An additional simulation with the model where savings are voluntary shows clearly that without making part of the savings mandatory in some way, the boost to overall savings will be muted and could in fact lead to serious underfunding problems in terms of future retirement income provision.

severe as under the previous simulation involving a complete shift to funding.

- As the graph showing the total net replacement ratio indicates, the overall generosity of the system is assumed to fall over the period, with pension income under this final scenario coming from two sources, with the largest proportion, by definition, still coming through the PAYG system. In terms of the equilibrium contribution rates (ECR's) of the PAYG and funded systems, the latter are set at the levels needed to maintain the 75/25% distribution, on average, over the time horizon covered by the simulation.
- In terms of the fiscal impact, this scenario is also very favourable, with reductions in both SSC's and government pension expenditure to levels well below those assumed under the baseline scenario.
- Finally, in terms of income distribution, this scenario can also be recommended, with pensioners income as well as that of the working age population both showing significant increases over the simulation horizon.

5. Summary and conclusions

Member States have already launched a wide range of reforms with the aim of tackling the ageing problem which they collectively face. Notwithstanding the reforms undertaken up until the end of the 1990s, the latest estimates of the effect on growth and on public expenditure on pensions confirm that the impact of ageing will be so significant and widespread that additional reforms will still be needed in order to address the associated growth loss and to put the public finances on a sounder footing. In this regard, the design and structure of public pension systems play a crucial role in determining the scale of the budgetary and growth impact of ageing and consequently a discussion on the relative merits of individual pension systems is of the utmost importance.

As stressed in this chapter, the effects of ageing are not confined simply to the public finance and growth arenas and therefore any discussion on reform needs to be extended to a broad range of economic and social considerations. On the economic front, it is widely acknowledged that any reform strategy needs to be as comprehensive as possible and that it should in particular aim at: (i) increasing economic growth, (ii) containing future pension expenditure, and (iii) strengthening the financial basis of pension systems. In this context the present study has focused on the policy choices within the pension system itself, with the range of options being plentiful and with no single 'best' approach being possible. Amongst the many policy courses which could be followed, current public pension systems can be made more sustainable through undertaking parametric reforms with a view to improving incentives to work and to strengthening the actuarial link between contributions and benefits. This latter approach would help to create a clear demographic link in public pension systems. Fairness between generations and strengthening the financial basis of pension systems inherently broadens the question of the sustainability of pension systems to the wider issue of public debt management. This, in turn, suggests a need to consider issues such as increased pre-funding both within

the existing systems and through the establishment of specific pension funds. Opting for more radical systemic reforms involves questions other than funding. This leads one to consider the objective of diversification in terms of retirement income provision and the risks involved in different systems. In addition, it includes the difficult question of balancing the possible beneficial side-effects on the economy with the inevitable costs of the transition process.

The empirical part of the chapter provides a quantitative assessment of many of the key issues which were raised in essentially normative terms in Sections 2 and 3. Simulations for the EU-15 as a whole give an idea of the magnitude of the impact of some selected pension reforms as well as their simultaneous impact on a range of economic variables. In particular, the simulations focused on the effects on economic growth; the sustainability of public finances; and the income distribution consequences of changing pension systems in terms of the differential impact of the various pension reforms on the working-age population and on pensioners.

In terms of parametric reforms, a number of individual and combined reform scenarios were assessed. Regarding the individual reforms, the impact of two options were analysed: namely (i) a reduction in the generosity of the PAYG pension system brought about through changes in the systems replacement ratio and (ii) an increase in the retirement age. With regard to reductions in generosity, while such a reform option provides clear budgetary gains, less success is discernible in terms of easing the growth loss associated with ageing and income distribution difficulties are evident. No such problems exist with the retirement age simulation which suggests large gains in terms of growth (i.e. a gain of over 13% relative to the baseline), budgetary sustainability and income distribution. With regard to the fiscal gain, the retirement simulation suggests that the public expenditure impact of an increase in the effective retirement age is of the order of 1 for 1 (i.e. for each additional

year worked before retiring, the public expenditure impact on pensions is reduced by close to 1 percentage point of GDP).

In addition to the individual parametric reform simulations, the paper also assessed the impact of two sets of combined parametric reforms, firstly the ‘EPC’ scenario which provided an assessment of the impact of the labour market and pension generosity assumptions underlying the EPC’s recent ageing work, and secondly a set of parametric reforms which included the EPC assumptions plus an increase in the effective retirement age. The reforms outlined in the ‘EPC’ scenario are clearly significant and constitute a welcome step in the right direction but according to the simulations do not go far enough either in terms of bringing the PAYG pension system back into equilibrium or in terms of overcoming the negative consequences of ageing in terms of economic growth. Both of the latter objectives could however be achieved if, in addition to the EPC reforms, the effective retirement age was brought back up to the statutory age. In fact, such a comprehensive package of parametric reforms has, on its own (i.e. without recourse to any systemic changes), the potential to more than fully offset the negative effects of ageing in terms of standards of living and in terms of ensuring that government expenditure on pensions will be stabilised at its 2000 level of 10 ½% of GDP over the next 50 years rather than increasing by 7 percentage points as predicted in the baseline scenario.

In addition to the parametric reform simulations, the ageing model was also used to assess the possibility of a shift to funding, with two specific options for systemic reforms being analysed: namely (i) a 100% switch into a funded system and (ii) a partial (25%) move. While the models baseline simulation suggests that the present return differential in favour of funding would broadly persist over the next 50 years, this differential would contract considerably if there was to be a 100% shift into funding. From a baseline differential of around 3 ½ percentage points, the differential would fall to roughly 2 ¾ percentage points if there was to be an immediate abolition of the PAYG system, with small changes in the differential provoking large changes in terms of the respective costs of the individual pension systems. In addition, the simulations show clearly that it would be politically difficult, at the EU level at least, to go for a complete move to funding since the transition burden from the PAYG system is so high. The first systemic simulation suggests that the burden on workers would be

considerable, with the social security contributions (SSC’s) needed to finance the transition burden only falling slowly over the next number of decades and with workers forced to save an additional 12–20% of their wages to provide for their own pensions outside the PAYG system. Finally, in terms of growth rates, a full shift to funding would only boost the EU’s potential growth rate by a small, but nevertheless very welcome, 0.1 of a percentage point on an annual average basis over the next 50 years, compared with an annual average growth rate gain of 0.5 of a percentage point emanating from the scenario involving a comprehensive package of parametric reforms.

Notwithstanding the above, however, while a complete shift to funding would appear difficult in terms of the fall in returns for pension funds, the relatively low growth rate gain and the size of the transition burden to be serviced by EU workers, a smaller shift of, for example, 25% appears feasible, especially when combined with a broad range of parametric reforms aimed at bringing the PAYG system back into equilibrium and thereby both reducing the transition burden imposed on workers and boosting the growth rate gains considerably. Such a scenario is assessed in the final simulation with, not surprisingly, strong gains for all the key policy variables which are targeted, namely a 28% increase in the level of GDP compared with the baseline, a substantial reduction in the transition burden imposed on workers and overall gains in terms of the consumption of both the working age population and pensioners.

This final scenario may in fact constitute an ‘optimal’ policy path to be followed by the EU at the present time as it strives to find a workable balance between the cost advantage apparently offered by funded schemes and the income security and other advantages provided by the PAYG system. Furthermore, in terms of a risk diversification strategy for retirement income provision, a mixed approach may be more appropriate as it allows individuals to draw on both the returns to human capital investment, in the form of the real wage growth which underpins the PAYG system, and returns to physical capital investment in a funded system (i.e. the real interest rate).

Finally, while a politically feasible shift to partial funding over the next 50 years will bring significant gains in terms of budgetary sustainability, the size of the growth gains, as mentioned earlier, should not be exaggerated, especially when compared with a broad based parametric reforms scenario which also provides impressive budgetary

relief. In this context, regarding the overall GDP gain of 28% from the final systemic simulation, by far the largest proportion of the gain clearly emanates from the parametric reforms (with the increase in the effective retirement age being the single most potent pension reform option), with the partial shift to funding accounting for only about 5% of the overall gain in living standards.

Consequently, while the growth gains from funding are not insignificant, on the basis of the simulation results it appears that what is even more important from a growth perspective is that governments introduce the fundamental real economy measures which are necessary for economies to adjust to the changes brought about by ageing populations. In terms of pension reform, ageing has significantly altered the underlying economics of the pension system and it is incumbent on policy makers to bring the system back into a new equilibrium which reflects the twin 'certainties' of ongoing increases in life expectancy and lower birth rates compared with previous decades. In this regard, action is necessary to firstly bring the relationship between the number of years spent in

employment relative to the years spent in retirement (i.e. the passivity ratio) back to the levels witnessed when the PAYG system was in its infancy and secondly at the level of economic policy to recognise that whilst budgetary sustainability is an important measuring rod for pension reform measures, policy makers must retain economic growth considerations as their central objective ⁽¹⁾.

⁽¹⁾ It should be stressed that the simulation results presented in Section 4 of this paper endorse the findings of the empirical research referred to in Sections 2 and 3, especially with regard to the large gains to be achieved from an increase in the effective retirement age and also with regard to pension policy reforms which focus on the need to sustain and promote economic growth. In addition, the policy course suggested in Section 4 of a partial shift to funding is also a position which is widely shared in the literature. In this regard, despite the initial transition burden, funding is still an attractive method of pension financing given the longer run cost advantage which it provides. Finally, this favourable return differential is likely to persist over time as long as the practical operational details of any shift to funding are carefully scrutinized.

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Annex

Overview of key features of ageing model

An EU-15 aggregate version of DG ECFINs QUEST model has been used for the scenarios. The model can be characterised as a neo-classical growth model with short run Keynesian features arising from adjustment costs and nominal rigidities. Details of the model specification can be found in Roeger (2000). One important modification has been made for the purpose of the ageing scenarios: in order to capture intergenerational issues the private household sector of the model has been disaggregated into working age population and retiree households, along the lines suggested by Gertler (1999). This is a generalisation to the Blanchard/Yaari life cycle framework, which constitutes the standard specification in QUEST. The Gertler model can also be interpreted as a generalisation of a simple overlapping generations (OLG) model by allowing for realistic average lengths of life, work and retirement. This Annex discusses in particular the OLG modifications to the household sector.

Population dynamics — In the model individuals have finite lives and they go through three distinct stages of life: youth (0–20 years), work (21 years — retirement age), and retirement (retirement age+1 — expected end of life). The number of children in period t is given by N^y . Each period bN^y children are born and average duration in childhood is $1/(1-\lambda^y)$ where λ^y is the fraction of young people turning age 21. Child population dynamics is given by:

$$(1) \quad N_{t+1}^y = bN_t^y + (1-\lambda_t^y)N_t^y.$$

The working age population in period t is given by N^w . Each period $\lambda^y N^y$ children enter the working age population cohort. The mean duration of staying in this cohort is $1/(1-\lambda^w)$ where λ^w is the fraction of the population in working age which goes into retirement within the current period. Thus the population of working age evolves over time as follows:

$$(2) \quad N_{t+1}^w = \lambda_t^y N_t^y + (1-\lambda_t^w)N_t^w.$$

There are N^r pensioners at date t , and they are joined by $\lambda^w N^w$ new retirees, while a fraction $(1-\lambda^r)$ incumbent

retirees survive to the next period. This gives the following law of motion for the retiree population

$$(3) \quad N_{t+1}^r = \lambda_t^w N_t^w + (1-\lambda_t^r)N_t^r.$$

Households — Consumption of retirees and workers is proportional (up to variations in real interest rates) to financial and human wealth as implied by an intertemporal CES utility function. Retiree consumption is given by:

$$(4) \quad C_t^r = ar(A_t^r + S_t^r)$$

Where A^r is financial wealth held by pensioners and S^r represents the present discounted value of pensions:

$$S_t^r = \sum_{j=0}^{\infty} (1+r_{t+j} + \lambda_{t+j}^r)^{-j} rep_{t+j} (1-tl_{t+j} - ssc_{t+j}) part_{t+j}^r N_{t+j}^r$$

Notice that the finiteness of a pensioner's life is taken care of by including the probability of death in the discount rate. Pensions are proportional to net wages at rate rep_t , where tl is the labour tax rate and ssc is the rate of social security contributions. Only those retirees who have participated in the labour force are entitled to a pension, where the average participation rate of retirees is given by $(part_t^r)$.

Each member of the working age population ⁽¹⁾ also consumes a fraction of financial (A^w) and human wealth (H) net of labour taxes and pension contributions. A third element entering the consumption and savings decision of workers is the value of social security payments workers can expect once they retire (S^w).

$$C_t^w = aw(A_t^w + H_t + S_t^w)$$

$$\text{with } S_t^w = \sum_{j=0}^{\infty} (1+r)^{-j} f(ret_{t+j}) \frac{ar}{aw} \hat{S}_{t+j}^r$$

S^w is the capitalised value of future pensions the worker can expect after retiring. This expression is composed

⁽¹⁾ This includes the consumption by children.

of two terms, namely $prob(ret_{t+j})$ which represents the probability that the worker retires in $t+j$ and \hat{S}_{t+j}^r , the present discounted value of pensions of the average worker which he can expect when he retires in $t+j$. Worker households evaluate future pensions with the ratio of the marginal propensity to consume in retirement and in work ⁽¹⁾. This reflects the value to a worker of being able to consume today from wealth to be received in retirement.

At each moment in time the sum of S^r and S^w ⁽²⁾ constitutes the unfunded liabilities of the PAYG system. They are endogenously calculated by the model together with time paths for the interest rate and wages, given the future evolution of the retirement age, life expectancy, the participation rate and the replacement ratio.

The transition to funding is modelled by phasing out the replacement rate of new retirees over the working life of the youngest worker cohorts, starting at the date of transition, while keeping the replacement rate of incumbent retirees at the historical level. A funded scheme for the current working age population is introduced by setting up an annuities market where each worker contributes a certain percentage of his wage income to a mutual fund which invests the proceeds. After switching into retirement the fund pays a pension to the worker. In order to allow comparisons with the PAYG system the funded scheme is set up as a defined benefit scheme guaranteeing the same net replacement rate to pensioners as under the previous PAYG scheme. Given the replacement rate under the funded scheme and the evolution of average duration in retirement, the contribution rate (co_{t+j}) is determined by equalising at each date, the present discounted value of pension contributions

$$CL_t = \sum_{j=0}^{\infty} (1+r_{t+j} + \lambda_{t+j}^w)^{-j} co_{t+j} w_{t+j}.$$

to the present discounted value of the funded pension ($PDV(SL)_t$) the worker can expect in the future

$$PDV(SL)_t = \sum_{j=0}^{\infty} (1+r_{t+j})^{-j} prob(ret_{t+j}) SL_{t+j}.$$

where SL_{t+j} is the present discounted value of the pension from the mutual fund.

⁽¹⁾ This ratio is close to 2.

⁽²⁾ Corrected for the marginal propensity to consume differential in order to obtain the pure financial burden without utility evaluation.

Firms — Firms operate in a monopolistically competitive environment. GDP is produced via a Cobb Douglas production function with capital, energy and employment as inputs. Technical progress grows at an exogenous rate. Capital stock changes according to the rate of fixed capital formation and the rate of geometric depreciation. Furthermore, it is assumed that the investment process is subject to rising marginal costs of installation. Total real investment expenditures are equal to investment purchases plus the costs of installation. The objective of the firm is to maximise the present value of its cash flow. As decision rules for investment and employment the standard neo-classical relations emerge linking factor demand to the level of output and real factor prices.

Labour market — Market clearing for goods and financial markets is assumed in this specification since the focus is on medium to long run results. Persistently high unemployment rates in Europe make it necessary to depart from the neo-classical specification of labour supply. Instead a standard bargaining and search framework (see, for example Pissarides (1998)) is used to model the labour market. By allowing for market power of workers/trade unions, persistent involuntary unemployment can be modelled within this framework, since net wages are set as a mark-up over the reservation wage. The wage mark-up depends positively on labour market tightness. The reservation wage itself is determined by the level of unemployment benefits. The extent to which social security contributions are shifted onto wages depends crucially on how benefits are indexed to social security contributions. To the extent to which they are not indexed workers try to shift contributions onto wages in order to preserve a mark-up. With full indexation of benefits, social security contributions would not distort wages. In the simulations a 50% indexation of benefits to wages is assumed thus mitigating negative labour market effects from rising pension contributions. In effect this 50% indexation rule means that workers regard only 50% of their SSC's as savings, with the remaining 50% perceived as simply another form of labour taxation. Labour force participation is kept exogenous.

Government — The government pays unemployment benefits and purchases goods and services. These expenditures are financed by taxes on capital, labour and consumption as well as deficits. A debt rule which adjusts transfers to households such that a long run debt to GDP target is met guarantees the intertemporal solvency of the government. The government also manages a PAYG pension system where pension contributions are set in each period in such a way as to finance total pension expenditures for a given replacement rate.

Chapter 6

The microeconomic impact of information and communication technologies in Europe

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1. Introduction

In early 2000, technology stocks were riding high, the US economy was in its tenth consecutive year of expansion, and a consensus seemed to be building around the proposition that trend productivity growth had increased, thanks in large part to the rapid development and use of ICTs. There was speculation of further structural benefits such as smoothed business cycles or a permanently improved trade-off between unemployment and inflation. The issue in the EU was if and when the ‘new economy’ might materialise in Europe.

Eighteen months later, this vision was called into question as technology stocks fell and some of the dot.com firms that symbolised the new economy failed. Estimates of any trend increase in productivity were revised downwards as the US economy moved close to recession. The bursting of a speculative bubble is one thing but, for some, the deflation of new economy myths cast doubts on the real economic benefits of ICTs. This was equally true in Europe, as press comment turned to over-capacity in fibre-optic transmission and a radical reassessment of the prospects for third-generation mobile telecommunications services.

The present chapter argues that recent developments do not compromise the long-term expected economic

benefits of ICTs ⁽¹⁾. It is at the level of individual firms, product markets and labour markets where the immediate impact may be most apparent. The chapter therefore moves beyond aggregate data to examine the available microeconomic evidence on ICT take-up and the impact of ICT on the functioning of markets. It is also at the micro level where the economic, social and legal framework for the information society must be established. The chapter also looks at selected issues relating to how the functioning of markets and institutions may affect the take-up of ICT.

Section 2 sets the macroeconomic context by offering an interpretation of recent developments and the implications for estimates of growth potential. Moving to the microeconomic channels, Section 3 discusses the impact of ICTs on business processes, raising a number of key product market issues. Section 4 looks at the consequences for employment and the role of labour markets in the transition to a knowledge-based economy. Section 5 concludes and summarises ICT-related policy challenges.

⁽¹⁾ Last year’s EU economy review reviewed various growth-accounting exercises designed to estimate the contribution of ICTs to economic growth. It concluded that similar benefits to those observed in the United States could be expected in the EU as a whole, albeit with a lag of several years.

2. The macroeconomic context

2.1. Stock prices

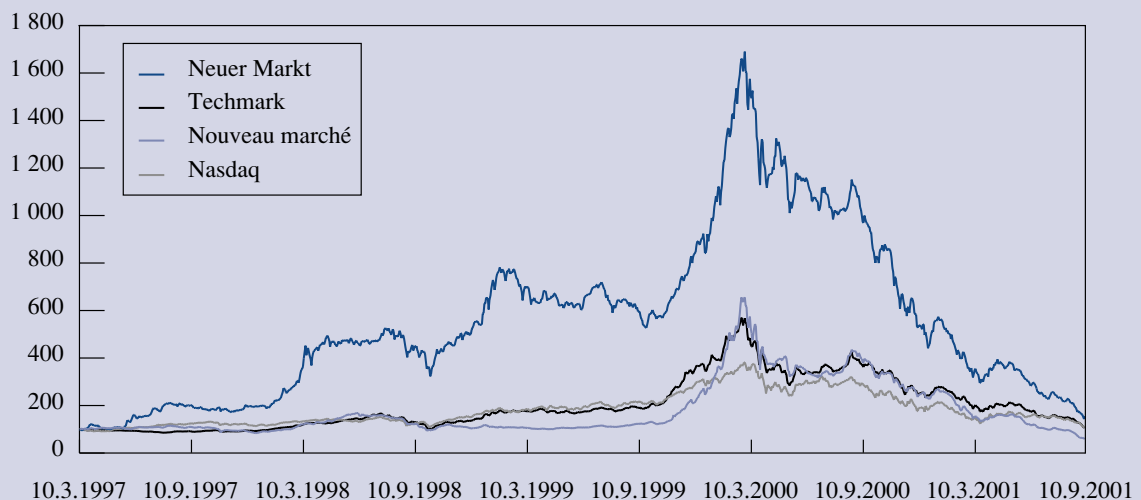
Graph 1 shows the rise and fall of the main listings for high technology 'growth' stocks. These are not exclusive to ICT firms, and many of the larger ICT firms are listed in the broader indices. Nevertheless, these markets came to be seen as symbolic of the new economy. The value of the US Nasdaq nearly quadrupled between March 1997 and March 2000, and nearly quartered between March 2000 and September 2001. Most commentators have explained this at least partly in terms of irrationality, or a speculative bubble which burst when 'the supply of bigger fools ready to buy overvalued stocks

had dried up' ⁽¹⁾. At any rate, the significance of the 'new economy' ⁽²⁾ for the profits of the high technology

⁽¹⁾ DeLong and Summers (2001).

⁽²⁾ The term 'new economy' has been used to refer not only to the rapid development, adoption and use of ICTs but also to changes in work organisation, globalisation, more intense competitive pressure and a favourable economic policy environment, see Baily (2001). This chapter focuses on ICTs and complementary changes in work and business organisation, although it is not always possible to distinguish these clearly from the other elements of the 'new economy' such as globalisation, more intense competitive pressure or a favourable economic policy environment.

Graph 1: Selected high technology stock listings, 1997–2001



Source: Datastream.

firms quoted on the Nasdaq appears to have been grossly over-estimated.

Recent history has been even more turbulent in the case of the (smaller) European markets with the rise and fall of the Neuer Markt particularly steep, and the Nouveau Marché in Paris falling below its initial level when established in March 1996.

Share prices are supposed to reflect the expected profitability of companies, not productivity per se. Higher productivity growth with a constant rate of profits should lead to a larger expected stream of profits⁽¹⁾. But additional factors would be needed to explain the boom in new economy stocks, such as expectations of rapid growth in market share or a higher rate of profitability.

The apparent overvaluation of these stocks may in part be rationally explained. It seems that investors greatly overestimated the potential of the new economy to create market power and thus to increase the rate of profits. In addition, it became clear during 1999 and 2000 that 'traditional' firms could employ new technologies as well as, if not more productively than, start-ups. This led investors to revise their view of the potential for start-ups to acquire market share at the expense of incumbents. However, neither of these points detracts from the real economic benefits of ICTs.

It follows that much of any shareholder value from the new economy should be reflected in the broader indices. The main blue chip indices have also suffered from the decline of telecoms, media and technology stocks and weakening general economic prospects. But recent falls should not obscure the fact that markets remain highly valued by historical standards and well above levels in December 1996 when the US Federal Reserve Chairman warned of 'irrational exuberance'⁽²⁾.

⁽¹⁾ Although higher productivity growth should translate into an increase in the number of profitable investment projects seeking funds, leading to upward pressure on real interest rates, which would have a negative effect on equity prices.

⁽²⁾ Even after recent falls, markets remain highly valued according to traditional benchmarks such as dividend yields, price-earnings ratios or Tobin's q . This applies to European markets almost to the same extent as it does to the United States; see e.g. PricewaterhouseCoopers (2001). This picture may be consistent with the view that markets are pricing in expected productivity gains, although of course if recent events show anything it is that firm conclusions cannot be drawn on the basis of valuation benchmarks or short-term movements in equity prices.

A further point is that the impact of innovation, compared to that of existing technologies, tends to extend further into the future and is almost by definition more uncertain. It is therefore not surprising to find overestimation, underestimation and higher volatility of the expected benefits⁽³⁾. This parallels historical experience with railways and electricity. Booms and busts in the stock of the original infrastructure builders and operators had very little to do with the diverse economic benefits which panned out over the following decades. Thus, economic history suggests that the wider benefits of a general purpose technology will not be reflected in share prices⁽⁴⁾.

2.2. Aggregate productivity estimates

Falling stock markets in 2000 were closely followed by a general deterioration of the economic outlook. As the US economy moved close to recession in 2001, recent national accounts figures were revised, including a reduction in the figures for investment in IT equipment and software in 1999 and 2000. Box 1 recalls the three main channels through which ICT investments may affect productivity, and some of the main results⁽⁵⁾.

Comparative European evidence has been harder to come by because of data limitations, but several authors have employed tactics such as applying US quality-adjusted deflators to European prices or using industry sources on ICT spending in order to arrive at estimates for EU countries⁽⁶⁾. These studies have found that a sharp increase in the use of ICTs made a significant contribution to increased GDP growth via capital deepening in several countries, notably Ireland, Finland, Sweden and the UK, as well as the United States (and to a lesser extent Canada and Australia). Others, including the large euro-area countries, fared less well, on account of lower growth in ICT investment and a lower initial share of ICT capital in total capital.

⁽³⁾ See Freeman (2001).

⁽⁴⁾ On general purpose technologies, see Bresnahan and Trajtenberg (1995).

⁽⁵⁾ See European Commission (2000) for further details, and also Baily (2001) where updated versions of some of the US studies are discussed.

⁽⁶⁾ See Schreyer (2000), Colecchia (2001), Roeger (2001), Daveri (2001), van Ark (2001) and ECB (2001). A number of national studies have also been carried out, including CPB (2000), Jalava and Pohjola (2001), Mairesse et al. (2000) and Oulton (2001).

Box 1: The growth contribution of ICTs: main channels and US evidence

The first main channel through which ICTs may affect growth is **capital deepening** — investment in ICTs, as with any other investment good, increases the stock of capital and thus boosts labour productivity, even in the absence of technical improvements.

The second channel is **rapid technical progress in ICT production**, measured by growth in total factor productivity (TFP) in the ICT sector.

The third channel is **technical progress in other industries due to the use of ICTs**. This category includes, for example, any productivity increases that result from improved business organisation enabled by ICTs, or other spill-over effects such as network externalities. Productivity gains through this channel would show up in the form of increased TFP growth in non-ICT sectors.

Evidence from the United States suggests that capital deepening was the most important factor behind the acceleration of labour productivity between 1995 and 2000. Real investment in ICTs surged during the 1990s. The US results point to a slightly smaller but significant contribution from technical progress in ICT production. Although progress was extremely rapid in some subsectors, especially computers and semiconductors, the entire ICT sector accounts for only around 8 % of US production, hence

the limited direct impact on overall labour productivity. But technical progress did produce a rapid fall in (quality-adjusted) prices, which paved the way for capital deepening. TFP growth also increased in non-ICT sectors. While many researchers were optimistic that this was partly due to the diffusion of ICTs, there was no clear evidence of this.

Recent sectoral evidence has uncovered a clearer link between overall labour productivity growth and intensive ICT use. Some sectors such as finance and retail trade, where heavy ICT investments have been made and the greatest benefits from ICT are expected, do show a substantial acceleration in productivity between 1989–95 and 1995–99 ⁽¹⁾. However, productivity gains are surprisingly small in most sectors which account for the majority of ICT investment, including certain areas where large gains might have been expected, such as retail banking and hotels (McKinsey, 2001). In addition, productivity gains in sectors such as wholesale, retail and telecommunications can be attributed to several factors, including competition, regulatory reform and cyclical demand conditions, as well as ICT investment (ibid.).

⁽¹⁾ See Baily (2001), Table 3. Baily does not distinguish here between capital deepening and TFP growth.

Table 1 provides estimates from some of these studies of GDP growth due to ICTs over the late 1990s. These results are not comparable between the different studies because the methodologies are not identical, but the table does provide an idea of the comparative picture between countries. Graph 2 and Table 2 illustrate the sizeable EU-US gap in expenditure on ICTs that had opened up by the mid-1990s.

The experience of some countries (e.g. Australia) suggests that a large ICT-producing sector is not a necessary condition for reaping the benefits of ICT use. Nevertheless, ICT production does play a role in explaining the differential contribution of ICTs to growth in the United States and the EU as a whole. As shown in Table 3, the ICT manufacturing sector in the United States is more than double the size of that in the euro area, so that even if technical progress in the latter was similarly rapid, the contribution to overall productivity growth would be less

than half that in the United States. It is notable that there is less of a gap in the size of sectors that use ICT intensively, yet productivity growth, particularly in ICT-using services, has been higher in the United States.

Most of these analyses focus on productivity, but a further point that emerges strongly is that employment performance in ICT-producing and -using sectors in the EU has been dismal relative to the United States. This explains a substantial part of the difference in the contribution of these industries to gross value-added.

To sum up in very broad terms, US macroeconomic evidence has tended to suggest a trend increase in labour productivity growth of around 1 percentage point. Around half of this, or more according to some studies, could be due to ICTs. In the EU as a whole, the contribution of ICT capital to productivity growth would appear to have been rather smaller and to have occurred

Table 1

The contribution of ICT capital to GDP growth, annual percentage points

	Roeger ⁽¹⁾ 1995–99	Daveri ⁽²⁾ 1996–99	Colecchia ⁽²⁾ 1995–99	Van Ark ⁽³⁾ 1995–99
Belgium	0.5	0.49	–	–
Denmark	0.3	0.65	–	1.07
Germany	0.3	0.45	0.29	0.96
Greece	0.2	0.46	–	–
Spain	0.3	0.34	–	–
France	0.4	0.44	0.36	0.75
Ireland	1.6	0.96	–	–
Italy	0.4	0.35	0.32	0.71
Netherlands	0.6	0.72	–	1.92
Austria	0.3	0.43	–	–
Portugal	0.5	0.49	–	–
Finland	0.5	0.74	0.58	2.50
Sweden	0.6	0.85	–	–
United Kingdom	0.5	1.17	–	1.50
Norway	0.4	–	–	–
Switzerland	0.5	–	–	–
Australia	–	–	0.61	–
Canada	–	–	–	1.23
Japan	–	–	0.33	0.78
US	0.9	1.45	0.88	2.67

(1) Software excluded, assumes elasticity of substitution of ICT with other factors equal to 1.5 and productivity acceleration in ICT production in EU 50% of US.

(2) Business sector GDP only.

(3) Figures for France, Germany and Japan are for 1995–98.

Sources: Roeger (2001), Daveri (2001), Colecchia (2001), Van Ark (2001).

mainly through capital deepening, with a limited contribution from technical progress in ICT production. Moreover, while productivity growth went hand in hand with employment growth in the United States, the same was not true of the euro area. The EU average conceals differences among the Member States, however, with some more closely paralleling the US experience.

As far as short-term prospects are concerned, this assessment changes somewhat with the current economic downturn. Productivity growth is clearly tailing off at present with the turn in the economic cycle and the signs are that investment, particularly in ICTs, has been severely curtailed. Revisions to US GDP figures mean that the acceleration in labour productivity in the second half of the 1990s was smaller than it seemed in 2000. Baily (2001) judges that some estimates of TFP growth in non-computer sectors may have been too high. The downward revisions of investment data will also reduce the measured contribution of ICTs via capital deepening. Nevertheless, in qualitative terms, the assessment stands:

technical progress in ICT production and an investment boom driven by rapid falls in quality-adjusted prices were major drivers of increased labour productivity growth from 1995.

Recent assessments are optimistic that the long-run impact of the new economy is still likely to be highly beneficial, on the grounds that the pace of underlying technological developments in recent decades shows no signs of abating ⁽¹⁾. The latter years of the 1990s may have been a period of exceptionally rapid technical progress. Jorgenson (2001) points out that this can be traced to the shift in 1995 in the product cycle for semi-conductors from three years to two as a result of intensified competition, although it cannot be assumed that this situation will persist indefinitely. Developments in the quality-adjusted price deflators in the United States may suggest reversion to a longer-term trend. Nevertheless,

⁽¹⁾ See for example DeLong and Summers (2001), IMF (2001).

Table 2

ICT expenditure as a percentage of GDP

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
B	3.7	3.5	3.8	3.9	4.2	4.5	4.9	4.8	5.2	5.6
DK	4.2	3.9	4.3	4.3	5.0	5.2	5.6	5.6	5.7	6.1
D	5.0	4.8	5.2	5.2	4.3	4.2	4.5	4.9	5.2	5.7
EL	2.4	2.4	2.8	2.8	3.7	3.9	4.0	4.9	5.3	6.0
E	2.9	2.7	3.2	3.1	3.4	3.7	5.0	5.2	5.8	6.3
F	4.0	3.8	4.2	4.3	4.4	4.5	4.8	5.1	5.5	6.1
IRL	4.4	4.1	4.8	4.8	5.4	5.6	5.7	5.2	4.9	4.8
I	2.5	2.5	3.2	3.2	3.7	3.7	3.9	4.4	4.8	5.3
L	:	:	:	:	:	:	:	:	:	:
NL	4.6	4.3	4.7	4.8	5.1	5.5	5.9	5.8	6.1	6.6
A	3.5	3.4	3.7	3.8	3.6	3.9	4.4	4.9	5.4	5.8
P	3.6	3.4	4.2	4.5	4.4	4.5	5.4	5.9	6.0	6.6
FIN	2.7	3.1	4.2	4.2	4.7	5.0	5.5	5.7	6.0	6.0
S	4.2	4.0	5.6	5.7	5.9	6.0	6.5	7.1	7.2	7.4
UK	4.7	4.7	5.4	5.4	5.8	6.1	5.9	6.0	6.3	6.5
EU-15	3.6	3.6	3.7	4.2	4.4	4.5	4.9	5.2	5.6	6.0
US	5.7	5.7	5.6	5.6	6.5	7.1	7.5	6.6	6.5	5.9
JP	4.4	4.4	3.8	3.9	4.3	4.6	4.7	5.0	4.1	4.3

NB: Information technology (computer hardware, office equipment, data communications hardware, software products and services) plus telecommunications equipment and services.

Source: EITO.

Table 3

Sectoral developments in the euro area and in the US

(1995–98)

	Share in nominal value-added (1998, %)		Growth in real-value added (%)		Growth in employment (%)		Growth in labour productivity (%)	
	Euro	US	Euro	US	Euro	US	Euro	US
ICT-producing sectors in manufacturing	0.7	1.8	11.5	25.6	-2.3	3.5	14.2	21.3
ICT-producing sectors in services	4.2	4.8	8.1	7.8	0.1	5.3	7.9	2.4
ICT-using sectors in manufacturing	3.9	3.0	1.6	2.9	-1.1	0.1	2.7	2.7
ICT-using sectors in services	12.0	13.1	3.2	7.4	2.9	4.5	0.3	2.7
Manufacturing	18.6	16.4	1.5	4.1	-0.6	0.6	2.1	3.5
Business services	51.8	52.7	2.7	6.6	1.8	2.9	0.9	3.7
Total economy	100	100	1.9	4.0	0.4	2.0	1.4	2.0

NB: Calculations for the euro area are based on data for Germany, France, Italy and Finland. Manufacturing and business services include ICT.

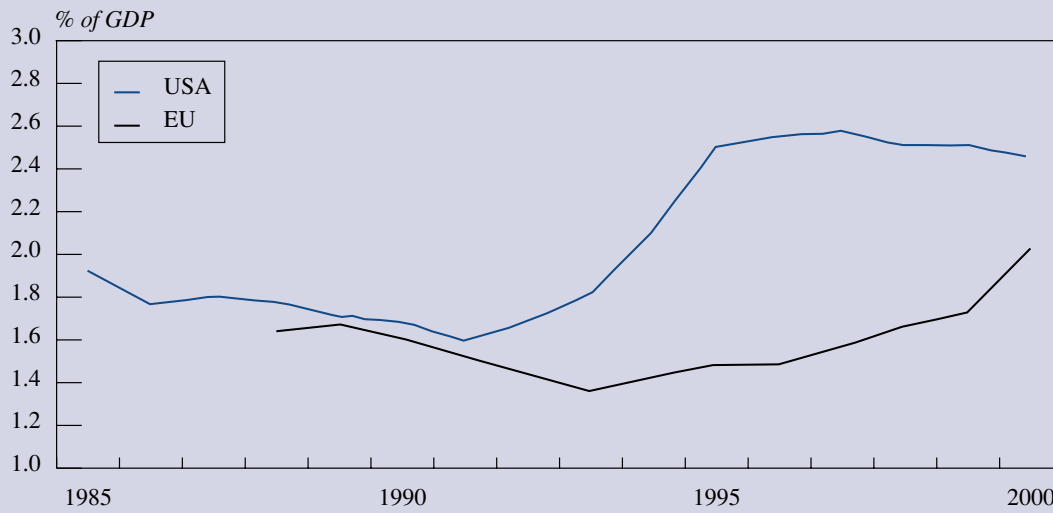
Source: ECB (2001).

Graph 3 shows that this is still one of steep decline. Computer prices declined by around 12% during the first half of the 1990s, by 17% from 1995 to the end of 1999, and by around 11% from 2000 to August 2001. In France, where a similar (though not fully comparable) quality-adjusted index is used, computer prices fell

dramatically over most of the 1990s and, as in the United States, slightly less steeply over the past two years.

Depreciation of computer equipment and software is rapid, so countries that find themselves lagging behind are not destined to remain so forever. The data for 2000

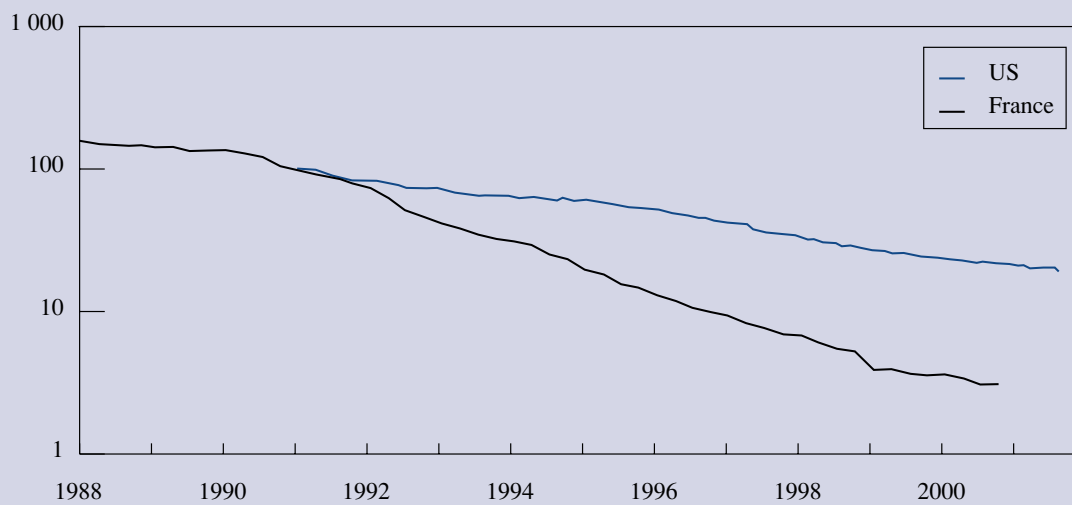
Graph 2: ICT investment



NB: Electronic data processing and telecommunications sales as a percentage of GDP, excludes software.

Source: REEDS database.

Graph 3: US and French computer price indices (rebased to Jan. 1991 = 100)



NB: US 'electronic computers', France 'micro-ordinateurs'.

Source: BLS and INSEE.

on ICT spending indicate that the gap between the EU and the United States was closing (see Graph 2 and Table 3). Under present circumstances, there may be a certain advantage in not being the first mover. The apparent boom-bust cycle in investment may be dampened to some extent in the EU, while conditions for putting in place ICT infrastructure are more favourable in some respects (e.g. lower hardware and software prices). The key policy issues would seem to be, first, why economic agents apparently had less of an incentive to invest in ICTs and, secondly, why the EU as a whole has a lower comparative advantage, compared to the United States, in the production of ICTs.

In conclusion, it is clear that higher growth in the United States and in a number of other countries in recent years has been driven in part by technical progress in ICTs, and the expectation remains that, following the current downturn, labour productivity growth will pick up in both the

United States and Europe to levels above the trend of recent decades. If the studies undertaken in 2000 and early 2001 suggested a trend increase in productivity growth of around one percentage point, then recent developments would imply a somewhat lower figure. On the other hand, periods of rapid change are associated with factor adjustment costs, which may mean that productivity growth in recent years has understated true technological progress ⁽¹⁾. Furthermore, macroeconomic analysis still does not provide clear evidence of TFP gains resulting from network externalities or improvements from the reorganisation of production. As far as the long-term effects of the new economy are concerned, the key issue for both the EU and the United States is whether and when these wider benefits — the subject of the following sections — will materialise.

⁽¹⁾ See Basu et al. (2001).

3. Business processes and the impact of ICTs on product markets

Because of its ‘general-purpose’ characteristics, information technology applications are characterised by enormous diversity. This raises the probability that the technology affects and gradually transforms those micro-economic processes through which economic growth is created. Such a transformation, in so far as it occurs, will come about as the result of changes arising both in the relatively narrow field of economic transactions, and more broadly through alterations in the wide range of activities involved in conducting business.

The first, narrow source of change originates from the effect of digitisation on the speed of economic transactions and the costs of executing them. Commonly referred to as the transactional impact of ICTs, or ‘*e-commerce*’, it is likely to change economic structures through its effect on market transparency and market power. But although it is potentially very powerful, the ramifications of e-commerce are bound to be overshadowed by another source of ICT impact captured in the term ‘*e-business*’. Based on the use of information technology for all manner of business activities, e-business should have an enhancing effect on economic efficiency. Starting with e-commerce, this section explores some of the mechanisms through which ICTs affect the functioning of product markets.

3.1. Electronic commerce and the impact on transparency and prices

The core of the economic impact of information technology springs from its capacity to break down information into bits that can be digitally processed, transmitted, and stored on computer networks. In the e-commerce domain, these features are expected to facilitate economic transactions on those interfaces where sellers and buyers meet. Specifically, as mentioned above, the impact should show up in improved **market transparency**, and either reinforcement or erosion of **market power**. Initially, the transparency effect is discussed

before returning to the market power issue in subsection 3.2.

Market transparency is the determining factor for how efficiently buyers can scan the market in search of deals that maximise value for money. On the supplier side, transparency is what shapes the effectiveness of product advertising. Because information technology thus yields visibility advantages on either side of the market, it shows all the signs of triggering an overhaul of many existing vehicles for market exchange.

In conventional markets, sellers rely on multiple channels for advertising products, including shop-windows, catalogues, and radio- and television-commercials. But whether buyers respond to this advertising depends on how accessible the information is and on the costs incurred by buyers in gathering and processing information. For buyers the rational strategy would seem to be to keep searching until the lowest price is found. However, buyers are generally constrained by **search costs**, and these must be weighed against any potential savings from continuing the search to find a cheaper price. Thus the multitude of off-line channels suggests that buyers face relatively high search costs.

On-line, that seems destined to change because of the critical capacity of e-commerce to automate the various steps in a transaction, from search and matching to execution and, for digital products, even delivery.

For suppliers, the creation of a common platform for pitching products on the Internet, potentially enables them to advertise products more transparently. Equally persuasive is the possibility for expanding the ‘reach’ of marketing efforts to customer segments, who before were constrained by geographical barriers, for instance. Extending the market in this fashion should, as a first-order effect, increase the number of suppliers that cater to individual buyer groups, thereby enhancing competition.

Likewise for buyers, provided their only search constraints are time and the bandwidth of the connection, the number of suppliers they are able to scan vastly exceeds what is possible in the physical world.

A particular source of cheaper market searches are price comparison-sites, or 'shopbots'. These are electronic search engines that allow users to scan markets for the best buy on a product. Another innovation due to ICT are electronic marketplaces. By creating a common market arena for suppliers and buyers, and by aggregating and, in the case of online auctions, matching supply and demand, electronic marketplaces heighten transparency and speed up economic exchange in the process.

But the final purchase does not even have to be made online for e-commerce to be effective. Since buyers have the freedom to conduct market searches on the Internet prior to purchase in a bricks-and-mortar outlet, the chances of finding the right match are markedly improved. The upshot of this is that for transactions initiated on the Internet, the total search costs are likely to be drastically reduced, provided transparency is not compromised by restrictions on trading.

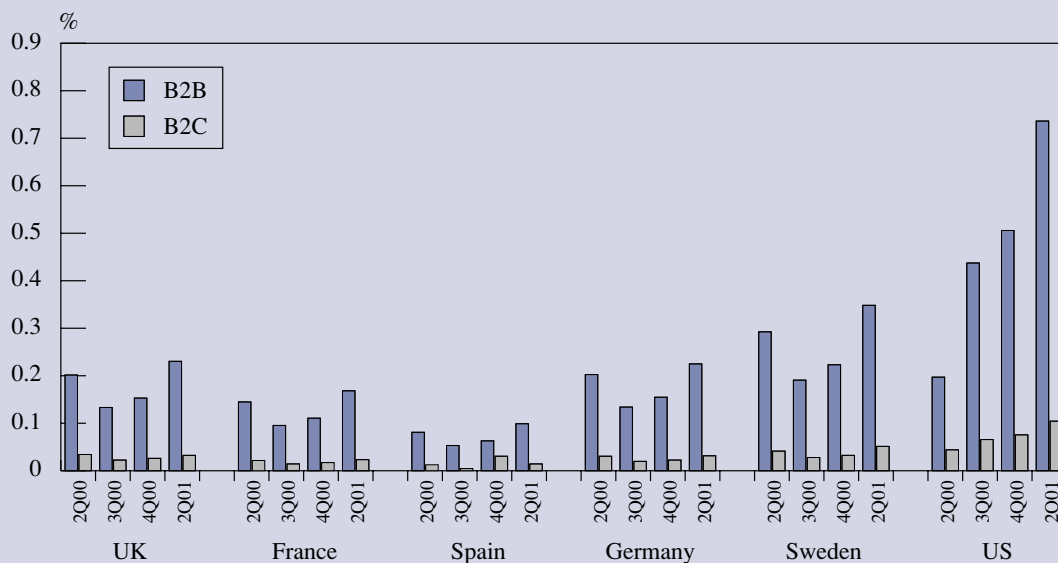
But as with other technologies that rely on interconnectivity, the impact of e-commerce depends on uptake. Benefits from the technology are a function of the total number of users, which explains why there are **network effects** in the diffusion process. As more users connect, utility increases exponentially because more connections can be made.

With more than 350 million users worldwide, the Internet has, however, long passed its critical mass. But far from assuring a full embrace of e-commerce, the diffusion of Internet access has pushed e-commerce forward at speeds resembling small steps more than the giant leap that many were predicting a few years ago. This pattern is particularly true for Europe (see Graph 4).

The upsurge in US e-commerce in the last two years has been somewhat like a steep increase whereas the same cannot be said about Europe. Nevertheless, it seems as though a positive trend in diffusion is discernible for Europe.

Business-to-business (B2B) e-commerce is by far the largest component, accounting for, on average, more than

Graph 4: E-commerce revenues, % of GDP



Source: Connectis.

Box 2: Empirical evidence on e-commerce price impact

Early work by Bailey (1998) found that the level of prices was higher on-line than off-line. But because the user community was very small at the time the data was collected, this result was widely believed to reflect the immaturity of the market. As expected, results on price levels have since been largely reversed. Brynjolfsson and Smith (1999) find on-line discounts of 9–16% for books and CDs compared to conventional markets. On aggregate, these savings are far from trivial given that books and CDs are among the most heavily traded products on-line.

Bailey (1998) and Brynjolfsson and Smith (1999) find that rather than eliminate price dispersion, on-line markets allow for systematic price spreads for books and CDs of up to 33 and 25% respectively. For airline tickets, Clemons, Hann, and Hitt (1998) find variations of up to 20% across on-line agents. Customer segmentation and price discrimination might offer clues as to the counter-intuitive findings in these studies.

One study (Goolsbee, 1998) finds that consumers in US states with high local sales taxes are more sensitive to prices on-line. Moreover, their purchasing frequency is higher than that of consumers in low-tax states. This would indicate that price responsiveness is stronger on-line compared to conventional shopping. More recent work by Lynch and Ariely (2000) corroborates this result. On-line price sensitivity is found to be higher for standard products, carried by many sellers. Conversely, and in line with

the argument that e-commerce leads to more search for quality, price sensitivity drops for non-common, unique foods.

Regarding menu costs, which are the costs incurred each time the price on a product is changed, Bailey (1998) finds that the frequency of price changes by Internet retailers is significantly higher than for their conventional counterparts. Brynjolfsson and Smith (1999) report further supporting evidence, citing price changes up to 100 times smaller in Internet retailers than in conventional markets.

In a Swedish study, Friberg et. al. (2000) find that prices on a basket of books and CDs, respectively, were 15% lower on-line compared to conventional stores. Including fixed transport costs reduces the price differential to 10% as transport costs generally diminish on-line cost savings. When buying only one item at a time, the gain from on-line purchasing completely vanishes. Consumers therefore must be prepared to buy several items at once to spread transport costs thinly. Interestingly, the price differential between on-line and off-line markets is not present with retailers who sell through both channels. This reflects the 'channel decision' that firms are facing — whether to sell products on-line and/or off-line, and how to apportion marketing efforts between the two. Fearing that they might cannibalise on their own profits, firms seem to opt for charging the same price in both markets.

80% of electronic sales across countries. The balance is made up of business-to-consumer (B2C). But even in countries where enthusiasm runs relatively high, for example the United States and Sweden, total e-commerce accounts for less than 2% of all sales. Thus, the full impact on prices and competition remains on the distant horizon.

True to form, the empirical findings cited in Box 2 indicate a rather protracted evolution of price effects. At first, the experimental nature of e-commerce and the paucity of user communities allow for some deviation from competitive market outcomes. But pressures on firms' pricing power have been mounting on the heels of a gradual spread of e-commerce practices and the multiplication of users.

Empirically, it seems that prices are beginning to budge under the influence of e-commerce although it far from

resembles the frenetic race to the bottom that some commentators had been predicting. Instead, the decline in price levels is modest, and when it comes to dispersion there seems to a good deal of persistence across many markets. One of the main factors accounting for these findings, is that, despite significant advances, on-line markets remain underdeveloped. Thus the coming of age of these should resolve several lingering price anomalies.

But shrouded in the data may also be the effects of business strategies that are designed to mitigate the competitive impact of e-commerce. For example, a high price which at first sight may look like a firm capitalising on a strong brand (or consumers' inexperience) may in reality be the result of unobserved bundling. Hence, it is important to consider the options conjured up by e-commerce for marketing and pricing products strategically.

3.2. Business response, product differentiation and market power

Chief among the relevant business strategies, probably, are product differentiation and price discrimination. But contrary to conventional wisdom, economic welfare does not necessarily suffer from the employment of these strategies.

Product differentiation is particularly suitable for on-line markets. Compared to the off-line world where sellers are normally constrained in what features they can attach to products, on-line markets impose fewer constraints on design and quality. This added flexibility explains why bundling and unbundling is spreading as a means of differentiating products that conventionally are sold as 'one-size-fits-all'. The use of 'versioning', especially, where the range of versions available for a composite product is increased, is growing in on-line marketing. By modifying products along various dimensions, for instance, convenience of use, speed of delivery, or after-sale-service, firms can tailor products to individual tastes. Examples of such customisation are personally-configured computers or made-to-measure clothing from specialised vendors.

Price discrimination, because of the fine-grained analysis of buyer behaviour that information technology permits, is the obvious extension to a differentiation strategy. Through compelling differentiation of products, firms may entice buyers to 'self-select' into separate segments, which are subsequently charged different prices based on their idiosyncratic willingness to pay. In welfare economic terms, this enables firms to extract a larger share of the consumer surplus.

Normally, product differentiation connotes anti-competitive behaviour, because it might create barriers to entry. If used deliberately to stifle competition, bundling or versioning is therefore a cause for concern. Economides (1993) legitimises this concern by showing how a strategy of 'pure bundling' (products available only as a package) restricts consumer choice and distorts market outcome. Evidently, if these types of differentiation were to spread widely, the impact on competition would be negative, irrespective of the gains from transparency.

But product differentiation should not be denounced without scrutiny. On the contrary, it can be welfare-enhancing if it satisfies consumers' demand for variety. In the same paper, Economides (1993) demonstrates how

a strategy of mixed bundling (products available both as a package and individually) indeed makes consumers better off. For price discrimination a similar word of caution is merited, because the traditional assumption of different customers being charged different prices for the same product seems to be losing its relevance. As De-Long and Summers (2001) recall, '(we) may come to see price discrimination as an essential mechanism for attaining economic efficiency and social welfare'.

Going back to the empirical evidence on prices, it cannot be excluded therefore that some of the results are driven by firms differentiating products. Analogous to the challenge of demarcating product markets, if the value of peripheral features is not disentangled from the core product, as hard as it may be, it is impossible to avoid biases in data on prices.

Thus, overall, the message is that more work is needed before conclusions may be drawn about the market impact of e-commerce and its implications for welfare. As work progresses in this direction, it is important to keep in mind that product differentiation may be compatible with market efficiency. In that respect, the Lynch and Ariely (2000) result for non-standardised goods is consistent with the view that consumers are benefiting from greater choice and lower cost of search for quality information.

3.3. E-business, reorganisation and productivity

Without doubt e-commerce will have a tangible impact on market functioning. But the economic ramifications are likely to be dwarfed by e-business — or what amounts to a large-scale automation of business processes. To see why this is, it is worth recalling that e-commerce is limited to the interfaces for buying and selling which account for only a fraction of business activity. In contrast, the overwhelming majority of the business processes that value chains are configured around involve no monetary transactions. Moreover, many of these processes are readily adaptable to information technology. Because of this amenability, it is reasonable to expect the pervasiveness of ICTs in the value chain to affect **economic efficiency**. Three main properties account for this.

First, **information handling** can be made more efficient by using information technology to build data systems

that pool information from across the supply chain and make it readily available to everyone connected to the network. Second, **resource allocation** can be improved by seamlessly exchanging information about production, for instance, between front-office and back-office units. Comprehensive information systems allow managers to make more informed decisions about operations and to execute them faster. Third, **employee interaction** can take on more flexible forms as staff units that are physically separated from each other can work more flexibly together through the sharing of databases and by communicating on a common electronic network.

Internal to individual firms, the automation of production processes enhances efficiency. This is due partly to the introduction of stand-alone computers, which increases throughput at a particular point in the production line. But the richest source of efficiency gains is the 'interconnection' across computer-mediated networks. By electronically linking internal business processes that span most or all of the production chain, firms can increase output, exploit resources more efficiently, and enhance innovation.

It seems evident that the gains on efficiency and speed will be magnified if external partners are integrated with the systems. This opens a way of taking advantage of the fact that firms rely on other firms for sourcing inputs or selling output. In most industries, such business interaction occurs at high frequency in strategically placed nodes across the value chain. In contrast, the netting of claims in e-commerce transactions is less frequent.

Since every e-business interaction involves transactions costs, each node in the value chain represents a potential source of value added if costs can be reduced. Therefore, the closer suppliers and customers are associated to each other, the easier it should be to tap this potential. In addition, because firms remain separate, they are not forced to sacrifice the comparative advantage that made them enter into the transaction initially ⁽¹⁾.

Consistent with the above, the external impact of ICTs should be felt both on the supply and demand side of the firm. On the supply side, software applications can achieve a degree of flexibility that is comparable to what a firm enjoys on its internal operations. Production orders

can be fed direct to the supplier either over proprietary links or via electronic marketplaces. On-line collaboration on product development is also made possible. On the demand side, firms can use ICTs to upgrade customer relationship management. By monitoring customers and through various feedback mechanisms, it is possible to better track consumption patterns. Moreover, ICTs make distribution services scalable too, even when distribution is outsourced. Hence, 'time-to-market' performance should improve on the back of supplier distribution services.

However, the adjustment costs that firms have to bear in order to adapt to a changed business environment will weigh on markets. Because the impact of new technologies is sometimes rather uncertain, visibility about future developments is diminished, which might have a delaying effect on investment. Alternatively, it leads to investments in inferior technology, drawing out the adjustment process ⁽²⁾.

A significant part of adjustment costs is related to turning ICT systems into value-adding business tools. This is not done by simply plugging in fancy, new information systems. Employees must be motivated to actively engage in using the systems before it is possible to reap any efficiency gains. Most of the time, however, this requires that firms abandon old, retentive work practices and replace them by organisational structures that allow the sharing and exchange of information across the firm. This suggests that there is an integral connection, a complementarity, between ICTs and workplace reorganisation.

3.4. The complementarity of workplace reorganisation

In a revealing analysis, Brynjolfsson and Hitt (2000) assert that 'a significant component of the value of information technology is its ability to enable complementary organizational investments such as business processes and work practices'. Indeed, firm-level productivity gains due to ICTs may only begin to materialise several years

⁽¹⁾ The integration that ICTs deliver across external nodes may, of course, lead to mergers if transactions costs become low enough that separation is no longer economically optimal.

⁽²⁾ For example, in the heyday of the dot.com era, old-economy firms were being criticised because, in the eyes of many analysts, they were not embracing the new reality of e-business. Now, market sentiments seem instead to favour the same old-economy firms that enjoy brand recognition and consumer confidence, but who are gradually complementing their off-line presence with e-business activities.

after ICT capital investment, once organisational changes have taken place.

A large body of case studies and surveys of firms provide evidence of the impact of ICTs on work organisation. Bresnahan et al. (2001) find that greater use of information technology is associated with increased delegation of authority to individuals and teams and greater levels of skill and education in the workforce. Lindbeck and Snower (2000) highlight a shift from specialisation by tasks towards ‘multitasking’, featuring job rotation, integration of tasks and learning across tasks, due in part to advances in ICTs.

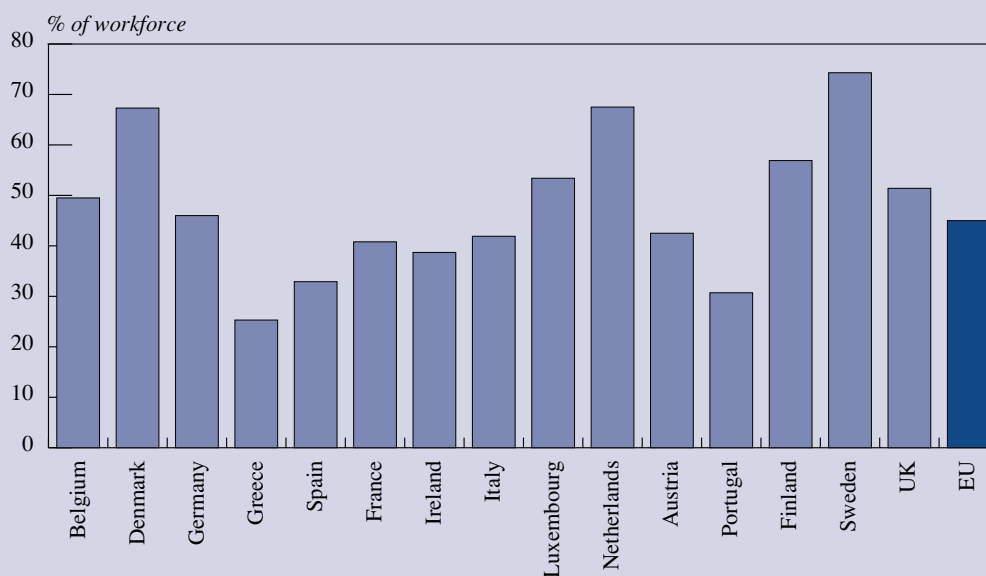
The creation of cross-functional teams is another innovation among organisation-conscious firms. Often, team-members are recruited for a particular project requiring special skills. When the project is completed, members move on to new teams. A third strand of organisational change relates to remuneration, which explains the profusion of salary supplements such as share ownership, stock options, and profit-sharing schemes.

It is important to recognise that investments in workplace reorganisation and other complementary assets far

exceed what firms pay out to acquire ICT equipment and software. For example, Brynjolffson and Hitt (2000) report that average spending on computer hardware accounts for less than 5% of start-up costs for a typical new firm. Significantly though, the propensity for ICT investment to be accompanied by workplace reorganisation is unmistakable. According to OECD work, the incidence of ICT-use is higher in firms that implement new work practices than in firms that do not. Further, recent data reveals how ICTs continue to diffuse rapidly in the workplace, albeit at different rates across Member States. From Graph 5 it is plain to see how the Netherlands and Scandinavia rank highest in terms of computer incidence in the workplace. Close to 70% of the workforce in these countries use a computer at work. Elsewhere, computers are used more sparingly, keeping the EU average below 50%.

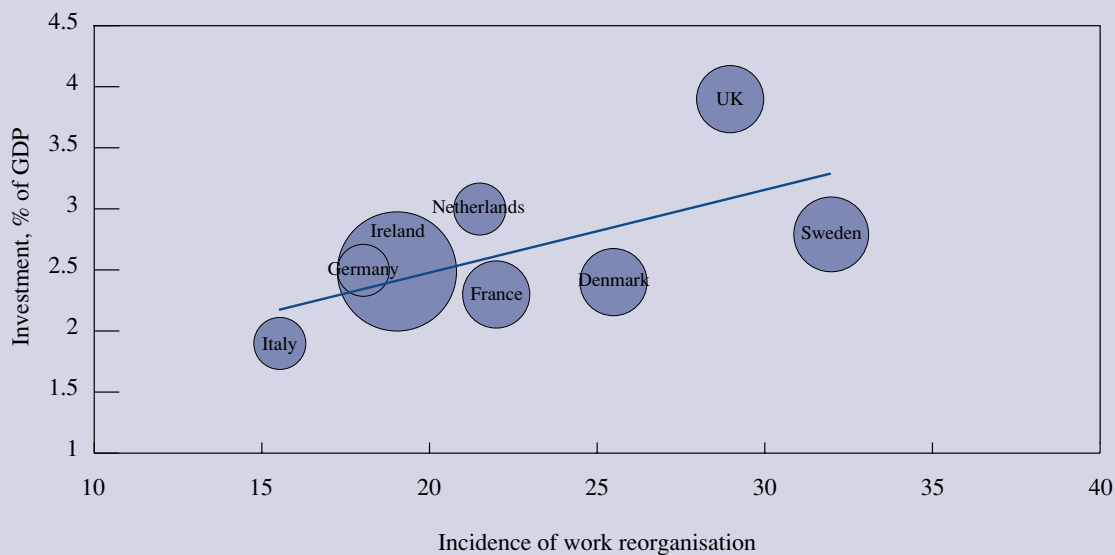
Because it still requires a computer to be connected to the network, a precondition for e-business gains to materialise is that enough workers have one. It follows that high-penetration Member States probably represent more fertile ground for reaping gains from ICTs than low-penetration countries. Indeed, Graph 6 suggests that a positive correlation exists between business investment in information technology and work reorganisation.

Graph 5: Computer use in workplace, 2000



Source: Commission services.

Graph 6: ICT investment, work reorganisation and labour productivity



Source: Commission services and OECD, Daveri (2001).

The size of each bubble indicates average labour productivity growth, 1996–2000. Work reorganisation and ICT investment refer to 1996. The trend line indicates the correlation between work reorganization and ICT investment.

Moreover, the graph indicates that this virtuous cycle raises productivity levels overall. With Ireland as a notable outlier, the joining of ICTs and work reorganisation seems an essential building block for achieving stronger productivity growth. Because growth opportunities are available to existing as well as new firms, pressure from new entries will cause a shakeout in the market. The mechanism works by making it increasingly difficult for less-efficient firms to survive in the market as firms become more skilled and as competitive pressures build up. Gradually, low-efficiency firms are weeded out, leaving in the market only high-efficiency firms. In the aggregate, productivity starts to climb as the selection process propagates throughout the economy.

Interestingly, the source of efficiency gains varies across industries. According to work done by the OECD, new

firms account for a considerable portion of productivity gains in ICT-related industries, whereas, in more mature industries, the strongest contribution comes from restructuring ‘within’ existing firms and the exit of inefficient firms.

But initial competitive conditions are critical for determining when the virtuous competition-technology cycle starts, and how fast it advances. Hence, by virtue of its effect on take-up, competition encourages diffusion and, as a corollary, has a positive influence on productivity. This concurs with the view proposed in Baily (2001). He reports ongoing work to suggest that inadequate competition partly explains the relatively modest productivity gains in Europe in the second half of the 1990s compared to the United States.

The view that competition remains restrained in Europe resonates also with official European positions. It corresponds, for example, to the findings in the European Commission (1999) that mark-ups are generally higher in European markets compared to the United States, especially in large Member States.

Armed with a vast array of analytical evidence, Member States therefore have had sufficient grounds for launching their combat on market inefficiencies. In response to the challenge, which has been common to all Member States, albeit at varying intensity, policymakers have put together a long list of initiatives. This list encompasses major policy accomplishments such as the single market programme, EMU, and ongoing structural reforms, which have proven rather effective at knitting markets closer together. Nevertheless, there is still room for improvement. This is where added transparency from e-commerce and heightened efficiency from e-business might fit in as possible carriers of further market integration and stronger competition.

3.5. E-business as a facilitator of market integration in Europe

At around 15%, price dispersion in the EU remains high. Apart from differences in standards living across Member States, the main culprit is persistent segmentation in a range of markets. But how each of these markets will respond to e-commerce and e-business depends, essentially, on the characteristics of the industry supplying the market and how well it lends itself to digital integration.

European Commission (2001a) reports considerable variation in the way industries are assimilating e-commerce and e-business practices. Basic and intermediate industries are expected to reap only modest gains. In contrast, the potential for integration and networking seems under-exploited in manufacturing industries. The impact on service industries is probably more heterogeneous than in manufacturing even, while transport and logistics, arguably, are among the most amenable industries. With a fairly simple business model — receiving and executing delivery orders — these industries adapt easily to an on-line environment.

For purposes of predicting the impact on European market integration, it is useful to separate the likely first-order effects from effects of a second-order nature. As described above, e-business and e-commerce should have palpable first-order effects on market functioning. The spread of ICT-supported business processes is expected, in most cases, to augment transparency, reduce transactions costs, and strengthen competition. Based on the resulting cost savings it should be feasible to derive temporary rises in productivity.

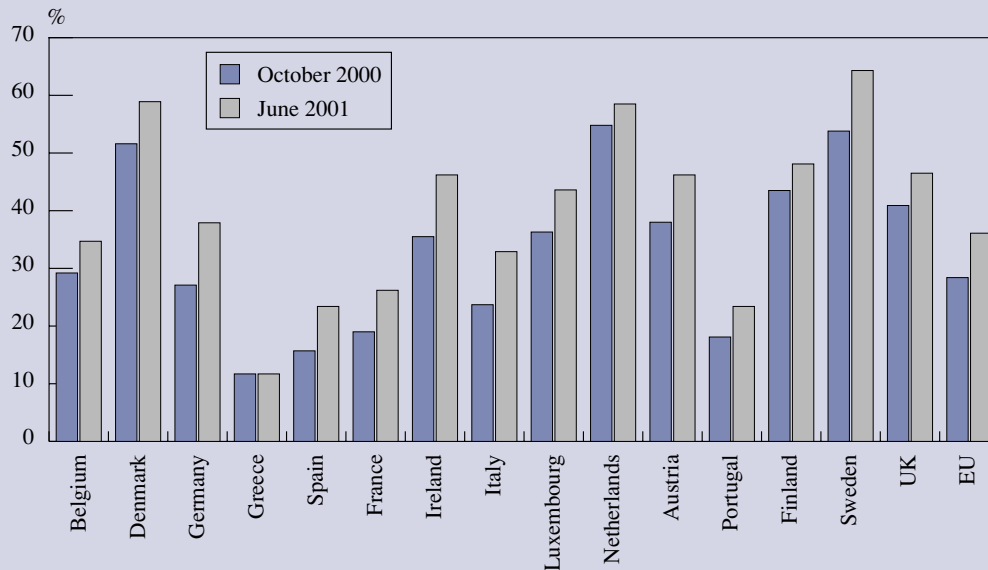
In the longer term, the structural and behavioural adjustments by firms and consumers, and the attendant policy responses, raise the probability of more permanent changes to economic efficiency. In theory, it is possible to estimate the aggregate impact of these second-order effects. But to do it, would require very detailed knowledge about complex dynamics for structural developments, something that is not readily available. Thus although the macroeconomic findings cited in subsection 3.2. embody microeconomic forces on the restructuring of firms and markets it is difficult analytically to reconcile the two.

For forecasting future developments, the preferred analytical approach therefore confines the impact to first-order effects. In this context, it is relatively easy to handle the narrow transactional effect of e-commerce, because it can be divided into savings on procurement costs and reductions in the share of markets where products are traded conventionally. In contrast, the largely indirect nature of e-business effects generally means that the part of it, which is not subsumed into the cost-savings from e-commerce, remains unaccounted for.

In a comprehensive and oft-cited analysis, Brookes and Wahhaj (2000) estimate the effect of B2B e-commerce on potential GDP in the United States, France, Germany, UK, and Japan. The study suggests that the immediate impact on prices, other things equal, would be close to a 4% decline in inflation over the period, equivalent to a 0.4% decline in annual inflation. Allowing for second-round effects on industry restructuring and monetary policy adjustment, the projections for Europe show potential GDP rising by around 0.25% per year in the course of a decade. However, these second-efforts reduce the overall impact on inflation. Unibank (2000), reporting similar estimates for Denmark, estimate that the diffusion of e-commerce might trigger up to a 0.5 of a percentage point decrease in annual inflation over a decade.

Taken at face value, the estimates on national economies suggest that price levels in Europe could fall substantially on the back of digitisation. In a study launched by the European Commission, Cambridge Econometrics (2001) provide a rough prediction on this price impact and the effects on output and employment associated with it. Using an econometric model for the whole of the EU, the study shows a dampening effect on prices from B2B and B2C separately. By 2005, consumer prices should be 0.3% lower than they would otherwise be on account of lower industry costs from B2B. By comparison, lower retail costs due to B2C are forecast to produce

Graph 7: Internet access in households



Source: Eurobarometer.

a decline in consumer prices of about 0.2%. Moreover, both B2B and B2C result in increases in EU GDP of about 0.1% above reference. However, the impact on employment is different between the two effects. Lower intermediate prices from B2B cause real wage costs to rise relative to other inputs resulting in lower employment. Conversely, the number of job increases from B2C owing to the stimulation to consumer demand.

Whether the future conforms to these projections is largely a question of how eagerly firms and consumers embrace the new activities involved. Notably, the recent downturn in technology markets, which has strongly affected the economy, has not been accounted for in the above analyses. Still, future ICT developments in Europe depend on creating a common mindset toward e-commerce and e-business.

3.6. Obstacles to the further development of e-commerce and e-business in Europe

Encouragingly, the community of Internet users is still growing in most Member States as is shown in Graph 7.

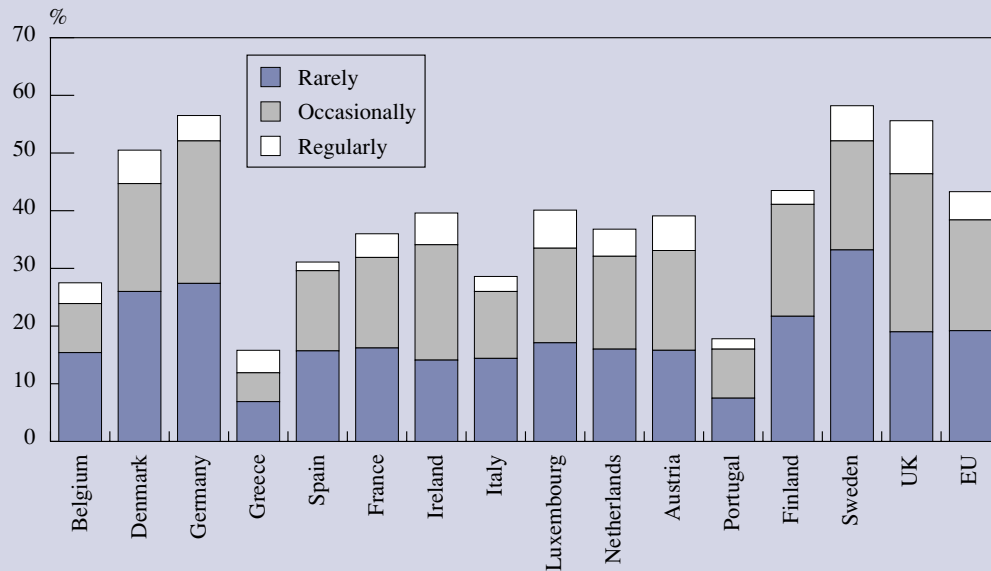
However, the mode of diffusion varies greatly. As with most other measures of technology penetration, the Nordic countries, the Netherlands and the UK are leading the pack. Germany, France, Ireland, and the remaining Benelux countries all enjoy intermediate penetration, while Southern Member States exhibit the least diffusion.

Combined with the data on computer access (Graph 5), the numbers on household Internet access show a diffusion process, which leaves something to be desired. But even if diffusion was greater in Europe, indications are that the commercial gains would not be fully exploited. This is so, because as Graph 8 reveals, even Internet users have reservations about e-commerce. Less than half of European users have bought anything on the Internet; and of these only a tiny fraction do it regularly. Until such reservations are assuaged, it is hard to imagine a boom in e-commerce and e-business in Europe.

Similar reservations are relevant for most aspects of ICT development in Europe. E-commerce and e-business push market integration forward only if they succeed in unlocking the network effects embedded in the technology. For this to happen, firms, households, and

Graph 8: Internet users shopping online

February 2001



Source: Eurobarometer.

governments must be prepared collectively to assume the costs of investing in the technology. Referring to this type of scenario, Bresnahan (2001) talks about the 'co-invention costs' of implementing and improving ICTs. Users are supposed to make investments more or less simultaneously, but the investment process remains

largely uncoordinated across firms and individuals. This indicates that 'co-invention costs' may be the true constraints on ICT diffusion. Thus, recent indications that for the first time in years Europe invests and spends more on ICT than the United States bodes well for the regions' endeavours to catch up with the US technology lead.

4. Labour markets

Earlier sections have covered the finding that complementary investments in work reorganisation or human capital may be a necessary condition for realising the potential productivity benefits of ICTs. Some observers have suggested that a lack of labour market flexibility in Europe and insufficient human capital may be behind the seemingly delayed reaction to the information revolution. This section examines these issues after first reviewing the potential impact of ICTs on overall employment and unemployment.

4.1. Technology, unemployment and employment

If technological progress is modelled as a productivity shock, then standard economic theory suggests a neutral effect on unemployment in the long run ⁽¹⁾. It is not a miracle cure for unemployment — even if technical breakthroughs lead to an economic boom, wages should eventually adjust to keep unemployment at around its structural level. Nor does the information economy spell the ‘end of work’ — some people may lose their jobs because of the introduction of new technologies but many other jobs will be created. With sound macroeconomic management, human resources are reallocated to more productive uses ⁽²⁾.

A major caveat is that in practice the effects of recent technological change, in particular computerisation, are not homogeneous. They affect different workers in different ways and, in particular, developments in recent

decades seem to have exacerbated labour market inequalities by increasing demand for higher-skilled workers while reducing demand for lower-skilled workers ⁽³⁾. In the presence of institutions such as unemployment and social assistance benefits, unionised wage bargaining and statutory minimum wages, skill-biased technical change can raise structural unemployment. It is argued that this is exactly what has happened in Europe ⁽⁴⁾.

The impact on employment is also ambiguous in the basic framework. A rise in productivity increases wages, which persuades some people to join the labour market or to work more, but allows others to leave or to work fewer hours. Again, in assessing the possible employment impact, it is important to take account of the impact of technical changes on different groups of (potential) workers, and the nature of the job opportunities created or destroyed. Skill-biased technical change could push some workers into inactivity or early retirement. Older working-age people may be vulnerable in areas where generic ICT skills are sought (although it is argued below that other generic skills are just as important).

But ICTs may also facilitate more flexible work organisation, allowing inactive people to join or return to the workforce, including some from groups typically most under-represented. In particular, women could stand to benefit most from a move towards ‘multitasking’ work environments and conditions (including telework) that allow better reconciliation of work and family life. In addition, empirical evidence tends to suggest that the wage elasticity of labour supply for married women is positive ⁽⁵⁾. Thus, higher productivity (leading to higher wages), together with improvements in the organisation

⁽¹⁾ See e.g. Layard et al. (1991).

⁽²⁾ There may be caveats to the standard view. For example, if higher productivity growth results in wage increases above workers’ aspirations, there may be reduced pressure on unit labour costs until workers’ aspirations catch up (Baily, 2001, p. 26). This could lead to a temporary improvement in the unemployment-inflation trade-off.

⁽³⁾ See e.g. Autor et al. (1998), Machin and Van Reenen (1998).

⁽⁴⁾ See Roeger and Wijkander (1999).

⁽⁵⁾ See e.g. Blundell and MaCurdy (1999).

Box 3: Employment protection and wage flexibility

Theoretical labour market search models generally reflect the intuition that employment protection is expected to reduce both job creation and job destruction (Garibaldi et al., 1997). However, well-designed, flexible employment protection can play a positive role in insuring workers against the risk of income loss (conventional insurance being unavailable because of moral hazard). This need not adversely affect job creation, since risk-averse employees prefer to pay a premium in the form of a wage reduction in return for a period of notice and/or severance payments upon termination of employment (Pissarides, 2001). But high and inflexible levels of employment protection, including various administrative procedures, legal obstacles and additional costs for collective redundancies, unambiguously reduce labour turnover. In addition, the insurance function is partly redundant in countries with adequate unemployment insurance.

A recent review of empirical evidence found that, even if there is no clear effect on overall employment and unemployment, stricter employment protection tends to reduce labour turnover (OECD, 1999). The available data do not reveal higher rates of gross job turnover in the supposedly more flexible labour markets of North America (Burda and Wyplosz, 1994; OECD, 1996). There are, however, two main differences. First, flows into and out of unemployment tend to be greater in the United States and Canada. In Europe, more or less as many jobs seem to be created and destroyed without people passing through a spell of unemployment. Secondly, movement of people between ongoing jobs appears to be much higher in the United States and Canada. This seems to be due partly to higher numbers of people moving between short-term jobs and brief periods of unemployment in North America, whereas in many EU Member States both job tenure and periods of unemployment tend to be longer (OECD, 1996). But it does not necessarily follow that European labour markets manage to avoid 'precarity' at no cost in terms of dynamism.

First, the role of movements between ongoing jobs in facilitating the adoption of new technologies should not be underestimated. Hammermesh et al. (1996), in a study of the Dutch labour market, found that almost one quarter of firms simultaneously hired and fired in the same year, and interpret this as evidence of the significance of failed job matches in labour turnover. Job protection legislation specified in terms of traditional occupational categories may allow resistance to changes in work organisation, while at the same time failing to offer any protection to the growing number of part-time and contract workers (Snower, 1999). Focusing only on firms that remain in business, Garibaldi et al. (1997) do find a clear negative correlation between job reallocation and the strictness of employment protection legislation.

Secondly, there may be other factors in Europe that lead to inefficient job turnover, one suggestion in particular being the role of wage-setting institutions (Bertola and Rogerson, 1997). Wages in most of the EU are generally held to be less flexible than in North America and, to some extent, the UK in two ways. First, they have responded slowly to negative productivity shocks in the past, leading to higher unemployment over the medium term ⁽¹⁾. Secondly, the overall wage distribution is more compressed, making it harder to employ relatively low-productivity workers. Both of these factors tend to make unemployment, rather than real wages, more likely to serve as the variable of adjustment when industries, firms or particular skills and occupations are subject to relative productivity shocks.

It is not clear whether greater wage flexibility could have improved ICT take-up in Europe ⁽²⁾. The experience of some Member States, notably Finland and Sweden, suggests that a wide earnings distribution cannot be a necessary condition. Indeed, Roeger (2001) points out that a compressed wage distribution should encourage firms to invest in unskilled labour-saving technologies. Baily (2001) recalls the finding that 81% of job growth in the United States between 1993 and 1999 was in categories paying above-median wages. Indeed, in the EU as well, it has been noted that 60% of the 10 million jobs created between 1995 and 2000 were in sectors considered to be either high-tech or requiring highly-educated workers (European Commission, 2001b). Some infer from this that the knowledge-based economy can bring both productivity growth and employment growth without a more unequal distribution of earnings.

But lower-productivity occupations are also important for the take-up of ICTs. The US-Europe comparison is misleading because of the very different starting positions — the obverse of high-skill job growth in Europe is a continued failure to create jobs for lower-skilled people, whereas this is not true of the United States. Secondly, high-wage net job creation in the United States does not imply that the labour market for below-median wage jobs was any the less dynamic in terms of gross flows. Human capital across the whole skill and productivity spectrum plays a role in sectors that produce ICTs or use them intensively (see subsection 4.3.).

⁽¹⁾ See, for example, OECD (2000). The increase in unemployment is in principle temporary, but may be prolonged in the presence of hysteresis effects.

⁽²⁾ Indeed, if wages react slowly to positive productivity shocks as well as negative ones, then it could be argued that any temporary reduction in unemployment will be longer-lasting (see subsection 4.1. above).

of work, could be key in terms of meeting EU objectives for female employment, though further research is necessary to quantify the potential impact.

There are grounds for cautious optimism that the spread of ICTs, if the risks are well-managed and the benefits are exploited, could have a moderate positive effect on employment in the EU. However, technical progress alone will be far from sufficient to meet the EU's employment objectives.

4.2. The role of labour market flexibility in economic adjustment and adoption of new technologies

Several commentators have suggested that a lack of flexibility in product and labour markets could explain why productivity gains from the use of ICTs have not materialised in Europe ⁽¹⁾. In broad terms, flexibility refers to the adjustment capacity of employment levels, wages and working practices. For various economic and social reasons, labour market flexibility is restricted by means of institutionalised bargaining over pay and working conditions, statutory employment contracts and other government regulations and policies, for example on maximum working time or minimum wages. At the same time, flexibility is promoted through the establishment of norms, often through collective bargaining, in areas such as flexitime, telework and work organisation more generally.

Flexibility thus defined is relevant to the adoption of ICTs in two ways. First, there is the general point that in any period of rapid technical change, a relatively high degree of creative destruction is to be expected. Secondly, as discussed in Section 3, the microeconomic evidence suggests that complementary investments in work reorganisation may be necessary to realise the full productivity potential of investments in ICTs.

Box 3 looks at employment protection legislation and wages, two of the most commonly discussed elements of flexibility. Other important aspects include performance-related pay, working time and other forms of modernised work organisation. Lindbeck and Snower (2000) discuss

a general shift, driven partly by technological developments, towards more 'holistic' work organisation involving job rotation, integration of tasks and learning across tasks. These developments have implications for the effectiveness of labour market policies and institutions ⁽²⁾. For example, if jobs become less uniform, then the principle of 'equal pay for equal work' will be harder to apply, making centralised wage-setting less efficient.

Collective bargaining may play a crucial role. On one hand, bargaining institutions need to take account of the changing nature of work. On the other hand, well-functioning institutions are likely to enhance the effectiveness of work organisation. Indeed, there is some evidence that new work practices are more prevalent among unionised firms ⁽³⁾. The countries that have been most successful so far in exploiting ICTs fall into two groups. In Ireland, the UK and the United States, unionisation and coverage of collective bargaining is relatively low, and bargaining tends to be decentralised at company level. The experience of the Scandinavian countries and Finland, however, suggests that this is not the only model (see Box 4).

In sum, there are good reasons to believe that labour market flexibility in its various forms is important for the take-up of ICTs and the realisation of productivity gains. Graphs 9 and 10 suggest a clear correlation between various measures of flexibility and the contribution of ICTs to growth. Of course, this does not prove a causal relationship, which would be difficult to isolate empirically not least because of the manner in which different policies and institutions interact. In any case, the implications for policy are not straightforward. On the one hand, ICT take-up is hardly the sole objective of labour market policy and, on the other, different combinations of policies may be appropriate in different countries. Nevertheless, there is a clear case for a careful examination of labour market policies and institutions with a view to ensuring that they are not unduly restricting the adaptability of the economy to technical progress.

Furthermore, as noted in Section 2, job creation in sectors that produce ICTs or use them intensively has been disappointing in Europe compared to the United States. This could be partly due to a shortage of human capital,

⁽¹⁾ See, for example, van Ark (2001), Bailly (2001), ECB (2001), Greenspan (1999), IMF (2001).

⁽²⁾ See Snower (1999).

⁽³⁾ See Arnal et al. (2001).

Box 4: Bargaining and flexibility in the Nordic countries

High levels of union membership and a long tradition of cooperation between the social partners and the government are the norm in all of the Nordic countries. As elsewhere, unionisation tends to be lower in the ICT sector (especially software and IT services, as opposed to the more traditional hardware and telecoms segments). Nevertheless, the unions in these countries have taken the lead in developing new recruitment methods aimed at attracting ICT workers, particularly young professionals. In addition, there are special sectoral bargaining agreements for IT services in Finland and protocols on ICT work in other sector-wide agreements in Denmark. In Sweden, specific agreements cover parts of the ICT sector, notably white collar employees of the IT and telecoms employers' association (ITA) (EIRO, 2001).

There is some evidence to suggest that the 'Nordic model' of flexible work organisation is associated with higher productivity, employment and working conditions. The Swedish Business Development Agency (NUTEK, 1999) drew this conclusion from a comparative study of firms in Denmark, Finland, Sweden and Norway. Front-runners in applying five key features of flexibility (delegated responsibility, organised human capital development, use of teams, organised job rotation and compensation based on results or quality) performed better on average.

The same research shows that, according to the enterprises themselves, trade unions had on balance made a positive contribution and were felt to have hindered organisational development only in a very small minority of cases (see table below).

Proportion of workplaces where attitudes of unions or shop stewards have influenced organisational development

	Number of workers	Positive / furthered		Negative / hampered		Not at all, not relevant or don't know
		much	little	much	little	
Denmark	50 +	12.5	25.4	3.5	6.2	52.4
	10 +	7.3	17.2	1.9	3.8	69.9
Finland	50 +		29		21	50
	10 +		23		22	55
Sweden	50 +	32.3	36.7	6.4	7.3	17.1

Source: NUTEK (1999).

although as noted below there is no indication that skill shortages are more severe than they have been in the United States. The key difference may be Europe's failure to employ a substantial share of its human capital.

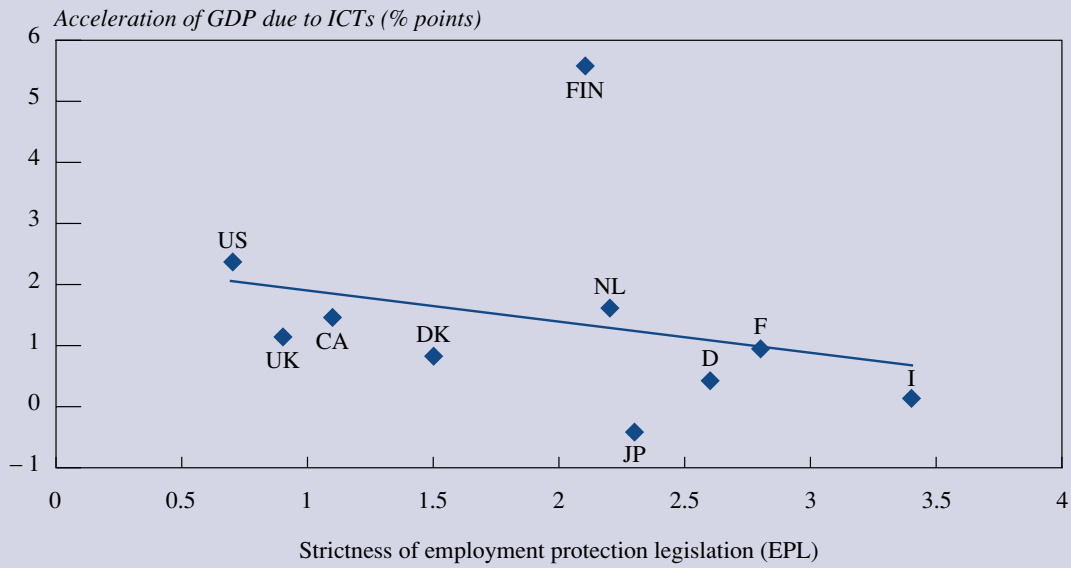
4.3. Human capital

It seems almost self-evident that the move towards a knowledge-based economy demands investment in human, as well as physical, capital. But, as Capelli (2000) puts it, arguments about the need for more skilled and educated workers often seem to be 'of the 'chicken soup' variety: it couldn't hurt'.

Much of the public debate has focused on the perceived shortage of skilled ICT workers. At EU-level, this has been particularly influenced by the reports from International Data Corporation for Microsoft (IDC, 2000) and for the European Information Technology Observatory (EITO, 2001) ⁽¹⁾. IDC do not make the full methodology used to generate these figures publicly available but,

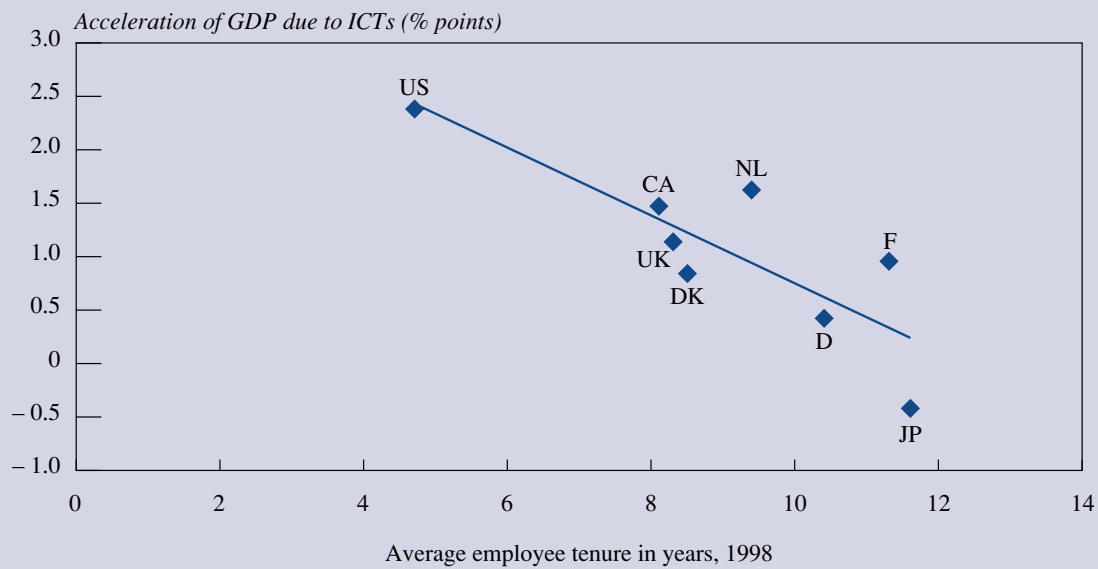
⁽¹⁾ IDC (2000) forecasts a shortage of 1.7 million ICT professionals by 2003, unless urgent action is taken. EITO (2001) includes e-business and call centre professionals in addition, and concludes that there was already a shortage of 1.9 million in 1999, forecast to rise to 3.8 million by 2003.

Graph 9: Employment protection legislation strictness v growth contribution of ICTs



NB: EPL strictness is a subjective index designed by the OECD.
 Source: van Ark (2001) and OECD (1999).

Graph 10: Average job tenure and the growth contribution of ICTs



Source: van Ark (2001) and OECD (2001).

Box 5: ICT vacancies in selected EU Member States

Evidence from employer surveys in the few Member States where these are conducted provides information on the scale of skill shortages in ICTs compared to other sectors and occupations. The figures from the Netherlands and Ireland (see tables below) show that, while there have been genuine shortages of specialist ICT skills in recent

years, the situation seemed if anything to be easing in 2000. ICT occupations are not the only ones where shortages have emerged. Moreover, ICT specialists make up a small proportion of total employment so that, in absolute terms, the number of vacancies is dwarfed by that in other sectors and occupations.

Employment and vacancies in the Netherlands by sector

(1998–2001)

	First quarter vacancies (000s)				Employment (000s) 2000	Vacancy ratio (%) 2000
	1998	1999	2000	2001		
Total	122.3	145.5	200.8	200.6	8 122	2.5
Mining and quarrying	0.3	0.1	0.2	0.1	283	0.1
Manufacturing	17.9	20.2	28.9	24.5	1 088	2.7
Energy and water supply	0	0.6	0.5	0.7	37	1.4
Construction	8.4	12.4	21.3	19.8	499	4.3
Trade, hotels, restaurants and repair	28.5	37.4	45.9	44.6	1 663	2.8
Transport, storage, communication	8.8	11.3	11.3	11.1	455	2.5
Financial and business activities	35.9	37.5	60.5	62.6	1 589	3.8
— Computer services etc. (SIC 72)	9.4	8	10.6	10.7	121	8.8

Source: CBS labour accounts and vacancy survey.

Vacancies by occupational grade in Ireland

(1998–99/1999–2000)

	Employment 1998/99	Vacancies as a share of employment (%)		Share of total vacancies (%) 1999/00
		1998/99	1999/00	
Managers/proprietors	142 600	2	2	3.6
Engineering professionals	19 500	11	7	2.1
Science professionals	7 700	7	4	0.5
Computer professionals	8 700	15	9	1.1
Other professionals	40 700	3	9	5.1
Engineering technicians	18 600	11	15	4.4
Science technicians	3 900	2	2	0.2
Computer technical staff associate professional level	9 400	14	10	1.2
Other associate professional	13 300	1	2	0.5
Clerical and secretarial	158 600	6	6	13.1
Skilled maintenance and skilled production	119 200	9	11	18.7
Production operatives	181 500	5	4	10.6
Transport and communications	82 900	5	5	5.7
Sales	138 200	7	5	9.4
Security	5 300	11	4	0.3
Personal service	104 100	8	11	15.9
Labourers	86 800	5	6	7.5
Total	1 141 000	6	6	100.0

NB: Vacancies are defined here as 'unmet demand for labour where the positions are currently unoccupied, available immediately and where the company is actually searching for workers'.

Source: ESRI (2000, 2001).

(Continued on the next page)

Box 5 (continued)

Falk's careful analysis of unfilled vacancies in Germany (table below) suggests that the figures produced by IDC may overstate the problem by a factor of four. Falk takes account of labour turnover partly by counting only vacan-

cies that remained unfilled during the six-month survey period and partly by adjusting the figures to exclude rotation of workers between different firms.

Unfilled ICT vacancies in various sectors

(Germany 2000)

	Number of ICT workers (000s)		Unfilled vacancies (000s)	Unfilled vacancy rate	
	1999	2000		total (%) — first half of 2000 —	adjusted (%) ⁽¹⁾
Manufacturing (excl. ICT industries)	150	160	13	7.9	6.0
Energy, water, construction (*)	35	37	2	7.4	5.6
Trade and transport	148	145	8	5.7	4.4
Banking and insurance	80	81	11	13.1	9.6
ICT sector (OECD definition)	390	444	34	7.6	6.3
Business services	171	188	16	8.5	7.6
Public sector (health, education, etc.) (*)	309	330	10	3.0	2.6
Germany total⁽²⁾	1 283	1 384	93	6.7	5.4

(*) Estimated. Including firms with four and less employees. The number of ICT workers in firms with four or less employees is estimated using information on the share of core ICT-employees across firm size as well as industries based on German Labour Force Survey. The unfilled vacancy rate in firms with four or less employees is assumed to be equal to the neighbouring size class (five to nine employees).

⁽¹⁾ Excluding replacement vacancies.

⁽²⁾ Catering and restaurants are included but not listed.

Source: Falk (2001).

from the information that is provided, it appears that there are several problems ⁽¹⁾.

A number of other studies carried out at national level mainly by ministries or government agencies conclude that shortages are much smaller ⁽²⁾. Box 5 provides some data on job vacancies across different sectors and occupations in selected EU Member States. The recent downturn in the ICT sector and the consequent massive redundancies announced mean that skill shortages in the

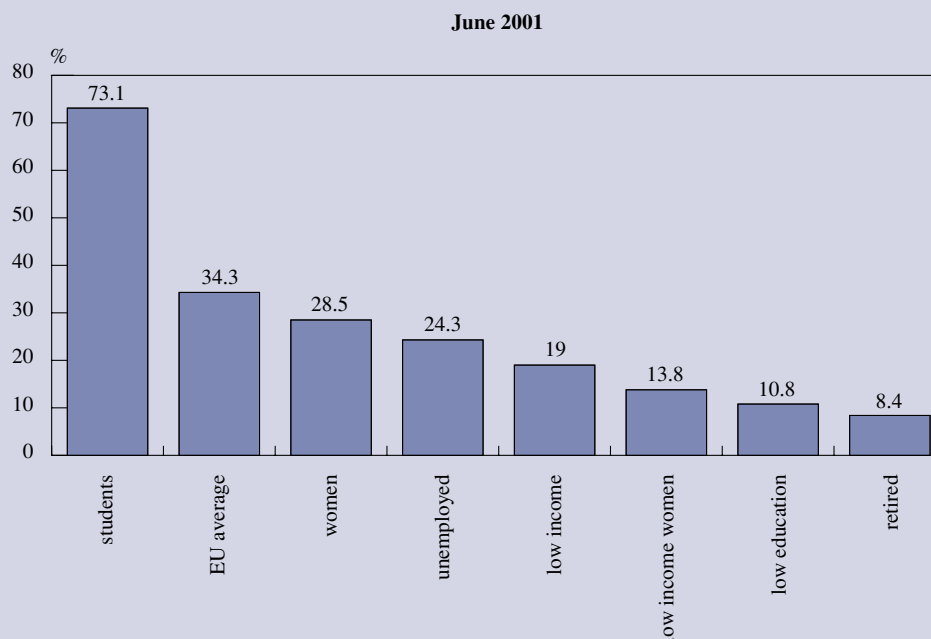
short-term may now be among the least of our worries. But, even before these developments, there were reasons to think that public attention may have been focused unduly on specialist ICT skills.

ICT production and use creates the potential for employment opportunities across a range of occupations and skill levels. Certain other specialist skills, such as engineering, may be in even greater demand. The vacancy data in Box 5 leave little room for doubt that those displaced by skill-biased technical change are far more likely to find jobs in occupations not directly linked to ICTs. Many of the jobs created in recent years in sectors where ICT use has had a significant impact — such as retail, wholesale or financial services — clearly do not require specialist skills. One of the strengths of the work by IDC and others is that it has highlighted the variety of skills required in order to enable e-business and other information society applications. Many workers in these areas — from call centre operators to website designers — need ICT skills beyond the basic level, but not necessarily specialist ICT skills.

⁽¹⁾ In particular, it is far from clear that 'shortages' really represent excess demand at current wages. Labour demand is gauged by asking employers about their recruitment needs on the basis of technical requirements. There is no comparison with other economic sectors or occupations, nor is any account taken of high labour turnover in ICT professions (which generates a stock of vacancies even if skill shortages are zero). Nor is full account taken of the potential response of labour supply and wages.

⁽²⁾ See European Commission (2001c, annex III) or WITSA (2001) for surveys.

Graph 11: Internet access in the EU



Source: Eurobarometer.

The available evidence on basic ICT skills indicates that these are important. The majority of the workforce uses ICTs on a regular basis, and a basic competence is increasingly important for employability and adaptability across sectors. However, there is little to suggest a genuine shortage relative to other skills. Work by the UK skills task force (2000), among others, shows that employers indeed find ICT competence and awareness among adults lacking, but not markedly more so than other generic skills such as communication skills, numeracy and team-working ability. A lack of IT skills among 16–17 year-old new recruits does not seem to be an issue. Acquiring a basic competence in ICT should be a key objective of general education (including adult education and lifelong learning), but not to the exclusion of other core skills.

There is evidence of an emerging ‘digital divide’. Graph 11 shows, for example, that Internet access in the EU is correlated with age, gender, education and employment status. There seems to be a clear role for policy to

address this issue, which relates as much to social inclusion as it does to employability ⁽¹⁾.

Nevertheless, when it comes to reaping potential productivity gains, training in generic skills is no substitute for specific training. The key human capital policy issue, in view of the changes in work organisation discussed earlier, is whether employers and employees have appropriate incentives to provide and to acquire their own specific training. As the demand for versatility, cognitive skills, general aptitude and so on grows, so does the transferability of employees among firms. This could reduce employers’ incentives to invest in training for fear of having employees poached. Yet, at the same time, employees may not have sufficient incentive to invest in their own training, in part because their skills are of use to a larger but still limited number of employers, who therefore retain a degree of bargaining power over pay and conditions.

⁽¹⁾ See European Commission (2001d).

5. Conclusions and policy challenges

5.1. Reconciling the macroeconomic and microeconomic pictures

The available evidence at both macroeconomic and microeconomic levels suggests that the rapid development and deployment of ICTs remains likely to have a significant positive effect on productivity growth. The developments of the past 18 months do not fundamentally change this, although the estimated impact is smaller now than it seemed it 1999–2000.

However, there is a puzzle still to be resolved. The analysis in Section 3 suggests that tangible improvements in business and work organisation should be observed. Yet the measured economic impact of the new economy hardly picks up these effects. Some of the recent US evidence has demonstrated a clearer link between intensive ICT use and productivity gains, but this does not seem to apply to all sectors, even some that have invested heavily in ICT. One reading of this is that the potential benefits of ICTs have been exaggerated. But the microeconomic evidence so far available suggests a more optimistic interpretation.

There are several reasons why macroeconomic growth accounting exercises may understate the true productivity potential of ICTs. These include measurement error, a failure to capture quality improvements in final products (e.g. retail banking) and dissipation of benefits in the form of ‘on-the-job consumption’ (e.g. use of the Internet at work for personal purposes).

However, a more fundamental point is that the economic history of similar periods of apparent all-purpose technological progress shows that it may take several decades for the wider benefits to emerge ⁽¹⁾. The lag between, say, the introduction of the Intel microprocessor in 1972 and the year 1995 would be short by the standards of

previous revolutions. The analysis of productivity gains post-1995 can hardly purport to measure the full impact of the latest wave of innovation in ICTs, centred on the Internet.

The microeconomic evidence suggests that there is a good reason for a delay between investments in ICTs and any subsequent productivity gains. Complementary investments — notably in business organisation, work organisation and human capital — are required to realise the potential, and these take time to make. In terms of policy, this suggests that it is essential to focus as much on the institutions that may help or hinder organisational changes as on the technologies themselves.

5.2. The outlook in Europe

Last year’s EU economy review tentatively concluded that the same driving forces behind the apparent productivity acceleration in the United States were at work in the EU as well, albeit with a delay of several years. This chapter provides some further support for that view. First, the (albeit limited) empirical evidence on business and work organisation in EU countries reaches similar conclusions to the US evidence. Secondly, there are direct signs that ICT investment spending and overall ICT expenditure were catching up with US levels in 2000 or indeed had already done so. Thirdly, later adoption of technology may confer certain advantages, especially where depreciation is rapid.

Competitive advantage in the production of certain ICTs provides part of the explanation for the United States’ lead and indeed the strong position of some EU Member States. But, in a longer term perspective, the use of ICTs is much more important. This chapter has found some support for the view that rigidities in product and labour markets are liable to delay both the diffusion of ICTs and the organisational changes required to secure the full productivity potential from the use of ICTs.

⁽¹⁾ See Freeman and Louça (2001) IMF (2001).

In a sense, this could mean that Europe has more to gain: 'it could be argued that paradoxically, it is precisely in Europe, with its still very fragmented markets, inefficiencies and protection in many sectors, that a further digitisation of the economy and organisational restructuring is likely to bring much more scope for productivity gains than in the United States' ⁽¹⁾. Thus, an important message is that ICTs and organisational change are complementary. But the introduction of ICTs will not be sufficient; further progress on economic reforms in order to facilitate organisational change is also necessary. Some of the specific issues that follow from the analysis in Sections 3 and 4 are as follows.

The appropriate response in the area of **competition policy** calls upon competition authorities to be vigilant in monitoring markets. Their analytical capacity must keep up with technological development. In particular, the enforcement of competition rules should be used to frustrate efforts to use new technologies to restrict competition.

Smoother regulations are needed to stimulate the take-up of **e-commerce**. Policy measures must be designed to target consumer reservations about the security of on-line systems. Moreover, appropriate initiatives should instil confidence about redress mechanisms to handle complaints in on-line commerce. Unlocking market integration through e-commerce also necessitates adjustments to make national regulations mutually compatible. Substantial efforts are being made at Community to achieve these objectives. But beyond this, Member States must continue to scrutinise regulatory frameworks to identify and remedy impediments to the uptake of ICT. In pursuing this, it is imperative that compliance costs are kept at a minimum.

Reform efforts in **telecoms markets and access costs** must be sustained to improve market functioning. In particular, broadband technology holds a promise for

expanding the user community through faster, more reliable access. But the key to successful dissemination is cheaper network access for operators, which underlines the importance of completing the task of unbundling the local loop. Accordingly, Member States are obliged to reinforce pressure on incumbents to cede control of local loops.

Turning to labour markets, the adoption of ICTs will not be sufficient for the EU to achieve its **employment objectives**. Increased productivity growth will raise real wages, but is not expected to have a major impact on unemployment or employment in the longer term. ICTs do enable the creation of knowledge-based job opportunities, skills development and modernised work organisation, and could therefore enhance the adaptability of employees. This could encourage increased labour supply and exert some downward pressure on structural unemployment. However, there are also substantial risks that need to be managed, in particular the risk of greater numbers of lower-skilled people being displaced.

Certain **labour market policies and institutions** may be far from optimal when it comes to securing the potential productivity gains of technological progress. This needs to be taken into account in the structural reform agenda, particularly in areas such as employment protection and wage bargaining. Social partners have a key role to play in introducing workable frameworks for practices such as job rotation, telework or flexitime.

The importance of **skills** is paramount, both in introducing ICTs and changes in work organisation, and in minimising the potentially-negative impact on unskilled workers. There is a need to recognise that information society skills are much broader than ICT skills, essential though the latter are. There is also a need to focus on how changes in work organisation might affect incentives to provide training and to acquire skills, including individuals' incentives to invest in their own training. The emphasis placed in the European employment strategy on lifelong learning and the responsibility of social partners and employers to provide information society skills is a positive first move.

⁽¹⁾ European Commission (2001a).

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Statistical annex

Autumn 2001

Statistical Annex

Long-term macroeconomic series

Notes on the statistical annex

General remarks

This edition of *European Economy* gives in its statistical annex updated time series of annual data.

Unless otherwise stated, data for Member States are based on the ESA 95 system. These data start in the late 1980s or the early 1990s (A, D, IRL, P, S) or in 1995 (E, EL, L), with the exception of B, DK, F, I, NL, FIN and UK, where most data have been reported for longer periods. ESA 79 data are used for the earlier years. For public finance data, time series according to the former definitions up to 1995 (tables 54A to 76A) are presented in parallel with the ESA 95 data (tables 54B to 76B). The latter start at the earliest in 1970, they are gradually becoming available and cannot be linked with the former definitions series. See also the explanatory notes on the respective tables.

For the USA and Japan the definitions are as in the SNA.

Data sources are Eurostat, national publications and the OECD.

Figures from 2001 to 2003 are forecasts made by Commission staff using the definitions and latest figures available from national sources. These series are not fully comparable with the corresponding figures for earlier years; however, the discontinuities of the levels of these series have been eliminated. The forecasts from 2001 to 2003 are based on data up to 12 November 2001.

Due to the introduction of the euro since the beginning of 1999, the following conventions have been adopted for the tables: series in national currencies continue in the same denomination as before until 2001. Historical series established in ECU are left unchanged until 1998. From 1999 onwards the euro is used for the statistical continuation of the ECU series.

See also the explanatory notes on the tables for specific definitions.

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Symbols and abbreviations

—	nil
:	not available
%	percent or percentage
Bn	1 000 million
Mio	million
Mrd	1 000 million
ECU	European currency unit
EUA	European unit of account
EUR	euro
GDP	gross domestic product, at market prices
PPS	purchasing power standard
SNA	system of national accounts
UA	unit of account
ULC	unit labour costs
D_90	Germany prior to unification in 1990
EU-15	all Member States
EUR-12	B, D, EL, E, F, IRL, I, L, NL, A, P, FIN

Table 1

Total population (national accounts)

(1 000)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	9 154	4 581	55 433	8 327	30 623	46 717	2 834	50 200	314.9	11 483
1961	9 184	4 612	56 185	8 398	30 915	47 207	2 819	50 536	316.9	11 637
1962	9 221	4 648	56 837	8 448	31 244	48 060	2 830	50 879	320.8	11 801
1963	9 290	4 685	57 389	8 480	31 576	48 897	2 850	51 252	324.1	11 964
1964	9 378	4 722	57 971	8 510	31 912	49 403	2 864	51 675	327.8	12 125
1965	9 464	4 760	58 619	8 551	32 250	49 860	2 876	52 112	331.5	12 293
1966	9 528	4 800	59 148	8 614	32 594	50 275	2 884	52 519	333.9	12 455
1967	9 581	4 838	59 286	8 716	32 939	50 669	2 900	52 901	335.0	12 597
1968	9 619	4 865	59 500	8 741	33 290	51 044	2 913	53 236	335.9	12 726
1969	9 646	4 892	60 067	8 773	33 644	51 456	2 926	53 538	337.5	12 873
1970	9 656	4 929	60 651	8 793	34 001	51 920	2 950	53 822	339.2	13 032
1971	9 673	4 963	61 284	8 769	34 362	52 410	2 978	54 073	342.4	13 194
1972	9 711	4 992	61 672	8 889	34 672	52 870	3 024	54 381	346.6	13 330
1973	9 742	5 022	61 976	8 929	34 985	53 297	3 073	54 751	350.5	13 438
1974	9 772	5 045	62 054	8 962	35 324	53 647	3 124	55 111	355.1	13 543
1975	9 801	5 060	61 829	9 046	35 694	53 891	3 177	55 441	359.0	13 660
1976	9 818	5 073	61 531	9 167	36 118	54 107	3 228	55 718	360.8	13 773
1977	9 830	5 088	61 400	9 309	36 564	54 353	3 272	55 955	361.4	13 856
1978	9 840	5 104	61 326	9 430	36 971	54 593	3 314	56 155	362.1	13 939
1979	9 848	5 117	61 359	9 548	37 289	54 831	3 368	56 318	362.9	14 034
1980	9 859	5 123	61 566	9 642	37 527	55 113	3 401	56 434	364.2	14 148
1981	9 859	5 122	61 682	9 730	37 741	55 425	3 443	56 502	365.2	14 247
1982	9 856	5 119	61 638	9 790	37 944	55 747	3 480	56 544	365.5	14 312
1983	9 856	5 114	61 423	9 847	38 123	56 042	3 505	56 564	365.5	14 368
1984	9 855	5 112	61 175	9 896	38 279	56 311	3 529	56 577	365.9	14 423
1985	9 858	5 114	61 024	9 934	38 420	56 587	3 540	56 593	366.7	14 488
1986	9 862	5 121	61 066	9 964	38 537	56 864	3 541	56 596	368.4	14 567
1987	9 870	5 127	61 077	9 984	38 632	57 173	3 547	56 602	370.8	14 664
1988	9 902	5 130	61 449	10 005	38 717	57 523	3 531	56 629	373.9	14 760
1989	9 938	5 133	62 063	10 038	38 792	57 865	3 510	56 672	377.6	14 846
1990	9 967	5 141	63 253	10 089	38 851	58 171	3 506	56 719	381.9	14 947
1991	10 005	5 154	64 074	10 200	38 920	58 464	3 526	56 751	387.1	15 068
1991	10 005	5 154	79 984	10 200	38 920	58 464	3 526	56 751	387.1	15 068
1992	10 045	5 171	80 594	10 322	39 008	58 754	3 555	56 856	392.5	15 182
1993	10 085	5 189	81 179	10 380	39 086	59 006	3 574	57 043	398.1	15 290
1994	10 116	5 205	81 422	10 426	39 149	59 221	3 586	57 196	403.8	15 381
1995	10 137	5 228	81 661	10 454	39 210	59 430	3 601	57 301	409.7	15 460
1996	10 157	5 262	81 896	10 476	39 270	59 634	3 626	57 397	415.6	15 523
1997	10 181	5 284	82 052	10 499	39 323	59 839	3 661	57 512	421.0	15 607
1998	10 203	5 301	82 029	10 516	39 371	60 049	3 705	57 569	426.5	15 703
1999	10 226	5 319	82 087	10 532	39 418	60 294	3 745	57 646	432.5	15 808
2000	10 253	5 336	82 183	10 556	39 466	60 628	3 787	57 762	438.5	15 919
2001	10 289	5 355	82 199	10 577	39 800	60 932	3 839	57 893	443.8	16 039
2002	10 325	5 373	82 240	10 599	40 078	61 236	3 884	57 951	449.1	16 153
2003	10 349	5 389	82 280	10 620	40 338	61 542	3 927	58 009	454.9	16 266

⁽¹⁾ 1960–91: D_90.

(1 000)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	7 048	8 682	4 430	7 480	52 372	235 246	299 679	180 671	94 100
1961	7 074	8 677	4 461	7 520	52 807	237 409	302 348	183 691	94 950
1962	7 130	8 665	4 491	7 562	53 292	239 926	305 428	186 538	95 830
1963	7 176	8 727	4 523	7 604	53 625	242 448	308 362	189 242	96 810
1964	7 224	8 768	4 549	7 662	53 991	244 706	311 081	191 889	97 830
1965	7 271	8 774	4 564	7 734	54 350	246 966	313 810	194 303	98 880
1966	7 322	8 754	4 581	7 807	54 643	249 008	316 258	196 560	99 790
1967	7 377	8 748	4 606	7 869	54 959	250 655	318 321	198 712	100 830
1968	7 415	8 760	4 626	7 912	55 214	252 205	320 196	200 706	101 960
1969	7 441	8 743	4 624	7 968	55 461	254 067	322 388	202 677	103 170
1970	7 467	8 692	4 606	8 043	55 632	255 929	324 533	205 052	104 340
1971	7 500	8 644	4 612	8 098	55 907	257 841	326 809	207 661	105 700
1972	7 544	8 631	4 640	8 122	56 079	259 710	328 903	209 896	107 190
1973	7 586	8 634	4 666	8 137	56 210	261 427	330 796	211 909	108 710
1974	7 599	8 755	4 691	8 161	56 224	262 937	332 367	213 854	110 160
1975	7 579	9 094	4 712	8 192	56 215	264 282	333 749	215 973	111 570
1976	7 566	9 356	4 726	8 222	56 206	265 468	334 969	218 035	112 770
1977	7 568	9 456	4 739	8 251	56 179	266 664	336 182	220 239	113 860
1978	7 562	9 559	4 753	8 275	56 167	267 803	337 349	222 585	114 900
1979	7 549	9 662	4 765	8 294	56 227	268 934	338 572	225 056	115 870
1980	7 549	9 767	4 779	8 311	56 330	270 149	339 913	227 726	116 810
1981	7 564	9 852	4 800	8 320	56 352	271 210	341 004	229 966	117 660
1982	7 571	9 912	4 827	8 325	56 318	271 987	341 749	232 188	118 480
1983	7 552	9 955	4 856	8 329	56 377	272 455	342 275	234 307	119 310
1984	7 553	9 989	4 882	8 337	56 506	272 836	342 791	236 348	120 080
1985	7 558	10 011	4 902	8 350	56 685	273 282	343 431	238 466	120 840
1986	7 566	10 011	4 918	8 370	56 852	273 859	344 202	240 651	121 490
1987	7 576	9 994	4 932	8 398	57 009	274 421	344 955	242 804	122 090
1988	7 596	9 968	4 947	8 436	57 158	275 400	346 125	245 021	122 580
1989	7 624	9 937	4 964	8 493	57 358	276 627	347 610	247 342	123 070
1990	7 718	9 896	4 986	8 559	57 561	278 485	349 746	249 973	123 480
1991	7 823	9 867	5 029	8 617	57 808	280 113	351 692	252 665	123 960
1991	7 823	9 867	5 029	8 617	57 808	296 023	367 602	252 665	123 960
1992	7 884	9 862	5 042	8 668	58 007	297 497	369 343	255 410	124 420
1993	7 993	9 876	5 066	8 719	58 191	298 976	371 075	258 119	124 830
1994	8 031	9 902	5 088	8 781	58 395	299 922	372 302	260 637	125 180
1995	8 047	9 917	5 108	8 827	58 606	300 734	373 395	263 082	125 470
1996	8 059	9 927	5 125	8 841	58 802	301 506	374 410	265 502	125 760
1997	8 072	9 946	5 140	8 846	59 009	302 253	375 391	268 048	126 070
1998	8 078	9 968	5 153	8 851	59 237	302 772	376 161	270 509	126 410
1999	8 092	9 989	5 171	8 858	59 501	303 441	377 119	272 945	126 510
2000	8 110	10 009	5 181	8 872	59 756	304 293	378 256	275 372	126 752
2001	8 130	10 029	5 192	8 885	59 995	305 363	379 599	277 458	126 990
2002	8 150	10 049	5 202	8 899	60 235	306 315	380 822	280 070	127 135
2003	8 169	10 069	5 212	8 914	60 476	307 235	382 014	282 317	127 135

(1) EU-15 excluding DK, S and UK; 1960–91: including D_90.

(2) 1960–91: including D_90.

Table 2

Employment, persons; all domestic industries (national accounts)

(annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	0.7	1.5	1.4	0.4	0.2	0.1	-0.2	0.2	1.1	2.3
1962	1.3	1.5	0.3	-1.0	0.8	0.2	0.7	-1.1	0.3	2.9
1963	0.1	1.2	0.2	-1.4	0.5	1.0	0.6	-1.6	-0.4	2.0
1964	0.6	2.1	0.1	-1.3	0.5	1.1	0.5	-0.4	1.7	2.4
1965	-0.1	1.8	0.6	-0.7	0.5	0.4	-0.2	-1.7	0.9	1.5
1966	0.2	0.5	-0.3	-0.9	0.5	0.8	-0.3	-1.6	0.5	1.7
1967	-0.4	-0.2	-3.3	-1.2	0.8	0.3	-0.6	1.2	-1.1	0.6
1968	-0.2	0.5	0.1	-1.2	0.8	-0.3	0.3	-0.2	-0.4	1.6
1969	1.4	1.6	1.6	-0.3	0.9	1.5	0.3	0.5	1.4	2.4
1970	1.5	1.0	1.3	-0.1	0.7	1.5	-1.2	0.2	2.0	1.3
1961-70	0.5	1.1	0.2	-0.8	0.6	0.6	0.0	-0.5	0.6	1.9
1971	0.6	-0.1	0.4	0.3	0.5	0.5	-0.4	0.0	3.2	0.9
1972	-0.2	1.7	0.4	0.5	0.3	0.6	0.3	-0.3	2.7	-0.8
1973	0.9	1.2	1.1	1.0	2.0	1.4	1.4	1.4	1.9	0.6
1974	1.6	-0.8	-1.2	0.1	0.7	0.9	1.4	1.6	2.8	0.6
1975	-1.4	-1.2	-2.7	0.1	-1.6	-0.9	-0.8	0.1	1.2	-0.1
1976	-0.5	1.7	-0.5	1.2	-1.1	0.8	-0.8	1.0	-0.1	0.6
1977	-0.4	-0.2	0.1	0.8	-0.7	0.8	1.8	0.3	-0.1	0.6
1978	0.2	0.8	0.8	0.4	-1.7	0.5	2.5	0.3	-0.6	1.2
1979	1.0	0.9	1.7	1.1	-1.7	0.5	3.2	1.1	0.5	2.1
1980	-0.1	-0.7	1.6	1.4	-3.0	0.3	1.0	1.4	0.7	1.1
1971-80	0.2	0.3	0.2	0.7	-0.6	0.5	0.9	0.7	1.2	0.7
1981	-1.9	-1.5	-0.1	5.2	-2.6	-0.4	-0.9	-0.1	0.3	-0.6
1982	-1.3	0.3	-1.2	-1.1	-0.9	0.1	0.0	0.2	-0.3	-1.6
1983	-1.3	0.2	-1.4	0.5	-0.5	-0.3	-1.9	0.3	-0.3	-1.2
1984	0.1	1.5	0.2	-0.2	-2.4	-0.2	-1.9	0.0	0.6	0.9
1985	0.6	2.3	0.7	2.5	-1.4	-0.8	-2.6	0.9	0.9	1.8
1986	0.6	2.3	1.4	0.3	1.4	0.4	0.7	0.7	2.5	2.4
1987	0.6	0.4	0.7	-0.1	4.5	0.8	0.9	0.2	2.7	1.8
1988	1.7	-0.7	0.8	1.7	3.4	0.9	0.0	1.1	3.0	2.0
1989	1.2	-0.7	1.5	0.4	3.4	1.7	-0.2	0.7	3.5	2.6
1990	0.9	-0.7	3.0	1.3	3.6	1.0	4.3	1.6	4.2	2.9
1981-90	0.1	0.3	0.5	1.0	0.8	0.3	-0.2	0.6	1.7	1.1
1991	0.1	-0.6	2.5	-2.3	1.0	0.1	0.0	1.9	4.1	1.8
1992	-0.5	-0.8	-1.5	1.4	-1.5	-0.5	1.0	-0.5	2.5	1.6
1993	-0.8	-1.5	-1.4	1.0	-2.9	-1.2	0.6	-2.5	1.8	0.0
1994	-0.4	1.4	-0.2	1.9	-0.5	0.0	3.1	-1.5	2.5	0.7
1995	0.7	0.5	0.2	0.9	1.8	0.8	5.1	-0.1	2.5	1.5
1996	0.4	0.7	-0.3	-0.4	1.3	0.3	3.6	0.6	2.7	2.3
1997	0.7	1.2	-0.2	-0.3	2.9	0.5	5.6	0.4	3.1	3.2
1998	1.2	1.2	0.9	3.4	3.6	1.3	7.2	1.0	4.4	2.6
1999	1.4	1.1	1.1	-0.7	3.5	1.8	6.3	1.1	5.0	2.5
2000	1.6	0.7	1.5	-0.3	3.1	2.2	4.9	1.6	5.6	2.4
1991-2000	0.5	0.4	0.3	0.4	1.2	0.5	3.7	0.2	3.4	1.9
2001	1.2	0.4	0.0	1.1	2.3	1.6	2.3	1.5	5.5	2.0
2002	0.3	0.2	-0.3	0.6	1.0	0.4	0.8	0.4	2.2	0.6
2003	1.2	0.5	0.8	1.2	2.1	1.2	1.8	1.3	3.8	1.4

⁽¹⁾ 1961-91: D_90.

(annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	0.8	0.7	1.9	0.9	1.4	0.7	0.8	0.1	1.4
1962	0.4	0.5	-0.4	0.7	0.9	0.2	0.4	2.1	1.3
1963	-0.6	0.2	0.4	0.0	0.2	0.1	0.1	1.0	0.9
1964	-0.1	-0.1	0.0	0.1	1.2	0.3	0.5	2.1	1.3
1965	-0.6	0.2	1.2	1.0	1.0	0.0	0.3	3.0	1.6
1966	-1.0	-0.1	0.2	0.9	0.6	-0.1	0.0	4.6	2.1
1967	-1.8	-0.6	-1.8	-1.0	-1.5	-0.6	-0.8	2.3	1.9
1968	-1.2	-0.6	-1.3	1.1	-0.5	0.0	-0.1	2.5	1.7
1969	-0.1	-0.6	1.5	1.2	0.1	1.1	0.9	2.8	0.8
1970	0.4	2.3	2.1	1.9	-0.4	1.0	0.8	-0.2	1.1
1961-70	-0.4	0.2	0.4	0.7	0.3	0.3	0.3	2.0	1.4
1971	1.1	2.7	-0.7	-0.2	-0.9	0.5	0.2	-0.2	0.7
1972	0.7	0.0	0.9	0.3	-0.1	0.2	0.2	2.4	0.5
1973	1.7	-0.4	1.9	0.4	1.9	1.3	1.3	4.2	2.3
1974	0.9	-0.7	0.3	2.0	0.6	0.4	0.4	1.7	-0.4
1975	-0.5	-1.2	-0.5	2.0	-0.1	-1.2	-0.9	-1.6	-0.2
1976	0.3	-0.4	-0.9	0.3	-0.8	0.1	0.0	2.5	0.8
1977	1.0	0.3	-1.8	0.0	0.1	0.2	0.2	3.5	1.2
1978	0.3	-1.6	-0.9	0.5	1.1	0.2	0.4	4.8	1.0
1979	0.4	2.2	2.2	1.2	1.5	0.9	1.0	3.4	1.0
1980	1.0	-0.4	2.9	1.2	-0.2	0.5	0.4	0.6	0.7
1971-80	0.7	0.1	0.3	0.8	0.3	0.3	0.3	2.1	0.7
1981	-0.2	1.1	1.3	0.2	-3.9	-0.3	-1.0	0.9	0.8
1982	-1.4	-1.9	1.1	-0.2	-1.8	-0.6	-0.8	-1.2	0.8
1983	-1.0	-1.1	0.4	0.2	-1.3	-0.6	-0.7	1.0	1.5
1984	-0.1	-1.5	0.6	0.8	2.1	-0.3	0.2	4.4	0.3
1985	0.3	0.0	0.1	1.0	1.2	0.2	0.5	2.3	0.6
1986	0.3	-2.7	-0.3	0.6	-0.1	0.8	0.6	1.7	0.5
1987	-0.1	2.3	0.5	0.8	1.8	1.1	1.2	2.8	0.4
1988	0.3	2.2	1.0	1.4	3.5	1.3	1.7	2.9	1.2
1989	1.3	1.9	0.9	1.5	2.7	1.6	1.7	2.3	1.5
1990	1.6	1.7	-0.5	0.9	1.2	2.1	1.8	1.3	1.7
1981-90	0.1	0.2	0.5	0.7	0.5	0.5	0.5	1.8	0.9
1991	1.4	2.8	-5.6	-1.5	-3.0	1.2	0.3	-1.0	2.0
1992	0.2	-1.6	-7.2	-4.4	-2.3	-0.9	-1.2	0.1	1.1
1993	-0.6	-2.0	-6.2	-5.2	-1.4	-1.6	-1.7	2.0	0.4
1994	-0.1	-1.0	-1.1	-0.8	0.7	-0.3	-0.1	2.3	0.1
1995	0.0	-0.7	1.6	1.3	1.5	0.6	0.8	2.2	0.1
1996	-0.6	-5.9	1.4	-0.6	1.1	0.2	0.3	1.7	0.4
1997	0.5	1.7	3.3	-1.1	2.0	0.8	1.0	2.3	1.0
1998	0.7	2.7	2.1	1.2	1.4	1.7	1.6	2.2	-0.7
1999	1.2	1.8	2.7	2.3	1.1	1.7	1.6	1.9	-0.8
2000	0.5	1.7	1.8	2.2	1.0	1.9	1.7	1.9	-0.2
1991-2000	0.3	-0.1	-0.8	-0.7	0.2	0.5	0.4	1.6	0.3
2001	0.0	1.5	1.4	1.8	0.7	1.2	1.1	-0.1	-0.3
2002	-0.3	0.7	0.0	0.1	0.0	0.3	0.2	-0.6	-0.3
2003	0.3	0.8	0.5	0.7	0.4	1.2	1.0	0.9	-0.3

⁽¹⁾ EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ 1961-91: including D_90.

Table 3

**Unemployment rate; total
Member States: definition Eurostat**

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	2.3	1.3	1.0	5.6	2.4	1.5	5.8	5.7	0.0	0.8
1961	1.9	1.1	0.7	5.5	2.4	1.4	5.3	5.1	0.0	0.6
1962	1.7	1.2	0.6	4.8	1.6	1.5	5.2	4.4	0.0	0.5
1963	1.5	1.5	0.6	4.8	2.0	1.6	5.4	3.6	0.0	0.6
1964	1.4	1.2	0.5	4.6	2.8	1.2	5.2	4.0	0.0	0.5
1965	1.6	0.9	0.4	4.8	2.6	1.5	5.0	5.0	0.0	0.6
1966	1.7	1.1	0.5	5.0	2.2	1.6	5.1	5.4	0.0	0.8
1967	2.4	1.0	1.4	5.4	3.0	2.1	5.5	5.0	0.0	1.7
1968	2.8	1.0	1.0	5.6	3.0	2.6	5.8	5.3	0.0	1.5
1969	2.2	0.9	0.6	5.2	2.5	2.3	5.5	5.3	0.0	1.1
1970	1.8	0.6	0.5	4.2	2.6	2.4	6.3	5.1	0.0	1.0
1961-70	1.9	1.0	0.7	5.0	2.5	1.8	5.4	4.8	0.0	0.9
1971	1.7	0.9	0.6	3.1	3.4	2.7	6.0	5.1	0.0	1.3
1972	2.2	0.8	0.8	2.1	2.9	2.8	6.7	6.0	0.0	2.3
1973	2.2	0.7	0.8	2.0	2.6	2.7	6.2	5.9	0.0	2.4
1974	2.3	2.8	1.8	2.1	3.1	2.8	5.8	5.0	0.0	2.9
1975	4.2	3.9	3.3	2.3	4.5	4.0	7.9	5.5	0.0	5.5
1976	5.5	5.1	3.3	1.9	4.9	4.4	9.8	6.2	0.0	5.8
1977	6.3	5.9	3.2	1.7	5.3	4.9	9.7	6.7	0.0	5.6
1978	6.8	6.7	3.1	1.8	7.1	5.1	9.0	6.7	1.2	5.6
1979	7.0	4.8	2.7	1.9	8.8	5.8	7.8	7.2	2.4	5.7
1980	7.4	5.2	2.7	2.7	11.6	6.2	8.0	7.1	2.4	6.4
1971-80	4.6	3.7	2.2	2.2	5.4	4.1	7.7	6.1	0.6	4.4
1981	9.5	8.3	3.9	4.0	14.4	7.3	10.8	7.4	2.4	8.9
1982	11.2	8.9	5.6	5.8	16.3	8.0	12.5	8.0	2.4	11.9
1983	11.0	9.0	6.9	7.1	17.5	8.1	13.9	7.5	3.5	9.7
1984	11.1	8.5	7.1	7.2	20.2	9.7	15.5	8.0	3.1	9.3
1985	10.4	7.1	7.2	7.0	21.6	10.1	16.8	8.3	2.9	8.3
1986	10.3	5.4	6.6	6.6	21.2	10.3	16.8	9.0	2.6	8.3
1987	10.0	5.4	6.4	6.7	20.6	10.4	16.6	9.8	2.5	8.1
1988	9.0	6.1	6.3	6.8	19.5	9.9	16.2	9.8	2.0	7.5
1989	7.5	7.3	5.6	6.7	17.2	9.4	14.7	9.8	1.8	6.9
1990	6.7	7.7	4.8	6.4	16.2	9.0	13.4	9.0	1.7	6.2
1981-90	9.7	7.4	6.0	6.4	18.5	9.2	14.7	8.7	2.5	8.5
1991	6.6	8.4	4.2	7.0	16.4	9.5	14.7	8.6	1.7	5.8
1991	6.6	8.4	5.6	7.0	16.4	9.5	14.7	8.6	1.7	5.8
1992	7.2	9.2	6.6	7.9	18.4	10.4	15.4	8.8	2.1	5.6
1993	8.8	10.2	7.9	8.6	22.7	11.7	15.6	10.2	2.6	6.6
1994	10.0	8.2	8.4	8.9	24.1	12.3	14.3	11.1	3.2	7.1
1995	9.9	7.2	8.2	9.2	22.9	11.7	12.3	11.6	2.9	6.9
1996	9.7	6.8	8.9	9.6	22.2	12.4	11.7	11.7	3.0	6.3
1997	9.4	5.6	9.9	9.8	20.8	12.3	9.9	11.7	2.7	5.2
1998	9.5	5.2	9.3	10.9	18.8	11.8	7.5	11.8	2.7	4.0
1999	8.8	5.2	8.6	11.6	15.9	11.2	5.6	11.3	2.4	3.4
2000	7.0	4.7	7.9	11.1	14.1	9.5	4.2	10.5	2.4	3.0
1991-2000	8.7	7.1	8.1	9.5	19.6	11.3	11.1	10.7	2.6	5.4
2001	6.9	4.6	7.8	10.6	13.0	8.7	3.8	9.5	2.2	2.3
2002	7.0	4.7	8.2	10.1	13.0	9.2	4.5	9.6	2.4	3.2
2003	6.9	4.6	7.8	9.6	12.1	8.7	4.5	8.9	2.2	3.5

(1) 1960-91: D_90.

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	3.3	1.7	1.6	1.7	1.4	2.6	2.4	5.5	1.7
1961	2.5	2.0	1.4	1.5	1.2	2.3	2.1	6.7	1.4
1962	2.6	2.3	1.5	1.5	1.7	2.1	2.0	5.5	1.3
1963	2.8	2.4	1.7	1.7	2.1	2.0	2.0	5.7	1.2
1964	2.6	2.5	1.7	1.6	1.4	2.0	1.9	5.2	1.2
1965	2.6	2.5	1.5	1.2	1.2	2.2	2.0	4.5	1.2
1966	2.4	2.5	1.7	1.6	1.1	2.3	2.0	3.8	1.3
1967	2.5	2.5	3.3	2.1	2.0	2.8	2.6	3.8	1.3
1968	2.7	2.6	4.4	2.2	2.1	2.9	2.7	3.6	1.2
1969	2.7	2.6	3.2	1.9	2.0	2.6	2.4	3.5	1.1
1970	1.8	2.6	2.1	1.5	2.2	2.5	2.3	4.9	1.1
1961-70	2.5	2.5	2.3	1.7	1.7	2.4	2.2	4.7	1.2
1971	1.7	2.5	2.5	2.5	2.7	2.6	2.6	5.9	1.2
1972	1.5	2.5	2.9	2.7	3.1	2.8	2.8	5.6	1.4
1973	1.3	2.6	2.6	2.5	2.2	2.7	2.6	4.9	1.3
1974	1.6	1.7	1.9	2.0	2.0	2.9	2.7	5.6	1.4
1975	2.0	4.4	2.7	1.6	3.2	4.2	3.9	8.5	1.9
1976	2.0	6.2	3.9	1.6	4.8	4.6	4.6	7.7	2.0
1977	1.7	7.3	5.9	1.8	5.1	4.9	4.9	7.1	2.0
1978	2.2	7.9	7.3	2.2	5.0	5.3	5.1	6.1	2.2
1979	2.1	7.9	6.0	2.1	4.6	5.6	5.3	5.8	2.1
1980	1.7	7.6	4.7	2.0	5.6	6.0	5.8	7.1	2.0
1971-80	1.8	5.1	4.0	2.1	3.8	4.2	4.0	6.4	1.8
1981	2.5	7.3	4.9	2.6	8.9	7.2	7.4	7.6	2.2
1982	3.7	7.2	5.4	3.3	10.3	8.5	8.7	9.7	2.4
1983	4.3	8.2	5.5	3.7	11.1	8.9	9.1	9.6	2.6
1984	3.8	8.9	5.2	3.3	11.1	9.7	9.7	7.5	2.7
1985	3.5	9.2	5.0	2.9	11.5	9.9	10.0	7.2	2.6
1986	2.8	8.8	5.2	2.7	11.5	9.9	9.9	7.0	2.8
1987	3.5	7.3	4.8	2.2	10.6	9.9	9.7	6.2	2.8
1988	3.1	5.9	4.2	1.8	8.7	9.5	9.1	5.5	2.5
1989	2.7	5.2	3.1	1.6	7.3	8.8	8.3	5.3	2.3
1990	3.0	4.8	3.2	1.7	7.0	8.1	7.7	5.6	2.1
1981-90	3.3	7.3	4.7	2.6	9.8	9.0	9.0	7.1	2.5
1991	3.3	4.2	6.6	3.1	8.8	8.1	8.1	6.8	2.1
1991	3.3	4.2	6.6	3.1	8.8	8.2	8.2	6.8	2.1
1992	3.3	4.3	11.7	5.6	10.1	9.1	9.2	7.5	2.2
1993	3.9	5.7	16.4	9.1	10.5	10.8	10.7	6.9	2.5
1994	3.8	6.9	16.6	9.4	9.6	11.5	11.1	6.1	2.9
1995	3.9	7.3	15.4	8.8	8.7	11.2	10.7	5.6	3.1
1996	4.4	7.3	14.6	9.6	8.2	11.5	10.8	5.4	3.4
1997	4.4	6.8	12.7	9.9	7.0	11.5	10.6	4.9	3.4
1998	4.5	5.2	11.4	8.3	6.3	10.8	9.9	4.5	4.1
1999	3.9	4.5	10.2	7.2	6.1	9.9	9.1	4.2	4.7
2000	3.7	4.1	9.8	5.9	5.5	8.9	8.2	4.0	4.7
1991-2000	3.9	5.6	12.5	7.7	8.1	10.3	9.9	5.6	3.3
2001	3.9	3.8	9.2	5.2	5.1	8.3	7.7	4.7	5.2
2002	4.3	4.3	9.4	5.6	5.4	8.6	8.0	5.9	6.5
2003	4.2	4.7	9.3	5.4	5.4	8.2	7.6	5.7	7.3

(¹) EU-15 excluding DK, S and UK; 1960-91: including D_90.

(²) 1960-91: including D_90.

Table 4

Gross domestic product at current market prices

(national currency)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
	Mrd BEF	Mrd DKK	Mrd DEM	Mrd GRD	Mrd ESP	Mrd FRF	Mrd IEP	1 000 Mrd ITL	Mrd LUF	Mrd NLG
1960	567	42.1	302.7	113	721	308.5	0.690	24.8	30.14	46.61
1961	602	46.7	331.7	129	821	334.3	0.743	27.6	30.15	49.21
1962	644	52.6	360.8	136	949	375.1	0.805	31.0	31.75	52.98
1963	693	56.0	382.4	154	1 120	421.1	0.865	35.6	33.87	57.48
1964	775	64.0	420.2	174	1 264	466.9	0.985	38.9	38.67	67.63
1965	845	71.9	459.2	201	1 466	503.9	1.049	41.9	40.51	75.54
1966	907	78.9	488.2	224	1 701	545.9	1.105	45.4	42.57	82.25
1967	972	86.9	494.4	242	1 926	589.7	1.207	50.0	42.85	90.24
1968	1 040	96.8	533.3	263	2 175	639.7	1.362	54.2	46.88	100.05
1969	1 153	110.4	597.0	303	2 490	732.0	1.573	59.8	54.28	113.32
1970	1 282	122.1	675.3	342	2 750	816.5	1.772	67.3	63.54	127.15
1971	1 405	135.3	749.8	380	3 104	909.7	2.027	73.4	64.70	143.51
1972	1 573	155.3	823.1	440	3 643	1 016.5	2.447	80.2	72.97	161.70
1973	1 787	178.2	917.3	575	4 392	1 162.5	2.954	96.6	88.67	185.41
1974	2 096	199.7	983.9	659	5 378	1 340.6	3.267	122.2	108.10	210.34
1975	2 320	223.4	1 026.6	793	6 315	1 510.3	4.147	139.4	100.13	232.15
1976	2 636	259.2	1 120.5	986	7 599	1 749.7	5.087	175.0	115.21	264.70
1977	2 851	288.0	1 195.3	1 155	9 642	1 973.2	6.233	212.6	118.39	288.64
1978	3 062	321.1	1 283.6	1 409	11 802	2 245.7	7.391	250.2	129.54	311.10
1979	3 275	357.3	1 388.4	1 747	13 806	2 552.2	8.667	306.1	141.00	331.16
1980	3 561	385.8	1 472.0	2 093	15 862	2 882.2	10.251	384.4	153.45	353.65
1981	3 734	422.4	1 535.0	2 499	17 798	3 239.1	12.441	461.2	163.57	370.73
1982	4 041	482.2	1 588.1	3 141	20 467	3 706.8	14.659	543.8	183.30	386.08
1983	4 281	531.7	1 668.5	3 746	23 305	4 100.9	16.209	633.4	201.65	400.86
1984	4 625	583.5	1 750.9	4 656	26 298	4 460.8	17.991	725.7	223.57	419.86
1985	4 919	634.0	1 823.2	5 678	29 222	4 771.2	19.527	813.9	236.95	440.40
1986	5 149	685.6	1 925.3	6 781	33 454	5 135.4	20.711	900.4	262.34	453.08
1987	5 366	720.9	1 990.5	7 636	37 409	5 416.4	22.153	984.7	270.95	456.24
1988	5 746	748.3	2 096.0	9 289	41 648	5 837.1	23.880	1 092.8	301.22	474.50
1989	6 264	788.6	2 224.4	11 038	46 670	6 270.3	26.661	1 196.8	342.36	503.78
1990	6 639	825.3	2 426.0	13 315	51 983	6 620.9	28.598	1 320.8	361.72	536.09
1991	6 943	857.7	2 647.6	16 443	57 003	6 884.1	29.675	1 440.6	389.64	565.09
1991	6 943	857.7	2 938.0	16 443	57 003	6 884.1	29.675	1 440.6	389.64	565.09
1992	7 309	887.9	3 155.2	19 012	61 394	7 126.0	31.529	1 517.6	424.44	588.05
1993	7 471	900.2	3 235.4	21 412	63 517	7 226.5	34.054	1 563.3	464.83	604.20
1994	7 818	965.7	3 394.4	24 297	67 554	7 499.7	36.624	1 653.4	510.21	634.36
1995	8 162	1 009.8	3 523.0	27 235	72 842	7 752.4	41.502	1 787.3	533.30	666.04
1996	8 357	1 060.9	3 586.5	29 935	77 245	7 951.4	45.725	1 902.3	562.50	694.30
1997	8 772	1 116.3	3 660.6	33 104	82 218	8 207.1	52.781	1 987.2	630.82	735.43
1998	9 112	1 169.0	3 773.6	35 873	87 845	8 565.8	60.729	2 077.4	685.94	780.54
1999	9 502	1 229.6	3 861.2	38 147	94 088	8 856.5	70.116	2 145.0	743.59	823.45
2000	10 018	1 315.5	3 961.6	41 146	101 294	9 214.7	81.489	2 257.1	844.46	883.88
2001	10 364	1 371.6	4 040.6	44 223	107 969	9 538.6	90.920	2 356.4	904.14	948.28
2002 ⁽²⁾	–	1 418.6	–	–	–	–	–	–	–	–
2003 ⁽²⁾	–	1 487.3	–	–	–	–	–	–	–	–

⁽¹⁾ 1960–91: D_90.⁽²⁾ For euro-zone countries, see Table 5.

(national currency)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
	Mrd ATS	Mrd PTE	Mrd FIM	Mrd SEK	Mrd GBP	Mrd EUR	Mrd EUR	Mrd USD	Mrd YEN
1960	168.7	85	16.53	75.4	25.68	218.6	306.2	517.5	16 214
1961	187.2	92	18.73	82.1	27.17	240.4	332.8	535.5	19 583
1962	199.0	97	20.06	89.0	28.48	265.4	363.1	575.8	22 222
1963	214.5	106	21.79	96.5	30.34	292.7	397.1	607.5	25 433
1964	234.9	115	24.57	107.6	33.16	324.5	439.4	653.1	29 917
1965	255.3	128	27.17	118.4	35.84	354.5	479.5	708.7	33 284
1966	278.2	140	29.13	128.8	38.14	383.8	517.5	777.6	38 656
1967	295.8	157	31.96	139.8	40.17	410.6	551.3	821.8	45 300
1968	317.8	173	36.64	148.3	43.51	455.9	597.8	898.4	53 649
1969	347.0	190	41.82	161.1	46.85	512.1	667.0	971.6	63 021
1970	389.4	212	46.67	180.4	51.52	576.9	747.9	1 025.5	74 279
1971	434.7	237	51.29	195.0	57.47	640.6	828.5	1 114.0	81 729
1972	496.8	276	59.81	213.4	64.40	720.9	924.2	1 224.6	93 571
1973	563.0	336	72.80	237.5	74.03	853.2	1 068.7	1 369.1	113 931
1974	640.8	404	91.75	268.2	83.80	988.8	1 230.0	1 484.3	135 953
1975	679.7	449	106.08	315.0	105.77	1 106.1	1 387.6	1 617.7	150 216
1976	750.8	558	120.02	356.3	125.21	1 282.7	1 595.7	1 805.1	168 694
1977	830.5	745	132.14	387.5	145.68	1 428.2	1 768.7	2 011.5	187 985
1978	877.0	937	145.59	432.0	167.98	1 572.1	1 945.9	2 274.7	207 007
1979	956.9	1 182	169.30	484.2	197.36	1 764.3	2 201.7	2 544.1	224 367
1980	1 028.0	1 495	195.29	549.9	230.70	1 943.1	2 471.3	2 771.2	243 234
1981	1 094.4	1 787	221.31	602.4	252.95	2 105.8	2 723.4	3 104.1	261 025
1982	1 174.7	2 203	248.77	658.6	277.09	2 308.8	2 969.5	3 228.2	274 048
1983	1 251.8	2 740	277.08	737.6	302.51	2 482.0	3 170.8	3 501.5	285 577
1984	1 314.2	3 352	310.79	825.7	324.23	2 693.4	3 440.8	3 896.1	304 857
1985	1 385.1	4 195	338.04	897.4	354.95	2 873.4	3 692.7	4 174.4	325 790
1986	1 455.9	5 262	361.33	981.0	381.32	3 114.7	3 909.1	4 411.4	340 947
1987	1 511.6	6 163	392.52	1 060.0	419.63	3 287.4	4 119.4	4 698.4	355 836
1988	1 584.1	7 364	444.48	1 154.1	468.39	3 524.0	4 482.4	5 061.3	381 577
1989	1 699.1	8 662	495.96	1 276.4	514.17	3 853.1	4 894.5	5 439.0	409 601
1990	1 838.4	10 188	523.03	1 408.2	557.30	4 200.8	5 273.8	5 750.0	441 914
1991	1 970.9	11 705	499.36	1 498.8	586.15	4 493.4	5 638.3	5 929.9	469 228
1991	1 970.9	11 705	499.36	1 498.8	586.15	4 635.0	5 779.9	5 929.9	469 228
1992	2 089.2	13 187	486.92	1 493.0	610.85	4 885.8	6 025.8	6 261.0	481 580
1993	2 159.5	13 871	492.61	1 497.6	642.33	4 937.0	6 043.3	6 582.1	486 518
1994	2 276.1	15 024	522.31	1 596.4	681.33	5 154.8	6 335.1	6 992.5	491 834
1995	2 370.7	16 201	564.57	1 713.3	719.18	5 399.2	6 588.3	7 337.5	497 737
1996	2 450.0	17 340	585.87	1 756.4	762.21	5 632.9	6 920.0	7 750.2	510 801
1997	2 511.1	18 706	635.53	1 823.8	811.07	5 756.4	7 287.9	8 255.6	521 859
1998	2 613.6	20 313	689.52	1 905.3	859.81	5 991.4	7 632.0	8 719.2	515 833
1999	2 706.1	21 695	716.40	2 004.7	901.27	6 256.7	8 017.9	9 205.9	512 528
2000	2 818.7	23 107	782.88	2 098.5	943.41	6 552.6	8 525.5	9 809.1	511 834
2001	2 888.6	24 422	805.95	2 167.5	987.95	6 808.1	8 812.4	10 139.0	505 169
2002 ⁽³⁾	–	–	–	2 248.9	1 030.59	7 030.7	9 101.7	10 378.4	501 347
2003 ⁽³⁾	–	–	–	2 357.6	1 088.13	7 348.7	9 521.5	10 907.9	503 149

⁽¹⁾ 1960–98 ECU; EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽²⁾ 1960–98 ECU; 1960–91: including D_90.⁽³⁾ For euro-zone countries, see Table 5.

Table 5

Gross domestic product at current market prices

(Mrd EUR ⁽¹⁾)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	L	NL
1960	10.7	5.8	68.2	3.6	11.4	59.2	1.8	37.6	0.6	11.6
1961	11.3	6.3	77.0	4.0	12.8	63.4	2.0	41.4	0.6	12.6
1962	12.0	7.1	84.3	4.2	14.8	71.0	2.1	46.4	0.6	13.7
1963	12.9	7.6	89.4	4.8	17.5	79.7	2.3	53.2	0.6	14.8
1964	14.5	8.7	98.2	5.4	19.7	88.4	2.6	58.2	0.7	17.5
1965	15.8	9.7	107.3	6.2	22.9	95.4	2.7	62.6	0.8	19.5
1966	17.0	10.7	114.1	7.0	26.5	103.4	2.9	67.9	0.8	21.2
1967	18.3	11.7	116.1	7.6	29.6	112.2	3.1	75.1	0.8	23.4
1968	20.2	12.5	129.6	8.5	30.2	125.9	3.2	84.3	0.9	26.9
1969	22.6	14.4	148.3	9.9	34.8	138.4	3.7	93.6	1.1	30.6
1970	25.1	15.9	180.5	11.2	38.5	143.8	4.2	105.4	1.2	34.4
1971	27.6	17.4	205.7	12.1	42.8	157.6	4.7	113.3	1.3	39.2
1972	31.9	19.9	230.1	13.1	50.6	179.7	5.5	122.6	1.5	44.9
1973	37.4	24.0	280.0	15.6	61.2	212.6	5.9	134.8	1.9	54.1
1974	45.7	27.8	318.8	18.4	78.1	236.3	6.4	154.3	2.4	66.3
1975	50.9	31.4	336.7	19.8	89.9	283.9	7.4	172.2	2.2	74.1
1976	61.1	38.3	398.0	24.1	101.7	327.4	8.2	188.2	2.7	89.6
1977	69.7	42.0	451.3	27.4	111.1	352.0	9.5	211.2	2.9	103.1
1978	76.4	45.7	502.2	30.1	121.1	391.2	11.1	231.6	3.2	113.0
1979	81.5	49.6	552.9	34.4	150.1	437.8	12.9	268.9	3.5	120.5
1980	87.7	49.3	583.2	35.2	159.1	491.1	15.2	323.2	3.8	128.1
1981	90.4	53.3	610.6	40.5	173.3	536.3	18.0	365.1	4.0	133.6
1982	90.4	59.1	668.4	48.1	190.3	576.4	21.3	410.8	4.1	147.7
1983	94.2	65.4	734.9	48.0	182.8	605.7	22.7	469.2	4.4	158.0
1984	101.8	71.6	782.3	52.7	207.8	649.2	24.8	525.3	4.9	166.4
1985	109.5	79.1	818.9	53.7	226.3	702.2	27.3	562.1	5.3	175.4
1986	117.6	86.4	904.7	49.3	243.4	755.2	28.2	615.9	6.0	188.7
1987	124.7	91.4	960.9	48.9	263.1	781.7	28.6	658.7	6.3	195.5
1988	132.3	94.1	1 010.4	55.4	302.7	829.5	30.8	710.9	6.9	203.2
1989	144.4	98.0	1 074.5	61.7	357.9	892.7	34.3	792.3	7.9	215.7
1990	156.5	105.0	1 182.2	66.1	401.7	957.6	37.2	867.8	8.5	231.9
1991	164.4	108.4	1 291.0	73.0	443.7	987.2	38.6	939.6	9.2	244.5
1991	164.4	108.4	1 432.6	73.0	443.7	987.2	38.6	939.6	9.2	244.5
1992	175.7	113.7	1 561.7	77.0	463.3	1 040.5	41.4	951.2	10.2	258.5
1993	184.6	118.5	1 670.8	79.7	425.9	1 089.4	42.6	849.0	11.5	277.8
1994	197.1	128.0	1 763.8	84.4	425.1	1 139.3	46.1	863.4	12.9	293.9
1995	211.7	137.8	1 880.2	89.9	446.9	1 188.1	50.9	839.0	13.8	317.3
1996	212.7	144.2	1 878.2	98.0	480.5	1 224.6	57.6	971.1	14.3	324.5
1997	216.4	149.2	1 863.5	107.0	495.6	1 241.1	70.6	1 030.0	15.6	332.7
1998	224.3	155.9	1 916.4	108.5	525.4	1 297.6	77.2	1 068.8	16.9	351.6
1999	235.5	165.4	1 974.2	117.1	565.5	1 350.2	89.0	1 107.8	18.4	373.7
2000	248.3	176.5	2 025.5	122.2	608.8	1 404.8	103.5	1 165.7	20.9	401.1
2001	256.9	183.9	2 065.9	129.8	648.9	1 454.1	115.4	1 217.0	22.4	430.3
2002	265.1	190.1	2 106.7	139.0	679.9	1 500.7	124.8	1 256.2	23.9	451.9
2003	276.6	199.4	2 181.7	149.8	718.0	1 564.2	136.8	1 318.1	25.9	475.3

⁽¹⁾ 1960–98 ECU.⁽²⁾ 1960–91: D_90.

(Mrd EUR ⁽¹⁾)

	A	P	FIN	S	UK	EUR-12 ⁽²⁾	EU-15 ⁽³⁾	US	JP
1960	6.1	2.8	4.9	13.8	68.1	218.6	306.2	490.0	42.6
1961	6.7	3.0	5.5	14.9	71.3	240.4	332.8	501.7	51.0
1962	7.2	3.2	5.9	16.1	74.5	265.4	363.1	538.2	57.7
1963	7.7	3.4	6.4	17.4	79.4	292.7	397.1	567.9	66.0
1964	8.4	3.7	7.2	19.4	86.8	324.5	439.4	610.5	77.7
1965	9.2	4.2	7.9	21.4	93.8	354.5	479.5	662.5	86.4
1966	10.0	4.6	8.5	23.3	99.8	383.8	517.5	726.9	100.4
1967	10.7	5.1	8.7	25.4	103.6	410.6	551.3	771.8	118.2
1968	11.9	5.9	8.5	27.9	101.5	455.9	597.8	873.2	144.8
1969	13.1	6.5	9.7	30.5	110.0	512.1	667.0	950.5	171.3
1970	14.7	7.2	10.9	34.1	120.9	576.9	747.9	1 003.2	201.8
1971	16.6	8.0	11.7	36.3	134.1	640.6	828.5	1 063.2	224.6
1972	19.2	9.1	12.9	39.9	143.4	720.9	924.2	1 091.7	275.4
1973	23.3	11.1	15.5	44.1	147.4	853.2	1 068.7	1 111.5	342.0
1974	28.5	13.5	20.2	50.3	163.2	988.8	1 230.0	1 234.7	400.2
1975	31.5	14.3	23.2	61.3	188.9	1 106.1	1 387.6	1 303.8	416.4
1976	37.5	16.6	27.8	73.2	201.4	1 282.7	1 595.7	1 614.5	509.3
1977	44.1	17.1	28.8	75.7	222.8	1 428.2	1 768.7	1 762.7	614.7
1978	47.5	16.8	27.8	75.1	253.0	1 572.1	1 945.9	1 785.3	775.1
1979	52.3	17.6	31.8	82.5	305.4	1 764.3	2 201.7	1 856.4	746.7
1980	57.2	21.5	37.8	93.5	385.5	1 943.1	2 471.3	1 990.3	772.1
1981	61.8	26.1	46.2	106.9	457.3	2 105.8	2 723.4	2 780.3	1 063.8
1982	70.3	28.2	52.8	107.2	494.4	2 308.8	2 969.5	3 295.0	1 125.2
1983	78.4	27.8	56.0	108.1	515.3	2 482.0	3 170.8	3 933.3	1 351.2
1984	83.5	29.0	65.8	126.8	549.0	2 693.4	3 440.8	4 937.8	1 629.5
1985	88.5	32.2	72.0	137.6	602.7	2 873.4	3 692.7	5 470.4	1 804.3
1986	97.3	35.8	72.6	140.2	567.8	3 114.7	3 909.1	4 482.4	2 066.4
1987	103.7	37.9	77.5	145.0	595.6	3 287.4	4 119.4	4 069.8	2 135.9
1988	108.6	43.3	89.9	159.4	704.9	3 524.0	4 482.4	4 280.2	2 519.3
1989	116.6	50.0	105.0	179.8	763.7	3 853.1	4 894.5	4 936.7	2 695.8
1990	127.3	56.3	107.7	187.3	780.7	4 200.8	5 273.8	4 515.4	2 406.2
1991	136.6	65.5	99.8	200.4	836.1	4 493.4	5 638.3	4 785.4	2 818.3
1991	136.6	65.5	99.8	200.4	836.1	4 635.0	5 779.9	4 785.4	2 818.3
1992	147.0	75.5	83.9	198.2	828.1	4 885.8	6 025.8	4 823.2	2 932.5
1993	158.5	73.6	73.6	164.2	823.5	4 937.0	6 043.3	5 620.9	3 738.2
1994	168.1	76.3	84.4	174.2	878.1	5 154.8	6 335.1	5 878.4	4 054.0
1995	179.8	82.6	98.9	183.6	867.7	5 399.2	6 588.3	5 609.7	4 046.2
1996	182.4	88.6	100.5	206.3	936.6	5 632.9	6 920.0	6 103.7	3 699.2
1997	181.6	94.2	108.1	210.8	1 171.5	5 756.4	7 287.9	7 279.8	3 807.1
1998	188.6	100.7	115.3	213.7	1 271.1	5 991.4	7 632.0	7 777.4	3 523.1
1999	196.7	108.2	120.5	227.6	1 368.2	6 256.7	8 017.9	8 637.7	4 224.7
2000	204.8	115.3	131.7	248.5	1 547.9	6 552.6	8 525.5	10 639.7	5 145.4
2001	209.9	121.8	135.6	233.5	1 586.8	6 808.1	8 812.4	11 280.1	4 654.3
2002	215.8	127.5	139.2	234.0	1 646.9	7 030.7	9 101.7	11 421.9	4 621.5
2003	223.4	133.4	145.5	244.7	1 728.8	7 348.7	9 521.5	12 026.3	4 728.8

⁽¹⁾ 1960–98 ECU.⁽²⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽³⁾ 1960–91: including D_90.

Table 6

Gross domestic product at current market prices

(Mrd PPS)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	9.0	5.8	67.9	3.7	18.2	48.5	1.8	44.1	0.6	13.3
1961	9.7	6.4	73.3	4.3	21.0	52.8	1.9	49.2	0.6	14.1
1962	10.7	7.0	80.0	4.5	24.0	58.7	2.1	54.5	0.6	15.3
1963	11.6	7.4	85.9	5.2	27.2	64.6	2.3	60.1	0.6	16.6
1964	13.0	8.4	95.7	6.0	30.2	71.9	2.5	64.5	0.7	18.8
1965	14.0	9.2	105.4	6.9	33.5	78.7	2.7	69.6	0.8	20.6
1966	15.0	9.8	112.4	7.7	37.3	86.0	2.8	76.6	0.8	22.0
1967	16.1	10.5	115.4	8.3	40.1	92.6	3.0	84.5	0.8	23.9
1968	17.2	11.3	125.3	9.2	44.0	99.5	3.4	92.7	0.9	26.2
1969	19.4	12.7	141.8	10.8	50.5	112.1	3.8	103.6	1.1	29.3
1970	22.0	13.9	159.5	12.6	56.3	126.9	4.1	116.8	1.2	33.2
1971	24.5	15.3	176.5	14.6	63.3	142.8	4.6	127.9	1.3	37.2
1972	27.6	17.1	196.5	17.2	73.1	159.3	5.2	140.9	1.4	41.0
1973	31.9	19.3	224.4	20.3	85.9	183.0	6.0	163.6	1.8	46.9
1974	37.4	21.5	253.1	21.3	102.1	212.5	7.0	193.9	2.2	55.0
1975	41.8	23.9	283.1	25.7	116.3	240.0	8.4	215.2	2.1	62.4
1976	48.4	27.8	326.4	30.1	131.5	273.8	9.3	250.9	2.4	71.5
1977	52.7	30.5	363.5	33.5	146.5	306.1	10.9	278.1	2.4	79.3
1978	58.2	33.4	402.2	38.6	159.7	339.9	12.5	309.7	2.8	87.2
1979	65.3	37.7	459.4	43.7	175.1	384.8	14.1	358.1	3.1	97.7
1980	75.6	41.6	514.3	48.8	196.6	433.5	16.1	410.9	3.5	109.6
1981	83.0	44.7	565.2	52.8	215.6	481.7	18.3	454.6	3.8	119.7
1982	90.1	49.7	606.0	56.5	236.2	535.1	20.3	495.1	4.2	128.0
1983	95.0	53.1	647.7	58.7	252.5	570.5	21.2	526.5	4.4	136.8
1984	102.7	58.0	703.0	63.2	271.3	612.1	23.4	571.1	4.9	149.1
1985	109.6	62.9	750.6	67.8	290.5	649.8	25.2	615.5	5.3	160.9
1986	115.1	67.5	792.6	70.3	309.5	686.6	26.1	651.0	5.9	170.5
1987	121.2	69.2	823.9	70.4	334.6	721.1	28.0	686.8	6.2	177.2
1988	132.1	72.9	890.4	76.5	366.4	786.0	30.4	743.8	6.9	190.3
1989	144.4	76.9	970.9	83.5	404.1	861.6	34.0	805.2	8.1	210.2
1990	155.8	81.3	1 075.8	87.6	439.7	926.8	38.4	860.7	8.4	229.3
1991	166.8	87.9	1 190.2	96.0	485.9	995.2	41.9	926.9	9.3	243.5
1991	166.8	87.9	1 320.8	96.0	485.9	995.2	41.9	926.9	9.3	243.5
1992	178.7	89.7	1 411.3	103.3	494.3	1 026.0	45.7	961.3	10.1	254.4
1993	185.6	94.9	1 426.0	107.7	503.5	1 019.2	48.0	944.8	10.9	262.4
1994	194.9	103.1	1 525.2	115.1	517.8	1 052.9	53.3	1 002.6	11.9	277.7
1995	201.5	108.8	1 585.7	121.7	541.3	1 088.7	59.3	1 045.9	12.4	298.0
1996	208.5	115.9	1 660.3	129.2	576.1	1 121.8	63.1	1 095.8	13.1	306.6
1997	220.4	123.0	1 716.9	134.1	610.3	1 149.7	73.6	1 138.5	14.4	340.6
1998	229.6	128.4	1 765.3	142.0	633.9	1 203.8	79.4	1 208.1	15.6	367.1
1999	240.6	134.4	1 842.6	150.5	676.3	1 267.4	89.3	1 256.4	17.0	386.9
2000	256.2	144.8	1 940.1	162.0	724.6	1 343.8	101.4	1 320.7	19.7	416.2
2001	263.3	149.4	1 980.0	171.4	757.7	1 397.0	108.4	1 364.7	20.7	432.2
2002	272.1	154.0	2 029.4	181.0	787.1	1 445.4	113.7	1 408.3	21.9	448.0
2003	284.1	160.6	2 120.2	192.0	826.5	1 509.6	121.7	1 470.0	23.6	469.2

⁽¹⁾ 1960–91: D_90.

(Mrd PPS)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	6.8	3.5	3.9	9.5	64.9	221.3	301.6	298.0	55.1
1961	7.4	3.8	4.3	10.4	68.6	242.5	327.8	314.3	63.5
1962	7.9	4.3	4.6	11.3	72.4	267.1	357.8	347.7	71.9
1963	8.5	4.7	5.0	12.4	79.4	292.4	391.6	378.9	81.7
1964	9.5	5.3	5.5	13.9	87.4	323.5	433.2	419.1	94.9
1965	10.2	6.0	6.1	15.0	93.5	354.5	472.2	466.5	104.8
1966	11.2	6.4	6.4	15.9	99.0	384.6	509.3	516.4	119.9
1967	11.8	7.1	6.8	17.0	104.2	410.4	542.1	545.0	137.1
1968	12.7	8.0	7.1	18.1	111.8	446.4	587.5	588.4	158.1
1969	14.3	8.7	8.2	20.0	120.0	503.5	656.3	638.5	186.4
1970	16.3	10.1	9.5	22.8	131.5	568.6	736.9	685.1	220.1
1971	18.5	11.5	10.4	24.8	144.2	633.2	817.5	761.0	246.7
1972	20.9	13.3	12.0	27.0	159.6	708.4	912.2	857.7	285.6
1973	23.9	16.1	14.0	30.6	186.5	817.8	1 054.3	989.8	336.3
1974	28.0	18.4	16.2	35.6	206.6	947.1	1 210.8	1 107.9	374.0
1975	31.6	19.9	18.7	41.4	232.8	1 065.2	1 363.2	1 250.8	436.7
1976	36.2	23.3	20.5	45.7	261.8	1 224.1	1 559.6	1 446.0	497.0
1977	41.0	26.6	22.3	48.7	290.1	1 362.9	1 732.2	1 639.4	561.9
1978	43.9	29.4	24.5	53.3	322.0	1 508.5	1 917.2	1 859.3	635.5
1979	50.7	34.0	28.6	60.6	362.1	1 714.7	2 175.2	2 102.9	734.6
1980	57.5	39.4	33.4	68.3	393.0	1 939.2	2 442.1	2 325.8	837.3
1981	63.1	44.0	37.4	75.0	425.2	2 139.1	2 684.1	2 616.2	945.5
1982	69.6	48.6	41.8	82.0	469.3	2 331.4	2 932.5	2 773.0	1 055.5
1983	75.2	51.0	45.1	87.7	510.8	2 484.6	3 136.2	3 039.1	1 133.9
1984	79.6	52.8	49.2	96.3	552.9	2 682.5	3 389.7	3 441.7	1 242.9
1985	85.2	56.8	53.1	102.7	599.5	2 870.4	3 635.5	3 739.4	1 357.4
1986	89.9	61.1	56.1	108.4	642.9	3 034.7	3 853.5	3 988.2	1 442.0
1987	93.7	66.5	59.9	114.5	688.2	3 189.4	4 061.3	4 222.7	1 543.1
1988	100.7	74.5	65.4	122.0	754.3	3 463.4	4 412.6	4 582.8	1 712.4
1989	110.5	83.5	72.3	131.4	810.8	3 788.2	4 807.3	4 991.2	1 897.1
1990	121.3	91.0	75.9	139.7	856.7	4 110.6	5 188.3	5 323.6	2 094.8
1991	130.9	100.2	72.6	141.8	868.7	4 459.5	5 557.9	5 499.6	2 276.4
1991	130.9	100.2	72.6	141.8	868.7	4 590.0	5 688.5	5 499.6	2 276.4
1992	138.1	105.4	70.8	140.8	916.6	4 799.5	5 946.6	5 799.9	2 384.1
1993	144.4	110.0	75.0	141.2	934.2	4 837.4	6 007.6	6 099.0	2 461.4
1994	152.1	118.3	79.0	150.0	981.3	5 100.7	6 335.1	6 499.9	2 525.9
1995	156.6	123.4	87.4	159.8	997.8	5 322.0	6 588.3	6 822.8	2 629.7
1996	166.2	129.7	90.4	165.8	1 077.4	5 561.0	6 920.0	7 286.1	2 808.3
1997	173.9	144.1	99.0	175.5	1 173.8	5 815.6	7 287.9	7 840.7	2 926.6
1998	179.4	148.8	105.8	182.2	1 242.6	6 078.9	7 632.0	8 323.2	2 942.0
1999	188.4	158.5	110.7	192.6	1 306.4	6 384.5	8 017.9	8 861.2	3 028.9
2000	200.1	167.8	120.0	205.7	1 402.3	6 772.6	8 525.5	9 545.2	3 174.2
2001	204.5	173.0	122.9	209.9	1 457.1	6 996.0	8 812.4	9 827.4	3 202.4
2002	210.4	179.2	126.1	215.3	1 509.8	7 222.6	9 101.7	10 082.2	3 232.5
2003	218.2	186.3	131.1	223.8	1 584.5	7 552.6	9 521.5	10 606.5	3 294.3

⁽¹⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽²⁾ 1960–91: including D_90.

Table 7

Gross domestic product at current market prices

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	6.2	11.0	9.6	14.4	13.9	8.4	7.7	11.2	0.0	5.6
1962	6.9	12.7	8.8	5.0	15.6	12.2	8.3	12.4	5.3	7.7
1963	7.6	6.4	6.0	13.1	18.0	12.3	7.5	14.5	6.7	8.5
1964	11.9	14.3	9.9	13.1	12.9	10.9	13.8	9.5	14.2	17.7
1965	9.0	12.3	9.3	15.3	16.0	7.9	6.5	7.6	4.8	11.7
1966	7.4	9.8	6.3	11.6	16.0	8.3	5.4	8.4	5.1	8.9
1967	7.2	10.2	1.3	8.0	13.2	8.0	9.2	10.2	0.6	9.7
1968	6.9	11.4	7.9	8.8	12.9	8.5	12.8	8.4	9.4	10.9
1969	10.9	14.0	11.9	15.1	14.5	14.4	15.5	10.4	15.8	13.3
1970	11.2	10.7	13.1	13.1	10.4	11.5	12.6	12.5	17.1	12.2
1961–70	8.5	11.3	8.4	11.7	14.3	10.2	9.9	10.5	7.7	10.6
1971	9.6	10.7	11.0	11.0	12.9	11.4	14.4	9.0	1.8	12.9
1972	11.9	14.8	9.8	15.7	17.4	11.7	20.7	9.3	12.8	12.7
1973	13.6	14.7	11.4	30.7	20.6	14.4	20.7	20.4	21.5	14.7
1974	17.3	12.1	7.3	14.6	22.5	15.3	10.6	26.5	21.9	13.4
1975	10.7	11.9	4.3	20.3	17.4	12.7	26.9	14.1	-7.4	10.4
1976	13.7	16.0	9.1	24.4	20.3	15.9	22.7	25.6	15.1	14.0
1977	8.2	11.1	6.7	17.1	26.9	12.8	22.5	21.5	2.8	9.0
1978	7.4	11.5	7.4	22.0	22.4	13.8	18.6	17.6	9.4	7.8
1979	7.0	11.3	8.2	24.0	17.0	13.6	17.3	22.4	8.8	6.4
1980	8.8	8.0	6.0	19.8	14.9	12.9	18.3	25.6	8.8	6.8
1971–80	10.8	12.2	8.1	19.9	19.2	13.4	19.2	19.0	9.2	10.8
1981	4.8	9.5	4.3	19.4	12.2	12.4	21.4	20.0	6.6	4.8
1982	8.2	14.2	3.5	25.7	15.0	14.4	17.8	17.9	12.1	4.1
1983	5.9	10.3	5.1	19.2	13.9	10.6	10.6	16.5	10.0	3.8
1984	8.0	9.7	4.9	24.3	12.8	8.8	11.0	14.6	10.9	4.7
1985	6.4	8.6	4.1	22.0	11.1	7.0	8.5	12.2	6.0	4.9
1986	4.7	8.1	5.6	19.4	14.5	7.6	6.1	10.6	10.7	2.9
1987	4.2	5.2	3.4	12.6	11.8	5.5	7.0	9.4	3.3	0.7
1988	7.1	3.8	5.3	21.6	11.3	7.8	7.8	11.0	11.2	4.0
1989	9.0	5.4	6.1	18.8	12.1	7.4	11.6	9.5	13.7	6.2
1990	6.0	4.7	9.1	20.6	11.4	5.6	7.3	10.4	5.7	6.4
1981–90	6.4	7.9	5.1	20.3	12.6	8.7	10.8	13.1	9.0	4.2
1991	4.6	3.9	9.1	23.5	9.7	4.0	3.8	9.1	7.7	5.4
1992	5.3	3.5	7.4	15.6	7.7	3.5	6.2	5.3	8.9	4.1
1993	2.2	1.4	2.5	12.6	3.5	1.4	8.0	3.0	9.5	2.7
1994	4.6	7.3	4.9	13.5	6.4	3.8	7.5	5.8	9.8	5.0
1995	4.4	4.6	3.8	12.1	7.8	3.4	13.3	8.1	4.5	5.0
1996	2.4	5.1	1.8	9.9	6.0	2.6	10.2	6.4	5.5	4.2
1997	5.0	5.2	2.1	10.6	6.4	3.2	15.4	4.5	12.1	5.9
1998	3.9	4.7	3.1	8.4	6.8	4.4	15.1	4.5	8.7	6.1
1999	4.3	5.2	2.3	6.3	7.1	3.4	15.5	3.3	8.4	5.5
2000	5.4	7.0	2.6	7.9	7.7	4.0	16.2	5.2	13.6	7.3
1991–2000	4.2	4.8	3.9	11.9	6.9	3.4	11.0	5.5	8.8	5.1
2001	3.5	4.3	2.0	7.5	6.6	3.5	11.6	4.4	7.1	7.3
2002	3.2	3.4	2.0	7.1	4.8	3.2	8.1	3.2	6.5	5.0
2003	4.3	4.8	3.6	7.7	5.6	4.2	9.6	4.9	8.4	5.2

⁽¹⁾ 1961–91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	11.0	7.6	13.4	8.8	5.8	9.7	8.9	3.5	20.8
1962	6.3	6.4	7.1	8.5	4.8	10.5	9.3	7.5	13.5
1963	7.8	8.5	8.6	8.3	6.5	10.7	9.7	5.5	14.4
1964	9.5	8.5	12.8	11.5	9.3	10.9	10.7	7.5	17.6
1965	8.7	11.7	10.6	10.0	8.1	9.5	9.3	8.5	11.3
1966	8.9	9.6	7.2	8.8	6.4	8.5	8.1	9.7	16.1
1967	6.4	11.8	9.7	8.5	5.3	7.1	6.8	5.7	17.2
1968	7.4	10.7	14.6	6.1	8.3	9.0	8.8	9.3	18.4
1969	9.2	9.7	14.1	8.6	7.7	12.5	11.5	8.1	17.5
1970	12.2	11.3	11.6	12.0	10.0	12.2	11.7	5.5	17.9
1961–70	8.7	9.5	10.9	9.1	7.2	10.0	9.5	7.1	16.4
1971	11.6	12.0	9.9	8.1	11.6	11.0	11.0	8.6	10.0
1972	14.3	16.4	16.6	9.4	12.0	11.7	11.8	9.9	14.5
1973	13.3	21.7	21.7	11.3	15.0	16.1	15.7	11.8	21.8
1974	13.8	20.2	26.0	13.0	13.2	16.3	15.5	8.4	19.3
1975	6.1	11.2	15.6	17.4	26.2	11.1	13.9	9.0	10.5
1976	10.5	24.3	13.1	13.1	18.4	16.5	16.7	11.6	12.3
1977	10.6	33.5	10.1	8.8	16.3	14.5	14.6	11.4	11.4
1978	5.6	25.8	10.2	11.5	15.3	13.4	13.6	13.1	10.1
1979	9.1	26.2	16.3	12.1	17.5	14.1	14.6	11.8	8.4
1980	7.4	26.5	15.4	13.6	16.9	13.8	14.2	8.9	8.4
1971–80	10.2	21.6	15.4	11.8	16.2	13.8	14.1	10.5	12.6
1981	6.5	19.5	13.3	9.5	9.6	11.3	11.0	12.0	7.3
1982	7.3	23.3	12.4	9.3	9.5	11.8	11.4	4.0	5.0
1983	6.6	24.4	11.4	12.0	9.2	10.6	10.4	8.5	4.2
1984	5.0	22.3	12.2	11.9	7.2	9.8	9.4	11.3	6.8
1985	5.4	25.2	8.8	8.7	9.5	8.3	8.5	7.1	6.9
1986	5.1	25.4	6.9	9.3	7.4	8.6	8.4	5.7	4.7
1987	3.8	17.1	8.6	8.1	10.0	6.5	7.1	6.5	4.4
1988	4.8	19.5	13.2	8.9	11.6	8.5	9.0	7.7	7.2
1989	7.3	17.6	11.6	10.6	9.8	8.6	8.8	7.5	7.3
1990	8.2	17.6	5.5	10.3	8.4	8.9	8.8	5.7	7.9
1981–90	6.0	21.2	10.4	9.9	9.2	9.3	9.3	7.6	6.2
1991	7.2	14.9	-4.5	6.4	5.2	7.7	7.2	3.1	6.2
1992	6.0	12.7	-2.5	-0.4	4.2	6.0	5.5	5.6	2.6
1993	3.4	5.2	1.2	0.3	5.2	2.8	3.1	5.1	1.0
1994	5.4	8.3	6.0	6.6	6.1	5.3	5.5	6.2	1.1
1995	4.2	7.8	8.1	7.3	5.6	5.5	5.5	4.9	1.2
1996	3.3	7.0	3.8	2.5	6.0	3.9	4.2	5.6	2.6
1997	2.5	7.9	8.5	3.8	6.4	4.2	4.5	6.5	2.2
1998	4.1	8.6	8.5	4.5	6.0	4.8	5.0	5.6	-1.2
1999	3.5	6.8	3.9	5.2	4.8	3.9	4.1	5.6	-0.6
2000	4.2	6.5	9.3	4.7	4.7	4.9	4.9	6.6	-0.1
1991–2000	4.4	8.5	4.1	4.1	5.4	4.9	5.0	5.5	1.5
2001	2.5	5.7	2.9	3.3	4.7	4.1	4.1	3.4	-1.3
2002	2.8	4.7	2.7	3.8	4.3	3.3	3.5	2.4	-0.8
2003	3.5	4.6	4.5	4.8	5.6	4.6	4.8	5.1	0.4

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961–91: including D_90.⁽²⁾ PPS weighted; 1961–91: including D_90.

Table 8

Gross domestic product at current market prices per head of population

(EUR ⁽¹⁾; EU-15 = 100 ⁽²⁾)

	B	DK	D ⁽³⁾	EL	E	F	IRL	I	L	NL
1960	114.8	123.2	120.5	42.0	36.3	123.9	63.2	73.4	177.4	99.0
1961	111.6	124.7	124.5	43.7	37.7	122.1	62.8	74.4	161.9	98.5
1962	109.8	128.8	124.8	42.2	39.8	124.3	62.6	76.7	155.6	97.5
1963	108.2	125.5	120.9	43.9	42.9	126.6	61.7	80.6	151.7	96.3
1964	109.4	129.8	119.9	45.1	43.7	126.7	63.7	79.8	156.1	102.0
1965	109.2	133.7	119.8	47.8	46.4	125.2	62.5	78.7	149.5	103.8
1966	108.8	135.9	117.9	49.5	49.7	125.6	61.3	79.0	145.7	104.2
1967	110.1	139.7	113.0	50.1	51.9	127.8	62.0	82.0	138.7	107.3
1968	112.5	138.1	116.6	52.2	48.6	132.2	58.4	84.8	145.3	113.1
1969	113.1	142.3	119.3	54.4	50.0	130.0	61.0	84.5	152.1	115.0
1970	112.7	140.3	129.1	55.1	49.2	120.2	61.2	84.9	159.0	114.4
1971	112.6	138.7	132.4	54.4	49.1	118.6	62.6	82.7	146.5	117.3
1972	116.8	142.2	132.8	52.3	51.9	120.9	64.1	80.2	151.8	119.9
1973	118.8	148.1	139.8	53.9	54.1	123.5	59.2	76.2	163.8	124.6
1974	126.2	148.7	138.8	55.5	59.8	119.0	55.0	75.7	179.2	132.3
1975	124.9	149.1	131.0	52.7	60.6	126.7	56.1	74.7	147.2	130.4
1976	130.6	158.6	135.8	55.2	59.1	127.0	53.2	70.9	155.3	136.5
1977	134.8	156.9	139.7	55.9	57.7	123.1	55.4	71.7	152.3	141.4
1978	134.7	155.4	142.0	55.4	56.8	124.2	58.2	71.5	154.8	140.5
1979	127.3	149.0	138.6	55.4	61.9	122.8	59.1	73.4	148.8	132.0
1980	122.4	132.3	130.3	50.3	58.3	122.6	61.3	78.8	142.7	124.6
1981	114.8	130.3	123.9	52.2	57.5	121.2	65.5	80.9	135.8	117.4
1982	105.5	132.9	124.8	56.5	57.7	119.0	70.3	83.6	129.1	118.8
1983	103.2	138.0	129.1	52.6	51.8	116.7	69.8	89.5	131.1	118.7
1984	102.9	139.6	127.4	53.0	54.1	114.8	70.0	92.5	134.0	114.9
1985	103.3	143.8	124.8	50.3	54.8	115.4	71.7	92.4	133.8	112.6
1986	105.0	148.5	130.4	43.6	55.6	116.9	70.2	95.8	143.2	114.1
1987	105.8	149.3	131.7	41.0	57.0	114.5	67.5	97.4	142.2	111.6
1988	103.2	141.6	127.0	42.8	60.4	111.4	67.3	96.9	143.2	106.3
1989	103.2	135.6	123.0	43.7	65.5	109.6	69.5	99.3	148.4	103.2
1990	104.1	135.5	123.9	43.5	68.6	109.2	70.5	101.5	148.1	102.9
1991	102.5	131.2	125.7	44.6	71.1	105.3	68.4	103.3	148.7	101.2
1991	104.5	133.8	113.9	45.5	72.5	107.4	69.7	105.3	151.6	103.2
1992	107.2	134.8	118.8	45.7	72.8	108.6	71.5	102.5	159.4	104.4
1993	112.4	140.3	126.4	47.2	66.9	113.4	73.1	91.4	177.2	111.5
1994	114.5	144.5	127.3	47.6	63.8	113.1	75.6	88.7	187.2	112.3
1995	118.4	149.4	130.5	48.7	64.6	113.3	80.1	83.0	191.4	116.3
1996	113.3	148.2	124.1	50.6	66.2	111.1	86.0	91.5	186.3	113.1
1997	109.5	145.4	117.0	52.5	64.9	106.8	99.4	92.2	190.4	109.8
1998	108.4	144.9	115.1	50.8	65.8	106.5	102.8	91.5	195.1	110.4
1999	108.3	146.2	113.1	52.3	67.5	105.3	111.8	90.4	200.5	111.2
2000	107.5	146.8	109.4	51.4	68.4	102.8	121.2	89.5	211.8	111.8
2001	107.6	148.0	108.3	52.9	70.2	102.8	129.5	90.6	217.6	115.6
2002	107.4	148.1	107.2	54.9	71.0	102.5	134.5	90.7	222.3	117.1
2003	107.2	148.4	106.4	56.6	71.4	102.0	139.8	91.2	228.1	117.2

⁽¹⁾ 1960–98 ECU.⁽²⁾ 1960–91: including D_90.⁽³⁾ 1960–91: D_90.

(EUR ⁽¹⁾; EU-15 = 100 ⁽²⁾)

	A	P	FIN	S	UK	EUR-12 ⁽³⁾	EU-15 ⁽²⁾	US	JP
1960	85.3	31.6	108.0	180.6	127.2	90.9	100.0	265.4	44.3
1961	86.6	31.2	111.7	179.5	122.6	92.0	100.0	248.1	48.8
1962	84.4	30.7	109.7	178.9	117.7	93.0	100.0	242.7	50.6
1963	83.4	30.6	109.2	178.0	115.0	93.7	100.0	233.0	53.0
1964	82.7	30.1	111.7	179.6	113.8	93.9	100.0	225.2	56.2
1965	82.6	31.0	113.8	181.0	113.0	94.0	100.0	223.1	57.2
1966	83.5	31.8	113.5	182.1	111.6	94.2	100.0	226.0	61.5
1967	83.6	33.8	109.1	186.2	108.9	94.6	100.0	224.3	67.7
1968	85.8	35.9	98.2	188.6	98.5	96.8	100.0	233.0	76.1
1969	84.8	35.8	101.8	184.8	95.9	97.4	100.0	226.7	80.2
1970	85.1	36.0	102.4	184.0	94.3	97.8	100.0	212.3	83.9
1971	87.3	36.5	100.1	176.9	94.6	98.0	100.0	202.0	83.8
1972	90.4	37.3	98.6	175.0	91.0	98.8	100.0	185.1	91.4
1973	95.2	39.8	102.6	167.9	81.1	101.0	100.0	162.4	97.4
1974	101.4	41.6	116.5	166.4	78.4	101.6	100.0	156.0	98.2
1975	100.1	37.8	118.6	179.9	80.8	100.7	100.0	145.2	89.8
1976	104.0	37.2	123.7	186.9	75.2	101.4	100.0	155.4	94.8
1977	110.7	34.3	115.4	174.4	75.4	101.8	100.0	152.1	102.6
1978	108.9	30.4	101.4	157.4	78.1	101.8	100.0	139.1	116.9
1979	106.5	28.1	102.7	152.9	83.5	100.9	100.0	126.8	99.1
1980	104.2	30.3	108.7	154.8	94.1	98.9	100.0	120.2	90.9
1981	102.3	33.2	120.4	160.9	101.6	97.2	100.0	151.4	113.2
1982	106.9	32.8	126.0	148.2	101.0	97.7	100.0	163.3	109.3
1983	112.1	30.1	124.5	140.2	98.7	98.3	100.0	181.2	122.2
1984	110.2	28.9	134.3	151.5	96.8	98.3	100.0	208.1	135.2
1985	109.0	29.9	136.6	153.3	98.9	97.8	100.0	213.3	138.9
1986	113.2	31.5	129.9	147.5	87.9	100.1	100.0	164.0	149.8
1987	114.7	31.8	131.6	144.6	87.5	100.3	100.0	140.4	146.5
1988	110.4	33.5	140.3	145.9	95.2	98.8	100.0	134.9	158.7
1989	108.6	35.7	150.2	150.3	94.6	98.9	100.0	141.7	155.6
1990	109.4	37.7	143.3	145.1	89.9	100.0	100.0	119.8	129.2
1991	108.9	41.4	123.8	145.1	90.2	100.1	100.0	118.1	141.8
1991	111.0	42.2	126.2	147.9	92.0	99.6	100.0	120.5	144.6
1992	114.2	46.9	101.9	140.1	87.5	100.7	100.0	115.7	144.5
1993	121.8	45.8	89.2	115.6	86.9	101.4	100.0	133.7	183.9
1994	123.0	45.3	97.4	116.6	88.4	101.0	100.0	132.5	190.3
1995	126.7	47.2	109.7	117.9	83.9	101.8	100.0	120.8	182.8
1996	122.4	48.3	106.1	126.2	86.2	101.1	100.0	124.4	159.2
1997	115.9	48.8	108.3	122.8	102.3	98.1	100.0	139.9	155.5
1998	115.1	49.8	110.2	119.0	105.8	97.5	100.0	141.7	137.4
1999	114.3	51.0	109.6	120.9	108.2	97.0	100.0	148.8	157.1
2000	112.1	51.1	112.8	124.3	114.9	95.5	100.0	171.4	180.1
2001	111.2	52.3	112.5	113.2	113.9	96.0	100.0	175.1	157.9
2002	110.8	53.1	111.9	110.0	114.4	96.0	100.0	170.6	152.1
2003	109.7	53.2	112.0	110.1	114.7	96.0	100.0	170.9	149.2

⁽¹⁾ 1960–98 ECU.⁽²⁾ 1960–91: including D_90.⁽³⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.

Table 9

Gross domestic product at current market prices per head of population

(PPS; EU-15 = 100 ⁽¹⁾)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	L	NL
1960	97.4	126.0	121.8	43.9	59.2	103.2	63.2	87.3	176.0	115.2
1961	97.5	127.4	120.3	47.1	62.7	103.1	63.8	89.8	166.6	112.1
1962	98.6	128.9	120.1	45.4	65.5	104.3	63.3	91.4	156.5	110.9
1963	98.4	124.0	117.8	48.7	67.9	104.0	63.4	92.3	152.9	109.2
1964	99.3	128.1	118.5	50.6	67.9	104.5	62.4	89.6	155.5	111.2
1965	98.6	128.5	119.4	53.9	69.1	104.9	61.3	88.8	151.3	111.6
1966	98.0	127.0	118.0	55.3	71.1	106.2	59.8	90.6	146.6	109.8
1967	98.5	127.4	114.3	56.2	71.4	107.4	61.2	93.8	143.7	111.2
1968	97.7	126.3	114.8	57.5	72.0	106.2	63.1	94.9	143.8	112.0
1969	98.6	127.4	116.0	60.6	73.7	107.0	63.1	95.1	153.6	111.9
1970	100.4	124.5	115.8	63.2	73.0	107.6	61.7	95.6	157.9	112.2
1971	101.4	123.6	115.1	66.7	73.7	108.9	61.6	94.6	146.3	112.8
1972	102.4	123.8	114.9	69.8	76.0	108.6	62.3	93.4	148.7	110.9
1973	102.7	120.8	113.6	71.2	77.0	107.8	60.8	93.8	158.9	109.6
1974	105.1	116.8	112.0	65.4	79.4	108.7	61.5	96.6	170.1	111.4
1975	104.5	115.7	112.1	69.6	79.8	109.0	64.5	95.0	141.2	111.8
1976	105.8	117.9	113.9	70.5	78.2	108.7	61.8	96.7	140.7	111.6
1977	104.0	116.3	114.9	69.9	77.8	109.3	64.5	96.5	131.5	111.0
1978	104.1	115.0	115.4	72.1	76.0	109.5	66.4	97.0	134.4	110.0
1979	103.2	114.7	116.5	71.3	73.1	109.2	65.3	99.0	132.8	108.3
1980	106.7	112.9	116.3	70.5	72.9	109.5	66.1	101.3	132.6	107.8
1981	106.9	110.9	116.4	68.9	72.6	110.4	67.6	102.2	131.2	106.7
1982	106.6	113.2	114.6	67.2	72.5	111.9	67.9	102.0	133.2	104.3
1983	105.2	113.4	115.1	65.0	72.3	111.1	66.1	101.6	132.7	103.9
1984	105.4	114.8	116.2	64.6	71.7	109.9	67.0	102.1	135.0	104.6
1985	105.1	116.2	116.2	64.5	71.4	108.5	67.4	102.7	136.6	104.9
1986	104.2	117.7	115.9	63.0	71.7	107.8	65.9	102.7	144.2	104.6
1987	104.3	114.6	114.6	59.9	73.6	107.1	67.1	103.1	141.3	102.6
1988	104.6	111.5	113.7	59.9	74.2	107.2	67.6	103.0	145.5	101.1
1989	105.0	108.3	113.1	60.2	75.3	107.7	70.0	102.7	154.5	102.4
1990	105.4	106.7	114.7	58.5	76.3	107.4	73.8	102.3	149.0	103.4
1991	105.5	108.0	117.5	59.6	79.0	107.7	75.2	103.3	151.8	102.3
1991	107.8	110.3	106.7	60.8	80.7	110.0	76.8	105.5	155.0	104.4
1992	110.5	107.7	108.8	62.2	78.7	108.5	79.8	105.0	159.6	104.1
1993	113.7	113.0	108.5	64.1	79.6	106.7	83.0	102.3	168.7	106.0
1994	113.3	116.4	110.1	64.9	77.7	104.5	87.4	103.0	172.6	106.1
1995	112.7	118.0	110.0	66.0	78.2	103.8	93.4	103.4	172.2	109.3
1996	111.1	119.2	109.7	66.7	79.4	101.8	94.1	103.3	170.4	106.9
1997	111.5	119.9	107.8	65.8	79.9	99.0	103.6	102.0	176.2	112.4
1998	110.9	119.4	106.1	66.5	79.3	98.8	105.7	103.4	179.8	115.2
1999	110.7	118.9	105.6	67.2	80.7	98.9	112.1	102.5	184.7	115.1
2000	110.9	120.4	104.7	68.1	81.5	98.3	118.8	101.4	198.9	116.0
2001	110.2	120.2	103.8	69.8	82.0	98.8	121.6	101.5	201.1	116.1
2002	110.3	119.9	103.3	71.4	82.2	98.8	122.5	101.7	203.7	116.1
2003	110.1	119.6	103.4	72.5	82.2	98.4	124.4	101.7	208.1	115.7

⁽¹⁾ 1960–91: including D_90.⁽²⁾ 1960–91: D_90.

(PPS; EU-15 = 100 ⁽¹⁾)

	A	P	FIN	S	UK	EUR-12 ⁽²⁾	EU-15 ⁽¹⁾	US	JP
1960	95.6	40.6	87.4	126.7	123.1	93.5	100.0	163.9	58.2
1961	96.0	40.9	89.4	127.4	119.8	94.2	100.0	157.8	61.7
1962	94.1	42.1	88.2	127.5	116.0	95.0	100.0	159.1	64.1
1963	93.8	42.7	87.2	128.7	116.6	95.0	100.0	157.7	66.4
1964	94.1	43.4	86.9	130.0	116.3	94.9	100.0	156.9	69.7
1965	93.0	45.1	88.2	129.3	114.4	95.4	100.0	159.5	70.4
1966	94.6	45.5	87.3	126.8	112.5	95.9	100.0	163.2	74.6
1967	94.2	47.9	86.3	126.6	111.3	96.2	100.0	161.0	79.9
1968	93.6	50.0	84.1	124.8	110.3	96.5	100.0	159.8	84.5
1969	94.1	49.1	87.5	123.5	106.3	97.4	100.0	154.8	88.7
1970	96.4	51.0	90.6	125.0	104.1	97.8	100.0	147.1	92.9
1971	98.4	53.3	90.3	122.2	103.1	98.2	100.0	146.5	93.3
1972	100.0	55.6	93.1	120.0	102.6	98.4	100.0	147.3	96.1
1973	99.0	58.6	94.0	118.1	104.1	98.2	100.0	146.5	97.1
1974	101.1	57.6	95.0	119.7	100.9	98.9	100.0	142.2	93.2
1975	102.1	53.6	97.3	123.6	101.4	98.7	100.0	141.8	95.8
1976	102.7	53.4	93.1	119.5	100.1	99.0	100.0	142.4	94.7
1977	105.2	54.6	91.1	114.7	100.2	99.2	100.0	144.5	95.8
1978	102.1	54.1	90.6	113.3	100.9	99.1	100.0	147.0	97.3
1979	104.6	54.8	93.5	113.8	100.2	99.2	100.0	145.4	98.7
1980	106.1	56.2	97.1	114.5	97.1	99.9	100.0	142.2	99.8
1981	106.0	56.7	99.0	114.6	95.9	100.2	100.0	144.5	102.1
1982	107.1	57.2	100.8	114.8	97.1	99.9	100.0	139.2	103.8
1983	108.6	55.9	101.3	114.9	98.9	99.5	100.0	141.6	103.7
1984	106.6	53.5	101.9	116.8	98.9	99.4	100.0	147.3	104.7
1985	106.5	53.6	102.3	116.2	99.9	99.2	100.0	148.1	106.1
1986	106.2	54.5	101.9	115.7	101.0	99.0	100.0	148.0	106.0
1987	105.0	56.6	103.2	115.8	102.5	98.7	100.0	147.7	107.4
1988	104.0	58.6	103.7	113.4	103.5	98.6	100.0	146.7	109.6
1989	104.8	60.7	105.4	111.9	102.2	99.0	100.0	145.9	111.5
1990	105.9	62.0	102.6	110.0	100.3	99.5	100.0	143.6	114.4
1991	105.9	64.3	91.4	104.2	95.1	100.7	100.0	137.7	116.2
1991	108.1	65.6	93.3	106.4	97.1	100.2	100.0	140.7	118.7
1992	108.8	66.4	87.2	100.9	98.1	100.2	100.0	141.0	119.0
1993	111.6	68.8	91.5	100.0	99.2	99.9	100.0	145.9	121.8
1994	111.3	70.2	91.3	100.4	98.8	99.9	100.0	146.6	118.6
1995	110.3	70.5	97.0	102.6	96.5	100.3	100.0	147.0	118.8
1996	111.6	70.7	95.4	101.4	99.1	99.8	100.0	148.5	120.8
1997	111.0	74.6	99.3	102.2	102.5	99.1	100.0	150.7	119.6
1998	109.5	73.6	101.2	101.5	103.4	99.0	100.0	151.7	114.7
1999	109.5	74.6	100.7	102.3	103.3	99.0	100.0	152.7	112.6
2000	109.5	74.4	102.8	102.9	104.1	98.7	100.0	153.8	111.1
2001	108.4	74.3	101.9	101.7	104.6	98.7	100.0	152.6	108.6
2002	108.0	74.6	101.4	101.2	104.9	98.7	100.0	150.6	106.4
2003	107.1	74.2	100.9	100.7	105.1	98.6	100.0	150.7	104.0

⁽¹⁾ 1960–91: including D_90.⁽²⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.

Table 10

Gross domestic product at 1995 market prices

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	5.0	6.4	4.6	13.2	11.8	5.5	5.0	8.2	3.8	3.1
1962	5.2	5.7	4.7	0.4	9.3	6.7	3.2	6.2	1.4	4.0
1963	4.4	0.6	2.8	11.8	8.8	5.3	4.7	5.6	3.4	3.6
1964	6.9	9.3	6.7	9.4	6.2	6.5	3.8	2.8	7.9	8.3
1965	3.6	4.6	5.4	10.8	6.3	4.8	1.9	3.3	1.9	5.2
1966	3.1	2.7	2.8	6.5	7.2	5.2	0.9	6.0	1.1	2.7
1967	3.9	3.9	-0.3	5.7	4.3	4.7	5.8	7.2	0.2	5.3
1968	4.2	4.3	5.5	7.2	6.6	4.3	8.2	6.5	4.2	6.4
1969	6.6	6.9	7.5	11.6	8.9	7.0	5.9	6.1	10.0	6.4
1970	6.2	2.5	5.0	8.9	4.2	5.7	2.7	5.3	1.7	5.8
1961-70	4.9	4.7	4.4	8.5	7.3	5.6	4.2	5.7	3.5	5.1
1971	3.8	2.6	3.1	7.8	4.6	4.8	3.5	1.9	2.7	4.5
1972	5.3	4.5	4.3	10.2	8.1	4.4	6.5	3.2	6.6	3.1
1973	6.1	3.6	4.8	8.1	7.8	5.4	4.7	6.5	8.3	5.0
1974	4.2	-1.4	0.2	-6.4	5.6	3.1	4.3	5.3	4.2	4.1
1975	-1.3	-1.7	-1.3	6.4	0.5	-0.3	5.7	-2.0	-6.6	0.2
1976	5.7	6.4	5.3	6.9	3.3	4.2	1.3	6.5	2.5	4.8
1977	0.6	1.1	2.8	2.9	2.8	3.2	8.1	2.4	1.6	2.3
1978	2.8	1.8	3.0	7.2	1.5	3.4	7.1	3.7	4.1	2.4
1979	2.3	3.1	4.2	3.3	0.0	3.3	3.1	5.5	2.3	2.2
1980	4.4	-0.6	1.0	0.7	1.3	1.6	3.1	3.5	0.8	1.2
1971-80	3.4	1.9	2.7	4.6	3.5	3.3	4.7	3.6	2.6	3.0
1981	0.0	-2.1	0.1	-1.6	-0.1	1.2	3.3	0.8	-0.6	-0.5
1982	0.4	2.7	-0.9	-1.1	1.2	2.6	2.3	0.6	1.1	-1.2
1983	0.3	1.7	1.8	-1.1	1.8	1.5	-0.2	1.2	3.0	1.7
1984	2.5	3.5	2.8	2.0	1.8	1.6	4.3	2.8	6.2	3.3
1985	2.0	3.6	2.0	2.5	2.3	1.5	3.1	3.0	2.9	3.1
1986	1.7	4.0	2.3	0.5	3.3	2.4	0.3	2.5	7.8	2.7
1987	2.8	0.0	1.5	-2.3	5.5	2.5	4.7	3.0	2.3	1.4
1988	4.6	1.2	3.7	4.3	5.1	4.6	4.3	3.9	10.4	3.1
1989	3.9	0.2	3.6	3.8	4.8	4.2	6.2	2.9	9.8	5.0
1990	2.9	1.0	5.7	0.0	3.8	2.6	7.6	2.0	2.2	4.1
1981-90	2.1	1.6	2.2	0.7	2.9	2.5	3.6	2.3	4.5	2.3
1991	1.8	1.1	5.0	3.1	2.5	1.0	1.9	1.4	6.1	2.5
1992	1.6	0.6	2.2	0.7	0.9	1.5	3.3	0.8	4.5	1.7
1993	-1.5	0.0	-1.1	-1.6	-1.0	-0.9	2.7	-0.9	8.7	0.9
1994	2.8	5.5	2.3	2.0	2.4	2.1	5.8	2.2	4.2	2.6
1995	2.6	2.8	1.7	2.1	2.8	1.7	10.0	2.9	3.8	2.9
1996	1.2	2.5	0.8	2.4	2.4	1.1	7.8	1.1	3.6	3.0
1997	3.6	3.0	1.4	3.5	4.0	1.9	10.8	2.0	9.1	3.8
1998	2.2	2.8	2.0	3.1	4.3	3.4	8.6	1.8	5.9	4.3
1999	3.0	2.1	1.8	3.4	4.1	2.9	10.8	1.6	5.7	3.7
2000	4.0	3.2	3.0	4.3	4.1	3.1	11.5	2.9	9.5	3.5
1991-2000	2.1	2.3	1.9	2.3	2.6	1.8	7.3	1.6	6.1	2.9
2001	1.3	1.3	0.7	4.1	2.7	2.0	6.5	1.8	4.0	1.5
2002	1.3	1.6	0.7	3.5	2.0	1.5	3.3	1.3	3.0	1.5
2003	2.8	2.5	2.8	4.2	3.2	2.6	5.5	2.7	5.4	3.1

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	5.3	5.2	7.6	5.7	2.5	6.3	5.4	2.3	11.9
1962	2.4	6.6	3.0	4.3	1.3	5.6	4.7	6.1	8.6
1963	4.1	5.9	3.3	5.3	5.0	4.8	4.8	4.4	8.8
1964	6.0	7.3	5.2	6.8	5.4	5.9	5.9	5.9	11.2
1965	2.9	7.6	5.3	3.8	2.4	4.8	4.3	6.5	5.7
1966	5.6	3.9	2.4	2.1	1.9	4.5	3.9	6.7	10.2
1967	3.0	8.1	2.2	3.4	2.3	3.7	3.4	2.5	11.1
1968	4.5	9.2	2.3	3.6	4.1	5.6	5.2	4.8	11.9
1969	6.3	3.4	9.6	5.0	2.0	7.1	6.1	3.1	12.0
1970	7.1	7.6	7.5	6.5	2.3	5.5	4.9	0.2	10.3
1961-70	4.7	6.4	4.8	4.6	2.9	5.4	4.9	4.2	10.1
1971	5.1	6.6	2.4	0.9	2.1	3.7	3.3	3.4	4.4
1972	6.2	8.0	7.7	2.3	3.6	4.8	4.5	5.5	8.4
1973	4.9	11.2	7.0	4.0	7.2	5.9	6.0	5.9	8.0
1974	3.9	1.1	3.2	3.2	-1.6	2.9	2.0	-0.6	-1.2
1975	-0.4	-4.3	1.8	2.6	-0.6	-0.7	-0.6	-0.3	3.1
1976	4.6	6.9	-0.1	1.1	2.8	5.0	4.5	5.6	4.0
1977	4.7	5.5	0.3	-1.6	2.3	2.8	2.6	4.7	4.4
1978	-0.4	2.8	2.3	1.8	3.3	3.0	3.0	5.6	5.3
1979	5.5	5.6	6.8	3.8	2.6	3.7	3.5	3.2	5.5
1980	2.3	4.6	5.1	1.7	-2.1	2.0	1.3	-0.2	2.8
1971-80	3.6	4.7	3.6	2.0	1.9	3.3	3.0	3.2	4.4
1981	-0.1	1.6	2.1	0.0	-1.5	0.5	0.1	2.5	2.8
1982	1.9	2.1	3.1	1.0	2.0	0.7	0.9	-2.1	3.1
1983	2.8	-0.2	2.7	1.8	3.6	1.5	1.8	4.3	2.3
1984	0.3	-1.9	3.4	4.0	2.5	2.3	2.4	7.3	3.8
1985	2.2	2.8	3.1	1.9	3.6	2.2	2.5	3.8	4.4
1986	2.3	4.1	2.5	2.3	3.9	2.5	2.7	3.4	3.0
1987	1.7	6.4	4.2	3.1	4.5	2.6	2.9	3.4	4.5
1988	3.2	7.5	4.7	2.3	5.2	4.2	4.3	4.2	6.5
1989	4.2	6.4	5.1	2.4	2.2	3.9	3.5	3.5	5.3
1990	4.7	4.0	0.0	1.4	0.8	3.5	3.0	1.7	5.3
1981-90	2.3	3.3	3.1	2.0	2.7	2.4	2.4	3.2	4.1
1991	3.3	4.4	-6.3	-1.1	-1.4	2.5	1.7	-0.5	3.1
1992	2.3	1.1	-3.3	-1.4	0.2	1.5	1.2	3.1	0.9
1993	0.4	-2.0	-1.1	-2.2	2.5	-0.8	-0.3	2.7	0.4
1994	2.6	1.0	4.0	4.1	4.7	2.3	2.8	4.1	1.0
1995	1.6	4.3	3.8	3.7	2.9	2.3	2.5	2.7	1.6
1996	2.0	3.8	4.0	1.1	2.6	1.5	1.7	3.6	3.5
1997	1.6	3.9	6.3	2.1	3.4	2.4	2.6	4.5	1.8
1998	3.5	4.5	5.3	3.6	3.0	2.9	2.9	4.3	-1.1
1999	2.8	3.4	4.0	4.5	2.1	2.7	2.6	4.1	0.8
2000	3.0	3.4	5.7	3.6	2.9	3.4	3.3	4.2	1.5
1991-2000	2.3	2.8	2.2	1.8	2.3	2.1	2.1	3.3	1.3
2001	1.1	1.7	0.5	1.4	2.3	1.6	1.7	0.9	-0.6
2002	1.2	1.5	1.7	1.6	1.7	1.3	1.4	0.5	-0.9
2003	2.4	2.3	2.9	2.6	3.0	2.9	2.9	3.4	0.5

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 11

Gross domestic product at 1995 market prices per person employed

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	4.3	4.8	3.2	12.8	11.6	5.4	5.2	8.0	2.7	1.6
1962	3.8	4.1	4.3	1.4	8.4	6.5	2.5	7.3	1.1	1.9
1963	4.3	-0.6	2.6	13.4	8.2	4.3	4.2	7.3	3.8	2.2
1964	6.3	7.1	6.6	10.9	5.6	5.4	3.3	3.3	6.0	6.4
1965	3.7	2.7	4.8	11.5	5.7	4.4	2.1	5.1	1.0	4.4
1966	2.9	2.2	3.1	7.5	6.7	4.4	1.2	7.7	0.6	1.9
1967	4.2	4.1	3.0	7.0	3.5	4.4	6.4	5.9	1.3	5.6
1968	4.4	3.7	5.4	8.5	5.7	4.6	7.9	6.7	4.6	5.4
1969	5.1	5.2	5.8	11.9	8.0	5.4	5.6	5.6	8.5	4.7
1970	4.6	1.5	3.7	9.0	3.6	4.2	3.9	5.1	-0.3	4.6
1961-70	4.4	3.5	4.2	9.3	6.7	4.9	4.2	6.2	2.9	3.9
1971	3.1	2.7	2.6	7.5	4.1	4.3	3.9	2.0	-0.5	3.9
1972	5.5	2.8	3.8	9.6	7.8	3.8	6.2	3.7	3.8	4.0
1973	5.2	2.4	3.6	7.0	5.7	4.0	3.2	4.3	6.3	5.0
1974	2.6	-0.6	1.4	-6.5	4.9	2.2	2.8	3.2	1.4	3.9
1975	0.1	-0.6	1.5	6.3	2.2	0.6	6.5	-2.2	-7.7	0.8
1976	6.1	4.6	5.9	5.6	4.4	3.4	2.2	4.9	2.7	4.8
1977	1.0	1.3	2.7	2.1	3.6	2.4	6.2	1.3	1.6	2.1
1978	2.7	1.1	2.2	6.8	3.3	2.8	4.5	3.1	4.7	1.6
1979	1.4	2.2	2.5	2.2	1.8	2.9	-0.1	3.9	1.8	0.7
1980	4.6	0.1	-0.6	-0.7	4.5	1.5	2.1	1.5	0.1	0.5
1971-80	3.2	1.6	2.6	3.9	4.2	2.8	3.7	2.6	1.4	2.7
1981	1.9	-0.6	0.2	-6.4	2.5	1.8	4.2	0.8	-0.9	0.8
1982	1.7	2.4	0.3	-0.1	2.2	2.6	2.3	0.1	1.4	1.5
1983	1.6	1.6	3.2	-1.6	2.2	1.9	1.7	0.6	3.3	3.6
1984	2.4	2.0	2.6	2.2	4.3	2.0	6.3	2.4	5.6	3.2
1985	1.4	1.3	1.3	0.0	3.8	2.4	5.9	2.1	2.0	1.2
1986	1.2	1.6	0.9	0.2	1.8	2.2	-0.4	1.7	5.1	0.7
1987	2.2	-0.3	0.7	-2.2	1.0	1.9	3.8	2.5	-0.3	-0.3
1988	2.8	2.0	2.9	2.6	1.7	3.7	4.3	2.9	7.2	1.1
1989	2.7	0.8	2.1	3.4	1.3	2.5	6.5	2.6	6.1	2.7
1990	2.0	1.7	2.7	-1.3	0.2	1.7	3.2	1.0	-1.9	1.4
1981-90	2.0	1.2	1.7	-0.3	2.1	2.3	3.8	1.7	2.7	1.6
1991	1.7	1.7	2.5	5.6	1.6	1.0	1.9	0.6	2.0	1.1
1992	2.0	1.4	3.8	-0.7	2.5	2.3	2.4	1.4	1.9	0.4
1993	-0.7	1.5	0.3	-2.5	2.0	0.8	2.1	2.2	6.8	1.0
1994	3.2	4.0	2.5	0.1	2.9	2.4	2.6	3.2	1.6	2.6
1995	1.8	2.3	1.5	1.2	0.9	1.2	4.7	2.9	1.3	1.1
1996	0.8	1.9	1.1	2.8	1.2	1.3	4.0	0.8	0.9	0.5
1997	2.8	1.8	1.6	3.9	0.9	1.6	5.0	1.6	5.8	0.7
1998	1.0	1.5	1.0	-0.3	0.5	2.4	1.3	0.8	1.5	1.4
1999	1.6	1.0	0.8	4.1	0.5	1.3	4.3	0.8	0.7	1.2
2000	2.4	2.5	1.4	4.6	1.0	0.9	6.3	1.4	3.6	1.1
1991-2000	1.7	1.9	1.6	1.8	1.4	1.5	3.4	1.6	2.6	1.1
2001	0.1	0.9	0.6	3.0	0.4	-0.2	4.1	0.3	-1.4	-0.4
2002	0.9	1.5	1.0	2.9	1.0	1.0	2.5	0.9	0.7	1.0
2003	1.5	2.0	2.0	3.0	1.1	1.2	3.6	1.4	1.5	1.8

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	4.5	4.5	5.6	4.7	1.1	5.6	4.6	2.7	10.3
1962	2.0	6.0	3.4	3.6	0.4	5.5	4.3	3.9	7.2
1963	4.7	5.6	2.9	5.3	4.8	4.8	4.7	3.5	7.9
1964	6.2	7.4	5.3	6.8	4.2	5.6	5.4	4.0	9.8
1965	3.5	7.4	4.1	2.8	1.3	4.9	4.1	3.1	4.0
1966	6.7	3.9	2.2	1.1	1.3	4.7	3.9	2.0	8.0
1967	4.8	8.7	4.1	4.4	3.8	4.4	4.3	0.0	9.0
1968	5.8	9.8	3.7	2.5	4.7	5.6	5.3	2.4	10.1
1969	6.4	4.0	8.0	3.8	1.9	6.0	5.2	0.5	11.1
1970	6.7	5.2	5.2	4.5	2.7	4.4	4.1	1.0	9.1
1961-70	5.1	6.2	4.4	3.9	2.6	5.2	4.6	2.3	8.6
1971	3.9	3.8	3.0	1.1	3.0	3.2	3.1	3.9	3.7
1972	5.5	8.0	6.8	1.9	3.8	4.6	4.3	3.0	7.9
1973	3.2	11.7	5.0	3.6	5.3	4.5	4.5	1.5	5.6
1974	3.0	1.8	2.9	1.2	-2.2	2.4	1.5	-2.1	-0.8
1975	0.1	-3.2	2.3	0.6	-0.5	0.5	0.3	1.8	3.3
1976	4.2	7.3	0.8	0.8	3.7	4.8	4.5	2.7	3.1
1977	3.6	5.2	2.2	-1.6	2.2	2.4	2.3	1.2	3.2
1978	-0.7	4.5	3.3	1.3	2.2	2.8	2.6	0.5	4.3
1979	5.0	3.4	4.5	2.6	1.1	2.8	2.5	-0.1	4.4
1980	1.3	5.0	2.1	0.5	-1.9	1.4	0.8	-0.4	2.1
1971-80	2.9	4.7	3.3	1.2	1.6	2.9	2.6	1.2	3.7
1981	0.1	0.6	0.9	-0.2	2.5	0.8	1.1	1.5	2.1
1982	3.4	4.1	2.0	1.2	3.8	1.3	1.7	-0.4	2.3
1983	3.9	1.0	2.3	1.5	4.9	2.0	2.5	3.4	0.7
1984	0.4	-0.4	2.8	3.2	0.4	2.6	2.2	2.3	3.5
1985	1.9	2.8	3.0	0.9	2.4	2.0	2.0	1.4	3.8
1986	2.0	7.0	2.8	1.7	4.0	1.7	2.1	1.7	2.5
1987	1.8	4.0	3.7	2.3	2.6	1.5	1.6	0.4	4.1
1988	2.8	5.2	3.7	0.9	1.7	2.9	2.6	1.2	5.3
1989	3.0	4.5	4.2	0.9	-0.6	2.5	1.9	1.0	3.8
1990	3.1	2.2	0.6	0.4	-0.4	1.6	1.2	0.6	3.6
1981-90	2.2	3.1	2.6	1.3	2.1	1.9	1.9	1.3	3.1
1991	2.1	1.5	-0.7	0.4	1.7	1.5	1.6	0.6	1.1
1992	2.2	2.8	4.2	3.2	2.6	2.5	2.5	3.2	-0.2
1993	1.3	0.0	5.4	3.2	4.0	1.0	1.5	0.6	0.0
1994	2.8	2.0	5.1	4.9	3.9	2.7	2.9	1.5	0.9
1995	2.0	5.0	2.2	2.3	1.4	1.8	1.7	0.2	1.4
1996	2.2	10.4	2.6	1.6	1.5	1.5	1.5	1.7	3.0
1997	1.1	2.2	2.9	3.2	1.4	1.6	1.6	2.0	0.8
1998	2.7	1.8	3.2	2.3	1.6	1.2	1.3	2.0	-0.4
1999	1.8	1.5	1.2	2.1	1.1	1.1	1.1	2.2	1.6
2000	1.6	1.7	3.9	1.4	1.8	1.5	1.6	2.1	1.8
1991-2000	2.0	2.9	3.0	2.5	2.1	1.6	1.8	1.6	1.0
2001	1.1	0.2	-0.8	-0.4	1.6	0.4	0.6	1.0	-0.3
2002	1.5	0.8	1.7	1.5	1.7	1.1	1.2	1.1	-0.5
2003	2.1	1.5	2.4	1.9	2.6	1.6	1.8	2.5	0.8

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 12

Industrial production; construction excluded

(annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	6.4	5.1	6.4	:	:	5.6	:	10.8	2.9	4.4
1962	5.6	8.9	4.1	:	10.4	6.6	:	9.6	-4.5	4.7
1963	8.0	1.2	3.5	10.2	8.7	4.5	:	8.9	1.1	5.8
1964	6.0	11.5	7.7	10.8	12.9	6.5	:	1.1	9.4	10.1
1965	2.5	6.6	5.5	8.8	15.8	1.8	:	4.7	0.7	5.5
1966	2.0	2.9	0.9	15.7	14.6	5.9	:	11.2	-3.7	5.4
1967	1.7	4.0	-2.4	4.7	3.1	2.3	:	7.9	-0.4	4.5
1968	5.6	7.4	9.7	7.8	8.1	3.6	:	5.9	6.1	12.0
1969	9.8	12.3	12.8	11.8	15.8	11.7	:	3.5	12.7	11.5
1970	3.0	2.6	5.8	10.3	7.3	5.6	:	6.6	0.5	9.7
1961-70	5.0	6.2	5.3	:	:	5.4	:	7.0	2.3	7.3
1971	1.8	2.3	1.0	11.3	6.6	4.7	:	-0.4	-1.1	5.5
1972	7.5	4.4	3.6	16.0	16.3	7.2	:	4.4	4.2	5.1
1973	6.1	3.3	6.4	15.4	11.0	7.6	:	9.7	12.0	7.7
1974	4.1	-0.7	-1.7	-1.5	7.5	2.4	:	4.5	3.5	4.7
1975	-9.8	-6.0	-6.2	4.3	-2.6	-8.6	:	-9.2	-19.6	-5.1
1976	7.7	9.7	6.8	10.5	4.3	9.3	:	12.4	3.8	7.7
1977	0.4	0.8	2.7	2.0	5.5	1.8	8.0	1.1	0.5	0.4
1978	2.4	2.2	1.9	7.6	2.7	2.3	7.9	1.9	3.2	0.8
1979	4.5	3.7	5.1	6.1	0.5	4.3	7.7	6.7	3.4	3.9
1980	-1.2	0.2	0.0	1.0	0.6	-1.0	-2.6	5.6	-2.1	-0.8
1971-80	2.2	1.9	1.9	7.1	5.1	2.9	:	3.5	0.4	2.9
1981	-2.8	0.1	-1.8	0.8	-0.7	-1.0	5.5	-2.2	-5.6	-2.0
1982	0.0	2.7	-3.3	0.9	-1.2	-0.8	-0.7	-3.1	2.3	-3.8
1983	1.9	3.3	0.6	-0.4	2.6	0.1	7.8	-2.4	5.4	1.9
1984	2.5	9.5	3.0	2.3	0.9	1.7	9.9	3.3	11.7	5.0
1985	2.5	4.2	4.9	3.3	1.8	1.4	3.4	0.1	-1.1	4.8
1986	0.8	6.0	1.8	-0.3	3.3	0.6	2.1	4.1	1.9	0.2
1987	2.1	-3.0	0.5	-1.2	4.6	1.2	8.9	2.6	-0.6	1.1
1988	5.8	2.1	3.5	5.1	3.1	4.6	10.7	6.9	8.7	0.1
1989	3.4	2.1	5.0	1.8	5.1	3.7	11.6	3.9	7.8	5.1
1990	1.5	0.8	5.2	-2.5	-0.3	3.1	4.7	6.3	2.6	2.4
1981-90	1.8	2.7	1.9	1.0	1.9	1.4	6.3	1.9	3.2	1.4
1991	-1.9	0.2	2.9	-1.0	-0.7	-0.3	3.3	-0.4	0.4	1.8
1992	-0.4	3.0	-2.4	-1.1	-3.1	-1.0	9.1	-1.3	-0.8	-0.2
1993	-5.1	-2.7	-7.9	-2.9	-4.7	-3.8	5.6	-2.1	-4.3	-1.1
1994	2.1	10.7	3.2	1.3	7.7	4.2	11.9	6.2	5.9	4.9
1995	6.5	4.2	0.8	1.8	4.8	2.5	20.5	5.0	2.0	4.6
1996	0.5	1.6	0.8	1.2	-1.3	0.9	8.1	-1.9	0.1	2.4
1997	4.7	5.3	3.7	1.3	6.9	3.8	17.5	3.8	5.8	0.2
1998	3.4	2.2	4.1	7.1	5.5	5.1	19.8	1.1	-0.1	2.4
1999	0.9	1.8	1.5	3.9	2.6	2.0	14.8	0.0	11.5	2.2
2000	5.5	6.2	6.3	0.5	4.4	3.4	15.4	4.8	4.3	2.9
1992-2000	1.9	3.5	1.0	1.4	2.4	1.9	13.5	1.7	2.6	2.0
2001	0.3	1.7	0.3	2.5	-0.6	3.2	9.6	1.0	2.0	0.8
2002	0.3	2.2	-0.5	1.2	0.4	1.5	5.8	2.0	1.0	0.0
2003	2.5	3.1	6.3	4.9	0.5	2.5	8.2	3.0	4.0	3.0

(1) 1961-91: D_90.

(annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	4.6	8.0	11.1	8.1	0.5	:	:	0.7	19.4
1962	2.3	0.9	6.5	6.4	1.0	:	:	8.3	8.4
1963	4.2	3.8	3.7	6.2	3.9	:	:	5.9	11.2
1964	7.8	8.6	6.7	9.0	7.2	:	:	6.7	15.9
1965	4.6	5.1	7.0	7.2	3.0	:	:	10.0	3.7
1966	4.6	4.9	4.8	2.8	1.2	:	:	8.8	13.2
1967	0.8	-1.6	3.9	3.6	-0.7	:	:	2.1	19.4
1968	7.2	10.4	5.4	4.4	5.0	:	:	5.6	15.4
1969	11.4	7.9	14.1	7.1	3.4	:	:	4.7	16.0
1970	8.8	6.3	11.8	6.0	0.5	:	:	-3.3	13.7
1961-70	5.6	5.4	7.5	6.1	2.5	:	:	4.9	13.5
1971	6.2	7.8	4.7	1.1	-0.5	:	:	1.4	2.6
1972	7.8	13.0	8.8	2.2	1.8	:	:	9.7	7.3
1973	5.0	11.8	7.2	6.5	9.0	:	:	8.1	15.0
1974	4.9	2.8	4.6	4.3	-2.0	:	:	-1.5	-4.0
1975	-6.2	-4.9	-3.9	-2.1	-5.4	:	:	-8.8	-11.0
1976	6.3	3.4	1.0	-0.6	3.3	:	:	9.2	11.1
1977	4.0	13.1	0.6	-5.5	5.2	2.3	2.6	8.2	4.1
1978	2.5	6.9	5.1	-1.9	2.8	2.2	2.2	5.9	6.3
1979	7.3	7.2	10.6	6.0	3.8	4.9	4.7	3.3	7.3
1980	2.8	4.9	7.8	0.0	-6.5	1.1	-0.3	-2.8	4.7
1971-80	4.0	6.5	4.6	1.0	1.0	:	:	3.1	4.1
1981	-1.1	2.3	2.6	-2.4	-3.1	-1.5	-1.7	1.6	1.0
1982	-0.5	7.7	0.9	-0.6	1.9	-2.1	-1.4	-5.4	0.3
1983	0.9	3.6	3.2	4.5	3.7	0.3	1.0	3.7	3.2
1984	4.9	2.5	4.7	5.7	0.0	2.8	2.5	8.9	9.3
1985	4.7	-1.3	3.4	2.9	5.5	2.7	3.2	1.6	3.7
1986	1.2	7.3	1.6	0.1	1.4	2.0	1.9	1.2	-0.2
1987	1.0	4.4	4.6	2.5	4.1	1.7	2.1	4.6	3.4
1988	4.4	3.8	4.3	1.3	5.2	4.4	4.4	4.5	9.4
1989	5.8	6.7	2.4	3.7	2.1	4.5	4.0	1.8	5.8
1990	6.8	9.0	-0.2	6.8	0.0	4.1	3.4	-0.2	4.2
1981-90	2.8	4.6	2.7	2.4	2.1	1.9	1.9	2.2	4.0
1991	1.9	0.0	-9.0	-5.0	-3.3	0.7	-0.1	-2.0	1.9
1992	-1.2	-2.3	1.3	-2.3	0.4	-1.6	-1.3	3.1	-5.7
1993	-1.5	-5.2	5.4	-0.9	2.1	-4.7	-3.5	3.5	-3.5
1994	4.0	-0.2	11.4	10.9	5.2	4.6	5.0	5.4	1.3
1995	4.9	11.6	6.3	10.6	1.8	3.3	3.2	4.8	3.3
1996	1.0	5.3	3.7	1.7	1.0	0.3	0.5	4.6	2.3
1997	6.4	2.6	9.2	7.0	1.0	4.2	3.8	6.8	3.5
1998	8.2	5.7	8.2	3.7	0.8	4.2	3.6	4.9	-6.5
1999	6.0	3.0	6.1	2.0	0.5	1.9	1.7	4.2	0.8
2000	9.2	0.5	10.8	8.5	1.5	5.3	4.8	5.6	5.7
1992-2000	4.0	2.2	6.9	4.5	1.6	1.9	1.9	4.8	0.0
2001	4.1	1.5	-0.5	1.2	-1.5	1.3	0.8	:	:
2002	4.1	1.2	1.8	3.4	0.2	0.9	0.9	:	:
2003	4.1	2.0	3.9	3.8	1.6	3.9	3.6	:	:

(1) EU-15 excluding DK, S and UK; 1961-91: including D_90.

(2) 1961-91: including D_90.

Table 13

Private final consumption expenditure at current prices

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	60.3	60.3	56.8	77.7	67.4	57.4	80.1	57.7	52.3	49.1
1961	59.1	60.4	56.8	73.6	66.9	57.8	78.4	56.7	55.2	50.1
1962	58.0	60.2	56.8	74.3	66.3	57.7	78.0	57.0	55.2	50.7
1963	58.5	59.8	56.7	71.5	67.5	58.0	77.4	58.2	55.7	51.9
1964	55.9	58.6	55.6	70.6	66.5	57.0	75.9	57.6	54.9	49.8
1965	56.0	57.3	56.1	68.4	67.3	56.5	75.0	57.3	56.4	49.9
1966	55.7	58.0	56.3	67.8	66.5	56.3	75.1	58.3	56.4	49.8
1967	54.9	58.3	57.2	68.1	65.9	56.4	73.3	58.6	57.3	49.3
1968	55.6	57.0	56.4	67.7	65.0	56.7	74.2	57.7	55.9	48.6
1969	54.3	55.5	55.4	64.5	62.7	56.2	72.9	57.3	51.8	49.1
1970	52.3	55.5	54.6	64.4	63.1	55.2	72.0	57.6	48.9	49.1
1961-70	56.0	58.1	56.2	69.1	65.8	56.8	75.2	57.6	54.8	49.8
1971	52.7	54.1	54.5	63.0	63.3	55.0	71.1	57.8	53.1	48.6
1972	52.7	51.3	54.9	60.3	62.9	55.0	67.9	58.0	51.9	48.0
1973	53.1	52.5	54.0	56.9	62.6	54.4	67.3	58.2	47.4	47.8
1974	52.4	52.4	54.2	61.2	63.2	54.8	71.5	57.6	44.7	47.7
1975	53.7	53.4	56.8	61.8	63.3	55.9	67.0	58.8	56.0	49.1
1976	53.6	54.5	56.4	60.3	64.6	55.6	67.4	57.9	54.9	49.6
1977	54.5	54.7	57.1	63.2	64.0	55.5	67.0	57.5	57.7	50.3
1978	54.2	54.0	56.6	63.4	62.8	55.1	66.6	56.4	56.2	50.8
1979	55.4	54.2	56.3	62.8	63.4	55.3	68.2	56.9	56.1	51.1
1980	55.6	53.7	56.9	64.5	64.2	55.8	68.7	58.2	56.9	50.8
1971-80	53.8	53.5	55.8	61.7	63.4	55.3	68.3	57.8	53.5	49.4
1981	56.9	54.0	57.6	66.2	64.7	57.0	68.9	58.4	59.0	49.7
1982	57.6	53.0	57.7	65.7	64.4	57.2	62.6	58.6	58.4	49.7
1983	57.6	52.1	57.5	67.0	63.7	56.9	62.5	57.9	57.8	50.2
1984	56.8	51.9	57.2	64.7	62.3	56.7	61.6	58.2	56.3	49.8
1985	57.7	51.9	56.9	63.8	62.0	57.0	62.4	58.3	56.9	50.3
1986	56.7	52.3	55.4	64.5	61.3	56.3	62.8	58.3	54.6	50.4
1987	56.6	50.9	55.7	69.0	61.3	56.7	62.1	58.3	56.1	51.6
1988	55.3	50.2	55.0	69.2	60.5	55.6	62.5	57.8	54.2	50.3
1989	54.8	49.9	54.9	70.1	60.8	55.3	61.7	58.4	51.9	49.7
1990	54.9	49.1	54.4	71.5	60.2	55.3	59.1	57.5	53.9	49.5
1981-90	56.5	51.5	56.2	67.2	62.1	56.4	62.6	58.2	55.9	50.1
1991	55.5	49.3	54.7	71.2	60.1	55.5	59.5	58.1	54.7	49.9
1991	55.5	49.3	56.8	71.2	60.1	55.5	59.5	58.1	54.7	49.9
1992	54.9	49.5	56.7	72.9	60.8	55.5	59.4	59.3	51.5	49.9
1993	54.7	50.0	57.5	73.4	60.7	55.8	57.7	58.5	49.8	49.9
1994	54.8	51.1	56.8	73.3	60.5	55.6	57.5	58.9	47.5	49.3
1995	54.3	50.5	56.9	73.1	59.8	55.5	54.4	58.7	47.5	49.0
1996	54.7	50.3	57.4	73.7	59.6	55.8	53.9	58.3	47.6	49.9
1997	54.2	50.2	57.7	72.2	59.3	55.0	51.5	58.9	44.6	49.4
1998	54.3	50.6	57.6	71.8	59.3	54.8	49.7	59.3	43.2	49.7
1999	53.8	49.6	58.2	71.1	59.4	54.7	48.2	60.1	41.3	50.2
2000	54.1	47.7	58.4	70.1	59.2	54.8	47.8	60.4	38.6	49.8
1991-2000	54.5	49.9	57.4	72.3	59.9	55.3	54.0	59.1	46.6	49.7
2001	54.6	47.5	59.2	69.4	58.8	55.1	47.6	60.5	38.4	49.2
2002	54.6	47.5	59.3	68.5	58.4	55.2	47.5	60.8	38.2	49.2
2003	54.4	47.1	59.1	67.3	58.2	55.1	47.3	60.6	37.4	49.2

(1) 1960-91: D_90.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	58.6	71.4	59.1	57.0	65.1	58.2	59.7	64.2	55.0
1961	57.7	72.0	57.7	56.4	64.7	58.0	59.4	64.0	53.5
1962	58.6	68.1	59.5	55.8	65.3	58.0	59.5	63.2	54.1
1963	58.9	67.9	60.0	55.7	65.3	58.5	59.7	63.1	55.2
1964	57.7	66.7	60.6	53.8	63.8	57.4	58.5	63.0	54.1
1965	58.1	66.3	60.3	53.7	62.9	57.4	58.3	62.7	54.9
1966	57.0	66.4	59.8	53.6	62.4	57.6	58.3	62.0	54.4
1967	57.6	64.0	59.4	53.3	62.3	57.8	58.4	61.9	53.3
1968	57.1	67.0	56.7	53.2	61.9	57.3	57.9	62.2	51.3
1969	55.7	67.5	56.2	52.9	61.1	56.5	57.1	62.3	50.2
1970	53.7	64.5	55.0	51.3	60.6	55.8	56.4	63.3	49.0
1961–70	57.2	67.0	58.5	54.0	63.0	57.4	58.4	62.8	53.0
1971	53.9	66.7	54.4	51.1	60.9	55.8	56.4	63.1	50.2
1972	53.2	62.7	54.8	51.4	61.5	55.7	56.3	62.9	50.7
1973	52.8	63.4	53.5	51.0	61.3	55.1	55.8	62.3	50.3
1974	52.5	71.0	51.7	51.5	62.4	55.4	56.1	62.8	50.9
1975	55.2	75.4	53.5	50.0	60.9	57.1	57.2	63.7	53.6
1976	55.6	73.3	54.2	51.1	59.8	56.8	56.8	63.7	53.9
1977	56.1	70.4	54.4	51.5	58.7	56.9	56.9	63.6	54.1
1978	54.3	66.5	54.6	51.2	58.7	56.3	56.4	62.9	54.1
1979	54.2	66.0	53.4	50.5	59.3	56.5	56.6	62.7	55.1
1980	54.3	65.8	52.6	49.6	58.9	57.1	57.1	63.6	55.2
1971–80	54.2	68.1	53.7	50.9	60.2	56.3	56.6	63.1	52.8
1981	55.2	68.1	52.5	50.6	59.6	57.8	57.8	62.6	54.4
1982	55.8	68.0	53.4	51.5	59.6	57.9	57.9	64.4	55.4
1983	57.1	67.8	53.4	50.0	59.9	57.7	57.7	65.3	56.0
1984	56.5	69.1	52.5	48.8	60.0	57.4	57.4	64.1	55.2
1985	56.4	66.4	52.9	49.3	59.9	57.4	57.4	65.0	54.5
1986	55.8	63.6	52.9	49.6	61.8	56.7	57.1	65.6	54.2
1987	55.7	62.9	52.8	50.6	61.7	56.9	57.3	66.1	54.3
1988	55.8	62.7	51.4	50.5	62.5	56.2	56.9	66.3	53.5
1989	55.7	61.9	50.7	49.5	62.5	56.3	56.9	66.1	53.3
1990	55.5	62.5	50.4	49.1	62.6	55.9	56.5	66.6	53.0
1981–90	56.0	65.3	52.3	49.9	61.0	57.0	57.3	65.2	54.4
1991	54.9	63.4	53.8	51.3	63.2	56.3	57.0	67.0	52.6
1991	54.9	63.4	53.8	51.3	63.2	56.9	57.5	67.0	52.6
1992	55.4	64.4	54.9	51.9	63.9	57.2	57.8	67.2	53.4
1993	56.0	66.1	54.6	53.0	64.8	57.3	58.0	67.7	54.4
1994	55.9	65.1	53.4	52.0	64.2	57.0	57.7	67.4	55.4
1995	56.2	63.3	51.7	50.2	63.9	56.7	57.4	67.7	55.4
1996	57.2	63.3	52.7	50.3	64.6	57.1	57.8	67.6	55.2
1997	57.6	62.5	50.9	50.6	64.5	57.0	57.8	67.0	55.0
1998	57.1	62.2	50.2	50.2	64.9	56.9	57.9	67.2	55.6
1999	57.1	62.4	50.8	50.1	65.5	57.2	58.3	67.9	56.3
2000	57.0	61.8	49.5	50.5	65.5	57.2	58.3	68.6	56.0
1991–2000	56.4	63.5	52.2	51.0	64.5	57.0	57.8	67.5	54.9
2001	57.9	61.7	50.1	50.5	65.9	57.5	58.6	69.3	56.5
2002	58.3	61.4	50.6	50.6	65.7	57.5	58.6	68.3	56.9
2003	58.8	61.0	50.3	50.3	65.1	57.4	58.4	68.1	57.0

⁽¹⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽²⁾ 1960–91: including D_90.

Table 14

Private final consumption expenditure at current prices per head of population

(EUR ⁽¹⁾; EU-15 = 100 ⁽²⁾)

	B	DK	D ⁽³⁾	EL	E	F	IRL	I	L	NL
1960	115.9	124.3	114.5	54.6	41.0	119.1	84.7	70.9	155.4	81.3
1961	111.0	126.7	118.9	54.1	42.4	118.8	82.9	71.1	150.4	83.0
1962	107.2	130.4	119.1	52.7	44.4	120.7	82.1	73.5	144.3	83.0
1963	106.0	125.6	114.8	52.5	48.5	122.9	80.0	78.5	141.6	83.6
1964	104.4	130.1	113.8	54.4	49.7	123.4	82.6	78.5	146.5	86.8
1965	104.9	131.3	115.3	56.1	53.5	121.3	80.3	77.3	144.6	88.8
1966	103.9	135.0	113.8	57.5	56.7	121.3	78.9	78.9	140.7	89.0
1967	103.3	139.4	110.6	58.4	58.5	123.4	77.7	82.2	135.9	90.5
1968	108.0	136.1	113.7	61.1	54.6	129.4	74.9	84.5	140.4	95.0
1969	107.5	138.4	115.9	61.5	55.0	128.0	77.9	84.9	137.9	98.9
1970	104.5	138.1	125.1	62.8	55.0	117.6	78.2	86.7	138.0	99.6
1971	105.3	133.0	128.1	60.7	55.1	115.8	79.0	84.8	138.1	101.2
1972	109.1	129.4	129.4	56.0	57.9	118.0	77.3	82.6	139.9	102.1
1973	113.0	139.5	135.5	55.0	60.7	120.4	71.5	79.5	139.2	106.9
1974	117.9	138.7	134.1	60.5	67.3	116.2	70.2	77.7	142.7	112.4
1975	117.4	139.2	130.2	56.9	67.0	124.0	65.8	76.9	144.2	112.1
1976	123.1	152.3	134.7	58.7	67.2	124.3	63.1	72.3	149.9	119.1
1977	129.1	151.0	140.2	62.2	65.0	120.1	65.3	72.6	154.6	125.0
1978	129.4	148.7	142.4	62.2	63.3	121.5	68.8	71.5	154.1	126.4
1979	124.4	142.4	137.7	61.5	69.3	119.9	71.2	73.8	147.2	119.1
1980	119.3	124.5	129.8	56.8	65.6	119.9	73.9	80.4	142.4	110.8
1981	113.2	121.9	123.5	59.7	64.4	119.6	78.1	81.8	138.7	100.9
1982	105.1	121.6	124.4	64.1	64.2	117.5	76.0	84.6	130.3	102.0
1983	103.0	124.7	128.8	61.1	57.2	115.2	75.6	90.0	131.4	103.3
1984	101.9	126.3	127.0	59.8	58.8	113.6	75.2	93.8	131.6	99.8
1985	103.9	130.1	123.7	55.9	59.2	114.7	78.0	93.8	132.7	98.7
1986	104.4	136.1	126.6	49.3	59.7	115.4	77.2	98.0	137.0	100.9
1987	104.5	132.8	128.0	49.4	61.0	113.3	73.1	99.1	139.2	100.5
1988	100.4	125.0	122.8	52.0	64.2	108.7	74.0	98.5	136.6	94.0
1989	99.4	118.9	118.7	53.8	70.0	106.5	75.4	102.1	135.6	90.1
1990	101.0	117.6	119.3	54.9	73.0	106.9	73.7	103.2	141.2	90.2
1991	99.7	113.6	120.5	55.8	75.0	102.5	71.4	105.2	142.7	88.6
1991	100.9	114.9	112.5	56.4	75.8	103.7	72.2	106.4	144.3	89.6
1992	101.8	115.3	116.4	57.7	76.5	104.2	73.4	105.1	141.8	90.1
1993	105.8	120.8	125.1	59.6	69.9	109.0	72.7	92.0	151.8	95.8
1994	108.8	128.1	125.2	60.4	66.9	108.8	75.4	90.5	154.1	96.0
1995	111.9	131.4	129.4	62.1	67.3	109.6	75.9	84.9	158.5	99.4
1996	107.4	129.0	123.2	64.5	68.4	107.4	80.2	92.4	153.4	97.6
1997	102.5	126.3	116.6	65.5	66.6	101.5	88.4	94.0	146.7	93.8
1998	101.6	126.6	114.5	63.0	67.3	100.9	88.2	93.8	145.5	94.7
1999	100.0	124.5	113.1	63.8	68.8	99.0	92.5	93.2	142.0	95.7
2000	99.7	120.2	109.5	61.8	69.5	96.5	99.3	92.8	140.4	95.5
2001	100.3	119.9	109.3	62.6	70.5	96.7	105.2	93.5	142.8	97.1
2002	100.0	120.1	108.4	64.1	70.8	96.6	109.1	94.1	145.1	98.2
2003	99.9	119.9	107.8	65.2	71.3	96.3	113.2	94.7	146.2	98.8

⁽¹⁾ 1960–98 ECU.⁽²⁾ 1960–91: including D_90.⁽³⁾ 1960–91: D_90.

(EUR ⁽¹⁾; EU-15 = 100 ⁽²⁾)

	A	P	FIN	S	UK	EUR-12 ⁽³⁾	EU-15 ⁽²⁾	US	JP
1960	83.7	37.8	107.0	172.2	138.6	88.6	100.0	285.3	40.9
1961	84.1	37.8	108.5	170.4	133.4	89.8	100.0	267.2	43.9
1962	83.1	35.2	109.7	168.0	129.3	90.8	100.0	257.8	46.1
1963	82.2	34.7	109.8	165.8	125.8	91.7	100.0	246.0	48.9
1964	81.5	34.3	115.7	164.9	124.0	92.1	100.0	242.6	51.9
1965	82.4	35.3	117.8	166.7	121.8	92.5	100.0	239.9	53.9
1966	81.5	36.2	116.5	167.4	119.5	92.9	100.0	240.0	57.3
1967	82.4	37.0	110.9	169.7	116.1	93.5	100.0	237.6	61.7
1968	84.7	41.5	96.1	173.3	105.4	95.8	100.0	250.4	67.4
1969	82.7	42.3	100.2	171.1	102.6	96.5	100.0	247.5	70.5
1970	81.0	41.1	100.0	167.4	101.4	96.9	100.0	238.2	73.0
1971	83.4	43.2	96.5	160.3	102.2	97.0	100.0	225.9	74.7
1972	85.4	41.6	95.9	159.7	99.4	97.7	100.0	206.7	82.2
1973	90.1	45.2	98.4	153.5	89.2	99.9	100.0	181.3	87.8
1974	94.9	52.7	107.3	152.6	87.2	100.4	100.0	174.6	89.1
1975	96.6	49.8	111.0	157.2	86.0	100.5	100.0	161.7	84.2
1976	101.8	48.1	118.0	168.0	79.2	101.3	100.0	174.2	90.0
1977	109.2	42.5	110.5	157.9	77.8	101.9	100.0	170.0	97.7
1978	104.9	35.9	98.1	142.9	81.3	101.7	100.0	155.0	112.2
1979	101.8	32.7	96.8	136.3	87.4	100.7	100.0	140.5	96.4
1980	99.2	34.9	100.2	134.5	97.1	99.1	100.0	134.0	87.9
1981	97.7	39.1	109.4	140.9	104.8	97.3	100.0	164.1	106.5
1982	103.2	38.5	116.3	131.9	104.0	97.8	100.0	181.7	104.7
1983	111.0	35.4	115.2	121.4	102.6	98.4	100.0	205.2	118.7
1984	108.6	34.8	122.8	128.9	101.2	98.4	100.0	232.7	130.0
1985	107.2	34.6	125.8	131.7	103.2	97.8	100.0	241.6	132.0
1986	110.7	35.1	120.3	128.1	95.2	99.5	100.0	188.7	142.2
1987	111.5	34.9	121.2	127.8	94.2	99.7	100.0	162.0	138.8
1988	108.3	37.0	126.8	129.5	104.6	97.7	100.0	157.2	149.3
1989	106.4	38.9	134.0	130.8	104.0	97.9	100.0	164.9	145.9
1990	107.4	41.7	127.7	125.9	99.6	99.0	100.0	141.2	121.1
1991	104.9	46.1	116.8	130.6	100.1	98.8	100.0	138.8	131.0
1991	106.1	46.6	118.1	132.1	101.2	98.6	100.0	140.4	132.5
1992	109.5	52.2	96.8	125.9	96.8	99.6	100.0	134.6	133.6
1993	117.5	52.1	83.9	105.7	96.9	100.1	100.0	155.9	172.2
1994	119.2	51.1	90.1	105.1	98.4	99.7	100.0	154.9	182.8
1995	124.0	52.1	99.0	103.1	93.5	100.6	100.0	142.6	176.5
1996	121.2	52.9	96.8	110.0	96.4	99.9	100.0	145.5	152.2
1997	115.4	52.7	95.3	107.3	114.0	96.6	100.0	162.0	148.0
1998	113.5	53.5	95.5	103.2	118.5	95.8	100.0	164.4	132.0
1999	112.0	54.6	95.5	104.0	121.6	95.2	100.0	173.5	151.8
2000	109.6	54.2	95.8	107.7	129.0	93.7	100.0	201.7	173.1
2001	109.9	55.1	96.1	97.6	128.1	94.2	100.0	207.2	152.3
2002	110.3	55.6	96.6	94.9	128.3	94.2	100.0	199.0	147.7
2003	110.5	55.6	96.5	94.9	128.0	94.3	100.0	199.5	145.8

⁽¹⁾ 1960–98 ECU.⁽²⁾ 1960–91: including D_90.⁽³⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.

Table 15

Private final consumption expenditure at current prices per head of population

(PPS; EU-15 = 100 ⁽¹⁾)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	L	NL
1960	98.0	126.8	115.4	56.9	66.6	98.9	84.4	84.1	153.8	94.4
1961	96.7	129.0	114.5	58.1	70.4	100.0	83.9	85.4	154.1	94.1
1962	95.8	130.1	114.2	56.5	72.7	100.9	82.8	87.2	144.6	94.1
1963	95.9	123.4	111.2	58.0	76.2	100.4	81.8	89.4	141.9	94.3
1964	94.3	127.6	111.9	60.7	76.7	101.2	80.4	87.7	145.1	94.1
1965	94.2	125.4	114.2	62.9	79.2	101.0	78.3	86.7	145.4	94.9
1966	93.0	125.4	113.3	63.9	80.6	102.0	76.5	90.0	140.8	93.2
1967	91.9	126.3	111.1	65.2	80.1	103.1	76.3	93.6	140.0	93.3
1968	93.1	123.4	111.0	66.7	80.3	103.3	80.2	93.9	137.9	93.4
1969	93.1	123.1	111.8	68.1	80.4	104.7	80.1	94.8	138.4	95.6
1970	92.3	121.5	111.2	71.6	80.9	104.4	78.1	96.8	135.9	96.9
1971	93.9	117.5	110.4	73.8	81.9	105.4	77.1	96.1	136.6	96.4
1972	94.8	111.5	110.9	74.0	84.0	105.0	74.3	95.3	135.7	93.5
1973	96.4	112.3	108.6	71.7	85.3	103.7	72.4	96.5	133.2	92.8
1974	96.8	107.4	106.6	70.2	88.1	104.6	77.2	97.7	133.5	93.3
1975	97.0	106.8	110.1	74.3	87.3	105.4	74.8	96.6	136.6	95.0
1976	98.5	111.8	111.7	73.9	87.9	105.1	72.4	97.4	134.2	96.2
1977	98.6	110.8	114.1	77.0	86.6	105.5	75.2	96.6	132.2	97.1
1978	99.1	109.0	114.7	80.3	83.9	106.1	77.8	96.2	132.6	98.1
1979	100.1	108.8	114.9	78.4	81.1	105.8	78.1	98.7	130.3	96.9
1980	103.2	105.4	114.9	79.0	81.4	106.3	79.0	102.6	131.2	95.1
1981	104.7	103.0	115.2	78.4	80.7	108.2	80.1	102.6	133.1	91.1
1982	105.5	102.9	113.5	75.8	80.2	109.8	72.9	102.6	133.7	89.0
1983	104.3	101.8	114.0	75.1	79.3	108.9	71.2	101.4	132.1	89.8
1984	103.7	103.2	115.1	72.3	77.4	108.0	71.6	102.8	131.7	90.2
1985	105.0	104.5	114.4	71.3	76.8	107.2	72.8	103.7	134.7	91.4
1986	102.8	107.0	111.7	70.7	76.4	105.6	71.9	104.2	136.8	91.7
1987	102.2	101.0	110.4	71.5	78.0	105.2	72.1	104.0	137.2	91.7
1988	101.0	97.7	109.1	72.3	78.3	103.9	73.7	103.9	137.7	88.8
1989	100.5	94.3	108.4	73.6	79.9	103.9	75.5	104.9	140.1	88.8
1990	101.5	91.9	109.6	73.4	80.6	104.4	76.6	103.3	141.1	90.0
1991	102.1	92.9	112.1	74.0	82.9	104.3	78.1	104.7	144.9	89.0
1991	103.5	94.2	104.9	75.0	84.0	105.7	79.2	106.1	146.9	90.2
1992	104.3	91.7	106.0	78.0	82.2	103.4	81.5	107.0	141.2	89.3
1993	106.3	96.7	106.6	80.4	82.6	101.8	81.9	102.3	143.6	90.4
1994	106.8	102.4	107.5	81.8	80.8	99.8	86.5	104.3	141.0	90.0
1995	105.7	102.9	108.2	83.3	80.9	99.6	87.8	105.0	141.4	92.6
1996	104.5	102.9	108.2	84.5	81.4	97.7	87.1	103.5	139.3	91.6
1997	104.0	103.8	107.0	81.8	81.7	93.7	91.8	103.5	135.2	95.7
1998	103.7	104.0	105.1	82.2	80.9	93.2	90.4	105.6	133.6	98.5
1999	101.8	100.9	105.2	81.8	82.0	92.6	92.5	105.4	130.4	98.8
2000	102.7	98.4	104.7	81.8	82.6	92.2	97.2	105.0	131.6	99.0
2001	102.6	97.2	104.6	82.5	82.2	92.8	98.6	104.6	131.8	97.4
2002	102.5	97.1	104.2	83.4	81.8	92.9	99.2	105.3	132.7	97.2
2003	102.5	96.4	104.5	83.4	81.9	92.8	100.6	105.5	133.1	97.4

⁽¹⁾ 1960–91: including D_90.⁽²⁾ 1960–91: D_90.

(PPS; EU-15 = 100 ⁽¹⁾)

	A	P	FIN	S	UK	EUR-12 ⁽²⁾	EU-15 ⁽¹⁾	US	JP
1960	93.5	48.4	86.3	120.5	133.7	91.3	100.0	175.7	53.4
1961	92.9	49.4	86.5	120.5	129.9	92.1	100.0	169.4	55.3
1962	92.3	48.1	87.9	119.3	127.0	92.8	100.0	168.4	58.0
1963	91.9	48.2	87.2	119.3	126.8	93.0	100.0	165.6	61.1
1964	92.2	49.2	89.5	118.7	126.0	93.1	100.0	168.0	64.0
1965	92.2	51.0	90.7	118.4	122.6	94.0	100.0	170.5	65.9
1966	91.9	51.6	89.0	115.9	119.7	94.7	100.0	172.3	69.2
1967	92.3	52.2	87.3	114.7	118.1	95.1	100.0	169.6	72.4
1968	91.7	57.4	81.7	113.7	117.1	95.4	100.0	170.3	74.3
1969	91.1	57.7	85.4	113.5	113.0	96.3	100.0	167.8	77.5
1970	91.0	57.8	87.7	112.8	110.9	96.8	100.0	163.8	80.1
1971	93.1	62.5	86.3	109.8	110.3	97.1	100.0	162.3	82.4
1972	93.6	61.3	89.7	108.5	111.0	97.1	100.0	163.0	85.6
1973	92.4	65.7	88.9	106.6	112.9	96.8	100.0	161.5	86.4
1974	93.3	71.8	86.2	108.2	110.6	97.3	100.0	156.9	83.4
1975	97.3	69.8	90.0	106.7	106.6	98.3	100.0	156.1	88.8
1976	99.3	68.1	87.7	106.1	104.0	98.7	100.0	157.7	88.8
1977	102.6	66.9	86.4	102.8	102.4	99.2	100.0	159.8	90.2
1978	97.5	63.2	86.8	101.9	104.0	98.9	100.0	162.4	92.5
1979	99.2	63.3	87.5	100.6	104.1	99.0	100.0	159.8	95.2
1980	100.2	64.3	88.8	98.7	99.4	100.1	100.0	157.2	95.7
1981	100.6	66.4	89.3	99.7	98.2	100.3	100.0	155.6	95.4
1982	102.7	66.8	92.5	101.5	99.4	100.0	100.0	153.9	98.8
1983	106.9	65.3	93.1	98.9	102.1	99.6	100.0	159.2	100.0
1984	104.4	64.0	92.6	98.7	102.8	99.4	100.0	163.5	100.0
1985	104.1	61.7	93.7	99.3	103.6	99.2	100.0	166.8	100.2
1986	103.0	60.3	93.7	99.7	108.5	98.1	100.0	168.9	99.9
1987	101.3	61.6	94.3	101.5	109.6	97.9	100.0	169.1	100.9
1988	101.2	64.2	93.0	100.0	112.9	97.4	100.0	169.7	102.4
1989	101.8	65.7	93.3	96.7	111.6	97.8	100.0	168.5	103.8
1990	103.3	68.0	90.8	94.8	110.3	98.2	100.0	168.0	106.4
1991	101.5	71.1	85.7	93.3	104.9	99.3	100.0	160.9	106.7
1991	102.9	72.1	86.9	94.6	106.4	99.0	100.0	163.2	108.2
1992	103.7	73.5	82.4	90.1	107.9	98.9	100.0	163.1	109.4
1993	106.9	77.8	85.5	90.8	109.8	98.4	100.0	169.0	113.2
1994	107.0	78.6	83.7	89.8	109.1	98.5	100.0	170.0	113.0
1995	107.1	77.2	86.7	89.0	106.7	99.0	100.0	172.1	113.8
1996	109.7	76.9	86.3	87.8	110.0	98.4	100.0	172.5	114.7
1997	110.0	80.3	87.0	88.9	113.8	97.6	100.0	173.8	113.3
1998	107.6	78.8	87.4	87.7	115.4	97.3	100.0	175.3	109.8
1999	107.0	79.7	87.5	87.7	115.7	97.3	100.0	177.4	108.5
2000	106.9	78.8	87.1	89.0	116.7	97.1	100.0	180.6	106.6
2001	106.9	78.2	87.0	87.6	117.5	97.0	100.0	180.2	104.6
2002	107.3	78.0	87.4	87.2	117.4	97.0	100.0	175.4	103.1
2003	107.7	77.5	86.8	86.7	117.1	97.1	100.0	175.6	101.4

⁽¹⁾ 1960–91: including D_90.⁽²⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.

Table 16

Private final consumption expenditure at 1995 prices

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	1.6	7.3	6.1	6.8	11.0	5.9	3.1	7.5	5.0	5.2
1962	3.9	5.9	5.7	4.1	8.8	7.1	3.5	7.1	4.4	6.1
1963	4.5	0.0	2.8	5.7	11.3	6.9	4.2	9.3	4.6	7.0
1964	2.6	7.8	5.3	10.1	4.3	5.6	4.3	3.3	9.2	5.9
1965	4.3	3.4	6.9	7.1	6.8	4.0	0.8	3.3	4.0	7.5
1966	2.6	4.3	3.1	7.1	7.2	4.8	1.5	7.2	1.6	3.2
1967	2.8	3.5	1.1	7.0	6.0	5.1	3.8	7.4	0.0	5.4
1968	5.3	2.2	4.7	7.8	6.0	4.0	9.0	5.2	4.3	6.6
1969	5.3	5.8	8.0	6.4	7.2	6.0	5.4	6.6	5.2	7.9
1970	4.4	2.9	7.7	9.0	4.7	4.3	-1.0	7.6	6.1	7.4
1961-70	3.7	4.3	5.1	7.1	7.3	5.4	3.4	6.4	4.4	6.2
1971	4.9	0.4	5.5	5.6	5.1	4.9	3.2	4.0	5.6	3.7
1972	5.9	-0.3	4.7	6.1	8.3	4.9	5.1	3.3	4.8	3.0
1973	8.1	5.4	2.9	6.2	7.8	5.3	7.2	5.4	5.8	4.5
1974	2.8	-2.2	0.5	-1.3	5.1	1.2	1.6	3.0	4.5	3.3
1975	0.9	2.3	3.1	7.7	1.8	2.8	0.8	0.5	5.3	3.4
1976	5.1	6.8	3.9	5.9	5.6	4.9	2.7	4.7	3.1	5.6
1977	2.6	1.4	4.5	8.8	1.5	2.7	6.7	3.2	2.3	4.2
1978	2.5	0.6	3.7	8.0	0.9	3.7	8.9	2.6	2.9	4.9
1979	5.1	1.3	3.3	5.7	1.3	3.1	4.4	6.6	3.5	2.2
1980	2.4	-2.3	1.2	0.4	0.6	0.8	0.4	6.4	2.8	-1.2
1971-80	4.0	1.3	3.3	5.3	3.8	3.4	4.1	4.0	4.1	3.3
1981	-1.1	-1.8	-0.6	-0.6	-1.0	1.5	1.7	1.9	1.7	-4.2
1982	1.4	1.9	-1.3	3.1	0.0	2.8	-6.9	1.1	0.4	-1.2
1983	-1.0	1.0	1.5	1.9	0.4	0.5	0.8	0.3	0.5	1.0
1984	1.2	2.1	1.8	0.5	-0.2	0.5	2.0	3.0	1.4	1.1
1985	2.2	4.0	1.7	0.6	2.3	1.6	4.6	3.1	2.7	2.9
1986	3.1	5.9	3.5	-1.4	3.4	3.6	2.9	4.0	5.7	2.9
1987	1.8	-2.2	3.4	2.8	6.0	3.0	3.3	3.8	4.6	2.7
1988	3.7	-2.1	2.7	5.9	4.9	2.7	4.4	4.0	4.6	0.6
1989	3.9	-0.1	2.8	6.0	5.4	3.0	5.9	3.7	5.1	3.3
1990	3.2	0.1	5.4	2.6	3.5	2.7	0.6	2.1	5.7	3.9
1981-90	1.8	0.9	2.1	2.1	2.4	2.2	1.9	2.7	3.2	1.3
1991	3.1	1.6	5.6	2.8	2.9	0.7	1.8	2.9	6.3	2.7
1992	2.2	1.9	2.7	2.4	2.2	0.9	2.9	1.9	-0.9	0.8
1993	-1.0	0.5	0.1	-0.8	-1.9	-0.4	2.9	-3.7	1.7	0.5
1994	2.0	6.5	1.0	2.0	1.1	1.2	4.3	1.5	2.4	0.9
1995	0.7	1.2	2.0	2.7	1.7	1.2	4.2	1.7	2.4	3.0
1996	1.2	2.5	1.0	2.4	2.2	1.3	6.4	1.2	3.7	4.0
1997	2.0	2.9	0.6	2.8	3.2	0.2	7.4	3.2	3.6	3.0
1998	2.9	3.6	1.8	3.1	4.5	3.4	7.3	3.1	4.0	4.8
1999	2.1	0.5	3.1	2.9	4.7	2.8	8.3	2.3	2.1	4.5
2000	3.8	-0.1	1.5	3.2	4.0	2.5	10.0	2.9	3.4	3.8
1991-2000	1.9	2.1	1.9	2.3	2.4	1.4	5.5	1.7	2.9	2.8
2001	2.0	1.2	1.5	3.1	2.6	2.7	6.2	1.6	3.7	1.3
2002	1.6	1.7	0.6	2.7	1.6	1.9	4.2	2.0	3.5	2.3
2003	2.6	2.0	1.7	2.9	3.1	2.6	5.6	2.7	4.0	3.3

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	5.1	7.8	7.6	5.3	2.2	6.6	5.5	2.0	10.4
1962	3.3	-1.2	6.0	3.3	2.3	6.3	5.3	4.9	7.5
1963	5.5	6.9	4.4	4.4	4.8	6.4	5.9	4.1	8.8
1964	3.4	5.8	5.5	4.0	3.1	4.9	4.5	6.0	10.8
1965	4.9	6.0	5.6	4.2	1.4	5.3	4.4	6.3	5.8
1966	4.3	4.0	2.5	1.9	1.8	4.8	4.1	5.7	10.0
1967	3.5	6.0	2.1	2.3	2.4	4.4	3.9	3.0	10.4
1968	4.0	11.1	0.1	4.1	2.8	5.0	4.5	5.7	8.5
1969	2.9	5.4	10.7	4.4	0.6	6.8	5.5	3.7	10.3
1970	4.2	2.9	7.6	3.5	2.9	6.2	5.4	2.3	7.4
1961-70	4.1	5.4	5.2	3.8	2.4	5.7	4.9	4.4	9.0
1971	6.7	8.4	1.7	0.1	3.2	4.9	4.4	3.8	5.5
1972	6.1	2.9	8.3	3.4	6.4	4.9	5.1	6.0	9.0
1973	5.4	13.0	5.9	2.6	5.5	5.3	5.2	4.9	8.8
1974	3.0	9.1	1.7	3.4	-1.6	2.2	1.4	-0.8	-0.1
1975	3.2	1.7	3.1	2.8	-0.1	2.4	1.9	2.2	4.4
1976	4.5	2.3	0.6	4.2	0.5	4.6	3.9	5.8	2.9
1977	5.5	0.6	-0.7	-1.0	-0.4	3.4	2.6	4.3	4.0
1978	-1.6	-2.0	2.1	-0.7	5.4	3.0	3.3	4.4	5.3
1979	4.4	0.0	5.5	2.4	4.4	3.8	3.8	2.5	6.5
1980	1.6	3.7	2.2	-0.8	-0.1	2.1	1.6	-0.3	1.1
1971-80	3.8	3.9	3.0	1.6	2.3	3.6	3.3	3.3	4.7
1981	0.8	2.9	1.2	-0.3	0.1	0.3	0.2	1.3	0.8
1982	2.6	2.4	5.3	0.7	1.0	0.8	0.8	1.2	4.2
1983	5.0	-1.4	3.1	-2.0	4.5	0.8	1.4	5.5	2.9
1984	-1.3	-2.9	3.2	1.5	2.1	1.3	1.4	5.4	2.4
1985	1.9	0.7	3.8	2.7	3.8	2.1	2.5	5.0	3.8
1986	2.2	5.6	4.0	4.4	6.4	3.5	4.0	4.2	3.2
1987	2.9	5.3	5.1	4.6	5.3	3.6	3.9	3.3	4.1
1988	3.3	6.9	5.3	2.4	7.5	3.4	4.1	4.0	5.1
1989	4.3	2.9	4.6	1.2	3.3	3.6	3.5	2.7	4.7
1990	4.5	6.4	-0.6	-0.4	1.0	3.5	2.9	1.8	4.4
1981-90	2.6	2.8	3.5	1.5	3.5	2.3	2.4	3.4	3.6
1991	2.5	4.2	-3.8	0.9	-1.5	3.0	2.1	-0.2	2.7
1992	3.0	4.7	-4.4	-1.4	0.6	2.0	1.7	2.9	2.6
1993	0.8	1.1	-3.1	-3.1	3.2	-1.0	-0.3	3.4	1.8
1994	2.4	1.0	2.6	1.8	3.3	1.3	1.7	3.8	2.6
1995	2.6	0.5	4.4	0.6	1.9	1.8	1.8	3.0	1.4
1996	3.2	3.2	4.2	1.4	3.8	1.6	2.0	3.2	2.4
1997	1.7	3.4	3.5	2.0	3.8	1.8	2.1	3.6	0.8
1998	2.8	5.1	5.1	2.7	3.8	3.1	3.2	4.8	0.1
1999	2.7	4.8	4.0	3.9	4.2	3.2	3.4	5.0	1.2
2000	2.5	2.6	3.0	4.6	4.0	2.7	2.9	4.8	0.5
1991-2000	2.4	3.1	1.5	1.3	2.7	1.9	2.1	3.4	1.6
2001	1.4	1.1	1.5	0.9	3.8	2.0	2.3	2.5	0.5
2002	1.6	1.2	1.9	1.7	2.2	1.6	1.7	-0.5	0.1
2003	2.3	1.8	1.9	2.3	2.6	2.5	2.5	2.9	0.4

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 17

Final consumption expenditure of general government at current prices*(percentage of gross domestic product at market prices)*

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	16.2	13.9	13.4	10.9	8.8	16.0	13.1	14.3	11.6	19.5
1961	15.6	15.1	13.8	10.3	8.6	16.2	13.1	14.3	11.8	20.3
1962	16.1	15.9	14.6	10.7	8.6	16.5	13.2	14.7	12.9	21.1
1963	17.0	16.2	15.5	10.3	8.9	16.8	13.4	15.6	14.6	22.3
1964	16.3	16.3	14.8	10.6	8.6	16.7	14.0	16.1	12.8	22.6
1965	16.7	17.1	15.2	10.5	8.9	16.6	14.3	17.0	13.0	22.5
1966	17.1	17.9	15.5	10.5	9.2	16.5	14.3	16.7	13.5	23.0
1967	17.6	18.6	16.2	11.6	9.9	16.6	14.1	16.2	14.3	23.6
1968	17.7	19.4	15.5	11.5	9.6	17.3	14.1	16.3	14.3	23.1
1969	17.8	19.7	15.6	11.2	9.6	17.1	14.3	16.0	13.1	23.2
1970	17.5	20.9	15.8	11.0	10.0	17.3	15.4	15.5	12.5	23.6
1961-70	16.9	17.7	15.2	10.8	9.2	16.8	14.0	15.8	13.3	22.5
1971	18.4	22.2	16.9	10.9	10.1	17.6	16.1	17.0	13.9	24.4
1972	18.9	22.0	17.1	10.4	10.0	17.5	16.1	17.7	13.9	24.4
1973	19.0	22.1	17.8	9.6	10.0	17.5	16.5	17.0	13.4	23.9
1974	19.1	24.1	19.3	11.8	10.4	18.1	18.1	16.2	13.6	24.8
1975	21.4	25.3	20.5	12.9	11.0	19.5	19.6	16.5	17.7	26.4
1976	21.3	24.7	19.8	12.6	11.9	19.9	19.0	15.8	17.5	26.2
1977	21.8	24.6	19.7	13.3	12.1	20.2	18.0	16.1	18.8	26.5
1978	22.6	25.2	19.7	13.1	12.6	20.7	18.1	16.7	18.6	27.0
1979	22.7	25.7	19.7	13.4	13.1	20.8	19.1	16.8	19.0	27.6
1980	23.0	27.3	20.2	13.4	14.0	21.5	21.0	16.9	19.8	27.6
1971-80	20.8	24.3	19.1	12.1	11.5	19.3	18.1	16.7	16.6	25.9
1981	24.2	28.4	20.7	14.7	14.9	22.4	21.0	18.2	20.7	27.5
1982	23.9	28.7	20.6	14.4	15.1	23.1	20.9	18.3	19.5	27.7
1983	23.5	27.9	20.2	14.9	15.5	23.3	20.4	18.7	18.7	27.1
1984	23.5	26.6	20.0	15.3	15.3	23.7	19.7	18.4	18.2	25.8
1985	22.9	25.9	20.1	16.0	15.6	23.7	19.5	18.6	18.7	25.0
1986	22.8	24.6	19.9	15.2	15.4	23.4	19.8	18.3	18.0	24.7
1987	22.6	25.8	20.0	15.4	15.9	23.1	18.6	19.1	19.3	25.3
1988	21.2	26.3	19.7	14.1	15.7	22.7	17.1	19.5	18.2	24.7
1989	20.4	25.9	18.8	15.0	16.2	22.3	15.9	19.3	17.5	23.9
1990	20.2	25.6	18.3	15.1	16.7	22.3	16.4	20.2	18.8	23.5
1981-90	22.5	26.6	19.8	15.0	15.6	23.0	18.9	18.9	18.8	25.5
1991	20.8	25.7	17.6	14.2	17.4	22.5	17.4	20.3	18.6	23.8
1991	20.8	25.7	19.2	14.2	17.4	22.5	17.4	20.3	18.6	23.8
1992	20.9	25.8	19.8	13.7	18.3	23.1	17.8	20.1	18.4	24.3
1993	21.4	26.8	19.9	14.3	18.8	24.5	17.6	19.9	18.1	24.6
1994	21.3	25.9	19.7	13.8	18.2	24.1	17.4	19.1	17.5	24.2
1995	21.4	25.8	19.8	15.3	18.1	23.9	16.4	17.9	18.4	24.0
1996	21.6	25.9	19.9	14.5	17.9	24.2	15.8	18.1	18.9	23.1
1997	21.2	25.5	19.5	15.2	17.5	24.2	15.2	18.2	17.8	22.9
1998	21.1	25.7	19.2	15.3	17.5	23.4	14.5	17.9	16.8	22.7
1999	21.2	25.5	19.2	15.0	17.4	23.4	14.0	18.1	17.1	23.0
2000	21.2	24.8	19.0	15.3	17.4	23.3	13.4	18.0	16.0	22.7
1991-2000	21.2	25.7	19.5	14.7	17.8	23.7	15.9	18.8	17.8	23.5
2001	21.5	24.9	19.1	15.6	17.2	23.2	13.9	18.1	16.0	23.0
2002	21.6	25.1	19.1	15.3	17.3	23.4	14.3	18.2	16.1	23.3
2003	21.5	24.9	18.8	15.1	17.3	23.1	14.0	17.9	15.9	23.1

(1) 1960-91: D_90.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	13.3	9.8	12.4	16.2	17.0	14.4	15.0	17.0	10.9
1961	13.0	11.6	12.2	16.3	17.3	14.5	15.2	17.7	10.4
1962	13.2	11.9	13.0	17.2	17.6	15.0	15.7	17.8	10.8
1963	13.7	11.4	13.9	17.7	17.4	15.7	16.1	17.5	11.2
1964	13.7	11.4	14.0	17.6	17.0	15.5	15.9	17.0	10.8
1965	13.7	11.1	14.2	18.2	17.2	15.7	16.2	16.5	11.1
1966	14.0	11.2	14.9	19.3	17.6	15.8	16.4	17.5	10.9
1967	15.0	12.1	15.4	20.0	18.4	16.1	16.8	18.8	10.4
1968	15.2	12.1	15.8	21.0	18.1	16.2	16.8	18.7	10.1
1969	15.5	12.0	15.0	21.2	17.6	16.1	16.6	18.4	9.9
1970	15.1	12.8	15.0	22.0	18.0	16.1	16.8	18.6	10.1
1961–70	14.2	11.8	14.3	19.0	17.6	15.7	16.2	17.8	10.6
1971	15.2	12.5	15.7	23.1	18.4	16.9	17.5	18.2	10.8
1972	15.0	12.4	15.9	23.3	18.7	17.1	17.7	17.9	11.1
1973	15.5	11.9	15.6	23.3	18.6	17.1	17.7	17.1	11.3
1974	16.2	13.1	15.8	23.8	20.4	17.8	18.5	17.6	12.4
1975	17.7	13.9	17.8	24.4	22.3	18.9	19.8	18.1	13.6
1976	18.1	12.7	18.8	25.5	22.0	18.8	19.7	17.4	13.4
1977	17.8	13.0	19.3	28.2	20.7	19.0	19.7	17.1	13.3
1978	18.5	12.9	19.0	28.6	20.3	19.4	20.0	16.5	13.1
1979	18.4	12.8	18.5	29.0	20.0	19.4	20.0	16.3	13.2
1980	18.5	13.5	18.7	29.6	21.5	19.8	20.6	16.9	13.3
1971–80	17.1	12.9	17.5	25.9	20.3	18.4	19.1	17.3	12.6
1981	18.9	13.9	19.2	29.9	22.2	20.5	21.3	16.9	13.6
1982	19.3	13.8	19.3	29.8	22.1	20.6	21.4	17.8	13.8
1983	19.3	14.0	19.8	29.2	22.0	20.7	21.3	17.7	14.1
1984	19.4	13.9	19.7	28.3	21.7	20.5	21.1	17.3	13.9
1985	19.6	14.4	20.6	28.2	20.9	20.6	21.0	17.6	13.7
1986	19.9	14.2	21.0	27.8	20.9	20.4	20.8	17.8	13.9
1987	19.9	14.1	21.3	27.0	20.4	20.5	20.8	17.8	13.9
1988	19.6	14.6	20.4	26.3	19.7	20.2	20.5	17.2	13.6
1989	19.3	15.4	20.2	26.5	19.4	19.8	20.1	16.8	13.4
1990	18.9	16.2	21.6	27.7	19.8	19.8	20.2	17.0	13.3
1981–90	19.4	14.5	20.3	28.1	20.9	20.4	20.9	17.4	13.7
1991	19.2	18.0	24.8	27.5	20.7	19.8	20.4	17.2	13.3
1991	19.2	18.0	24.8	27.5	20.7	20.3	20.7	17.2	13.3
1992	19.6	18.0	25.4	28.2	21.1	20.6	21.0	16.8	13.7
1993	20.4	18.6	24.3	28.4	20.5	21.1	21.3	16.2	14.2
1994	20.5	18.7	23.4	27.4	20.0	20.7	20.9	15.7	14.5
1995	20.4	18.6	22.8	26.3	19.6	20.5	20.7	15.3	15.0
1996	20.3	18.9	23.2	27.1	19.3	20.5	20.7	15.0	15.1
1997	19.7	19.0	22.4	26.5	18.4	20.3	20.3	14.6	15.2
1998	19.6	18.9	21.7	26.7	18.0	19.9	19.9	14.3	15.7
1999	19.7	19.6	21.7	26.7	18.5	20.0	20.0	14.3	16.1
2000	19.4	20.1	20.7	26.2	18.5	19.8	19.9	14.4	16.6
1991–2000	19.9	18.8	23.0	27.1	19.5	20.4	20.5	15.4	14.9
2001	19.2	20.1	21.2	26.5	18.8	19.8	19.9	14.7	17.2
2002	18.8	20.0	21.6	26.9	19.2	19.9	20.1	15.4	17.5
2003	18.6	19.9	21.5	26.8	19.3	19.7	19.9	15.2	17.5

⁽¹⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽²⁾ 1960–91: including D_90.

Table 18

Final consumption expenditure of general government at 1995 prices

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	1.9	5.3	6.1	4.4	5.6	4.8	2.1	4.4	1.3	2.8
1962	8.6	9.9	9.5	6.7	6.7	4.7	3.1	3.9	2.4	3.3
1963	11.6	2.9	6.2	4.2	9.7	3.4	4.0	4.3	5.8	4.7
1964	4.2	7.3	1.8	9.3	1.3	4.2	3.0	4.2	-0.8	1.7
1965	5.5	3.4	4.9	9.0	3.6	3.2	3.7	4.0	2.5	1.5
1966	4.7	5.8	3.2	6.3	2.0	2.7	1.0	4.0	5.8	1.7
1967	5.7	7.7	3.6	8.5	2.4	4.3	4.5	4.4	4.2	2.4
1968	3.5	5.1	0.6	1.3	1.9	5.6	5.8	5.2	5.6	2.2
1969	6.3	6.8	4.3	7.7	4.4	4.1	6.9	2.8	3.3	4.5
1970	3.1	6.0	4.3	5.9	5.8	4.2	11.3	2.6	4.1	5.7
1961-70	5.5	6.0	4.4	6.3	4.3	4.1	4.5	4.0	3.4	3.1
1971	5.5	5.7	5.1	4.9	4.3	3.9	8.6	5.1	3.0	4.7
1972	5.9	4.1	4.2	5.7	5.2	3.5	7.5	5.3	4.2	1.5
1973	5.3	4.0	5.0	6.6	6.4	3.4	6.7	3.4	3.4	1.3
1974	3.4	3.2	4.0	12.3	9.3	1.2	7.6	2.8	3.8	2.3
1975	4.5	0.1	3.9	11.9	5.2	4.4	8.7	2.8	3.3	4.2
1976	3.7	4.4	1.5	5.1	6.9	4.2	2.7	3.0	2.8	4.2
1977	2.3	2.3	1.3	6.5	3.9	2.4	2.0	4.0	2.9	4.2
1978	6.0	6.3	3.9	3.5	5.4	5.2	8.2	3.9	1.8	3.1
1979	2.5	5.6	3.4	5.8	4.2	3.4	4.6	2.5	2.2	3.3
1980	1.8	3.7	2.6	0.2	4.2	2.6	7.1	2.4	3.1	2.3
1971-80	4.1	3.9	3.5	6.2	5.5	3.4	6.3	3.5	3.0	3.1
1981	3.1	2.0	1.8	6.8	4.1	3.4	0.3	3.4	1.4	2.8
1982	-0.7	2.7	-0.9	-2.0	4.8	4.7	3.3	2.9	1.5	2.6
1983	0.6	0.1	0.2	3.6	3.2	2.2	-0.4	3.6	1.9	1.6
1984	0.2	-0.2	2.5	2.7	1.9	2.8	-0.7	1.8	2.2	0.5
1985	2.9	2.1	2.1	3.8	4.3	2.2	1.8	3.0	2.0	2.4
1986	1.3	0.9	2.5	-1.1	4.6	2.4	2.6	2.6	2.7	2.4
1987	2.6	2.1	1.5	0.2	9.2	2.2	-4.8	4.8	4.7	2.8
1988	-0.7	-0.2	2.1	-5.5	3.6	3.2	-5.0	4.0	4.9	1.9
1989	1.1	-0.8	-1.6	5.4	8.3	1.6	-1.3	0.2	3.9	2.0
1990	-0.4	-0.2	2.2	0.6	6.3	2.5	5.4	2.5	3.1	2.3
1981-90	1.0	0.8	1.2	1.4	5.0	2.7	0.1	2.9	2.8	2.1
1991	3.6	0.6	0.4	-1.5	6.0	2.7	2.7	1.7	3.9	3.0
1992	1.5	0.8	5.0	-3.0	3.5	3.8	3.0	0.6	1.5	2.8
1993	-0.2	4.1	0.1	2.6	2.7	4.6	0.1	-0.2	3.7	1.6
1994	1.4	3.0	2.4	-1.1	0.5	0.7	4.1	-0.9	2.0	1.5
1995	1.3	2.1	1.5	5.6	2.4	-0.1	3.9	-2.2	2.2	1.3
1996	2.4	3.4	1.8	0.9	1.3	2.3	3.3	1.0	5.5	-0.4
1997	0.3	0.8	0.4	3.0	2.9	2.1	5.3	0.2	3.0	3.2
1998	1.5	3.1	1.2	1.7	3.7	-0.1	5.7	0.3	1.4	3.6
1999	3.2	1.4	1.6	-0.1	4.2	2.0	6.3	1.5	7.7	2.8
2000	2.5	1.0	1.2	2.3	4.0	2.2	5.4	1.6	4.8	1.9
1991-2000	1.7	2.0	1.6	1.0	3.1	2.0	4.0	0.3	3.6	2.1
2001	2.4	1.7	1.4	1.8	2.0	1.9	6.0	1.2	3.4	3.4
2002	1.1	1.4	1.3	0.5	2.4	2.0	3.8	1.6	3.0	2.5
2003	1.6	1.2	1.3	0.6	2.2	1.5	2.7	0.9	4.0	1.7

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	1.8	26.7	5.8	3.4	3.6	5.0	4.6	4.8	5.4
1962	2.4	8.5	7.9	6.3	3.1	6.1	5.5	5.8	7.5
1963	4.0	3.0	7.0	9.5	1.6	5.3	4.5	1.6	7.6
1964	4.9	6.8	2.0	3.0	1.9	3.2	3.0	1.1	3.0
1965	0.7	7.4	4.7	4.8	2.7	3.9	3.7	2.4	3.1
1966	4.6	6.6	4.6	5.5	2.9	3.3	3.3	10.7	4.5
1967	4.0	13.6	4.6	4.7	5.5	4.1	4.5	8.0	3.4
1968	3.1	8.4	5.9	6.8	1.1	3.4	3.1	2.6	4.7
1969	2.3	3.2	3.4	5.2	-1.9	4.0	2.9	0.1	4.1
1970	3.3	12.7	5.5	8.1	1.5	4.2	3.9	-1.2	4.8
1961-70	3.1	9.5	5.1	5.7	2.2	4.2	3.9	3.5	4.8
1971	3.3	6.4	5.8	2.2	3.4	4.7	4.4	-2.0	4.9
1972	4.1	8.6	7.8	2.4	4.6	4.3	4.3	0.6	5.0
1973	3.0	7.8	5.6	2.6	3.7	4.1	4.0	-0.9	5.4
1974	5.7	17.3	4.5	3.1	1.7	3.7	3.3	2.4	-0.4
1975	4.0	6.6	6.9	4.7	5.8	4.2	4.4	2.3	12.6
1976	4.3	7.0	5.8	3.5	1.7	3.4	3.1	0.1	4.2
1977	2.8	12.2	4.2	3.0	-1.3	2.9	2.1	1.7	4.2
1978	0.8	4.4	2.7	3.3	1.7	4.3	3.8	2.5	5.2
1979	3.5	6.4	3.6	4.7	1.6	3.3	3.1	1.9	4.2
1980	2.1	8.0	3.8	2.2	1.6	2.7	2.5	2.1	3.1
1971-80	3.3	8.4	5.1	3.2	2.4	3.7	3.5	1.0	4.8
1981	1.9	5.5	3.9	2.3	0.2	3.0	2.4	2.1	5.8
1982	3.0	3.7	2.4	1.0	0.6	2.2	1.9	2.5	4.8
1983	1.7	3.8	3.1	0.8	1.9	1.9	1.8	3.5	4.7
1984	0.8	0.2	2.0	2.2	1.3	2.0	1.9	2.9	3.2
1985	1.3	6.4	4.3	2.2	-0.3	2.6	2.1	5.5	0.1
1986	1.8	7.2	3.4	1.3	1.4	2.6	2.3	4.9	4.8
1987	0.2	3.8	4.4	1.0	0.0	3.1	2.4	3.7	3.5
1988	1.1	8.6	1.9	0.6	0.2	2.7	2.1	1.3	3.4
1989	1.7	6.4	2.2	2.1	1.0	1.2	1.1	1.4	2.9
1990	2.3	4.2	4.0	2.6	2.2	2.7	2.5	2.6	2.5
1981-90	1.6	5.0	3.2	1.6	0.8	2.4	2.1	3.0	3.5
1991	3.2	9.6	2.1	2.8	3.0	2.4	2.4	0.6	3.2
1992	3.5	-0.9	-2.4	0.0	0.7	3.0	2.5	0.2	2.7
1993	3.7	-0.2	-4.2	0.2	-0.7	1.5	1.2	-1.1	3.2
1994	3.0	4.3	0.3	-0.9	1.0	1.1	1.1	-0.1	2.9
1995	1.3	1.0	2.0	-0.6	1.7	0.6	0.7	-0.2	4.3
1996	1.2	3.4	2.5	0.9	1.2	1.6	1.6	0.7	2.8
1997	-1.5	2.2	4.1	-1.2	0.1	1.3	1.0	1.3	1.3
1998	2.8	3.8	1.7	3.2	1.5	1.3	1.4	1.5	1.9
1999	2.2	4.5	1.9	1.7	2.8	2.2	2.2	2.4	4.0
2000	0.9	2.5	0.7	-0.9	1.6	2.0	1.8	2.7	3.6
1991-2000	2.0	3.0	0.8	0.5	1.3	1.7	1.6	0.8	3.0
2001	-0.2	1.9	1.7	1.1	2.4	1.7	1.8	3.4	2.1
2002	-0.1	1.1	1.6	1.0	3.4	1.7	1.9	6.3	1.2
2003	0.2	0.9	1.1	0.8	3.2	1.4	1.6	2.4	0.3

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 19

Gross fixed capital formation at current prices; total economy

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	21.5	22.1	24.3	20.7	21.0	21.5	14.4	26.7	19.5	26.6
1961	22.9	23.7	25.2	20.4	22.0	22.8	16.3	27.5	22.6	27.4
1962	23.6	23.6	25.7	22.4	22.5	22.7	17.9	28.0	24.2	27.0
1963	23.0	22.5	25.6	19.5	22.8	23.6	19.5	28.4	28.0	26.2
1964	24.8	25.1	26.6	21.3	24.4	24.5	20.5	26.3	31.4	28.1
1965	24.8	24.6	26.1	22.1	25.6	24.8	21.4	22.8	26.1	27.7
1966	25.4	24.6	25.4	23.1	25.8	25.2	19.8	22.3	24.8	28.9
1967	25.4	24.8	23.1	22.1	26.0	25.5	20.0	23.1	22.3	29.1
1968	23.9	24.1	22.4	25.1	26.4	25.1	20.9	24.0	20.6	29.6
1969	23.6	25.4	23.3	26.4	26.7	25.0	23.3	24.9	20.7	27.1
1970	25.2	25.4	25.5	25.5	26.8	24.9	22.7	25.3	21.5	28.4
1961-70	24.3	24.4	24.9	22.8	24.9	24.4	20.2	25.3	24.2	28.0
1971	24.5	24.7	26.2	26.6	24.5	25.3	23.6	24.8	26.4	28.0
1972	23.7	25.7	25.4	30.6	25.6	25.3	23.7	24.3	25.9	26.0
1973	23.7	25.7	23.9	30.9	27.2	25.9	25.2	25.8	25.4	25.2
1974	25.2	24.8	21.6	23.8	28.7	26.4	24.6	27.1	22.9	24.0
1975	24.9	22.1	20.4	23.7	27.1	24.7	22.7	26.2	25.8	23.0
1976	24.4	24.0	20.1	24.2	25.6	24.5	24.2	25.3	23.2	21.2
1977	23.9	23.2	20.3	27.5	24.6	23.5	24.1	25.2	23.4	22.9
1978	23.9	22.9	20.6	30.6	23.3	22.9	26.8	24.5	22.4	23.1
1979	22.8	22.2	21.7	32.7	22.2	23.0	29.8	24.7	22.7	22.8
1980	23.3	20.1	22.6	28.4	22.9	23.8	28.2	25.2	25.3	22.7
1971-80	24.0	23.5	22.3	27.9	25.2	24.5	25.3	25.3	24.3	23.9
1981	20.1	16.8	21.6	26.0	22.7	23.1	28.7	25.2	23.7	20.8
1982	18.9	17.5	20.4	23.5	22.5	22.5	25.6	23.8	23.3	19.8
1983	17.4	17.9	20.4	25.2	21.9	21.2	22.4	22.6	19.8	19.8
1984	17.1	18.9	20.0	20.4	20.1	20.4	20.7	22.3	18.7	20.2
1985	17.5	20.7	19.5	21.9	20.6	20.3	18.4	21.8	16.5	20.8
1986	17.5	22.5	19.4	22.8	21.2	20.4	17.8	20.9	20.2	21.6
1987	18.0	22.0	19.4	21.6	22.4	21.0	16.6	20.9	23.0	22.0
1988	19.8	20.5	19.6	21.5	24.2	21.9	15.9	21.3	24.9	22.6
1989	21.5	20.5	20.2	22.6	25.6	22.5	17.1	21.3	23.7	22.8
1990	22.6	19.9	20.9	23.1	25.9	22.6	18.7	21.5	24.7	22.5
1981-90	19.0	19.7	20.1	22.9	22.7	21.6	20.2	22.2	21.8	21.3
1991	21.1	19.1	21.3	22.6	25.1	22.0	17.1	21.0	26.6	21.9
1991	21.1	19.1	23.8	22.6	25.1	22.0	17.1	21.0	26.6	21.9
1992	20.9	17.9	24.0	21.3	23.1	20.9	16.9	20.5	23.4	21.6
1993	20.1	17.1	23.0	20.3	21.3	19.4	15.5	18.4	24.3	20.6
1994	19.6	17.3	23.1	18.6	21.1	19.1	16.5	18.0	21.0	20.3
1995	19.9	18.6	22.4	18.6	22.0	18.8	17.2	18.3	21.7	20.3
1996	19.9	18.6	21.8	19.5	21.6	18.5	18.8	18.3	21.3	21.1
1997	20.4	19.6	21.4	20.0	21.9	18.0	20.3	18.3	22.2	21.5
1998	20.6	20.5	21.4	21.6	22.8	18.4	22.1	18.5	21.2	21.5
1999	20.9	20.2	21.6	22.5	24.0	19.1	23.5	19.0	23.8	22.5
2000	21.1	21.6	21.6	23.4	25.3	19.7	23.6	19.6	20.9	22.7
1991-2000	20.4	19.0	22.4	20.8	22.8	19.4	19.1	19.0	22.6	21.4
2001	20.5	20.6	20.6	24.3	25.6	19.9	23.4	19.4	21.3	21.9
2002	20.5	20.8	20.1	25.3	25.7	19.7	23.6	19.8	21.0	21.4
2003	20.7	21.2	20.2	26.6	25.9	19.8	23.7	19.9	20.9	21.4

(1) 1960-91: D_90.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	23.9	24.3	29.4	24.3	17.0	23.7	22.2	17.7	29.1
1961	25.1	24.4	29.0	24.9	18.0	24.7	23.3	17.3	32.0
1962	24.7	23.5	28.6	25.5	17.7	25.0	23.5	17.5	32.3
1963	24.9	24.9	26.5	25.9	17.5	25.2	23.6	18.0	31.7
1964	25.3	23.9	26.2	26.3	18.9	25.6	24.3	18.4	31.8
1965	26.2	23.9	27.3	26.4	19.0	25.1	23.9	19.0	29.9
1966	26.6	26.3	27.5	26.5	19.0	25.0	23.9	18.7	30.4
1967	25.5	27.9	26.1	26.5	19.8	24.5	23.7	18.0	32.0
1968	24.6	23.3	24.0	25.6	20.1	24.3	23.7	18.2	33.3
1969	24.0	23.7	24.7	24.8	19.4	24.6	23.8	18.4	34.6
1970	24.7	24.4	27.3	24.1	19.5	25.5	24.5	17.8	35.6
1961–70	25.2	24.6	26.7	25.6	18.9	25.0	23.8	18.1	32.4
1971	26.7	26.0	28.5	23.5	19.6	25.7	24.6	18.3	34.4
1972	28.9	28.4	29.0	23.7	19.2	25.5	24.4	19.1	34.2
1973	27.3	28.1	29.9	23.4	20.6	25.4	24.7	19.5	36.5
1974	27.2	27.3	31.0	22.9	21.6	25.0	24.5	18.9	34.9
1975	25.5	27.2	32.7	22.4	20.7	23.9	23.4	17.7	32.6
1976	24.9	26.3	29.2	22.6	20.4	23.2	22.9	18.1	31.3
1977	26.0	27.8	28.4	22.5	19.4	23.1	22.6	19.4	30.3
1978	24.0	29.3	25.4	20.8	19.2	22.8	22.3	20.6	30.5
1979	24.1	27.9	24.7	21.2	19.4	23.1	22.5	21.2	31.8
1980	24.9	30.0	26.7	21.6	18.7	23.8	22.8	20.2	31.7
1971–80	26.0	27.8	28.6	22.4	19.9	24.2	23.5	19.3	32.8
1981	24.6	32.4	26.5	20.2	17.1	23.1	21.8	19.9	30.7
1982	22.5	32.6	26.7	20.0	17.1	22.1	21.1	18.8	29.6
1983	21.9	30.6	26.9	20.0	17.0	21.4	20.6	18.6	28.1
1984	21.5	24.7	25.3	20.1	18.1	20.7	20.2	19.5	27.9
1985	22.2	22.9	25.4	20.7	18.1	20.5	20.2	19.5	27.7
1986	22.2	23.2	25.0	19.9	18.0	20.4	20.1	19.3	27.5
1987	22.6	25.7	25.6	20.8	18.8	20.7	20.5	18.6	28.6
1988	23.3	27.4	26.9	21.7	20.5	21.5	21.3	18.3	30.0
1989	23.4	26.6	29.5	23.7	21.7	22.1	22.1	18.0	31.0
1990	23.7	26.2	28.6	23.1	20.5	22.4	22.1	17.3	32.2
1981–90	22.8	27.2	26.6	21.0	18.7	21.5	21.0	18.8	29.3
1991	24.2	24.9	24.4	20.8	17.9	22.0	21.3	16.1	31.8
1991	24.2	24.9	24.4	20.8	17.9	22.7	21.9	16.1	31.8
1992	23.7	23.7	19.9	18.3	16.5	22.2	21.2	16.2	30.5
1993	23.2	22.2	16.4	15.3	15.7	20.8	19.9	16.7	29.2
1994	23.5	22.3	15.5	15.1	15.9	20.6	19.8	17.2	28.2
1995	23.3	22.8	16.3	15.5	16.3	20.5	19.8	17.7	27.8
1996	23.3	23.4	17.0	15.7	16.5	20.3	19.6	18.2	28.5
1997	23.5	25.6	18.0	15.2	16.6	20.1	19.4	18.7	28.1
1998	23.6	26.8	18.7	16.0	17.6	20.5	19.9	19.4	26.9
1999	23.3	27.4	19.0	17.0	17.2	21.0	20.2	19.9	26.2
2000	23.7	28.6	19.3	17.3	17.5	21.4	20.6	20.2	26.0
1991–2000	23.5	24.8	18.4	16.6	16.8	21.0	20.2	18.0	28.3
2001	23.3	27.7	19.6	17.8	17.5	21.1	20.4	19.4	25.6
2002	23.1	27.7	19.6	18.2	17.6	21.0	20.3	18.7	24.7
2003	23.3	28.1	19.8	18.5	18.0	21.2	20.5	19.1	24.7

⁽¹⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽²⁾ 1960–91: including D_90.

Table 20

Gross fixed capital formation at 1995 prices; total economy

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	12.4	13.9	6.5	13.2	17.9	10.9	16.9	11.6	9.0	6.0
1962	5.9	6.7	3.8	5.1	11.4	8.5	14.8	9.8	7.8	3.4
1963	0.1	-2.4	1.2	-6.5	11.4	8.8	12.0	8.1	14.2	1.1
1964	14.7	23.5	11.2	19.3	15.0	10.5	10.8	-5.8	22.1	19.2
1965	4.1	4.7	4.7	15.6	16.4	7.0	10.5	-8.4	-13.9	5.3
1966	6.8	4.3	1.2	5.4	13.1	7.3	-3.0	4.3	-5.1	8.0
1967	2.9	5.7	-7.0	-1.3	6.0	6.0	6.8	11.7	-7.9	8.5
1968	-1.3	2.8	3.3	23.1	9.5	5.5	13.2	10.8	-4.2	11.2
1969	5.3	12.5	9.6	16.5	10.0	9.2	20.5	7.8	10.5	-2.2
1970	8.4	0.8	8.9	-2.4	3.4	4.6	-3.3	3.0	7.5	9.2
1961-70	5.8	7.0	4.2	8.4	11.3	7.8	9.6	5.1	3.4	6.8
1971	-1.9	1.9	5.9	11.6	-3.0	7.3	8.9	0.3	10.7	0.7
1972	3.4	11.6	2.7	23.8	14.2	6.0	7.8	2.7	7.0	-3.0
1973	7.0	3.3	-0.3	6.8	13.0	8.5	16.2	5.4	11.8	4.6
1974	6.9	-9.1	-9.7	-32.7	6.2	1.3	-11.6	2.7	-7.0	-3.0
1975	-1.9	-11.7	-5.4	10.1	-4.5	-6.4	-3.6	-5.2	-7.4	-4.1
1976	4.0	16.2	3.6	7.1	-0.8	3.3	10.1	-0.5	-4.2	-3.3
1977	0.0	-3.2	3.6	12.3	-0.9	-1.8	4.8	2.7	-0.1	9.9
1978	2.8	0.6	4.1	12.5	-2.7	2.1	18.3	0.9	1.1	2.3
1979	-2.7	-0.4	6.7	5.2	-4.4	4.0	14.5	6.3	3.8	-1.4
1980	5.6	-12.1	2.2	-15.2	0.7	4.2	-3.7	3.0	12.7	-0.4
1971-80	2.3	-0.7	1.2	2.8	1.6	2.7	5.7	1.8	2.6	0.2
1981	-13.0	-19.6	-5.0	-9.8	-1.7	-0.6	7.3	-1.2	-7.4	-10.0
1982	-6.5	7.0	-5.4	-2.3	1.0	0.0	-3.4	-3.5	-0.5	-4.1
1983	-5.8	1.8	3.1	5.2	-1.2	-2.2	-9.0	-1.1	-11.8	2.5
1984	2.7	10.9	0.1	-15.9	-4.8	-0.8	-2.7	3.4	0.1	5.8
1985	7.0	14.3	-0.5	9.5	6.7	3.1	-7.8	0.4	-9.5	7.0
1986	3.2	16.4	3.3	-0.5	10.5	6.0	0.0	2.3	31.0	7.0
1987	6.2	-0.8	1.8	-6.0	12.2	6.0	-2.3	4.2	17.9	0.8
1988	15.7	-3.2	4.4	6.7	13.6	9.5	-1.6	6.7	15.0	5.3
1989	12.6	-0.6	6.3	7.1	12.0	7.3	15.6	4.2	7.0	5.1
1990	8.5	-2.2	8.5	5.0	6.5	3.3	12.1	4.0	2.7	2.5
1981-90	2.7	1.9	1.6	-0.4	5.3	3.1	0.5	1.9	3.7	2.1
1991	-4.1	-3.4	6.0	4.8	1.7	-1.5	-7.0	1.0	31.6	0.4
1992	1.7	-2.1	4.5	-3.2	-4.1	-1.6	0.0	-1.4	-9.0	0.7
1993	-3.1	-3.8	-4.5	-3.5	-8.9	-6.4	-5.1	-10.9	28.4	-3.2
1994	-0.1	7.7	4.0	-2.8	1.9	1.5	11.8	0.1	-14.9	2.1
1995	5.6	11.6	-0.7	4.2	7.7	2.0	13.4	6.0	3.5	3.9
1996	1.3	3.9	-0.8	8.4	2.1	0.0	16.6	3.6	1.7	6.3
1997	6.8	10.9	0.6	7.8	5.0	-0.1	17.8	2.1	14.3	6.6
1998	4.3	7.8	3.0	11.8	9.7	7.0	15.7	4.3	2.8	4.2
1999	3.3	1.6	4.2	7.3	8.8	6.2	13.5	4.6	19.6	7.8
2000	2.6	9.9	2.3	7.8	5.7	6.1	7.3	6.1	-3.0	3.8
1991-2000	1.8	4.3	1.8	4.1	2.8	1.3	8.0	1.4	6.5	3.2
2001	-0.6	-2.3	-2.7	9.1	3.8	2.8	3.4	1.6	5.8	-1.3
2002	1.6	3.3	-0.3	9.2	2.6	0.9	2.7	2.7	2.9	-0.8
2003	3.8	4.1	3.7	10.4	4.2	3.7	4.2	3.8	5.5	2.5

⁽¹⁾ 1961-91: D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	12.6	6.7	9.2	8.0	9.4	9.9	9.8	1.5	23.1
1962	2.7	1.7	0.5	6.3	0.7	6.7	5.7	8.2	14.6
1963	3.4	15.3	-3.0	6.8	1.5	5.2	4.6	7.9	12.1
1964	9.6	4.0	6.1	7.6	16.0	7.9	9.4	9.4	15.6
1965	5.2	10.3	10.4	4.0	5.2	3.9	4.1	9.7	5.1
1966	8.8	17.9	3.9	4.6	2.7	5.5	5.0	5.6	13.8
1967	0.1	5.2	-1.2	5.3	9.0	2.7	3.8	-1.1	17.8
1968	2.9	-9.3	-5.2	0.6	5.8	6.3	5.9	5.9	20.3
1969	4.9	8.1	12.7	4.3	-0.6	8.3	6.8	3.6	18.8
1970	9.8	11.4	12.5	3.3	2.9	5.9	5.3	-3.2	16.4
1961-70	5.9	6.9	4.4	5.1	5.2	6.2	6.0	4.7	15.7
1971	13.8	10.2	3.6	-0.6	2.0	3.9	3.5	5.8	4.7
1972	12.1	14.0	6.6	4.2	0.0	5.3	4.6	9.3	10.1
1973	0.3	10.3	8.5	2.7	6.5	5.4	5.5	7.8	11.6
1974	4.0	-6.1	3.2	-3.0	-2.0	-1.9	-2.1	-5.4	-8.5
1975	-5.0	-10.6	6.0	3.1	-1.9	-4.8	-4.3	-9.4	-0.7
1976	3.8	1.3	-8.0	1.9	1.7	1.5	1.8	8.1	2.9
1977	9.2	11.5	-3.4	-2.9	-1.5	2.2	1.4	11.7	2.8
1978	-7.6	6.2	-8.3	-6.8	2.5	1.8	1.6	11.1	7.9
1979	4.8	-1.3	3.4	4.5	2.6	3.7	3.5	5.0	5.9
1980	4.0	8.5	9.6	3.5	-4.7	2.3	1.1	-5.6	-0.4
1971-80	3.7	4.1	1.9	0.6	0.5	1.9	1.6	3.6	3.5
1981	-0.9	5.5	1.9	-6.0	-8.9	-2.9	-4.0	0.5	2.3
1982	-7.4	2.3	5.3	-0.9	5.9	-2.6	-1.4	-7.4	-0.1
1983	0.4	-7.1	2.9	1.1	5.1	-0.4	0.4	6.6	-1.1
1984	0.1	-17.4	-1.7	7.1	9.2	-0.5	1.2	15.8	4.4
1985	6.9	-3.5	2.8	5.2	4.1	2.2	2.8	5.4	5.1
1986	2.4	10.9	1.0	0.3	1.9	4.6	4.3	1.4	5.1
1987	4.4	18.0	4.9	8.2	9.3	4.8	5.4	-0.1	9.4
1988	6.8	14.8	11.0	6.6	14.9	8.1	8.9	3.6	12.0
1989	4.1	3.7	13.0	11.3	6.0	7.0	6.8	3.1	8.6
1990	6.2	7.6	-4.6	1.3	-2.6	5.3	3.8	-0.4	8.8
1981-90	2.2	3.0	3.5	3.3	4.3	2.5	2.7	2.7	5.4
1991	6.6	3.3	-18.6	-8.9	-8.2	1.4	-0.5	-5.4	2.2
1992	0.6	4.5	-16.7	-10.8	-0.9	0.1	-0.3	5.8	-2.5
1993	-0.9	-5.5	-16.6	-17.2	0.3	-6.4	-5.8	6.8	-3.1
1994	4.6	2.7	-2.7	6.1	4.7	2.1	2.6	8.0	-1.4
1995	1.3	6.6	10.6	9.4	3.1	3.0	3.2	5.9	0.3
1996	2.2	6.2	8.4	5.0	4.7	1.7	2.2	8.6	6.8
1997	2.0	13.9	11.9	-1.1	7.1	2.7	3.4	9.5	1.0
1998	3.4	11.2	9.3	8.5	13.2	5.5	6.7	10.5	-4.0
1999	1.5	7.1	3.0	9.6	0.9	5.6	4.9	7.9	-0.9
2000	5.1	5.3	5.5	5.0	4.9	4.6	4.7	6.8	0.6
1991-2000	2.6	5.4	-1.3	0.1	2.8	2.0	2.1	6.4	-0.2
2001	-0.2	-1.0	1.8	3.2	2.0	0.7	0.9	-1.6	-2.4
2002	0.8	2.2	0.5	3.1	1.1	1.3	1.4	-2.6	-4.5
2003	3.5	3.6	2.9	4.0	4.3	3.9	4.0	6.0	0.1

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 21

Net stockbuilding at current prices; total economy

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	-0.1	4.4	3.0	-6.5	-0.5	3.0	2.0	2.1	2.4	3.3
1961	0.5	1.9	2.0	-1.6	1.7	1.3	1.4	2.3	2.2	2.7
1962	0.0	2.9	1.6	-2.7	3.6	2.2	1.6	1.7	5.6	1.5
1963	0.4	0.8	0.7	3.4	3.4	1.4	0.9	1.0	-0.1	1.1
1964	1.5	1.7	1.5	5.3	2.7	2.1	1.2	0.5	-1.2	3.0
1965	0.8	2.3	2.3	7.2	3.0	1.4	2.3	0.7	2.1	1.9
1966	1.0	0.9	1.1	3.4	2.9	1.8	0.8	0.8	1.7	1.3
1967	0.4	0.2	-0.1	2.9	1.4	1.4	-0.4	1.1	-3.0	0.9
1968	0.9	0.8	2.1	2.0	0.8	1.1	1.1	0.0	-1.9	0.6
1969	1.9	1.4	2.9	4.5	2.5	2.4	2.4	0.7	-1.2	1.6
1970	1.6	1.1	2.1	5.2	0.8	2.5	1.7	1.5	2.7	1.6
1961-70	0.9	1.4	1.6	3.0	2.3	1.8	1.3	1.0	0.7	1.6
1971	1.4	0.7	0.6	5.4	0.9	1.5	0.3	-0.4	1.3	0.4
1972	0.5	0.5	0.5	4.6	0.9	1.6	1.4	-0.7	0.7	0.2
1973	1.3	1.5	1.3	10.1	0.8	2.0	1.6	1.0	-0.2	1.0
1974	2.2	1.4	0.4	8.7	2.2	2.3	4.4	3.2	-3.4	2.1
1975	-0.5	0.0	-0.6	7.2	2.1	-0.7	0.0	-1.4	-4.8	-0.2
1976	0.2	1.2	1.4	8.2	2.0	1.4	0.5	2.3	-2.2	1.0
1977	0.4	1.0	0.6	1.1	1.1	1.5	3.1	0.2	-4.7	0.6
1978	0.2	0.0	0.6	-2.9	0.2	0.8	1.5	0.2	0.9	0.4
1979	0.8	0.9	1.7	-5.4	0.8	1.3	2.3	0.6	-2.3	0.4
1980	1.1	0.1	0.8	-2.4	1.3	1.3	-1.2	2.6	-1.9	0.8
1971-80	0.7	0.7	0.7	3.4	1.2	1.3	1.4	0.8	-1.7	0.7
1981	1.0	0.1	-0.7	-5.0	-0.2	-0.1	-1.1	0.4	-0.9	-0.3
1982	1.3	0.5	-1.0	2.0	-0.1	0.5	1.4	0.7	-0.1	-0.5
1983	0.9	0.2	-0.1	-0.8	-0.3	-0.1	0.7	0.4	3.1	0.2
1984	1.8	1.5	0.3	5.1	0.4	0.1	1.4	1.5	4.7	0.2
1985	0.5	1.2	0.1	4.7	0.0	-0.1	0.9	1.8	-0.7	0.3
1986	0.3	1.1	0.2	3.0	0.4	0.2	0.6	1.1	-1.1	0.8
1987	0.6	-0.5	0.0	-1.8	0.6	0.2	0.1	1.3	-2.7	-0.5
1988	0.7	0.2	0.5	0.6	0.9	0.6	-0.2	1.3	-2.7	-0.4
1989	0.7	0.6	0.7	-0.2	0.8	0.8	1.0	1.1	-0.1	1.1
1990	0.2	0.4	0.5	-0.3	0.8	0.8	2.3	0.8	-1.1	1.0
1981-90	0.8	0.5	0.0	0.7	0.3	0.3	0.7	1.0	-0.2	0.2
1991	0.3	0.0	0.6	0.9	0.7	0.5	2.1	0.7	-0.3	0.9
1991	0.3	0.0	0.5	0.9	0.7	0.5	2.1	0.7	-0.3	0.9
1992	0.3	0.2	-0.2	-0.3	0.7	-0.1	-0.6	0.3	-0.5	0.8
1993	0.1	-0.7	-0.5	-0.4	0.0	-1.1	-0.4	-0.1	-1.9	-0.7
1994	-0.1	0.3	0.1	0.1	0.4	-0.1	-0.4	0.5	0.9	0.0
1995	0.2	1.1	0.2	0.3	0.3	0.5	0.9	1.0	0.1	0.7
1996	-0.3	0.4	-0.1	0.3	0.3	-0.2	0.7	0.3	0.5	0.2
1997	-0.1	1.2	0.0	0.2	0.3	-0.1	1.2	0.6	0.9	0.3
1998	-0.2	1.2	0.5	0.3	0.4	0.6	1.5	0.8	0.7	0.7
1999	-0.1	0.0	0.2	-0.2	0.5	0.4	0.0	0.8	0.4	0.1
2000	0.4	0.0	0.6	0.0	0.3	0.9	0.3	0.8	0.5	-0.1
1991-2000	0.0	0.4	0.1	0.1	0.4	0.1	0.5	0.6	0.1	0.3
2001	0.4	0.0	-0.1	-0.3	0.3	-0.3	0.1	0.8	0.0	0.0
2002	0.1	0.0	0.4	-0.2	0.3	-0.5	0.1	0.3	-0.1	-0.2
2003	0.1	0.0	0.6	0.0	0.3	-0.4	0.1	0.7	0.1	0.1

(1) 1960-91: D_90.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	3.2	1.4	1.0	2.6	2.2	2.3	2.3	0.7	3.9
1961	2.2	3.9	1.2	1.6	1.0	1.8	1.6	0.4	5.0
1962	0.4	1.8	0.4	1.0	0.0	1.7	1.3	1.1	2.0
1963	-0.2	2.0	-0.8	0.2	0.5	1.1	0.9	0.9	2.2
1964	1.6	3.3	-0.2	2.0	2.1	1.7	1.8	0.7	2.9
1965	0.7	4.4	2.0	2.5	1.3	1.8	1.7	1.2	2.1
1966	2.0	1.8	0.7	1.1	0.8	1.4	1.3	1.6	2.1
1967	1.0	0.6	-0.2	0.2	0.7	0.8	0.7	1.1	3.4
1968	1.7	3.1	1.3	0.3	1.0	1.2	1.1	1.0	3.6
1969	2.0	1.8	1.1	1.3	1.1	2.2	1.9	1.0	3.1
1970	3.9	5.9	3.5	3.1	0.7	2.1	1.9	0.2	3.5
1961-70	1.5	2.9	0.9	1.3	0.9	1.6	1.4	0.9	3.0
1971	1.8	3.2	2.3	1.1	0.2	0.9	0.8	0.7	1.5
1972	0.4	3.6	-0.6	-0.1	0.0	0.7	0.6	0.7	1.4
1973	2.4	5.9	-0.1	-0.5	2.1	1.6	1.6	1.1	1.7
1974	2.7	5.2	4.7	2.4	1.2	2.0	1.9	0.9	2.5
1975	-0.7	-3.3	2.2	3.3	-1.3	-0.3	-0.3	-0.4	0.3
1976	1.2	1.8	-1.2	2.3	0.7	1.6	1.5	1.0	0.7
1977	1.4	2.5	-1.3	-0.6	1.3	0.8	0.8	1.1	0.7
1978	0.0	2.6	-1.9	-1.8	1.1	0.4	0.4	1.1	0.5
1979	2.5	2.9	2.2	0.2	1.1	1.1	1.1	0.7	0.8
1980	1.7	4.2	3.4	1.1	-1.1	1.3	0.9	-0.2	0.7
1971-80	1.3	2.9	1.0	0.7	0.5	1.0	0.9	0.7	1.1
1981	-0.7	3.7	0.9	-0.7	-1.1	-0.2	-0.4	1.0	0.6
1982	-0.2	3.0	0.8	-1.0	-0.4	0.1	0.0	-0.4	0.5
1983	-0.6	-0.9	0.0	-1.4	0.5	0.0	0.0	-0.1	0.1
1984	0.7	-1.3	0.5	-1.0	0.4	0.6	0.6	1.6	0.4
1985	0.4	-1.2	-0.1	-0.1	0.2	0.5	0.4	0.6	0.7
1986	0.2	-1.0	-0.6	-0.6	0.2	0.4	0.4	0.3	0.5
1987	-0.1	0.7	-0.2	-0.5	0.3	0.3	0.3	0.6	0.2
1988	0.8	3.2	0.7	-0.3	0.9	0.7	0.7	0.2	0.7
1989	1.0	1.8	1.3	0.0	0.5	0.9	0.8	0.5	0.7
1990	1.1	1.6	0.4	-0.2	-0.3	0.7	0.5	0.2	0.6
1981-90	0.3	1.0	0.4	-0.6	0.1	0.4	0.3	0.5	0.5
1991	0.5	0.9	-2.0	-1.5	-0.9	0.6	0.3	0.0	0.7
1991	0.5	0.9	-2.0	-1.5	-0.9	0.5	0.3	0.0	0.7
1992	0.2	1.3	-1.3	-0.5	-0.3	0.1	0.0	0.2	0.2
1993	-0.2	0.0	-0.7	-0.6	0.0	-0.5	-0.4	0.3	0.0
1994	0.1	0.8	1.4	0.8	0.6	0.1	0.2	0.9	-0.1
1995	1.0	1.5	1.2	1.1	0.6	0.5	0.5	0.4	0.4
1996	0.4	0.9	-0.3	0.2	0.2	0.0	0.1	0.4	0.7
1997	0.6	0.6	0.4	0.4	0.5	0.2	0.3	0.8	0.6
1998	0.7	0.9	1.0	0.8	0.6	0.6	0.6	0.8	0.0
1999	0.8	1.0	-0.1	0.2	0.6	0.3	0.4	0.6	-0.2
2000	0.5	0.8	0.5	0.7	0.2	0.6	0.5	0.5	0.0
1991-2000	0.5	0.9	0.0	0.2	0.2	0.3	0.2	0.5	0.2
2001	0.5	0.7	-0.1	0.5	0.1	0.1	0.1	-0.3	-0.1
2002	0.3	0.7	0.0	0.3	0.2	0.1	0.1	0.3	-0.2
2003	0.3	0.7	0.1	0.3	0.4	0.3	0.3	0.6	-0.2

⁽¹⁾ EU-15 excluding DK, S and UK; 1960-91: including D_90.⁽²⁾ 1960-91: including D_90.

Table 22

National final uses, including stocks, at current prices*(percentage of gross domestic product at market prices)*

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	100.7	101.1	97.5	103.0	98.2	98.8	106.9	100.6	83.9	99.2
1961	100.8	101.5	97.8	102.9	100.7	99.0	106.6	100.3	89.9	101.0
1962	100.0	103.0	98.7	104.9	102.3	99.9	108.1	100.8	95.7	100.7
1963	101.0	99.6	98.5	104.8	103.9	100.5	108.7	102.7	96.2	101.9
1964	100.4	101.9	98.5	107.7	102.7	100.9	109.1	100.1	96.3	103.3
1965	100.1	101.4	99.7	108.1	105.3	99.9	110.5	97.8	95.6	101.8
1966	100.8	101.4	98.3	104.8	105.0	100.5	107.4	98.3	94.3	102.6
1967	99.6	101.9	96.4	104.7	103.5	100.5	104.5	99.1	88.7	102.1
1968	99.6	101.3	96.4	106.3	102.2	100.7	107.8	98.0	86.6	101.2
1969	98.9	102.0	97.2	106.5	101.9	101.4	110.5	98.7	82.3	101.3
1970	97.6	102.9	98.0	105.9	101.0	100.4	109.5	99.9	83.6	102.8
1961–70	99.9	101.7	97.9	105.7	102.8	100.4	108.3	99.6	90.9	101.9
1971	97.9	101.7	98.2	105.7	99.2	99.8	108.7	99.3	92.7	101.1
1972	96.6	99.5	98.0	105.7	99.8	99.9	106.8	99.3	90.4	98.2
1973	97.9	101.8	97.1	107.1	100.8	100.1	108.3	102.0	84.0	97.8
1974	99.6	102.8	95.6	105.3	104.8	101.9	116.2	104.2	75.9	98.2
1975	99.8	100.9	97.1	105.3	103.8	99.7	107.5	100.2	92.1	97.7
1976	99.8	104.5	97.7	105.1	104.5	101.7	109.4	101.3	90.6	97.6
1977	100.9	103.5	97.6	105.0	102.0	100.8	110.6	99.0	92.3	99.8
1978	101.0	102.0	97.5	104.2	99.2	99.6	111.4	97.9	94.9	100.8
1979	102.1	102.9	99.3	103.3	99.7	100.5	117.9	99.0	92.3	101.3
1980	103.0	101.1	100.5	103.8	102.4	102.4	115.0	102.9	96.9	101.3
1971–80	99.9	102.1	97.8	105.0	101.6	100.6	111.2	100.5	90.2	99.4
1981	102.2	99.3	99.2	101.9	102.1	102.4	115.7	102.2	99.0	97.4
1982	101.8	99.6	97.6	105.5	101.8	103.2	108.8	101.4	97.8	96.6
1983	99.4	98.1	98.0	106.4	100.8	101.4	104.2	99.5	96.1	97.0
1984	99.1	98.9	97.5	105.4	98.0	100.9	101.7	100.4	94.6	95.9
1985	98.6	99.8	96.5	106.4	98.3	100.9	99.5	100.5	91.3	96.4
1986	97.3	100.6	94.8	105.5	98.2	100.3	99.0	98.7	91.3	97.3
1987	97.8	98.2	95.0	104.3	100.1	101.0	95.7	99.5	95.0	98.4
1988	97.1	97.1	94.8	105.5	101.4	100.8	93.7	99.9	94.0	97.2
1989	97.3	96.9	94.6	107.4	103.4	100.9	94.2	100.2	92.4	97.5
1990	97.8	94.9	94.1	109.4	103.5	101.0	95.4	100.0	95.4	96.6
1981–90	98.8	98.3	96.2	105.8	100.8	101.3	100.8	100.2	94.7	97.0
1991	97.7	94.1	94.3	109.0	103.3	100.5	95.0	100.0	98.7	96.4
1991	97.7	94.1	100.2	109.0	103.3	100.5	95.0	100.0	98.7	96.4
1992	97.0	93.4	100.2	107.8	102.9	99.4	92.4	100.1	91.7	96.6
1993	96.2	93.2	99.8	107.7	100.8	98.5	89.4	96.8	89.2	94.4
1994	95.7	94.7	99.7	105.9	100.2	98.7	90.1	96.5	85.8	93.9
1995	95.7	95.9	99.4	107.3	100.2	98.6	88.6	95.9	87.8	94.1
1996	95.9	95.1	99.0	108.0	99.5	98.3	88.4	95.1	88.2	94.3
1997	95.6	96.5	98.6	107.5	99.0	97.0	87.3	96.0	85.5	94.1
1998	95.9	98.0	98.5	109.0	100.0	97.3	88.6	96.6	81.9	94.6
1999	95.7	95.2	99.1	108.4	101.3	97.6	86.1	97.9	82.6	95.7
2000	96.8	94.1	99.6	109.0	102.2	98.6	85.8	98.9	76.0	95.1
1991–2000	96.2	95.0	99.4	108.0	100.9	98.5	89.2	97.4	86.7	94.9
2001	97.1	93.1	98.7	109.0	102.0	97.9	85.7	98.8	75.9	94.2
2002	96.7	93.6	98.8	109.0	101.8	97.8	86.1	99.1	75.5	93.7
2003	96.7	93.4	98.7	108.9	101.7	97.7	85.7	99.2	74.4	93.7

(1) 1960–91: D₉₀.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	100.8	104.6	102.8	100.3	101.2	99.1	99.7	99.5	99.6
1961	99.8	109.6	101.0	99.2	101.0	99.4	99.8	99.4	101.6
1962	98.7	103.3	102.4	99.4	100.7	100.1	100.2	99.6	99.9
1963	99.1	103.7	100.7	99.5	100.7	100.7	100.6	99.4	100.8
1964	100.1	103.0	101.5	99.5	101.8	100.4	100.7	99.1	100.2
1965	100.6	103.4	104.8	100.6	100.3	100.3	100.4	99.4	98.6
1966	101.5	102.7	103.8	100.4	99.8	100.1	100.1	99.8	98.5
1967	100.9	101.1	101.6	99.8	101.2	99.5	99.9	99.8	99.8
1968	100.3	103.4	98.6	99.9	101.1	99.2	99.6	100.1	98.9
1969	98.9	102.8	97.9	100.1	99.2	99.6	99.6	100.1	98.4
1970	99.1	105.1	101.5	100.3	98.8	99.8	99.7	99.9	98.7
1961–70	99.9	103.8	101.4	99.9	100.5	99.9	100.1	99.7	99.5
1971	99.4	105.6	102.2	98.6	99.0	99.4	99.4	100.3	97.3
1972	99.5	103.4	100.3	98.2	99.4	99.1	99.1	100.7	97.7
1973	99.7	105.6	101.1	97.0	102.5	99.4	99.8	100.0	100.0
1974	100.4	113.6	103.7	100.5	105.7	100.3	101.1	100.2	100.8
1975	99.4	110.7	106.0	99.9	102.5	99.6	100.0	99.2	100.0
1976	101.6	111.7	102.1	101.4	102.9	100.5	100.9	100.1	99.2
1977	102.7	113.2	98.5	101.4	100.0	99.9	100.0	101.2	98.4
1978	100.1	110.7	96.3	98.7	99.2	99.0	99.1	101.1	98.3
1979	100.5	109.1	98.7	100.7	99.8	100.2	100.2	100.9	100.9
1980	102.0	112.9	101.1	101.6	98.0	102.1	101.4	100.5	100.9
1971–80	100.5	109.6	101.0	99.8	100.9	99.9	100.1	100.4	99.3
1981	101.4	117.4	98.6	99.9	97.9	101.3	100.6	100.5	99.3
1982	98.5	116.7	99.2	100.3	98.3	100.7	100.3	100.6	99.3
1983	98.8	111.0	99.5	97.6	99.4	99.7	99.6	101.5	98.3
1984	100.0	106.3	97.5	96.1	100.2	99.3	99.3	102.6	97.4
1985	99.9	102.4	99.2	98.0	99.2	99.0	99.0	102.7	96.6
1986	99.2	101.2	98.6	96.6	100.8	97.9	98.3	103.0	96.1
1987	99.7	104.4	99.6	97.9	101.2	98.5	98.9	103.0	97.0
1988	99.6	107.9	100.5	98.1	103.7	98.6	99.4	102.1	97.8
1989	99.3	105.7	102.0	99.2	104.1	99.0	99.7	101.5	98.5
1990	98.9	106.5	101.7	99.4	102.6	98.8	99.3	101.2	99.1
1981–90	99.5	107.9	99.6	98.3	100.7	99.3	99.4	101.9	97.9
1991	99.3	107.2	100.9	98.2	101.0	98.7	98.9	100.3	98.4
1991	99.3	107.2	100.9	98.2	101.0	100.4	100.3	100.3	98.4
1992	99.2	107.4	99.0	98.1	101.2	100.1	100.0	100.4	97.8
1993	99.6	107.0	95.1	96.1	101.0	98.7	98.8	100.9	97.8
1994	100.4	106.8	94.1	95.3	100.7	98.5	98.6	101.2	98.0
1995	100.8	106.2	92.1	93.1	100.5	98.3	98.4	101.1	98.6
1996	101.1	106.6	92.4	93.3	100.5	97.9	98.1	101.1	99.5
1997	101.5	107.7	91.8	92.7	100.0	97.6	97.8	101.1	98.9
1998	100.6	108.8	91.2	93.7	101.1	97.8	98.3	101.7	98.2
1999	100.9	110.3	91.6	94.0	101.8	98.5	98.9	102.7	98.5
2000	101.0	111.4	90.6	94.7	101.7	99.1	99.3	103.7	98.6
1991–2000	100.4	107.9	93.9	94.9	101.0	98.7	98.9	101.5	98.4
2001	100.8	110.4	90.8	95.1	102.3	98.5	99.0	103.1	99.1
2002	100.5	110.0	91.8	95.8	102.7	98.5	99.1	102.7	98.9
2003	101.0	109.8	91.6	95.8	102.8	98.5	99.1	103.0	99.0

⁽¹⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽²⁾ 1960–91: including D_90.

Table 23

National final uses, including stocks, at 1995 prices

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	4.3	6.3	4.9	13.2	13.3	5.7	4.6	8.1	6.6	4.4
1962	4.5	7.7	5.7	2.0	10.6	7.3	4.9	6.7	4.9	4.0
1963	4.5	-1.7	2.4	12.3	11.1	6.1	5.4	7.5	3.0	4.9
1964	6.7	12.1	6.7	11.5	4.9	7.5	5.3	0.7	8.1	9.5
1965	3.8	4.5	6.3	11.3	8.5	3.7	3.0	0.9	0.9	4.8
1966	4.0	3.2	1.7	4.4	7.9	5.7	-0.2	6.2	-0.7	3.5
1967	2.7	4.2	-1.7	5.7	4.2	4.8	4.0	8.0	-5.0	5.2
1968	3.9	3.3	5.2	8.4	5.8	4.7	10.0	5.3	2.5	6.7
1969	6.6	8.0	8.5	12.0	9.1	7.6	8.8	7.0	7.5	6.3
1970	5.1	2.9	7.4	8.3	3.3	4.3	0.7	6.9	9.3	6.9
1961-70	4.6	5.0	4.7	8.8	7.8	5.7	4.6	5.7	3.6	5.6
1971	3.3	1.6	3.9	7.4	3.1	4.4	3.9	1.4	6.4	2.5
1972	4.5	3.2	4.1	9.7	9.5	4.8	7.6	3.4	4.2	0.8
1973	8.5	5.5	3.7	10.0	8.7	6.3	9.1	6.9	5.9	4.5
1974	4.6	-3.2	-2.2	-8.9	6.8	1.9	2.0	4.7	-0.6	2.6
1975	-2.0	-2.1	0.4	5.4	0.4	-2.0	-3.2	-4.0	0.8	-0.3
1976	5.5	9.3	5.4	6.7	4.1	6.1	5.6	6.1	2.7	4.7
1977	2.2	0.2	2.7	3.7	0.5	1.8	7.4	1.0	-2.6	4.7
1978	3.0	1.4	3.6	6.3	-0.1	2.8	9.4	2.8	8.0	3.4
1979	3.6	2.6	5.3	2.1	0.9	3.8	6.9	6.0	-0.6	1.8
1980	2.9	-3.3	0.6	0.5	1.5	1.7	-1.7	6.1	6.1	0.5
1971-80	3.6	1.4	2.7	4.2	3.5	3.1	4.6	3.4	3.0	2.5
1981	-2.6	-4.2	-2.3	-1.7	-1.9	0.7	2.8	-0.3	1.2	-3.5
1982	-0.4	3.3	-2.2	1.2	1.0	2.9	-2.4	0.9	1.1	-1.1
1983	-1.6	0.7	2.4	0.2	0.3	0.1	-2.2	0.3	-0.6	1.9
1984	2.2	3.9	1.9	0.0	-0.2	0.8	0.7	3.3	2.5	2.3
1985	2.1	4.7	1.0	3.2	3.2	2.1	1.2	3.2	0.1	3.5
1986	2.5	6.5	3.3	0.6	5.3	3.7	2.1	3.1	8.7	3.5
1987	3.6	-2.0	2.4	-2.5	7.9	3.2	0.3	4.3	5.4	1.4
1988	4.8	0.2	3.6	6.3	6.8	4.6	1.3	4.1	6.8	2.2
1989	4.5	-0.1	2.9	5.3	7.3	3.7	7.7	3.1	8.6	5.0
1990	3.0	-0.7	5.2	2.9	4.6	2.9	5.5	2.7	3.1	3.4
1981-90	1.8	1.2	1.8	1.5	3.4	2.5	1.7	2.4	3.6	1.8
1991	1.6	-0.1	4.7	3.8	3.0	0.5	0.2	2.1	8.7	2.2
1992	1.8	0.9	2.8	-0.7	1.0	0.8	-0.1	0.9	-1.5	1.2
1993	-1.5	-0.3	-1.1	-0.8	-3.3	-1.6	1.0	-5.1	9.8	-1.6
1994	1.9	7.0	2.3	1.0	1.5	2.1	5.1	1.7	-0.5	2.0
1995	2.0	4.2	1.7	4.4	3.1	1.6	6.7	2.0	3.2	3.5
1996	0.9	2.2	0.3	3.3	1.9	0.7	7.4	0.9	4.1	2.8
1997	2.8	4.9	0.6	3.6	3.5	0.7	9.4	2.7	6.7	3.9
1998	3.3	4.5	2.4	4.6	5.7	4.0	10.3	3.1	3.1	4.8
1999	2.2	-0.6	2.6	3.0	5.6	3.1	6.6	3.0	7.5	4.2
2000	3.8	2.6	2.0	4.4	4.2	3.3	9.2	2.3	2.7	3.0
1991-2000	1.9	2.5	1.8	2.6	2.6	1.5	5.5	1.3	4.3	2.6
2001	1.6	0.5	-0.3	4.2	2.8	1.7	5.2	1.7	3.8	1.3
2002	1.3	2.0	1.0	3.9	2.0	1.6	3.7	1.9	3.1	1.5
2003	2.6	2.3	2.6	4.3	3.2	2.6	4.8	2.8	4.7	3.0

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	4.7	9.7	8.0	4.7	2.7	6.6	5.7	2.5	12.8
1962	1.2	1.1	3.8	4.0	1.5	6.2	5.2	6.0	7.8
1963	4.6	6.6	1.2	5.6	4.0	5.6	5.1	4.0	9.4
1964	7.3	7.5	5.7	5.7	6.1	5.7	5.9	5.3	11.0
1965	3.7	8.2	9.5	4.8	1.7	4.7	4.1	6.5	5.0
1966	6.6	3.2	2.0	2.3	1.8	4.5	3.8	7.1	10.1
1967	2.1	8.3	0.5	2.9	4.1	3.3	3.5	3.1	12.0
1968	4.2	12.9	1.3	3.9	3.2	5.4	4.8	4.8	11.4
1969	3.9	2.6	9.6	5.1	-0.1	7.7	6.1	2.8	11.6
1970	7.1	8.8	11.7	6.2	2.3	6.1	5.4	0.1	10.7
1961-70	4.5	6.8	5.2	4.5	2.7	5.6	5.0	4.2	10.1
1971	5.1	8.0	2.5	-0.8	2.5	3.5	3.1	3.3	3.9
1972	6.8	6.8	5.8	2.3	4.6	4.8	4.7	5.5	8.9
1973	6.1	12.2	8.2	2.0	7.5	6.2	6.3	4.5	9.5
1974	2.9	5.6	4.6	4.2	-2.0	1.9	1.2	-1.3	-2.2
1975	-1.1	-8.8	5.0	4.0	-1.0	-1.3	-1.1	-0.4	2.1
1976	6.5	7.8	-2.6	3.1	2.5	5.5	5.0	6.0	3.3
1977	5.2	7.2	-3.1	-2.6	-0.3	2.1	1.5	5.1	3.8
1978	-2.4	0.7	-0.7	-1.8	3.8	2.6	2.7	5.2	5.9
1979	5.5	2.6	8.9	4.8	3.5	4.3	4.1	2.4	6.2
1980	2.7	6.1	5.2	1.5	-2.3	2.4	1.5	-1.5	0.7
1971-80	3.7	4.7	3.3	1.6	1.9	3.2	2.9	2.8	4.1
1981	-2.1	3.4	-0.5	-2.1	-1.2	-1.0	-1.1	2.3	2.0
1982	-0.3	2.2	4.1	0.3	2.2	0.4	0.7	-0.9	3.0
1983	3.5	-5.7	2.9	-1.2	4.7	0.8	1.3	5.5	1.8
1984	1.6	-6.7	2.6	3.3	2.9	1.5	1.8	8.0	3.3
1985	1.9	0.9	4.5	3.8	2.8	2.3	2.4	4.2	3.9
1986	2.1	8.3	2.7	2.2	4.5	3.5	3.7	3.5	3.8
1987	2.6	9.9	5.7	4.4	4.8	3.6	3.8	3.1	5.3
1988	3.2	10.7	6.6	2.8	7.8	4.5	4.9	3.2	7.3
1989	3.7	4.9	7.0	3.6	2.9	4.0	3.8	2.8	5.6
1990	4.4	5.3	-0.5	0.8	-0.1	3.7	2.9	1.4	5.3
1981-90	2.0	3.2	3.5	1.8	3.1	2.3	2.4	3.3	4.1
1991	3.5	6.1	-7.9	-2.1	-2.3	2.5	1.5	-1.1	2.7
1992	2.3	3.4	-5.7	-1.8	0.9	1.4	1.2	3.1	0.6
1993	0.6	-2.1	-5.5	-5.2	2.2	-2.3	-1.6	3.2	0.3
1994	3.5	1.5	3.2	3.2	3.7	2.0	2.4	4.5	1.2
1995	2.6	4.1	3.2	2.0	2.0	2.2	2.2	2.5	2.1
1996	1.9	3.3	4.1	0.7	3.1	1.1	1.4	3.7	4.0
1997	1.5	5.1	4.7	0.9	3.9	1.9	2.3	4.7	0.9
1998	2.7	6.7	4.8	4.3	5.1	3.7	3.9	5.5	-1.5
1999	2.8	5.5	2.7	3.6	3.4	3.3	3.3	5.0	0.9
2000	2.5	3.0	3.3	3.7	3.4	2.9	3.0	4.8	1.1
1991-2000	2.4	3.6	0.6	0.9	2.5	1.9	2.0	3.6	1.2
2001	0.6	0.7	1.2	1.0	3.0	1.3	1.5	0.9	0.0
2002	0.9	1.5	2.0	1.6	2.3	1.6	1.7	0.6	-1.0
2003	2.4	2.1	2.0	2.2	3.3	2.8	2.9	3.7	0.3

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 24

Price deflator gross domestic product at market prices

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	1.2	4.3	4.7	1.1	1.8	2.7	2.5	2.8	-3.7	2.4
1962	1.6	6.6	3.9	4.6	5.7	5.2	4.9	5.8	3.9	3.5
1963	3.0	5.8	3.1	1.1	8.5	6.6	2.7	8.5	3.1	4.7
1964	4.7	4.6	3.0	3.4	6.3	4.1	9.7	6.5	5.8	8.7
1965	5.2	7.4	3.7	4.1	9.2	3.0	4.5	4.2	2.8	6.1
1966	4.1	6.8	3.4	4.8	8.2	3.0	4.4	2.2	3.9	6.0
1967	3.2	6.0	1.6	2.2	8.5	3.2	3.2	2.8	0.4	4.2
1968	2.6	6.9	2.3	1.5	5.9	4.0	4.2	1.7	5.0	4.2
1969	4.0	6.6	4.2	3.2	5.1	6.9	9.1	4.1	5.3	6.4
1970	4.7	7.9	7.7	3.8	5.9	5.5	9.7	6.9	15.1	6.1
1961-70	3.4	6.3	3.8	3.0	6.5	4.4	5.5	4.5	4.1	5.2
1971	5.6	7.9	7.7	3.0	7.8	6.3	10.5	6.9	-0.8	8.1
1972	6.4	9.9	5.3	5.0	8.5	7.0	13.4	6.0	5.8	9.3
1973	7.1	10.8	6.4	20.9	11.8	8.5	15.3	13.0	12.2	9.1
1974	12.6	13.6	7.1	22.5	16.0	11.8	6.1	20.1	17.0	9.0
1975	12.2	13.8	5.7	13.1	16.8	13.0	20.1	16.5	-0.9	10.2
1976	7.6	9.0	3.6	16.4	16.5	11.1	21.0	17.9	12.2	8.8
1977	7.5	9.9	3.7	13.8	23.4	9.3	13.3	18.7	1.2	6.6
1978	4.4	9.5	4.3	13.8	20.6	10.1	10.7	13.5	5.1	5.3
1979	4.5	7.9	3.8	20.0	16.9	10.0	13.8	15.9	6.4	4.1
1980	4.1	8.6	5.0	19.0	13.4	11.1	14.8	21.4	7.9	5.5
1971-80	7.1	10.1	5.2	14.6	15.1	9.8	13.8	14.9	6.5	7.6
1981	4.9	11.8	4.2	21.3	12.3	11.0	17.5	19.0	7.2	5.4
1982	7.8	11.1	4.4	27.2	13.6	11.5	15.2	17.2	10.8	5.4
1983	5.6	8.4	3.2	20.5	11.9	9.0	10.8	15.1	6.8	2.1
1984	5.4	6.0	2.1	21.9	10.9	7.0	6.4	11.5	4.4	1.4
1985	4.3	4.9	2.1	19.0	8.6	5.4	5.3	8.9	3.0	1.8
1986	2.9	4.0	3.2	18.8	10.9	5.1	5.8	7.9	2.8	0.1
1987	1.4	5.1	1.9	15.2	5.9	2.9	2.2	6.2	0.9	-0.7
1988	2.3	2.5	1.5	16.6	5.9	3.0	3.4	6.8	0.7	0.9
1989	5.0	5.2	2.4	14.5	6.9	3.1	5.1	6.5	3.5	1.1
1990	3.0	3.7	3.2	20.6	7.3	2.9	-0.3	8.2	3.4	2.2
1981-90	4.2	6.2	2.8	19.5	9.4	6.1	7.0	10.6	4.3	2.0
1991	2.7	2.8	3.9	19.8	6.9	3.0	1.8	7.6	1.5	2.8
1992	3.6	2.9	5.0	14.8	6.7	2.0	2.8	4.5	4.3	2.3
1993	3.7	1.4	3.7	14.5	4.5	2.3	5.2	3.9	0.7	1.8
1994	1.8	1.7	2.5	11.2	3.9	1.7	1.7	3.5	5.3	2.3
1995	1.8	1.8	2.0	9.8	4.9	1.7	3.0	5.0	0.7	2.0
1996	1.2	2.5	1.0	7.4	3.5	1.4	2.2	5.3	1.8	1.2
1997	1.3	2.2	0.7	6.8	2.3	1.3	4.1	2.4	2.8	2.0
1998	1.6	1.9	1.1	5.2	2.4	0.9	5.9	2.7	2.6	1.7
1999	1.2	3.0	0.5	2.9	2.9	0.5	4.2	1.6	2.5	1.7
2000	1.4	3.7	-0.4	3.4	3.4	0.9	4.3	2.2	3.7	3.7
1991-2000	2.0	2.4	2.0	9.5	4.1	1.6	3.5	3.9	2.6	2.2
2001	2.1	2.9	1.3	3.3	3.8	1.5	4.8	2.6	3.0	5.7
2002	1.9	1.8	1.3	3.5	2.7	1.7	4.6	1.9	3.4	3.5
2003	1.5	2.3	0.8	3.4	2.4	1.6	3.9	2.2	2.8	2.0

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	5.4	2.3	5.3	3.0	3.2	3.3	3.3	1.1	8.0
1962	3.8	-0.2	4.0	4.1	3.5	4.6	4.4	1.4	4.5
1963	3.6	2.5	5.1	2.9	1.5	5.6	4.6	1.1	5.2
1964	3.3	1.1	7.2	4.4	3.6	4.8	4.5	1.5	5.8
1965	5.7	3.8	5.0	6.0	5.6	4.5	4.8	1.9	5.3
1966	3.1	5.5	4.7	6.6	4.4	3.8	4.1	2.9	5.3
1967	3.2	3.4	7.4	5.0	3.0	3.3	3.3	3.1	5.5
1968	2.8	1.4	12.1	2.4	4.0	3.2	3.4	4.3	5.8
1969	2.7	6.1	4.2	3.4	5.6	5.0	5.1	4.9	4.9
1970	4.7	3.4	3.8	5.2	7.5	6.4	6.6	5.3	6.9
1961-70	3.8	2.9	5.9	4.3	4.2	4.4	4.4	2.7	5.7
1971	6.2	5.1	7.4	7.1	9.3	7.0	7.4	5.0	5.4
1972	7.6	7.8	8.2	7.0	8.1	6.6	7.0	4.2	5.6
1973	8.0	9.4	13.8	7.0	7.2	9.6	9.1	5.6	12.7
1974	9.5	18.9	22.1	9.5	15.0	13.0	13.3	9.0	20.8
1975	6.5	16.2	13.6	14.5	26.9	11.9	14.6	9.4	7.2
1976	5.6	16.3	13.3	11.9	15.2	11.0	11.7	5.6	8.0
1977	5.7	26.5	9.7	10.5	13.7	11.4	11.7	6.4	6.7
1978	6.0	22.3	7.7	9.5	11.6	10.0	10.3	7.1	4.6
1979	3.5	19.4	8.9	7.9	14.5	10.0	10.7	8.4	2.8
1980	5.0	20.9	9.7	11.7	19.4	11.5	12.8	9.2	5.4
1971-80	6.3	16.1	11.4	9.6	14.0	10.2	10.8	7.0	7.8
1981	6.6	17.6	11.0	9.5	11.3	10.8	10.9	9.3	4.3
1982	5.3	20.7	9.0	8.3	7.4	11.0	10.3	6.2	1.8
1983	3.7	24.6	8.4	10.1	5.4	9.0	8.4	4.0	1.9
1984	4.6	24.7	8.5	7.6	4.5	7.3	6.9	3.7	2.8
1985	3.1	21.7	5.5	6.6	5.7	5.9	5.9	3.2	2.4
1986	2.7	20.5	4.3	6.9	3.3	6.0	5.5	2.2	1.6
1987	2.1	10.1	4.2	4.8	5.3	3.8	4.1	3.0	-0.1
1988	1.6	11.2	8.1	6.5	6.1	4.1	4.5	3.4	0.7
1989	2.9	10.5	6.1	8.0	7.5	4.5	5.1	3.8	2.0
1990	3.3	13.1	5.4	8.8	7.5	5.2	5.6	3.9	2.4
1981-90	3.6	17.3	7.0	7.7	6.4	6.7	6.7	4.3	2.0
1991	3.8	10.1	1.8	7.6	6.6	5.1	5.4	3.6	3.0
1992	3.6	11.4	0.9	1.0	4.0	4.5	4.3	2.4	1.7
1993	2.9	7.4	2.3	2.6	2.6	3.7	3.5	2.4	0.6
1994	2.7	7.3	2.0	2.4	1.4	2.9	2.6	2.1	0.1
1995	2.5	3.4	4.1	3.5	2.6	3.1	3.0	2.2	-0.4
1996	1.3	3.1	-0.2	1.4	3.3	2.4	2.5	1.9	-0.8
1997	0.9	3.8	2.1	1.7	2.9	1.7	1.9	2.0	0.4
1998	0.5	3.9	3.0	0.9	2.9	1.8	2.0	1.2	-0.1
1999	0.7	3.3	-0.1	0.7	2.6	1.2	1.5	1.4	-1.4
2000	1.2	3.0	3.4	1.0	1.7	1.5	1.5	2.3	-1.6
1991-2000	2.0	5.6	1.9	2.3	3.1	2.8	2.8	2.2	0.1
2001	1.4	3.9	2.4	1.9	2.3	2.4	2.4	2.4	-0.7
2002	1.5	3.2	0.9	2.1	2.5	2.0	2.1	1.8	0.1
2003	1.0	2.3	1.6	2.2	2.5	1.7	1.8	1.6	-0.1

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 25

Price deflator private final consumption expenditure

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	2.5	3.5	3.3	1.4	1.8	3.1	2.3	1.7	0.5	2.4
1962	1.0	6.2	2.9	2.0	5.3	4.6	4.1	5.3	0.8	2.6
1963	3.7	5.6	3.0	2.9	7.8	5.4	2.4	7.0	3.1	3.8
1964	4.2	4.0	2.2	1.5	6.7	3.2	7.0	4.9	3.0	6.8
1965	4.8	6.1	3.2	4.3	9.9	2.8	4.4	3.6	3.4	4.0
1966	4.1	6.5	3.5	3.3	7.0	3.1	3.9	2.9	3.4	5.4
1967	2.7	7.1	1.6	1.5	5.8	3.0	2.8	3.2	2.3	3.0
1968	2.8	6.6	1.6	0.4	5.1	4.8	4.8	1.5	2.5	2.6
1969	2.8	4.9	1.9	3.1	3.2	7.0	7.8	2.9	1.9	6.1
1970	2.6	7.4	3.5	3.4	6.1	5.0	12.4	5.0	4.3	4.4
1961–70	3.1	5.8	2.7	2.4	5.8	4.2	5.1	3.8	2.5	4.1
1971	5.3	7.4	5.1	2.9	7.7	6.0	9.4	5.3	4.7	7.7
1972	5.6	9.3	5.6	4.4	7.7	6.3	9.7	6.2	5.1	8.0
1973	5.9	11.5	6.5	16.1	11.3	7.4	11.6	14.5	4.9	9.4
1974	12.7	14.3	7.1	24.9	17.7	14.8	15.7	21.6	10.0	9.5
1975	12.5	11.5	6.0	12.8	15.5	11.8	18.0	15.9	10.2	10.0
1976	7.8	11.0	4.2	14.8	16.4	9.9	20.1	18.1	9.3	9.0
1977	7.2	9.9	3.3	12.8	23.7	9.4	14.2	16.9	5.7	6.1
1978	4.3	9.3	2.6	13.2	19.1	9.1	8.2	12.5	3.4	3.8
1979	3.9	10.2	4.2	16.2	16.5	10.5	15.1	15.8	4.9	4.9
1980	6.7	9.6	5.8	22.5	15.7	13.0	18.6	20.8	7.5	7.4
1971–80	7.1	10.4	5.0	13.9	15.0	9.8	14.0	14.6	6.5	7.5
1981	8.5	12.2	6.2	23.2	14.1	13.0	19.6	18.0	8.6	7.1
1982	8.0	9.8	5.1	21.1	14.4	11.6	14.9	17.0	10.6	5.5
1983	6.8	7.4	3.2	19.4	12.3	9.6	9.5	14.9	8.3	3.7
1984	5.3	7.0	2.5	19.3	10.6	7.8	7.3	11.6	6.5	2.9
1985	5.7	4.5	1.8	19.6	8.1	5.8	5.1	9.1	4.3	3.0
1986	-0.1	2.8	-0.6	22.4	9.3	2.6	3.7	6.4	0.5	0.2
1987	2.1	4.8	0.5	17.2	5.5	3.2	2.4	5.2	1.5	0.2
1988	1.0	4.6	1.3	15.1	4.8	2.8	4.0	5.9	2.8	0.9
1989	3.9	4.7	2.9	13.6	6.7	3.8	4.0	6.7	3.6	1.4
1990	2.8	2.9	2.7	19.9	6.6	3.0	2.1	6.4	3.8	2.2
1981–90	4.4	6.0	2.5	19.0	9.2	6.3	7.1	10.0	5.0	2.7
1991	2.6	2.8	3.7	19.7	6.4	3.5	2.7	7.0	2.8	3.3
1992	1.9	1.9	4.4	15.6	6.6	2.5	3.0	5.5	3.4	3.3
1993	2.8	2.0	3.9	14.2	5.3	2.4	2.1	5.5	4.1	2.2
1994	2.9	3.0	2.6	11.1	4.9	2.1	2.8	4.9	2.3	2.9
1995	2.6	1.9	1.9	8.9	4.8	2.0	2.8	6.0	2.1	1.4
1996	2.1	2.1	1.7	8.2	3.5	1.9	2.6	4.4	1.8	1.9
1997	1.8	2.2	2.0	5.5	2.6	1.4	2.7	2.2	1.5	2.0
1998	1.2	1.8	1.1	4.5	2.2	0.7	3.5	2.1	1.3	1.7
1999	1.0	2.6	0.4	2.4	2.4	0.4	3.4	2.1	1.4	1.9
2000	2.2	3.1	1.4	3.1	3.2	1.5	4.7	2.9	2.8	2.8
1991–2000	2.1	2.4	2.3	9.2	4.2	1.8	3.0	4.3	2.4	2.3
2001	2.4	2.5	1.8	3.1	3.3	1.5	4.6	2.8	2.7	4.6
2002	1.4	1.8	1.6	3.0	2.4	1.4	3.7	1.8	2.3	2.5
2003	1.4	2.0	1.5	2.8	2.1	1.4	3.2	1.9	1.9	1.9

⁽¹⁾ 1961–91; D₉₀.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	4.0	0.6	2.8	2.3	2.9	2.6	2.7	1.1	6.4
1962	4.4	2.0	4.1	4.0	3.6	4.0	3.9	1.2	6.7
1963	2.6	1.1	5.0	3.4	1.6	4.9	4.2	1.1	7.3
1964	3.7	0.8	7.9	3.6	3.5	3.9	3.8	1.4	4.1
1965	4.5	4.8	4.3	5.4	5.0	4.1	4.4	1.5	6.8
1966	2.3	5.5	3.7	6.6	3.8	3.8	4.0	2.6	4.6
1967	3.9	1.5	6.7	5.4	2.6	3.0	3.0	2.5	3.9
1968	2.5	4.3	9.3	1.7	4.7	3.0	3.4	3.9	5.1
1969	3.3	4.9	2.1	3.4	5.5	3.8	4.1	4.5	4.2
1970	3.9	3.2	1.7	5.0	6.0	4.5	4.8	4.7	7.2
1961–70	3.5	2.8	4.7	4.1	3.9	3.8	3.8	2.4	5.6
1971	5.0	7.0	6.7	7.6	8.7	5.8	6.4	4.3	6.9
1972	6.5	6.3	8.5	6.4	6.5	6.3	6.4	3.5	5.9
1973	6.6	8.9	12.2	7.6	8.5	9.5	9.3	5.4	11.1
1974	10.0	23.5	19.7	10.3	17.2	14.7	15.0	10.3	21.0
1975	7.9	16.0	16.1	10.9	23.2	11.7	13.8	8.2	11.3
1976	6.5	18.1	14.0	11.0	15.7	11.1	11.9	5.5	9.8
1977	5.7	27.3	11.3	10.8	14.7	11.3	11.8	6.6	7.5
1978	4.0	21.3	8.2	11.6	9.5	9.0	9.2	7.1	4.6
1979	4.3	25.2	8.0	7.9	13.7	10.4	10.9	8.9	3.6
1980	6.1	21.6	11.1	12.4	16.2	12.9	13.4	10.8	7.5
1971–80	6.2	17.3	11.5	9.6	13.3	10.2	10.8	7.0	8.8
1981	7.3	20.2	11.7	12.1	10.9	12.3	12.1	8.8	4.8
1982	5.9	20.3	8.7	10.5	8.4	11.3	10.8	5.7	2.8
1983	3.9	25.8	8.0	10.9	5.1	9.4	8.7	4.3	2.3
1984	5.3	28.5	6.9	7.7	5.1	7.9	7.4	3.7	2.7
1985	3.3	19.4	5.5	7.0	5.3	6.2	6.0	3.5	1.8
1986	1.7	13.8	2.8	5.2	4.2	3.9	3.9	2.4	0.7
1987	0.7	9.9	3.1	5.6	4.4	3.5	3.7	3.8	0.4
1988	1.6	11.5	4.8	6.1	5.2	3.7	4.1	3.9	0.6
1989	2.6	12.8	5.3	7.0	6.3	4.9	5.2	4.4	2.1
1990	3.3	11.6	5.5	9.9	7.5	4.7	5.3	4.6	2.6
1981–90	3.5	17.2	6.2	8.2	6.2	6.7	6.7	4.5	2.1
1991	3.5	11.8	5.9	10.3	7.9	5.3	5.8	3.8	2.7
1992	3.9	9.2	4.1	2.2	4.7	4.7	4.6	3.1	1.6
1993	3.5	6.9	3.9	5.7	3.2	4.3	4.1	2.4	1.0
1994	2.8	5.6	0.9	2.8	1.9	3.5	3.2	2.0	0.5
1995	2.0	4.3	0.4	2.9	3.1	3.3	3.2	2.3	-0.3
1996	1.9	3.7	1.4	1.4	3.1	2.7	2.8	2.1	-0.1
1997	1.5	3.0	1.3	2.3	2.3	2.1	2.2	1.9	1.0
1998	0.5	2.9	1.7	1.0	2.7	1.6	1.8	1.1	-0.1
1999	0.7	2.3	1.1	1.0	1.5	1.2	1.3	1.6	-0.7
2000	1.5	2.8	3.5	0.9	0.6	2.2	1.9	2.7	-1.1
1991–2000	2.2	5.2	2.4	3.0	3.1	3.1	3.1	2.3	0.5
2001	2.6	4.3	2.6	2.3	1.5	2.5	2.3	1.9	-1.0
2002	1.9	2.8	1.8	2.1	1.8	1.8	1.8	1.5	-0.1
2003	1.9	2.2	2.0	1.9	2.0	1.8	1.8	1.8	0.1

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961–91: including D_90.⁽²⁾ PPS weighted; 1961–91: including D_90.

Table 26

Price deflator exports of goods and services

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	0.6	-1.2	-0.9	-1.6	2.0	0.5	-0.1	-0.8	-3.0	-1.7
1962	1.0	2.5	1.9	-0.9	4.8	0.4	1.9	0.9	-1.7	-0.1
1963	2.1	2.8	1.0	7.3	6.3	3.0	2.1	3.3	0.0	2.6
1964	4.2	3.4	2.7	1.9	2.8	4.9	4.7	4.1	2.2	2.5
1965	1.4	2.2	2.7	-1.0	1.1	0.4	1.9	0.0	1.4	2.3
1966	3.7	3.0	2.5	3.7	9.0	1.8	1.9	0.2	0.8	0.7
1967	0.5	1.1	0.2	-0.6	14.2	-0.2	0.6	1.1	0.4	0.0
1968	0.2	2.9	0.0	-1.9	17.8	0.1	6.2	0.3	1.3	-0.5
1969	4.6	6.3	4.0	1.8	6.1	4.6	6.1	2.7	6.5	2.2
1970	5.7	6.7	3.3	2.0	2.7	7.8	-6.1	6.1	13.2	5.8
1961-70	2.4	2.9	1.7	1.0	6.6	2.3	1.9	1.8	2.0	1.3
1971	2.1	3.3	4.3	-0.5	6.0	6.0	7.3	4.5	-2.8	3.2
1972	1.7	5.4	2.1	4.8	6.1	1.5	11.5	5.9	0.7	1.8
1973	8.3	12.7	6.7	27.1	9.5	8.6	19.7	12.2	15.0	7.3
1974	24.5	19.8	15.8	35.9	22.4	24.7	23.0	35.9	26.5	26.0
1975	4.8	7.4	4.1	10.5	10.6	5.6	18.4	14.2	-1.0	5.0
1976	6.5	6.9	3.5	9.3	16.4	10.0	23.0	20.1	8.6	6.6
1977	3.6	6.9	1.8	9.7	19.4	9.9	14.8	17.0	-2.8	3.6
1978	1.1	6.2	1.6	7.0	15.8	7.1	6.6	8.1	2.7	-0.9
1979	9.0	8.3	4.9	14.5	9.4	9.6	9.6	17.4	7.7	8.2
1980	9.3	13.6	6.3	36.4	18.1	11.1	10.8	22.7	7.5	11.5
1971-80	6.9	8.9	5.0	14.8	13.2	9.3	14.3	15.5	5.9	7.0
1981	9.2	13.1	5.7	22.7	14.9	13.3	16.4	21.2	9.6	13.8
1982	13.2	10.6	3.5	20.7	13.6	12.4	10.8	16.1	15.5	3.7
1983	7.3	5.4	1.9	20.5	16.7	9.2	9.1	8.2	5.9	-0.2
1984	8.3	7.2	3.4	14.8	12.5	9.0	8.1	9.7	5.2	5.1
1985	2.8	3.7	2.8	16.1	8.1	3.9	3.1	8.6	3.9	1.4
1986	-6.6	-5.4	-1.4	10.9	-0.4	-4.3	-6.3	-3.0	-1.5	-15.8
1987	-3.4	-1.3	-1.1	8.8	3.5	-0.9	0.5	1.0	-3.2	-5.1
1988	3.8	-0.8	1.9	12.2	4.7	2.3	5.6	3.4	2.3	0.2
1989	7.2	6.8	2.7	11.6	6.0	4.1	7.3	6.6	5.9	4.1
1990	-1.7	0.7	0.0	16.2	0.8	-1.5	-8.1	3.0	0.2	-0.8
1981-90	3.8	3.9	1.9	15.4	7.9	4.6	4.4	7.3	4.3	0.4
1991	-0.7	1.7	1.3	14.4	1.5	-0.6	-0.3	3.9	-0.1	0.1
1992	-1.1	2.5	1.0	9.7	2.9	-1.7	-2.0	0.9	1.6	-2.1
1993	-1.3	-0.3	0.7	9.3	5.0	-2.3	6.8	10.4	4.8	-2.3
1994	1.2	0.6	1.0	9.1	4.6	-0.1	0.2	3.3	6.0	0.3
1995	1.4	1.4	2.0	8.5	5.9	0.6	1.9	8.8	-2.0	0.9
1996	1.8	1.7	0.1	5.6	1.5	1.7	-0.3	1.0	2.6	0.5
1997	4.6	3.0	1.2	3.8	3.3	2.0	1.2	0.3	4.7	2.7
1998	-1.1	-0.7	0.3	4.5	0.6	-1.3	2.8	1.0	3.0	-1.4
1999	0.0	1.5	-0.8	1.4	0.5	-0.8	2.3	0.0	4.0	-0.5
2000	9.7	10.2	2.9	10.2	7.1	1.6	5.5	6.0	7.5	8.8
1991-2000	1.4	2.1	1.0	7.6	3.3	-0.1	1.8	3.5	3.2	0.7
2001	1.2	3.0	1.1	2.7	2.9	1.0	1.8	2.3	2.0	2.7
2002	1.1	-1.0	0.8	2.0	1.1	1.4	1.4	1.2	1.5	1.2
2003	1.9	1.9	2.0	2.8	2.4	1.5	2.7	2.2	2.5	2.1

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	3.7	-1.1	2.2	0.4	1.3	-0.3	0.0	1.1	-0.7
1962	0.4	-0.9	-0.4	-1.6	0.8	1.0	0.9	0.0	-1.6
1963	1.5	3.2	1.8	1.0	1.4	2.3	2.1	-0.2	2.5
1964	2.7	3.9	6.0	1.3	2.3	3.4	3.1	0.8	1.6
1965	2.8	3.0	4.9	2.1	2.3	1.6	1.8	3.3	-0.5
1966	1.8	-1.8	-0.9	1.7	3.0	2.0	2.2	3.0	-0.1
1967	0.5	3.7	2.6	1.4	2.5	1.0	1.3	4.2	0.2
1968	1.6	2.3	19.9	0.7	8.0	1.4	2.7	2.0	0.1
1969	2.5	-1.5	4.2	3.2	2.3	3.7	3.5	3.2	1.5
1970	5.5	5.4	9.0	9.2	8.4	5.1	5.9	4.3	2.8
1961-70	2.3	1.6	4.8	1.9	3.2	2.1	2.3	2.2	0.6
1971	3.5	2.9	5.1	4.2	4.9	4.2	4.3	3.3	2.8
1972	3.4	5.2	6.8	2.7	4.3	3.1	3.4	3.2	-0.6
1973	7.4	9.4	13.3	10.9	11.9	9.1	9.7	13.8	9.7
1974	11.2	39.5	37.0	26.1	24.9	24.0	24.2	23.6	31.3
1975	4.9	1.0	14.7	13.2	20.9	7.0	9.8	10.4	5.0
1976	1.8	7.1	6.3	6.5	19.7	9.4	11.1	3.1	2.0
1977	4.1	35.5	8.2	6.2	15.5	8.4	9.6	4.0	-3.7
1978	1.5	25.9	6.1	6.6	7.7	5.0	5.6	6.1	-6.3
1979	4.3	27.6	12.8	13.8	11.5	9.9	10.3	12.1	8.1
1980	6.2	25.2	11.4	12.1	14.4	12.7	13.0	10.1	9.7
1971-80	4.8	17.2	11.8	10.0	13.4	9.2	10.0	8.8	5.4
1981	5.1	18.5	8.3	9.0	8.5	12.3	11.6	7.4	2.6
1982	3.5	19.8	5.8	11.2	6.9	9.5	9.2	0.4	2.7
1983	0.8	30.0	6.8	12.7	8.0	6.6	7.0	0.5	-4.8
1984	4.0	30.2	8.4	7.1	7.6	7.7	7.6	1.0	0.0
1985	3.1	17.6	2.9	4.1	5.1	4.7	4.7	-2.7	-2.6
1986	-2.5	4.5	-3.7	-1.9	-8.2	-4.0	-4.6	-1.6	-12.8
1987	-1.8	10.8	1.8	2.5	2.8	-0.5	0.1	2.6	-4.4
1988	2.5	11.7	4.9	5.6	0.3	3.0	2.6	5.3	-2.3
1989	2.3	11.8	6.0	6.4	8.2	4.8	5.4	1.9	3.5
1990	0.9	6.3	0.4	1.5	4.4	0.3	0.9	0.7	1.4
1981-90	1.8	15.8	4.1	5.7	4.2	4.3	4.4	1.5	-1.8
1991	0.7	3.4	-0.4	1.7	1.7	1.2	1.3	1.4	-2.3
1992	0.4	0.5	6.2	-2.9	1.6	0.2	0.4	-0.3	-2.5
1993	0.3	4.9	6.5	9.5	8.8	2.0	3.1	0.0	-6.6
1994	1.3	6.4	1.3	3.7	1.0	1.7	1.6	1.2	-3.0
1995	1.9	5.5	5.0	7.0	3.4	3.3	3.4	2.4	-1.9
1996	1.1	-1.7	-0.6	-4.5	1.3	0.9	0.8	-1.3	2.9
1997	0.8	2.6	-1.1	-0.2	-4.1	1.9	0.9	-1.5	1.7
1998	0.4	0.9	-1.1	-1.3	-4.1	0.0	-0.6	-2.2	0.5
1999	-0.3	-0.1	-5.1	-1.6	-1.8	-0.3	-0.5	-0.6	-8.4
2000	2.1	5.3	4.6	2.9	1.7	5.1	4.6	1.8	-3.6
1991-2000	0.9	2.7	1.5	1.3	0.9	1.6	1.5	0.1	-2.4
2001	1.3	2.1	1.4	4.3	1.2	1.7	1.8	0.2	5.2
2002	0.7	1.2	-1.3	2.9	0.8	1.1	1.1	0.9	1.5
2003	1.7	2.4	0.8	1.5	2.4	2.0	2.0	1.9	-1.1

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 27

Price deflator imports of goods and services

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	2.6	0.1	-2.4	-1.6	2.0	0.2	1.1	-2.2	1.4	-1.9
1962	0.8	-0.1	-0.2	-0.7	2.0	2.3	0.5	0.4	0.8	-0.9
1963	4.0	1.9	2.4	0.6	2.0	0.9	1.9	1.5	1.2	1.4
1964	3.2	1.3	1.8	3.4	2.4	0.8	1.3	3.4	2.1	2.4
1965	0.2	1.6	2.9	0.8	0.8	1.2	2.6	0.6	1.7	0.5
1966	3.2	1.6	1.8	1.4	0.2	2.9	0.2	1.9	1.4	0.7
1967	0.5	1.5	-1.4	-0.6	2.6	-1.2	-0.3	0.7	-0.7	-0.9
1968	0.6	6.1	0.7	0.5	10.7	-1.2	7.9	0.7	0.0	-2.9
1969	3.2	3.6	1.9	0.4	2.9	6.1	4.2	1.4	3.1	3.3
1970	5.1	8.1	-6.5	3.9	4.5	10.2	0.7	3.7	6.8	6.6
1961-70	2.3	2.5	0.0	0.8	3.0	2.2	2.0	1.2	1.8	0.8
1971	3.3	4.7	1.0	3.0	5.5	5.2	5.4	5.4	5.1	3.8
1972	0.4	3.2	1.7	8.4	1.4	0.9	5.7	4.4	-0.1	-0.2
1973	7.6	12.6	8.0	20.4	10.4	6.7	13.9	27.5	9.0	7.3
1974	27.6	34.1	24.2	43.4	41.9	47.0	44.4	52.8	22.4	32.7
1975	6.0	3.3	2.1	18.5	7.0	2.7	20.5	9.9	10.2	4.6
1976	7.0	6.7	6.2	11.5	14.8	12.2	19.0	28.4	6.2	6.4
1977	3.0	8.2	1.7	5.3	22.0	12.9	16.8	14.8	3.8	3.3
1978	1.1	3.6	-1.8	10.4	7.6	3.5	4.7	6.8	1.8	-1.3
1979	8.9	13.8	8.6	18.6	7.2	11.2	13.7	19.5	7.9	10.9
1980	13.6	20.3	12.8	35.6	37.1	19.9	18.0	25.9	7.6	13.5
1971-80	7.6	10.7	6.2	16.9	14.8	11.6	15.7	18.8	7.2	7.7
1981	13.4	16.0	11.7	15.1	28.7	19.3	18.6	25.2	10.1	14.7
1982	13.7	9.3	2.8	23.9	12.2	13.2	7.5	11.2	13.8	1.7
1983	7.6	4.7	0.9	16.4	22.0	8.9	5.2	6.0	7.9	0.0
1984	8.1	7.8	5.1	24.1	11.9	10.2	9.4	9.5	7.4	5.7
1985	2.0	1.7	2.7	17.6	2.1	2.3	2.6	7.4	3.1	1.2
1986	-10.2	-11.2	-11.5	7.6	-16.2	-12.8	-10.1	-14.2	-2.4	-16.7
1987	-4.3	-1.6	-4.8	6.5	-2.8	-1.4	1.3	-1.7	-2.1	-3.1
1988	2.3	-1.4	1.8	9.8	0.1	1.4	6.4	4.8	4.5	-0.2
1989	6.5	6.8	5.2	14.6	1.9	6.0	6.2	6.9	5.4	4.6
1990	-1.4	-0.6	-0.7	13.4	-2.8	-1.8	-3.7	-1.8	2.4	-1.3
1981-90	3.5	2.9	1.1	14.8	5.0	4.2	4.1	4.9	4.9	0.4
1991	-0.7	2.8	2.2	12.1	-1.5	-0.2	2.4	0.5	1.1	0.3
1992	-2.7	-0.8	-1.2	12.1	1.2	-3.0	-1.2	1.1	-0.7	-1.1
1993	-2.8	-0.5	-1.0	7.7	6.1	-3.3	4.5	14.8	1.6	-2.0
1994	1.8	0.7	0.6	5.7	5.8	0.5	2.4	4.8	6.4	0.0
1995	2.3	1.2	0.8	6.8	4.4	0.4	3.8	11.1	0.8	0.2
1996	2.6	-0.1	0.5	5.0	0.7	2.3	-0.5	-2.9	2.7	1.2
1997	5.5	2.2	3.1	2.7	3.5	1.5	0.7	1.4	4.2	2.2
1998	-2.3	-1.2	-1.8	4.2	-0.3	-2.5	2.5	-1.3	1.9	-1.5
1999	0.7	0.7	-1.2	1.2	0.5	-0.6	2.7	0.4	3.7	0.6
2000	11.8	9.8	7.7	10.6	9.8	5.1	7.4	12.7	7.4	8.7
1991-2000	1.5	1.4	0.9	6.8	3.0	0.0	2.4	4.1	2.9	0.8
2001	1.2	2.2	1.3	2.3	1.9	0.8	1.8	2.0	1.7	1.0
2002	0.6	-0.9	0.3	1.1	0.5	0.2	0.7	0.4	0.4	0.2
2003	2.0	1.9	2.0	2.8	2.2	1.9	2.4	2.4	1.9	2.4

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	2.2	1.0	0.8	0.5	0.0	-0.8	-0.6	0.2	1.2
1962	0.6	-1.3	1.6	1.2	-0.4	0.4	0.3	-1.1	-2.1
1963	0.9	1.6	1.1	1.6	3.2	1.9	2.1	1.7	1.7
1964	1.7	2.2	2.2	3.4	2.4	2.2	2.2	2.2	1.6
1965	1.9	2.8	1.4	1.8	1.3	1.5	1.5	1.4	-0.7
1966	1.7	0.0	1.5	1.5	1.6	1.8	1.7	2.5	2.3
1967	1.5	-2.4	5.5	1.4	1.2	-0.3	0.1	0.2	-0.1
1968	0.6	-2.5	22.0	0.8	11.0	0.9	3.0	1.7	0.8
1969	4.9	0.9	2.8	2.7	2.4	3.0	2.9	2.5	2.9
1970	6.2	9.3	7.5	8.2	6.7	2.5	3.6	5.9	2.4
1961-70	2.2	1.1	4.5	2.3	2.9	1.3	1.7	1.7	1.0
1971	4.6	1.4	7.2	5.1	3.9	3.6	3.8	6.0	-3.0
1972	2.0	3.4	7.8	3.0	2.7	2.0	2.2	7.1	-4.6
1973	4.1	14.1	11.4	13.1	24.1	11.4	13.7	17.5	18.5
1974	17.7	43.8	40.3	37.5	41.9	37.1	38.0	43.0	64.1
1975	4.1	13.9	7.7	4.6	13.6	5.7	7.2	8.3	9.5
1976	2.9	11.2	4.7	7.3	21.1	12.1	13.5	3.0	5.3
1977	6.0	30.7	10.6	12.0	13.7	9.1	10.0	8.8	-3.8
1978	0.6	22.1	11.2	10.4	3.2	2.9	3.2	7.1	-15.7
1979	5.9	30.5	13.3	16.0	9.2	12.1	11.7	17.1	27.6
1980	9.5	31.3	19.5	14.2	9.9	19.1	17.5	24.5	37.5
1971-80	5.6	19.5	13.0	11.9	13.8	11.1	11.7	13.7	11.4
1981	9.3	25.6	11.0	11.2	7.8	17.5	15.9	5.4	2.1
1982	2.0	18.1	4.4	15.3	7.0	8.8	8.7	-3.4	6.6
1983	-0.4	29.9	7.1	13.5	7.4	6.5	6.8	-3.8	-5.4
1984	3.8	31.2	4.3	3.9	8.8	8.7	8.5	-0.9	-2.6
1985	3.9	13.0	3.3	4.5	4.0	3.8	3.8	-3.2	-2.2
1986	-3.9	-6.8	-6.9	-7.6	-4.4	-12.0	-10.6	0.0	-31.6
1987	-2.6	9.5	-0.2	3.5	2.4	-2.3	-1.3	5.9	-7.1
1988	2.0	11.7	1.2	3.4	-0.8	2.5	1.8	4.9	-4.6
1989	3.3	10.6	5.2	5.8	6.6	5.7	5.9	2.5	6.7
1990	0.6	4.1	1.3	2.9	3.3	-0.8	0.0	2.7	8.1
1981-90	1.7	14.1	3.0	5.5	4.1	3.6	3.7	1.0	-3.7
1991	1.2	1.0	3.4	-0.1	0.3	0.9	0.8	-0.5	-5.1
1992	0.3	-4.2	7.7	-2.2	0.0	-0.8	-0.7	0.1	-5.1
1993	0.8	4.4	8.3	14.5	8.6	1.7	3.1	-0.9	-8.3
1994	1.2	4.3	-0.5	4.0	3.0	2.0	2.2	0.9	-4.3
1995	0.5	3.9	0.1	5.7	6.1	3.0	3.5	2.7	-1.3
1996	2.1	1.6	0.4	-4.2	0.1	0.7	0.5	-1.8	8.5
1997	1.8	2.7	0.5	0.8	-7.1	2.6	0.9	-3.6	5.7
1998	0.0	-1.2	-3.0	-0.5	-6.2	-1.3	-2.1	-5.4	-2.7
1999	0.1	-0.6	-1.9	1.0	-2.5	-0.1	-0.4	0.6	-7.9
2000	3.1	8.3	6.9	4.6	0.5	8.5	7.3	4.3	0.9
1991-2000	1.1	2.0	2.1	2.2	0.2	1.7	1.5	-0.4	-2.1
2001	1.9	2.5	0.6	6.7	1.5	1.4	1.6	-3.5	5.8
2002	0.7	0.6	0.5	4.3	0.7	0.4	0.5	-2.4	-0.2
2003	2.4	2.5	1.7	2.1	2.3	2.2	2.2	2.1	1.2

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 28

Terms of trade goods and services (national accounts)

(1991 = 100)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	102.7	103.9	88.4	108.4	60.2	117.3	114.2	96.4	119.5	101.7
1961	100.7	102.5	89.7	108.4	60.2	117.6	112.8	97.8	114.2	101.9
1962	100.9	105.2	91.7	108.1	61.8	115.4	114.4	98.3	111.5	102.7
1963	99.1	106.1	90.4	115.4	64.4	117.7	114.6	100.0	110.1	104.0
1964	100.0	108.3	91.2	113.7	64.7	122.6	118.4	100.7	110.2	104.0
1965	101.2	108.9	91.0	111.7	64.9	121.6	117.6	100.0	109.8	105.8
1966	101.8	110.4	91.6	114.2	70.6	120.2	119.5	98.4	109.2	105.8
1967	101.7	110.0	93.2	114.1	78.5	121.4	120.6	98.8	110.4	106.7
1968	101.3	106.6	92.6	111.5	83.5	123.1	118.8	98.4	111.8	109.3
1969	102.8	109.4	94.5	113.1	86.1	121.3	120.9	99.7	115.5	108.0
1970	103.4	107.9	104.5	111.0	84.7	118.7	112.7	102.0	122.5	107.2
1971	102.1	106.4	108.0	107.3	85.1	119.5	114.7	101.1	113.3	106.6
1972	103.4	108.7	108.3	103.8	89.0	120.3	121.0	102.6	114.2	108.7
1973	104.2	108.8	107.0	109.6	88.3	122.5	127.2	90.4	120.5	108.7
1974	101.7	97.2	99.8	103.9	76.1	104.0	108.4	80.4	124.5	103.3
1975	100.5	101.1	101.8	96.8	78.8	106.8	106.4	83.5	111.8	103.7
1976	100.0	101.2	99.2	94.9	79.8	104.8	110.0	78.2	114.4	103.9
1977	100.5	100.0	99.3	98.9	78.1	102.0	108.1	79.7	107.1	104.2
1978	100.6	102.5	102.8	95.8	84.1	105.4	110.0	80.7	108.1	104.6
1979	100.7	97.6	99.3	92.4	85.8	103.8	106.1	79.3	107.9	102.1
1980	97.0	92.2	93.5	93.0	73.9	96.2	99.6	77.2	107.8	100.4
1981	93.4	89.8	88.5	99.1	65.9	91.4	97.7	74.8	107.3	99.6
1982	93.0	90.9	89.1	96.6	66.7	90.7	100.7	78.1	108.9	101.6
1983	92.7	91.5	90.0	99.9	63.9	91.0	104.4	79.7	106.9	101.4
1984	92.9	91.1	88.5	92.5	64.2	90.1	103.1	79.8	104.7	100.8
1985	93.6	92.9	88.6	91.2	68.0	91.4	103.7	80.7	105.6	101.0
1986	97.4	98.9	98.6	94.0	80.8	100.4	108.1	91.3	106.5	102.0
1987	98.3	99.2	102.5	96.0	86.1	100.9	107.2	93.8	105.3	99.9
1988	99.7	99.8	102.6	98.2	90.0	101.9	106.4	92.5	103.0	100.2
1989	100.4	99.8	100.2	95.6	93.6	100.0	107.6	92.3	103.5	99.7
1990	100.0	101.1	100.9	98.0	97.1	100.4	102.7	96.8	101.3	100.2
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	101.7	103.3	102.2	97.9	101.7	101.4	99.3	99.8	102.3	99.0
1993	103.2	103.5	104.0	99.3	100.6	102.4	101.4	95.9	105.6	98.8
1994	102.7	103.4	104.4	102.5	99.4	101.8	99.2	94.5	105.3	99.1
1995	101.7	103.5	105.6	104.1	100.8	101.9	97.4	92.5	102.3	99.7
1996	100.9	105.4	105.2	104.7	101.6	101.3	97.7	96.2	102.3	99.1
1997	100.1	106.2	103.3	105.8	101.5	101.8	98.1	95.2	102.8	99.5
1998	101.3	106.7	105.4	106.1	102.4	103.0	98.4	97.3	103.8	99.7
1999	100.6	107.5	105.8	106.2	102.4	102.8	98.0	96.9	104.1	98.6
2000	98.6	107.9	101.1	105.9	99.9	99.5	96.2	91.1	104.3	98.6
2001	98.6	108.9	100.9	106.3	100.9	99.7	96.2	91.3	104.6	100.3
2002	99.1	108.8	101.4	107.2	101.5	100.9	96.9	92.1	105.7	101.3
2003	99.0	108.7	101.4	107.3	101.7	100.5	97.1	91.9	106.3	101.0

⁽¹⁾ 1960–91: D₉₀.

(1991 = 100)

	A	P	FIN	S	UK	US	JP
1960	108.0	98.6	100.2	118.4	98.3	138.1	144.6
1961	109.6	96.6	101.6	118.3	99.6	139.4	141.9
1962	109.3	97.0	99.5	115.0	100.7	141.0	142.7
1963	110.0	98.5	100.1	114.3	99.0	138.4	143.9
1964	111.1	100.1	103.9	111.9	98.9	136.4	143.9
1965	112.0	100.3	107.5	112.2	99.9	139.0	144.2
1966	112.1	98.5	104.9	112.3	101.2	139.7	140.8
1967	111.0	104.7	102.0	112.3	102.5	145.2	141.2
1968	112.1	109.8	100.2	112.3	99.8	145.6	140.3
1969	109.6	107.1	101.6	112.9	99.6	146.5	138.4
1970	108.8	103.2	103.0	113.9	101.2	144.3	139.1
1971	107.7	104.7	101.1	112.9	102.3	140.6	147.4
1972	109.2	106.6	100.1	112.7	103.8	135.5	153.5
1973	112.7	102.1	101.9	110.5	93.6	131.3	142.2
1974	106.4	99.0	99.4	101.3	82.4	113.4	113.7
1975	107.2	87.8	105.9	109.6	87.7	115.7	109.0
1976	106.1	84.6	107.5	108.7	86.8	115.9	105.7
1977	104.1	87.7	105.1	103.1	88.1	110.8	105.9
1978	105.0	90.5	100.3	99.5	92.0	109.7	117.7
1979	103.5	88.5	99.9	97.7	93.9	105.0	99.7
1980	100.3	84.4	93.1	95.8	97.6	92.9	79.5
1981	96.5	79.7	90.9	94.0	98.2	94.6	79.9
1982	97.9	80.8	92.1	90.6	98.2	98.4	77.0
1983	99.1	80.9	91.8	89.9	98.7	102.7	77.5
1984	99.2	80.3	95.4	92.7	97.6	104.6	79.5
1985	98.4	83.5	95.1	92.4	98.7	105.2	79.2
1986	99.9	93.6	98.3	98.1	94.7	103.6	101.1
1987	100.7	94.7	100.3	97.1	95.1	100.4	104.1
1988	101.2	94.6	103.9	99.1	96.2	100.8	106.6
1989	100.2	95.6	104.7	99.6	97.7	100.1	103.5
1990	100.5	97.7	103.8	98.2	98.7	98.2	97.1
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	100.2	104.9	98.6	99.3	101.6	99.6	102.7
1993	99.7	105.4	97.0	94.9	101.8	100.5	104.6
1994	99.8	107.6	98.8	94.6	99.8	100.7	106.0
1995	101.3	109.3	103.6	95.7	97.3	100.3	105.4
1996	100.2	105.8	102.6	95.4	98.5	100.8	99.9
1997	99.2	105.7	101.0	94.5	101.7	103.0	96.1
1998	99.6	107.8	103.0	93.7	103.9	106.4	99.3
1999	99.2	108.3	99.6	91.3	104.7	105.1	98.9
2000	98.3	105.4	97.4	89.8	105.9	102.5	94.5
2001	97.7	105.0	98.2	87.8	105.6	106.4	93.9
2002	97.7	105.5	96.5	86.6	105.7	109.9	95.5
2003	97.0	105.5	95.6	86.1	105.8	109.8	93.4

Table 29

Nominal compensation per employee; total economy

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	3.3	12.9	10.2	4.6	12.9	10.6	8.3	8.2	2.9	7.4
1962	7.4	11.1	9.1	6.6	15.2	11.6	8.5	13.4	4.8	6.8
1963	8.1	4.6	6.1	7.7	21.1	11.4	5.2	19.7	8.0	9.3
1964	9.9	10.7	8.2	13.3	13.7	9.2	13.7	11.6	13.3	16.5
1965	9.6	13.8	9.5	12.2	15.6	6.5	5.3	8.2	4.2	11.7
1966	8.8	10.2	7.6	12.6	18.1	6.0	8.5	8.0	5.0	11.1
1967	7.5	11.1	3.3	9.5	14.7	7.0	8.0	8.3	2.8	9.3
1968	6.4	10.1	6.7	9.8	8.8	11.9	10.6	7.6	5.9	8.6
1969	8.5	11.3	9.5	9.6	11.8	10.9	13.9	7.6	5.6	13.2
1970	9.3	11.3	16.0	8.8	9.4	10.4	16.8	15.3	15.1	12.6
1961–70	7.9	10.7	8.6	9.4	14.1	9.5	9.8	10.7	6.7	10.6
1971	12.2	12.0	11.4	8.0	13.6	11.3	14.8	13.7	7.8	13.9
1972	14.2	8.6	9.6	12.6	17.7	10.1	15.8	10.6	9.7	12.9
1973	13.5	13.6	11.9	17.2	18.3	12.4	18.8	17.5	11.4	15.6
1974	18.0	18.8	11.4	19.3	21.3	17.8	18.0	22.9	22.9	15.8
1975	16.5	14.4	7.0	20.3	22.5	18.7	28.9	21.0	12.4	13.6
1976	15.8	12.0	7.7	23.2	23.4	14.8	19.6	21.1	11.1	11.0
1977	9.1	10.1	6.6	22.0	26.8	12.2	14.9	20.6	9.9	8.5
1978	7.2	9.7	5.5	23.1	24.8	12.4	15.5	16.4	5.9	7.0
1979	5.8	10.1	5.8	22.1	19.0	12.8	18.9	19.8	6.7	5.6
1980	10.6	10.6	6.8	15.7	17.3	14.4	21.1	21.7	9.2	5.4
1971–80	12.2	12.0	8.3	18.3	20.4	13.6	18.6	18.5	10.6	10.9
1981	6.4	9.7	4.8	21.3	15.6	14.0	18.1	22.5	8.3	3.4
1982	7.0	12.2	4.2	27.5	13.8	14.3	14.2	16.1	6.9	5.9
1983	6.1	8.7	3.6	21.6	13.9	10.2	12.8	15.8	6.9	3.1
1984	6.9	6.2	3.4	20.8	10.2	7.4	10.7	11.7	7.1	0.3
1985	5.1	5.4	2.9	21.0	9.6	6.9	9.2	10.0	4.3	1.3
1986	3.8	5.0	3.6	12.0	9.7	4.4	5.1	7.5	5.7	2.1
1987	2.0	8.5	3.2	11.3	7.3	3.3	5.1	7.9	4.1	1.4
1988	2.3	5.6	3.0	20.1	7.6	4.4	7.0	8.2	3.4	0.8
1989	3.9	4.2	2.9	23.2	7.5	4.1	6.5	8.6	7.7	0.8
1990	7.7	4.0	4.7	17.9	10.2	5.1	4.2	10.4	5.2	3.2
1981–90	5.1	6.9	3.6	19.6	10.5	7.3	9.2	11.8	6.0	2.2
1991	7.5	3.9	5.9	15.4	10.3	4.1	4.3	8.8	6.5	4.7
1992	5.8	4.1	10.5	11.8	11.3	4.4	7.0	5.8	5.3	4.6
1993	3.7	2.3	4.1	9.8	7.4	3.0	6.4	4.6	5.4	3.3
1994	4.1	1.5	3.0	10.9	3.7	2.1	2.5	3.0	4.0	2.8
1995	2.6	3.8	3.6	12.9	3.6	2.6	2.4	4.2	2.3	1.7
1996	1.6	4.1	1.3	8.8	4.5	2.7	3.5	6.1	1.8	1.3
1997	2.9	3.7	0.9	13.6	2.3	2.3	4.1	4.0	2.9	2.1
1998	1.8	3.8	1.2	6.0	2.7	2.3	4.5	-1.5	2.4	3.5
1999	3.2	4.0	1.4	4.8	2.7	2.4	5.3	2.4	3.5	3.3
2000	3.2	3.9	1.2	6.1	3.4	1.9	8.7	2.9	5.6	4.6
1991–2000	3.6	3.5	3.3	9.9	5.2	2.8	4.8	4.0	3.9	3.2
2001	3.2	3.8	2.0	5.5	3.9	2.2	9.5	3.2	4.4	5.0
2002	3.1	3.7	2.2	5.7	3.5	2.6	8.0	2.8	4.3	4.5
2003	2.3	3.7	2.4	5.5	2.8	2.4	6.9	2.9	3.7	3.9

⁽¹⁾ 1961–91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	9.3	5.8	7.9	8.1	6.5	9.5	8.7	3.2	13.2
1962	7.6	4.8	9.2	9.9	4.5	10.6	9.0	4.4	14.1
1963	7.9	8.1	10.8	9.4	4.9	11.6	9.7	4.0	13.2
1964	9.3	8.3	15.0	9.9	6.9	10.4	9.6	5.1	13.1
1965	9.1	11.0	9.6	8.6	6.7	9.2	8.7	3.7	11.9
1966	9.3	9.9	8.1	8.9	6.4	8.6	8.2	5.0	11.2
1967	9.5	13.7	9.7	9.2	6.2	7.2	7.1	4.3	12.1
1968	7.3	3.6	10.9	6.6	7.7	8.5	8.3	7.4	13.7
1969	8.3	10.0	7.4	6.9	7.1	9.9	9.2	7.3	15.8
1970	8.0	22.6	9.4	7.9	13.0	13.1	12.8	7.6	16.7
1961–70	8.6	9.7	9.8	8.5	7.0	9.9	9.1	5.2	13.5
1971	12.6	11.5	14.8	9.0	11.4	12.2	11.9	7.3	14.6
1972	11.0	15.8	14.6	8.5	13.0	11.3	11.5	7.3	14.2
1973	13.2	17.7	17.9	6.9	13.1	14.4	13.9	6.9	21.0
1974	13.9	35.1	24.0	12.9	18.9	17.5	17.6	8.2	25.7
1975	12.7	34.6	24.4	16.9	31.3	16.0	19.0	9.1	16.2
1976	9.2	24.5	16.3	17.9	14.6	15.0	15.0	8.3	11.1
1977	8.5	24.2	8.9	12.2	10.5	13.7	13.0	7.7	10.1
1978	9.0	18.8	6.1	10.9	13.3	12.0	12.2	7.7	7.5
1979	5.8	19.9	11.4	8.6	15.3	12.1	12.5	8.8	6.0
1980	6.6	25.7	13.1	10.9	19.8	13.2	14.3	10.2	6.5
1971–80	10.2	22.6	15.0	11.4	16.0	13.7	14.1	8.1	13.1
1981	8.1	21.0	13.9	9.2	14.0	12.2	12.5	9.5	6.4
1982	6.3	21.5	9.6	6.2	8.4	11.0	10.5	7.7	3.8
1983	4.7	21.8	10.0	7.9	8.9	9.4	9.3	5.4	2.2
1984	5.1	21.2	10.4	8.2	6.0	7.5	7.2	5.1	3.9
1985	5.3	22.5	10.3	7.5	7.6	6.8	6.9	4.6	2.9
1986	5.5	21.6	7.3	8.7	8.0	5.6	6.2	4.1	3.2
1987	4.0	14.4	7.7	7.0	7.2	4.7	5.3	4.2	3.3
1988	3.8	13.1	8.9	7.5	8.3	5.2	5.8	4.8	3.8
1989	4.5	15.2	10.2	11.3	9.3	5.3	6.2	3.2	4.8
1990	5.4	19.2	9.3	11.3	9.2	7.0	7.5	5.2	5.5
1981–90	5.3	19.1	9.7	8.5	8.7	7.5	7.7	5.4	4.0
1991	6.7	18.1	6.4	6.8	9.3	6.8	7.3	4.6	4.8
1992	5.9	16.3	2.2	3.9	4.9	7.8	7.1	5.3	1.4
1993	4.8	6.0	0.9	4.4	4.6	4.3	4.4	2.8	0.8
1994	4.0	5.6	3.1	4.8	2.9	3.1	3.1	2.4	1.4
1995	4.2	7.2	3.9	2.8	3.1	3.6	3.5	1.8	1.6
1996	1.1	8.5	2.7	6.8	3.6	3.0	3.2	2.5	0.6
1997	1.5	3.7	1.7	3.8	4.3	2.3	2.7	3.1	1.6
1998	2.8	3.7	4.1	3.3	5.0	1.5	2.2	4.5	-0.2
1999	2.4	4.2	2.1	1.3	5.3	2.3	2.8	4.1	-0.9
2000	2.1	6.3	3.9	8.7	4.1	2.5	3.0	5.1	0.6
1991–2000	3.5	7.9	3.1	4.6	4.7	3.7	3.9	3.6	1.2
2001	2.4	6.4	4.4	3.8	4.3	3.0	3.3	5.3	0.8
2002	2.4	4.7	3.5	3.8	3.9	3.0	3.2	2.2	-1.5
2003	2.6	4.0	3.4	3.9	4.4	2.8	3.1	3.1	-0.1

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961–91: including D_90.⁽²⁾ PPS weighted; 1961–91: including D_90.

Table 30

Real compensation per employee, deflator GDP; total economy

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	2.1	8.2	5.2	3.5	10.9	7.6	5.6	5.3	6.8	4.9
1962	5.7	4.2	5.0	1.9	9.0	6.1	3.4	7.2	0.9	3.2
1963	5.0	-1.1	2.9	6.5	11.6	4.6	2.4	10.4	4.7	4.4
1964	5.0	5.8	5.0	9.6	6.9	4.9	3.7	4.8	7.1	7.2
1965	4.2	5.9	5.5	7.8	5.9	3.4	0.8	3.8	1.3	5.2
1966	4.5	3.1	4.0	7.4	9.1	3.0	3.9	5.6	1.0	4.8
1967	4.1	4.7	1.7	7.2	5.7	3.7	4.6	5.4	2.3	4.8
1968	3.6	3.0	4.3	8.2	2.7	7.6	6.1	5.7	0.8	4.2
1969	4.3	4.4	5.1	6.2	6.3	3.7	4.4	3.4	0.3	6.3
1970	4.4	3.1	7.7	4.8	3.2	4.6	6.5	7.9	0.0	6.1
1961-70	4.3	4.1	4.6	6.3	7.1	4.9	4.1	5.9	2.5	5.1
1971	6.2	3.8	3.4	4.9	5.3	4.6	3.8	6.3	8.7	5.4
1972	7.4	-1.1	4.1	7.2	8.5	2.9	2.1	4.3	3.7	3.3
1973	6.0	2.6	5.2	-3.1	5.8	3.6	3.1	3.9	-0.7	5.9
1974	4.8	4.5	4.1	-2.6	4.6	5.4	11.2	2.3	5.1	6.2
1975	3.9	0.5	1.3	6.4	4.9	5.1	7.3	3.9	13.3	3.1
1976	7.6	2.7	3.9	5.8	5.9	3.3	-1.2	2.8	-1.0	1.9
1977	1.5	0.2	2.8	7.2	2.7	2.7	1.4	1.6	8.6	1.8
1978	2.7	0.2	1.2	8.2	3.4	2.1	4.3	2.5	0.7	1.7
1979	1.2	2.0	1.9	1.7	1.8	2.5	4.5	3.3	0.3	1.4
1980	6.2	1.9	1.7	-2.8	3.4	2.9	5.5	0.3	1.2	-0.1
1971-80	4.7	1.7	2.9	3.2	4.6	3.5	4.2	3.1	3.9	3.0
1981	1.5	-1.8	0.6	0.0	2.9	2.7	0.5	2.9	1.1	-1.8
1982	-0.8	1.0	-0.2	0.2	0.2	2.5	-0.9	-0.9	-3.5	0.5
1983	0.5	0.3	0.3	0.9	1.8	1.1	1.7	0.6	0.1	1.0
1984	1.4	0.1	1.3	-0.8	-0.6	0.4	4.1	0.2	2.6	-1.1
1985	0.8	0.4	0.9	1.7	0.9	1.4	3.7	1.0	1.3	-0.5
1986	0.9	1.0	0.4	-5.7	-1.1	-0.6	-0.6	-0.4	2.9	1.9
1987	0.6	3.2	1.3	-3.4	1.3	0.4	2.8	1.6	3.1	2.2
1988	-0.1	3.0	1.5	2.9	1.6	1.4	3.5	1.4	2.7	-0.2
1989	-1.0	-1.0	0.4	7.6	0.5	0.9	1.4	2.0	4.1	-0.3
1990	4.6	0.4	1.5	-2.2	2.7	2.1	4.6	2.0	1.7	1.0
1981-90	0.8	0.6	0.8	0.1	1.0	1.2	2.1	1.0	1.6	0.3
1991	4.6	1.1	1.9	-3.7	3.1	1.1	2.5	1.1	4.9	1.8
1992	2.1	1.2	5.2	-2.6	4.3	2.4	4.1	1.2	0.9	2.2
1993	-0.1	0.9	0.4	-4.0	2.7	0.7	1.1	0.6	4.6	1.4
1994	2.3	-0.3	0.5	-0.4	-0.1	0.4	0.8	-0.4	-1.3	0.4
1995	0.8	2.0	1.6	2.8	-1.2	0.9	-0.6	-0.8	1.6	-0.3
1996	0.4	1.6	0.3	1.4	1.0	1.2	1.3	0.8	-0.1	0.1
1997	1.6	1.5	0.2	6.3	0.0	1.0	-0.1	1.6	0.1	0.1
1998	0.2	1.9	0.1	0.8	0.3	1.4	-1.3	-4.1	-0.2	1.7
1999	1.9	0.9	0.9	1.8	-0.1	1.9	1.1	0.8	0.9	1.6
2000	1.8	0.2	1.6	2.6	0.0	1.0	4.2	0.7	1.8	0.8
1991-2000	1.5	1.1	1.3	0.5	1.0	1.2	1.3	0.1	1.3	1.0
2001	1.1	0.8	0.6	2.2	0.2	0.7	4.5	0.6	1.4	-0.7
2002	1.2	1.9	0.9	2.1	0.7	0.9	3.2	0.9	0.9	1.0
2003	0.7	1.4	1.6	2.1	0.4	0.8	2.9	0.7	0.8	1.9

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	3.8	3.4	2.4	5.0	3.2	6.1	5.3	2.1	4.9
1962	3.6	5.0	5.1	5.6	0.9	5.8	4.4	3.0	9.2
1963	4.2	5.5	5.4	6.3	3.4	5.7	4.8	2.9	7.6
1964	5.9	7.1	7.3	5.2	3.2	5.4	4.8	3.5	6.9
1965	3.2	6.9	4.3	2.5	1.1	4.5	3.7	1.7	6.3
1966	6.0	4.2	3.2	2.2	1.9	4.7	3.9	2.1	5.5
1967	6.1	10.0	2.2	4.0	3.1	3.8	3.7	1.2	6.2
1968	4.3	2.2	-1.0	4.1	3.6	5.1	4.7	2.9	7.4
1969	5.4	3.7	3.1	3.3	1.4	4.7	3.9	2.3	10.4
1970	3.1	18.6	5.3	2.6	5.1	6.3	5.9	2.1	9.2
1961-70	4.6	6.6	3.7	4.1	2.7	5.2	4.5	2.4	7.3
1971	6.0	6.1	6.9	1.8	1.9	4.9	4.2	2.2	8.8
1972	3.1	7.4	5.8	1.4	4.5	4.4	4.2	3.0	8.1
1973	4.8	7.6	3.6	-0.2	5.5	4.4	4.4	1.3	7.3
1974	4.0	13.6	1.6	3.2	3.3	3.9	3.8	-0.8	4.0
1975	5.8	15.8	9.5	2.1	3.4	3.7	3.9	-0.2	8.4
1976	3.4	7.1	2.7	5.3	-0.5	3.6	2.9	2.5	2.9
1977	2.7	-1.8	-0.7	1.5	-2.9	2.1	1.2	1.2	3.2
1978	2.8	-2.9	-1.5	1.2	1.6	1.8	1.7	0.5	2.7
1979	2.3	0.4	2.3	0.6	0.7	1.9	1.7	0.4	3.2
1980	1.5	4.0	3.0	-0.7	0.4	1.5	1.4	0.9	1.0
1971-80	3.6	5.6	3.3	1.6	1.8	3.2	2.9	1.1	4.9
1981	1.4	2.9	2.7	-0.3	2.5	1.3	1.5	0.2	2.0
1982	0.9	0.7	0.5	-1.9	1.0	0.0	0.1	1.4	2.0
1983	1.1	-2.2	1.4	-2.0	3.3	0.4	0.8	1.4	0.3
1984	0.5	-2.8	1.8	0.6	1.4	0.2	0.3	1.3	1.0
1985	2.2	0.6	4.6	0.8	1.8	0.8	0.9	1.4	0.5
1986	2.7	0.9	2.9	1.7	4.5	-0.3	0.6	1.8	1.5
1987	1.9	3.9	3.3	2.1	1.8	0.9	1.2	1.1	3.4
1988	2.2	1.8	0.7	1.0	2.1	1.0	1.2	1.4	3.1
1989	1.6	4.2	3.8	3.1	1.7	0.8	1.1	-0.6	2.7
1990	2.0	5.3	3.7	2.3	1.5	1.8	1.8	1.2	3.0
1981-90	1.6	1.5	2.5	0.7	2.2	0.7	1.0	1.1	2.0
1991	2.8	7.3	4.4	-0.8	2.5	1.7	1.8	1.0	1.8
1992	2.2	4.4	1.3	2.9	0.9	3.1	2.7	2.8	-0.3
1993	1.8	-1.3	-1.4	1.7	2.0	0.6	0.9	0.4	0.2
1994	1.3	-1.6	1.1	2.4	1.6	0.2	0.4	0.4	1.3
1995	1.6	3.7	-0.2	-0.7	0.5	0.5	0.4	-0.4	2.0
1996	-0.3	5.3	2.9	5.3	0.3	0.6	0.7	0.6	1.5
1997	0.6	-0.1	-0.3	2.1	1.4	0.6	0.8	1.1	1.2
1998	2.2	-0.2	1.1	2.4	2.0	-0.3	0.2	3.2	-0.1
1999	1.6	0.9	2.2	0.6	2.6	1.0	1.3	2.7	0.5
2000	0.9	3.2	0.5	7.6	2.3	1.0	1.4	2.8	2.3
1991-2000	1.5	2.1	1.1	2.3	1.6	0.9	1.1	1.4	1.0
2001	1.0	2.4	2.0	1.9	1.9	0.6	0.9	2.8	1.5
2002	0.9	1.5	2.6	1.6	1.3	1.0	1.1	0.3	-1.6
2003	1.5	1.7	1.7	1.7	1.8	1.1	1.3	1.5	0.1

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 31

Real compensation per employee, deflator private consumption; total economy

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	0.8	9.0	6.7	3.2	10.9	7.3	5.9	6.4	2.4	4.9
1962	6.3	4.7	6.0	4.5	9.4	6.7	4.2	7.7	4.0	4.1
1963	4.3	-0.9	3.0	4.6	12.4	5.7	2.7	11.8	4.7	5.3
1964	5.5	6.4	5.8	11.7	6.5	5.8	6.3	6.4	10.0	9.1
1965	4.6	7.3	6.0	7.5	5.2	3.6	0.9	4.4	0.8	7.4
1966	4.5	3.4	3.9	9.0	10.3	2.9	4.4	4.9	1.6	5.4
1967	4.7	3.7	1.7	7.9	8.4	4.0	5.1	5.0	0.5	6.1
1968	3.4	3.3	5.0	9.4	3.5	6.8	5.5	6.0	3.3	5.9
1969	5.5	6.1	7.5	6.3	8.4	3.7	5.7	4.5	3.7	6.7
1970	6.5	3.6	12.0	5.2	3.1	5.2	4.0	9.8	10.3	7.8
1961-70	4.6	4.6	5.7	6.9	7.8	5.1	4.4	6.7	4.1	6.3
1971	6.5	4.3	6.0	5.0	5.5	5.0	4.9	8.0	3.0	5.7
1972	8.2	-0.6	3.8	7.9	9.4	3.5	5.6	4.2	4.4	4.5
1973	7.2	1.9	5.0	0.9	6.3	4.7	6.5	2.6	6.2	5.7
1974	4.7	3.9	4.0	-4.5	3.0	2.6	1.9	1.0	11.7	5.8
1975	3.6	2.6	0.9	6.6	6.0	6.1	9.3	4.4	1.9	3.3
1976	7.4	0.9	3.3	7.4	6.0	4.4	-0.4	2.6	1.6	1.8
1977	1.8	0.2	3.2	8.2	2.4	2.5	0.6	3.1	4.0	2.3
1978	2.8	0.3	2.8	8.7	4.8	3.0	6.7	3.4	2.4	3.2
1979	1.8	-0.2	1.6	5.1	2.1	2.0	3.3	3.5	1.6	0.7
1980	3.7	1.0	0.9	-5.5	1.3	1.2	2.1	0.8	1.6	-1.8
1971-80	4.7	1.4	3.1	3.8	4.7	3.5	4.0	3.3	3.8	3.1
1981	-1.9	-2.2	-1.3	-1.5	1.3	0.8	-1.3	3.8	-0.2	-3.4
1982	-1.0	2.2	-0.8	5.3	-0.5	2.4	-0.6	-0.7	-3.3	0.4
1983	-0.7	1.2	0.4	1.8	1.4	0.6	3.0	0.7	-1.2	-0.6
1984	1.5	-0.7	0.9	1.3	-0.3	-0.4	3.2	0.1	0.5	-2.5
1985	-0.6	0.8	1.1	1.1	1.3	1.0	3.8	0.9	0.0	-1.6
1986	4.0	2.2	4.2	-8.5	0.3	1.8	1.4	1.0	5.2	1.9
1987	-0.1	3.5	2.7	-5.1	1.7	0.1	2.6	2.5	2.5	1.2
1988	1.2	1.0	1.6	4.3	2.7	1.6	2.9	2.2	0.6	-0.1
1989	0.0	-0.6	0.0	8.4	0.7	0.3	2.4	1.8	4.0	-0.6
1990	4.7	1.1	2.0	-1.6	3.4	2.0	2.1	3.8	1.3	1.0
1981-90	0.7	0.8	1.1	0.5	1.2	1.0	1.9	1.6	0.9	-0.5
1991	4.8	1.0	2.1	-3.7	3.6	0.6	1.6	1.7	3.6	1.3
1992	3.8	2.2	5.8	-3.3	4.4	1.8	3.9	0.3	1.8	1.2
1993	0.9	0.3	0.2	-3.8	2.0	0.6	4.2	-0.9	1.2	1.0
1994	1.2	-1.5	0.4	-0.2	-1.1	0.0	-0.3	-1.8	1.6	-0.2
1995	0.0	1.8	1.7	3.7	-1.1	0.6	-0.4	-1.7	0.2	0.3
1996	-0.5	2.0	-0.4	0.6	1.0	0.8	0.9	1.7	0.0	-0.6
1997	1.1	1.4	-1.1	7.7	-0.3	0.8	1.3	1.7	1.4	0.1
1998	0.6	2.0	0.1	1.5	0.6	1.6	1.0	-3.6	1.1	1.7
1999	2.1	1.4	1.0	2.4	0.3	2.0	1.9	0.3	2.0	1.4
2000	0.9	0.7	-0.2	3.0	0.2	0.4	3.8	0.0	2.7	1.7
1991-2000	1.5	1.1	1.0	0.7	0.9	0.9	1.8	-0.2	1.6	0.8
2001	0.8	1.3	0.1	2.3	0.6	0.7	4.7	0.4	1.6	0.4
2002	1.7	1.9	0.7	2.6	1.0	1.2	4.1	1.0	1.9	2.0
2003	0.9	1.7	0.9	2.6	0.6	1.1	3.6	1.0	1.7	2.0

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	5.2	5.2	5.0	5.7	3.5	6.7	5.9	2.1	6.5
1962	3.1	2.8	5.0	5.7	0.8	6.4	4.9	3.2	7.0
1963	5.1	6.9	5.5	5.8	3.2	6.4	5.3	2.8	5.5
1964	5.4	7.5	6.6	6.1	3.3	6.3	5.5	3.6	8.7
1965	4.5	5.9	5.1	3.0	1.7	4.8	4.1	2.1	4.7
1966	6.9	4.2	4.3	2.2	2.5	4.6	4.0	2.4	6.3
1967	5.4	12.0	2.8	3.6	3.5	4.1	4.0	1.8	7.8
1968	4.7	-0.7	1.5	4.8	2.9	5.3	4.8	3.4	8.2
1969	4.8	4.8	5.2	3.4	1.5	5.9	4.9	2.7	11.2
1970	4.0	18.8	7.6	2.8	6.5	8.2	7.6	2.7	8.8
1961-70	4.9	6.6	4.8	4.3	2.9	5.9	5.1	2.7	7.5
1971	7.2	4.2	7.6	1.3	2.5	6.0	5.2	2.9	7.2
1972	4.2	8.9	5.6	1.9	6.1	4.7	4.8	3.7	7.8
1973	6.2	8.1	5.1	-0.7	4.3	4.5	4.2	1.4	8.9
1974	3.5	9.3	3.6	2.4	1.4	2.4	2.3	-1.9	3.8
1975	4.4	16.0	7.1	5.4	6.5	3.9	4.6	0.9	4.4
1976	2.5	5.4	2.0	6.2	-1.0	3.5	2.7	2.7	1.2
1977	2.7	-2.4	-2.1	1.3	-3.6	2.2	1.1	1.0	2.5
1978	4.8	-2.1	-2.0	-0.6	3.5	2.8	2.8	0.5	2.7
1979	1.5	-4.2	3.2	0.6	1.4	1.6	1.5	-0.1	2.4
1980	0.5	3.4	1.7	-1.3	3.1	0.3	0.8	-0.6	-1.0
1971-80	3.7	4.5	3.1	1.6	2.4	3.2	3.0	1.0	4.0
1981	0.8	0.7	2.0	-2.6	2.8	-0.1	0.4	0.7	1.5
1982	0.3	1.0	0.8	-3.9	0.1	-0.3	-0.3	1.9	1.0
1983	0.8	-3.2	1.9	-2.7	3.6	0.0	0.5	1.1	-0.1
1984	-0.1	-5.6	3.3	0.4	0.9	-0.4	-0.2	1.3	1.2
1985	2.0	2.6	4.5	0.5	2.2	0.6	0.8	1.2	1.1
1986	3.8	6.8	4.4	3.4	3.7	1.7	2.1	1.6	2.5
1987	3.3	4.1	4.4	1.4	2.8	1.2	1.6	0.4	2.9
1988	2.2	1.4	3.9	1.4	3.0	1.4	1.6	0.9	3.2
1989	1.9	2.1	4.7	4.0	2.8	0.4	1.0	-1.1	2.6
1990	2.0	6.8	3.7	1.3	1.5	2.2	2.1	0.5	2.8
1981-90	1.7	1.6	3.3	0.3	2.3	0.7	1.0	0.8	1.9
1991	3.1	5.7	0.5	-3.2	1.3	1.5	1.4	0.8	2.0
1992	2.0	6.5	-1.9	1.7	0.2	2.9	2.4	2.2	-0.2
1993	1.2	-0.9	-2.9	-1.2	1.3	0.1	0.3	0.4	-0.1
1994	1.2	0.0	2.1	2.0	1.0	-0.4	-0.1	0.4	0.8
1995	2.1	2.8	3.5	-0.1	0.0	0.2	0.2	-0.5	1.9
1996	-0.9	4.7	1.3	5.3	0.5	0.3	0.4	0.4	0.7
1997	0.0	0.7	0.4	1.5	1.9	0.2	0.5	1.2	0.5
1998	2.3	0.8	2.3	2.2	2.2	0.0	0.5	3.4	0.0
1999	1.6	1.9	1.0	0.3	3.7	1.0	1.5	2.4	-0.2
2000	0.5	3.4	0.4	7.8	3.4	0.3	1.1	2.4	1.7
1991-2000	1.3	2.5	0.7	1.6	1.6	0.6	0.8	1.3	0.7
2001	-0.2	2.0	1.8	1.5	2.7	0.5	1.0	3.4	1.8
2002	0.5	1.8	1.7	1.6	2.1	1.1	1.3	0.7	-1.4
2003	0.6	1.8	1.4	2.0	2.4	1.0	1.3	1.3	-0.2

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 32

Adjusted wage share; total economy ⁽¹⁾

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	L	NL
1960	68.8	67.7	70.6	101.4	70.7	74.1	78.2	76.6	56.6	62.2
1961	68.0	68.5	72.1	93.1	70.1	74.9	77.8	74.9	59.0	64.5
1962	69.1	69.1	72.5	94.1	70.2	75.0	78.2	74.6	58.5	65.3
1963	69.6	69.5	72.6	88.5	72.4	75.5	77.5	76.6	58.9	66.8
1964	68.7	68.8	71.4	87.3	73.4	75.4	78.2	77.6	59.0	67.2
1965	68.8	71.4	71.6	84.2	73.7	74.6	77.4	76.6	59.4	67.9
1966	70.3	72.5	72.2	84.5	75.7	73.6	80.4	75.0	59.5	70.1
1967	70.7	73.5	71.5	84.9	77.1	72.8	78.7	75.0	60.2	69.7
1968	69.8	73.7	70.0	85.3	74.6	74.0	77.4	73.8	58.0	69.3
1969	69.1	73.2	70.5	81.2	73.8	73.3	77.1	72.0	53.7	69.7
1970	68.7	74.5	72.1	77.7	73.6	73.1	79.3	73.9	54.2	71.0
1961-70	69.3	71.5	71.6	86.1	73.5	74.2	78.2	75.0	58.0	68.2
1971	70.7	75.3	72.7	75.2	74.1	73.2	79.4	76.6	59.9	72.6
1972	71.1	72.3	72.8	73.2	74.7	72.6	76.0	76.5	60.3	72.0
1973	71.2	71.9	73.6	65.5	75.1	72.1	75.6	76.0	56.2	72.4
1974	72.9	74.3	75.2	67.3	74.0	74.0	80.5	75.3	57.5	73.6
1975	75.3	75.4	75.0	68.4	75.7	77.1	79.0	78.0	71.7	75.5
1976	76.5	74.4	73.6	68.4	76.5	77.4	78.5	77.1	68.5	73.3
1977	76.9	74.3	73.7	72.3	75.9	76.9	72.1	77.7	73.1	73.6
1978	76.9	74.3	73.0	73.1	75.2	76.6	70.2	77.1	70.9	73.5
1979	76.7	74.9	72.7	73.0	75.5	77.0	73.1	76.0	69.7	74.0
1980	78.0	75.9	74.5	70.3	74.7	77.7	77.5	75.4	71.2	73.2
1971-80	74.6	74.3	73.7	70.7	75.1	75.5	76.2	76.6	65.9	73.4
1981	77.8	74.9	74.8	74.0	75.7	78.3	76.4	76.7	72.0	71.1
1982	76.3	73.0	74.3	74.9	74.3	78.4	74.9	76.3	69.1	70.4
1983	75.5	72.3	72.3	77.5	74.6	77.7	75.2	76.9	68.2	68.4
1984	74.4	71.3	71.3	75.4	71.6	76.6	73.2	75.2	66.8	65.7
1985	74.1	71.1	70.7	75.8	70.0	76.0	70.8	74.4	66.7	64.6
1986	73.7	71.8	70.0	72.3	68.1	73.6	70.9	72.9	64.9	65.7
1987	73.2	74.0	70.4	72.1	68.0	72.7	70.2	72.8	67.1	67.3
1988	71.1	74.5	69.3	71.2	67.4	71.3	69.2	72.5	64.4	66.6
1989	68.9	72.3	68.5	73.2	67.0	70.1	67.6	72.1	63.6	64.5
1990	70.6	70.8	67.7	73.9	68.6	70.4	66.8	73.5	66.0	64.4
1981-90	73.6	72.6	70.9	74.0	70.5	74.5	71.5	74.3	66.9	66.9
1991	72.5	70.2	67.8	68.4	69.6	70.3	67.0	74.2	68.0	64.9
1991	72.5	70.2	68.5	68.4	69.6	70.3	67.0	74.2	68.0	64.9
1992	72.7	69.4	69.6	67.6	71.3	70.1	68.7	74.2	67.6	66.1
1993	73.5	69.2	69.9	65.8	70.7	70.1	67.3	73.5	66.8	66.9
1994	73.2	66.9	68.7	65.4	69.0	69.3	67.1	71.1	64.9	65.4
1995	72.2	66.7	68.4	66.6	67.4	69.3	63.7	68.9	65.6	65.2
1996	72.3	66.9	67.9	66.2	67.3	69.7	61.7	68.6	64.8	65.2
1997	71.7	67.0	67.1	68.2	67.0	69.2	59.0	69.1	61.5	64.8
1998	71.1	67.8	66.5	69.1	67.2	68.5	57.7	68.0	60.5	65.2
1999	71.5	67.6	67.1	68.2	67.2	68.9	56.1	67.9	61.6	65.8
2000	71.1	65.5	67.2	67.1	66.7	68.8	55.3	67.4	60.5	65.6
1991-2000	72.2	67.7	68.1	67.3	68.4	69.4	62.4	70.3	64.2	65.5
2001	71.6	65.3	66.9	66.6	66.4	69.2	55.0	67.4	62.2	66.0
2002	71.7	65.6	66.9	66.1	66.2	69.1	55.5	67.5	62.3	66.0
2003	71.4	65.1	66.6	65.5	65.7	68.9	55.1	67.0	62.0	66.2

(1) Compensation per employee as percentage of GDP at factor cost per person employed.

(2) 1960-91: D_90.

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	72.8	69.5	76.7	69.4	71.6	72.7	72.2	71.2	79.0
1961	72.7	69.0	74.4	69.7	73.0	73.0	72.8	70.8	75.1
1962	73.8	68.8	75.7	71.8	73.5	73.3	73.2	70.1	76.1
1963	73.4	68.6	76.6	72.6	72.5	74.0	73.5	69.8	75.8
1964	73.6	68.6	77.6	71.5	72.1	73.8	73.3	69.4	73.5
1965	73.5	68.4	78.3	71.7	72.2	73.5	73.1	68.3	74.9
1966	73.3	68.8	79.3	72.8	73.0	73.5	73.4	68.0	73.0
1967	74.0	70.1	79.0	72.6	72.7	73.3	73.1	69.0	71.0
1968	73.6	65.3	75.8	74.2	72.4	72.5	72.6	69.5	69.2
1969	72.9	65.4	71.9	73.8	73.1	71.9	72.2	70.9	68.6
1970	70.5	74.2	71.7	72.3	74.7	72.6	73.0	71.9	68.8
1961–70	73.1	68.7	76.0	72.3	72.9	73.1	73.0	69.8	72.6
1971	72.1	75.5	74.8	74.5	73.0	73.6	73.6	70.8	72.1
1972	71.1	75.0	74.2	73.5	72.7	73.4	73.3	70.6	72.2
1973	72.7	72.1	73.2	71.0	71.9	73.3	73.0	70.3	73.5
1974	72.6	79.6	71.0	71.1	74.9	74.4	74.3	71.3	76.5
1975	75.8	95.7	75.4	72.0	77.6	76.3	76.3	69.8	80.1
1976	74.7	96.1	76.9	75.1	75.0	75.7	75.6	69.4	80.0
1977	74.5	89.4	75.5	78.0	72.2	75.6	75.2	69.3	80.3
1978	76.5	81.6	72.4	76.8	71.7	75.1	74.7	69.0	79.0
1979	74.6	79.1	70.6	74.8	72.3	74.9	74.5	69.0	78.5
1980	74.7	79.5	71.3	74.0	74.8	75.5	75.3	70.0	77.6
1971–80	73.9	82.4	73.5	74.1	73.6	74.8	74.6	70.0	77.0
1981	75.7	81.4	72.7	74.2	75.0	76.0	75.8	69.3	77.7
1982	73.7	80.2	71.8	71.5	73.6	75.5	75.0	70.4	77.5
1983	71.7	78.5	71.1	69.8	72.1	74.7	74.0	68.9	77.0
1984	72.4	76.3	70.9	68.6	72.8	73.3	73.0	68.2	75.5
1985	72.4	74.9	72.2	69.0	72.2	72.6	72.4	68.2	73.3
1986	72.4	72.8	72.5	69.4	73.1	71.4	71.6	68.3	72.5
1987	72.6	72.8	72.5	69.8	72.7	71.3	71.5	68.7	72.6
1988	72.2	71.2	71.4	69.5	72.9	70.4	70.8	68.9	71.3
1989	71.3	70.8	71.1	70.7	74.3	69.5	70.3	67.8	70.5
1990	70.3	72.9	72.7	72.6	75.5	69.9	70.8	68.3	69.9
1981–90	72.5	75.2	71.9	70.5	73.4	72.5	72.5	68.7	73.8
1991	70.5	77.0	76.0	72.0	76.7	70.3	71.3	68.7	70.1
1991	70.5	77.0	76.0	72.0	76.7	70.4	71.4	68.7	70.1
1992	70.6	79.0	73.6	70.3	75.4	70.9	71.5	68.4	70.5
1993	71.0	77.1	68.6	68.5	73.7	70.6	71.0	68.2	70.4
1994	70.3	75.0	66.1	66.6	72.1	69.3	69.5	67.6	70.7
1995	69.6	74.0	64.3	64.7	71.7	68.5	68.8	67.2	71.2
1996	67.9	71.1	64.8	67.8	70.7	68.2	68.5	66.3	70.2
1997	68.1	69.7	63.4	67.8	70.9	67.8	68.3	65.7	70.5
1998	67.5	67.9	62.1	68.7	71.5	67.2	68.0	66.4	71.2
1999	67.7	68.9	62.8	68.9	72.8	67.5	68.5	66.7	70.4
2000	66.9	69.0	60.3	71.6	73.2	67.2	68.4	67.1	70.2
1991–2000	69.0	72.9	66.2	68.7	72.9	68.8	69.4	67.2	70.5
2001	66.8	70.4	61.8	73.3	73.1	67.3	68.4	68.1	71.7
2002	66.4	71.0	62.1	73.3	72.8	67.3	68.4	67.4	71.0
2003	66.0	71.3	61.5	73.1	72.1	66.9	68.0	66.8	70.6

(¹) EU-15 excluding DK, S and UK; 1960–91: including D_90.

(²) 1960–91: including D_90.

Table 33

Nominal unit labour costs; total economy ⁽¹⁾

(national currency; 1991 = 100)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	NL
1960	21.8	10.9	30.8	4.0	5.0	14.2	9.1	5.6	22.5
1961	21.6	11.8	32.9	3.7	5.1	14.9	9.4	5.6	23.8
1962	22.3	12.6	34.4	3.9	5.4	15.6	9.9	5.9	25.0
1963	23.1	13.2	35.6	3.7	6.1	16.7	10.0	6.6	26.7
1964	23.9	13.7	36.1	3.8	6.5	17.3	11.0	7.1	29.2
1965	25.3	15.2	37.8	3.8	7.1	17.6	11.4	7.4	31.3
1966	26.7	16.3	39.4	4.0	7.9	17.9	12.2	7.4	34.1
1967	27.6	17.4	39.5	4.1	8.8	18.4	12.4	7.5	35.3
1968	28.1	18.5	40.0	4.1	9.0	19.7	12.7	7.6	36.3
1969	29.0	19.6	41.4	4.1	9.3	20.7	13.7	7.7	39.3
1970	30.3	21.5	46.3	4.0	9.8	21.9	15.4	8.5	42.3
1971	32.9	23.4	50.3	4.1	10.7	23.4	17.0	9.5	46.3
1972	35.7	24.7	53.0	4.2	11.7	24.8	18.6	10.1	50.3
1973	38.5	27.4	57.3	4.6	13.1	26.8	21.4	11.4	55.4
1974	44.3	32.8	62.9	5.8	15.2	30.9	24.5	13.5	61.7
1975	51.5	37.7	66.3	6.6	18.2	36.4	29.7	16.7	69.6
1976	56.2	40.4	67.4	7.7	21.5	40.4	34.7	19.3	73.7
1977	60.7	43.9	70.0	9.2	26.3	44.3	37.5	23.0	78.3
1978	63.4	47.7	72.3	10.6	31.8	48.4	41.4	25.9	82.5
1979	66.2	51.3	74.6	12.7	37.2	53.1	49.3	29.9	86.5
1980	70.0	56.8	80.1	14.8	41.8	59.8	58.5	35.8	90.7
1981	73.1	62.6	83.8	19.2	47.1	67.0	66.3	43.5	93.0
1982	77.0	68.6	87.1	24.5	52.4	74.6	74.1	50.5	97.1
1983	80.3	73.5	87.4	30.2	58.4	80.6	82.1	58.1	96.6
1984	83.9	76.5	88.1	35.7	61.7	84.9	85.6	63.4	93.9
1985	87.0	79.6	89.5	43.2	65.2	88.7	88.2	68.3	94.1
1986	89.3	82.2	91.9	48.3	70.2	90.6	93.1	72.2	95.4
1987	89.1	89.5	94.1	54.9	74.6	91.9	94.2	76.0	97.0
1988	88.6	92.6	94.2	64.3	79.0	92.5	96.7	80.0	96.7
1989	89.6	95.7	94.9	76.6	83.7	94.0	96.8	84.6	94.8
1990	94.6	97.9	96.8	91.5	92.1	97.1	97.7	92.5	96.6
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	103.7	102.6	106.4	112.6	108.5	102.1	104.5	104.3	104.1
1993	108.2	103.5	110.5	126.9	114.3	104.3	108.9	106.7	106.5
1994	109.3	101.0	111.0	140.5	115.2	104.0	108.8	106.6	106.7
1995	110.1	102.5	113.4	156.7	118.3	105.4	106.4	107.9	107.3
1996	110.9	104.8	113.6	166.0	122.2	106.8	105.9	113.6	108.1
1997	111.0	106.8	112.8	181.4	124.0	107.4	105.0	116.2	109.6
1998	111.9	109.2	113.0	193.0	126.8	107.4	108.3	113.6	111.9
1999	113.6	112.4	113.7	194.2	129.6	108.5	109.4	115.4	114.3
2000	114.5	113.9	113.4	197.0	132.8	109.6	111.9	117.2	118.2
2001	118.1	117.2	114.9	201.9	137.4	112.3	117.7	120.6	124.7
2002	120.6	119.8	116.3	207.5	140.7	114.2	123.9	123.0	129.1
2003	121.5	121.7	116.8	212.5	143.0	115.6	127.9	124.8	131.8

⁽¹⁾ Ratio of compensation per employee to real GDP per person employed.⁽²⁾ 1960-91: D_90.

(national currency; 1991 = 100)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1960	26.0	3.0	9.8	11.7	8.8	16.7	14.6	25.3	24.0
1961	27.2	3.1	10.1	12.1	9.3	17.4	15.2	25.4	24.6
1962	28.7	3.0	10.6	12.8	9.6	18.2	15.9	25.5	26.2
1963	29.6	3.1	11.4	13.3	9.7	19.3	16.6	25.7	27.5
1964	30.5	3.1	12.5	13.7	9.9	20.1	17.2	25.9	28.3
1965	32.1	3.2	13.2	14.5	10.4	20.9	18.0	26.1	30.5
1966	32.9	3.4	13.9	15.6	11.0	21.7	18.7	26.8	31.3
1967	34.4	3.6	14.7	16.3	11.2	22.2	19.2	28.0	32.2
1968	34.9	3.4	15.7	17.0	11.5	22.8	19.7	29.4	33.3
1969	35.5	3.6	15.6	17.5	12.1	23.7	20.5	31.4	34.7
1970	35.9	4.2	16.2	18.1	13.4	25.7	22.3	33.4	37.1
1971	38.9	4.5	18.1	19.5	14.4	28.0	24.3	34.5	41.0
1972	40.9	4.8	19.4	20.7	15.7	29.8	25.9	36.0	43.5
1973	44.9	5.1	21.8	21.4	16.9	32.5	28.1	37.9	49.8
1974	49.7	6.7	26.3	23.9	20.5	37.0	32.4	41.9	63.0
1975	55.9	9.4	31.9	27.7	27.1	41.9	37.7	44.9	70.9
1976	58.6	10.9	36.9	32.4	29.9	45.2	41.0	47.3	76.4
1977	61.4	12.8	39.3	37.0	32.4	49.0	44.6	50.3	81.5
1978	67.4	14.6	40.3	40.5	35.9	52.4	48.1	53.9	84.0
1979	67.9	16.9	43.0	42.9	41.0	56.2	52.2	58.7	85.3
1980	71.4	20.3	47.6	47.3	50.0	62.1	58.7	64.9	89.0
1981	77.1	24.4	53.8	51.8	55.6	67.9	64.5	70.1	92.8
1982	79.2	28.5	57.8	54.3	58.1	73.5	69.4	75.8	94.2
1983	79.9	34.3	62.1	57.7	60.3	77.5	73.1	77.2	95.6
1984	83.7	41.7	66.7	60.5	63.6	80.4	76.2	79.3	95.9
1985	86.5	49.7	71.4	64.5	66.8	83.5	79.5	81.8	95.1
1986	89.4	56.5	74.5	68.9	69.4	86.4	82.4	83.8	95.8
1987	91.4	62.1	77.4	72.1	72.5	88.7	85.1	86.9	95.1
1988	92.3	66.8	81.2	76.9	77.3	90.0	87.2	90.0	93.8
1989	93.6	73.7	85.9	84.8	84.9	91.7	90.3	92.0	94.7
1990	95.7	86.0	93.4	94.0	93.0	95.6	95.2	96.2	96.4
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	103.6	113.2	98.1	100.8	102.3	104.8	104.2	102.0	101.6
1993	107.2	119.9	93.8	101.9	102.9	108.0	106.9	104.3	102.4
1994	108.5	124.1	92.0	101.8	101.9	108.4	107.0	105.3	102.9
1995	110.8	126.6	93.6	102.3	103.7	110.0	108.7	107.0	103.1
1996	109.5	124.5	93.7	107.5	105.8	111.5	110.5	107.8	100.6
1997	109.9	126.3	92.6	108.2	108.8	112.0	111.5	109.0	101.5
1998	110.0	128.7	93.4	109.2	112.5	112.3	112.3	111.6	101.7
1999	110.6	132.1	94.2	108.3	117.2	113.6	114.0	113.7	99.2
2000	111.1	138.2	94.2	116.1	119.7	114.7	115.5	117.1	98.1
2001	112.5	146.7	99.2	121.0	122.8	117.7	118.6	122.1	99.2
2002	113.5	152.4	100.9	123.8	125.4	120.0	120.8	123.4	98.2
2003	114.0	156.2	101.9	126.2	127.6	121.4	122.3	124.2	97.4

⁽¹⁾ EU-15 excluding DK, L, S and UK; export weighted.⁽²⁾ EU-15 excluding L; export weighted.

Table 34

Real unit labour costs; total economy ⁽¹⁾

(1991 = 100)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	NL
1960	94.8	99.0	101.8	149.1	101.3	103.3	113.5	103.0	97.2
1961	92.8	102.1	103.8	136.8	100.6	105.5	114.0	100.4	100.3
1962	94.4	102.3	104.5	137.5	101.2	105.1	114.9	100.3	101.6
1963	95.1	101.7	104.8	129.1	104.4	105.4	113.0	103.2	103.7
1964	93.9	100.5	103.3	127.6	105.6	104.9	113.4	104.7	104.5
1965	94.4	103.7	104.1	123.3	105.8	103.9	112.0	103.5	105.4
1966	95.8	104.6	105.0	123.3	108.1	102.5	115.0	101.5	108.3
1967	95.7	105.3	103.6	123.6	110.4	101.8	113.0	101.0	107.6
1968	94.9	104.6	102.6	123.2	107.3	104.7	111.1	100.0	106.3
1969	94.2	103.7	101.9	117.0	105.7	103.1	109.9	97.9	108.0
1970	94.0	105.4	105.8	112.4	105.3	103.5	112.6	100.5	109.6
1971	96.8	106.5	106.6	109.7	106.6	103.8	112.6	104.7	111.2
1972	98.6	102.4	106.8	107.2	107.3	102.9	108.2	105.2	110.4
1973	99.3	102.6	108.4	97.1	107.4	102.5	108.1	104.9	111.4
1974	101.5	107.9	111.2	101.2	107.1	105.7	116.9	103.9	113.9
1975	105.4	109.1	111.0	101.3	109.9	110.4	117.7	110.4	116.5
1976	106.9	107.1	108.9	101.5	111.5	110.2	113.8	108.1	113.3
1977	107.4	106.0	109.0	106.6	110.6	110.6	108.6	108.4	113.0
1978	107.4	105.1	108.0	107.9	110.8	109.7	108.4	107.8	113.1
1979	107.3	104.9	107.4	107.5	110.8	109.3	113.3	107.1	113.9
1980	109.0	106.8	109.8	105.2	109.6	110.8	117.2	105.8	113.2
1981	108.6	105.4	110.3	112.5	110.0	111.7	113.0	108.1	110.2
1982	105.9	104.0	109.8	112.8	107.8	111.6	109.6	107.0	109.2
1983	104.7	102.7	106.7	115.6	107.3	110.6	109.6	107.0	106.4
1984	103.7	100.8	105.3	112.1	102.3	108.9	107.3	104.7	102.0
1985	103.1	100.0	104.9	114.1	99.5	107.9	105.1	103.6	100.3
1986	102.9	99.3	104.4	107.4	96.7	104.9	104.9	101.4	101.6
1987	101.2	102.9	104.9	106.0	97.0	103.4	103.9	100.6	104.1
1988	98.4	103.9	103.4	106.4	96.9	101.1	103.1	99.1	102.8
1989	94.8	102.0	101.7	110.7	96.1	99.5	98.2	98.5	99.7
1990	97.2	100.6	100.6	109.6	98.5	99.9	99.5	99.5	99.3
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	100.0	99.8	101.3	98.1	101.7	100.1	101.7	99.8	101.8
1993	100.7	99.2	101.5	96.6	102.5	99.9	100.7	98.2	102.2
1994	99.8	95.2	99.5	96.1	99.4	98.0	99.0	94.8	100.0
1995	98.8	94.9	99.5	97.6	97.3	97.7	93.9	91.3	98.6
1996	98.4	94.7	98.7	96.3	97.1	97.6	91.4	91.4	98.2
1997	97.2	94.4	97.4	98.5	96.3	96.9	87.0	91.3	97.7
1998	96.4	94.8	96.5	99.7	96.1	96.0	84.7	86.9	98.0
1999	96.7	94.7	96.6	97.5	95.6	96.5	82.1	86.9	98.4
2000	96.1	92.6	96.8	95.7	94.6	96.7	80.6	86.3	98.1
2001	97.1	92.5	96.8	94.9	94.4	97.5	80.9	86.6	97.9
2002	97.3	92.9	96.7	94.2	94.1	97.4	81.4	86.6	97.9
2003	96.6	92.3	96.4	93.4	93.4	97.1	80.9	86.0	98.0

⁽¹⁾ Ratio of compensation per employee to nominal GDP per person employed.⁽²⁾ 1960-91: D_90.

(1991 = 100)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1960	103.3	98.3	102.4	101.0	96.9	101.6	101.1	102.4	111.0
1961	102.7	97.3	99.3	101.3	98.9	102.4	102.3	101.8	105.6
1962	104.3	96.4	100.9	103.3	99.4	103.0	102.8	100.9	107.5
1963	103.8	96.3	103.3	104.3	98.1	103.8	103.0	100.3	107.3
1964	103.5	96.0	105.3	102.8	97.1	103.4	102.4	99.8	104.5
1965	103.2	95.6	105.6	102.5	96.9	103.4	102.3	98.5	106.8
1966	102.6	95.9	106.7	103.7	97.5	103.7	102.6	98.6	104.3
1967	103.8	97.0	104.7	103.2	96.9	102.9	102.0	99.7	101.7
1968	102.4	90.3	100.0	104.9	95.8	102.4	101.5	100.3	99.2
1969	101.4	90.0	95.5	104.4	95.5	101.3	100.6	102.0	98.6
1970	98.0	101.5	95.6	102.6	97.7	103.4	102.5	103.2	98.6
1971	99.9	103.8	99.2	103.3	96.7	105.0	103.4	101.5	103.5
1972	97.7	103.2	98.4	102.7	97.3	104.8	103.4	101.6	103.8
1973	99.3	99.4	97.1	98.9	97.6	105.3	103.7	101.3	105.4
1974	100.3	110.9	95.8	100.9	103.1	107.6	106.6	102.7	110.6
1975	106.0	132.7	102.6	102.4	107.1	110.6	109.6	100.6	116.0
1976	105.2	132.4	104.5	107.0	102.8	109.3	108.1	100.4	115.7
1977	104.2	123.5	101.5	110.5	97.8	109.2	107.3	100.4	115.7
1978	107.9	114.8	96.8	110.4	97.2	108.5	106.6	100.4	114.0
1979	105.1	111.5	94.8	108.2	96.8	108.0	106.1	100.9	112.7
1980	105.3	110.4	95.7	106.9	99.0	109.1	107.2	102.2	111.4
1981	106.7	112.9	97.4	106.8	99.0	109.6	107.7	100.9	111.4
1982	104.1	109.2	96.0	103.5	96.2	108.7	106.3	102.7	111.1
1983	101.3	105.7	95.2	99.9	94.8	106.9	104.5	100.7	110.6
1984	101.3	103.1	94.2	97.3	95.7	105.0	103.1	99.6	108.0
1985	101.6	100.9	95.6	97.3	95.1	104.1	102.4	99.6	104.5
1986	102.3	95.2	95.7	97.3	95.6	103.0	101.5	99.8	103.6
1987	102.4	95.1	95.3	97.1	94.9	102.9	101.3	100.5	103.0
1988	101.8	92.0	92.6	97.3	95.2	101.2	100.1	100.7	100.9
1989	100.4	91.8	92.2	99.3	97.4	99.5	99.3	99.1	99.9
1990	99.3	94.6	95.1	101.2	99.2	99.6	99.7	99.7	99.3
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	100.0	101.5	97.2	99.7	98.3	100.7	100.2	99.6	99.9
1993	100.5	100.2	90.9	98.3	96.4	100.4	99.7	99.4	100.1
1994	99.0	96.7	87.4	95.9	94.3	98.1	97.4	98.3	100.5
1995	98.6	95.4	85.3	93.1	93.5	97.0	96.3	97.8	101.0
1996	96.3	91.0	85.6	96.5	92.3	96.5	95.9	96.7	99.5
1997	95.8	88.9	83.0	95.4	92.3	95.4	95.1	95.8	99.9
1998	95.3	87.2	81.3	95.5	92.7	94.0	94.0	97.0	100.2
1999	95.2	86.7	82.0	94.1	94.1	94.1	94.2	97.4	99.1
2000	94.5	88.0	79.4	99.8	94.5	93.8	94.2	98.1	99.6
2001	94.4	89.9	81.6	102.1	94.8	94.1	94.6	99.8	101.5
2002	93.8	90.5	82.3	102.3	94.4	94.1	94.5	99.0	100.4
2003	93.3	90.8	81.8	102.1	93.7	93.7	94.1	98.1	99.6

⁽¹⁾ EU-15 excluding DK, L, S and UK; export weighted.⁽²⁾ EU-15 excluding L; export weighted.

Table 35

Nominal unit labour costs; total economy ⁽¹⁾
Performance relative to the rest of 22 industrial countries; double export weights

(USD; 1991 = 100)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	NL
1960	110.0	68.2	87.4	180.2	58.5	124.1	97.9	77.0	80.0
1961	103.4	70.1	94.3	159.6	56.8	124.9	96.3	73.6	84.2
1962	102.5	71.8	95.4	161.4	58.0	125.8	98.3	74.8	85.3
1963	102.0	73.4	94.4	147.3	62.7	129.5	98.4	80.8	88.1
1964	101.3	73.6	91.9	146.2	65.3	129.6	105.4	84.8	93.7
1965	102.9	78.3	92.2	141.8	68.8	126.6	103.7	84.0	96.2
1966	104.1	80.6	92.3	143.0	73.1	123.1	106.1	80.7	100.7
1967	104.6	83.3	89.3	142.9	76.7	122.8	104.4	80.4	101.8
1968	104.5	82.7	89.1	142.9	68.8	131.4	99.4	79.9	104.1
1969	103.3	84.0	90.2	134.5	68.1	125.8	102.1	78.1	108.4
1970	99.3	84.7	102.9	122.2	66.2	112.7	105.3	79.0	106.2
1971	100.0	85.0	106.4	111.1	66.8	108.8	108.2	80.8	108.4
1972	105.2	84.8	108.6	100.0	70.1	110.9	108.6	80.4	112.4
1973	105.8	93.1	118.5	92.7	74.3	113.7	110.9	75.3	117.6
1974	108.4	97.5	119.1	103.8	76.8	106.7	106.2	70.9	120.8
1975	112.5	100.3	109.8	93.9	78.4	120.8	101.5	74.5	122.7
1976	117.2	101.5	108.1	96.4	79.1	119.8	100.6	66.7	124.8
1977	124.0	101.6	111.2	103.6	78.4	116.5	98.0	68.4	129.5
1978	124.7	103.5	112.6	101.5	80.5	117.2	100.4	67.9	131.1
1979	122.6	103.1	112.6	106.1	95.2	119.9	108.4	70.6	130.1
1980	116.4	94.1	109.2	96.3	89.0	122.1	108.8	74.1	123.4
1981	106.3	88.9	98.8	104.5	83.5	115.3	103.4	73.9	112.2
1982	94.8	87.6	100.1	114.4	82.1	110.2	107.9	75.1	115.3
1983	92.8	90.2	99.7	110.8	73.2	106.5	111.3	80.6	112.5
1984	92.3	87.9	95.3	108.9	73.1	103.8	107.7	80.7	104.3
1985	93.3	89.2	93.3	107.8	72.8	105.7	108.1	80.0	100.9
1986	98.9	95.8	103.4	92.5	75.8	110.3	117.1	86.1	107.1
1987	99.7	105.1	109.6	91.8	78.2	109.2	112.0	89.1	111.1
1988	95.8	103.4	105.7	97.5	83.3	104.4	109.2	88.5	107.6
1989	93.5	100.4	101.5	104.3	89.1	100.9	103.4	91.4	101.3
1990	99.1	104.4	103.1	108.3	97.0	104.6	104.3	98.6	101.9
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	101.9	101.8	106.4	100.2	101.9	101.4	104.3	97.3	102.5
1993	104.8	103.3	112.0	101.6	92.1	103.5	101.5	81.0	105.5
1994	107.4	100.7	112.3	104.7	86.8	103.5	100.9	77.1	105.7
1995	111.4	105.5	119.8	112.1	88.2	107.5	97.3	70.0	109.1
1996	108.6	105.6	115.2	114.7	90.7	107.6	97.9	79.9	106.3
1997	103.0	103.1	106.9	121.0	86.6	102.7	97.5	80.9	102.4
1998	103.0	105.1	106.5	120.4	87.6	102.4	94.5	78.0	103.6
1999	101.6	105.0	103.2	118.9	86.8	99.8	90.8	76.3	103.0
2000	97.3	99.8	96.0	111.2	84.4	94.8	86.1	73.0	101.8
2001	98.3	101.2	94.9	110.2	85.2	94.9	88.7	73.5	105.5
2002	98.9	102.2	94.7	111.6	85.8	95.0	92.2	73.9	107.7
2003	98.4	102.6	93.9	113.1	86.2	95.1	94.1	74.1	108.8

⁽¹⁾ Ratio of compensation per employee to real GDP per person employed.⁽²⁾ 1960–91: D_90.

(USD; 1991 = 100)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1960	88.9	104.3	87.4	98.1	92.4	84.9	80.9	173.3	46.3
1961	88.7	101.3	85.1	96.7	94.5	87.6	84.7	168.7	46.4
1962	89.4	96.5	86.2	98.1	95.3	89.2	87.1	164.1	48.4
1963	88.0	95.4	90.0	98.2	92.1	92.4	88.7	159.3	49.8
1964	87.3	93.1	95.2	97.6	91.1	93.9	89.7	155.3	50.1
1965	88.4	92.5	95.9	98.6	92.5	94.0	91.3	149.2	52.6
1966	87.0	93.9	97.1	101.4	93.4	93.6	92.2	147.1	52.3
1967	88.8	95.6	92.5	103.2	91.1	91.9	89.8	148.4	51.9
1968	89.6	90.9	81.8	107.9	80.1	93.2	85.2	154.7	52.6
1969	87.7	92.2	78.0	106.6	80.6	91.7	83.9	158.1	51.9
1970	80.3	99.7	74.6	101.0	82.0	94.2	86.2	155.5	51.4
1971	81.5	99.2	75.9	99.7	82.2	96.5	88.2	145.6	54.7
1972	81.1	98.8	72.4	100.8	81.3	100.4	91.4	132.7	61.5
1973	87.6	99.6	75.5	95.5	72.1	109.3	93.7	119.1	69.8
1974	89.5	112.3	81.2	91.3	73.6	107.2	92.3	113.5	72.5
1975	91.8	130.7	85.1	95.8	79.3	110.4	100.0	105.3	71.3
1976	93.1	128.7	92.6	105.9	69.5	106.7	92.0	107.4	75.3
1977	96.4	110.1	86.4	107.9	66.8	110.3	93.8	106.4	82.9
1978	101.8	92.9	74.4	101.0	70.1	111.0	95.3	98.5	97.1
1979	98.3	84.3	74.1	99.9	79.0	114.9	105.3	97.4	84.4
1980	96.4	86.9	76.2	99.8	96.6	111.7	111.9	97.2	75.8
1981	93.4	92.4	80.6	98.1	99.9	95.8	94.2	106.6	82.0
1982	92.9	87.6	81.9	86.2	93.2	94.0	87.9	124.1	73.5
1983	92.4	79.9	80.3	78.5	86.8	91.8	81.7	131.3	80.5
1984	93.2	78.6	84.9	80.9	84.7	86.4	75.6	140.4	82.8
1985	93.7	80.3	88.1	82.7	85.9	85.5	75.6	147.2	81.3
1986	100.6	81.9	88.4	85.3	81.1	98.6	86.7	125.1	103.3
1987	103.7	81.0	89.6	85.3	81.4	105.2	94.1	112.7	107.9
1988	102.1	80.2	92.6	88.2	89.8	99.2	92.4	106.4	113.6
1989	100.0	82.5	97.1	94.6	92.9	95.3	90.5	108.5	106.0
1990	100.9	89.7	101.9	98.7	96.4	104.2	103.4	102.6	92.8
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	101.4	112.6	82.8	98.7	94.7	106.0	104.4	96.5	103.8
1993	105.1	108.6	67.3	79.8	85.3	102.2	92.5	99.7	123.1
1994	106.1	107.6	70.9	78.8	84.5	100.5	89.9	99.0	132.6
1995	110.6	109.4	78.9	77.9	81.3	106.4	94.6	98.8	137.4
1996	105.8	106.5	75.7	88.8	83.4	107.0	98.3	102.9	115.4
1997	102.3	104.3	71.6	84.7	98.6	96.4	93.2	109.1	108.5
1998	102.2	103.8	70.9	82.8	104.7	95.0	94.2	115.5	100.7
1999	100.3	103.5	69.0	79.3	107.2	90.0	88.7	114.2	112.5
2000	96.8	103.5	64.6	83.2	110.4	79.9	78.4	120.5	121.8
2001	96.0	107.5	67.0	77.0	108.0	80.9	77.8	127.5	108.2
2002	95.3	109.9	67.4	75.0	108.4	81.8	78.7	126.0	106.5
2003	94.8	111.4	67.2	75.4	108.3	81.7	78.7	125.3	106.5

⁽¹⁾ EU-15 excluding DK, L, S and UK relative to 11 industrial countries.⁽²⁾ EU-15 excluding L relative to 8 industrial non-member countries.

Table 36

Exports of goods and services at current prices (national accounts)*(percentage of gross domestic product at market prices)*

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	38.5	31.6	19.0	12.3	8.3	13.9	29.4	12.7	101.6	45.8
1961	39.8	29.4	18.0	11.9	8.1	13.6	32.0	13.0	102.0	43.6
1962	41.4	28.0	17.4	10.4	8.3	12.3	29.8	12.9	93.7	43.0
1963	42.6	29.8	17.8	11.2	7.7	12.1	31.0	12.4	91.1	43.1
1964	43.4	29.2	18.1	9.6	8.8	12.2	30.8	13.0	92.4	41.8
1965	42.8	28.7	18.0	9.5	8.2	12.7	32.2	14.5	94.6	41.1
1966	44.5	27.9	19.2	11.7	8.9	12.7	34.4	15.0	90.6	40.0
1967	43.5	26.7	20.4	11.2	8.6	12.6	35.0	14.7	92.1	38.9
1968	45.7	27.0	21.4	9.9	10.6	12.7	35.9	15.5	94.4	39.3
1969	49.7	26.8	21.7	9.6	11.3	13.5	34.5	16.1	98.9	40.8
1970	51.7	27.2	21.2	9.8	12.5	15.1	34.1	16.1	104.2	43.2
1961-70	44.5	28.1	19.3	10.5	9.3	13.0	33.0	14.3	95.4	41.5
1971	50.3	27.0	20.8	10.1	13.4	15.7	33.4	16.6	103.4	43.5
1972	50.7	26.4	20.6	11.3	13.7	16.0	31.9	17.4	97.2	43.3
1973	55.2	27.9	21.8	14.5	13.7	16.8	35.1	17.2	104.8	45.4
1974	60.8	30.9	26.4	18.0	13.5	19.8	39.3	19.9	120.4	51.9
1975	52.8	29.3	24.7	17.9	12.7	18.2	39.4	20.2	108.5	47.9
1976	55.8	28.1	25.7	17.7	12.9	18.7	42.7	21.8	103.4	49.3
1977	54.6	28.1	25.5	17.6	13.6	19.6	45.7	23.2	101.9	46.2
1978	52.6	27.1	24.8	17.1	14.3	19.5	46.1	23.5	98.3	43.9
1979	57.4	28.8	25.1	19.1	14.1	20.1	45.9	24.2	106.6	48.0
1980	57.3	32.2	26.4	24.7	14.8	20.4	45.7	21.6	103.8	51.2
1971-80	54.7	28.6	24.2	16.8	13.7	18.5	40.5	20.5	104.8	47.1
1981	61.8	36.0	28.7	27.4	16.9	21.3	44.7	23.0	101.6	56.7
1982	66.4	35.7	29.9	22.1	17.6	20.8	44.3	22.5	104.4	55.9
1983	69.1	35.8	28.7	21.2	19.8	21.4	48.3	21.6	105.8	55.5
1984	73.7	36.3	30.6	21.5	22.1	23.0	54.9	22.3	118.6	59.9
1985	71.4	36.4	32.5	20.6	21.6	22.9	55.6	22.5	127.4	60.8
1986	65.5	31.9	30.2	22.6	18.8	20.3	50.6	19.9	117.1	50.7
1987	63.8	31.2	29.0	23.0	18.4	19.7	54.1	19.2	114.6	49.7
1988	67.8	33.2	29.6	20.6	17.9	20.4	57.7	18.8	117.8	52.1
1989	72.1	35.1	31.5	20.3	17.2	21.7	61.1	19.7	118.6	55.1
1990	69.9	35.8	32.1	18.7	16.3	21.2	57.0	19.7	116.3	54.0
1981-90	68.2	34.7	30.3	21.8	18.6	21.3	52.8	20.9	114.2	55.1
1991	68.5	37.2	33.6	18.0	16.3	21.5	57.9	18.5	114.9	54.1
1991	68.5	37.2	26.3	18.0	16.3	21.5	57.9	18.5	114.9	54.1
1992	66.7	36.5	24.5	18.8	16.8	21.5	60.8	19.1	112.3	52.1
1993	64.1	35.4	22.8	17.7	18.3	20.7	66.0	22.3	110.5	52.4
1994	67.3	35.5	23.6	18.1	21.0	21.5	70.8	23.9	111.4	54.9
1995	69.0	35.4	24.5	17.6	22.6	22.5	76.3	27.0	108.9	57.4
1996	70.6	35.8	25.3	17.5	23.9	23.1	77.5	25.8	111.8	57.9
1997	74.6	36.4	27.9	19.4	26.7	25.5	79.8	26.4	118.3	61.1
1998	75.1	35.4	29.0	19.9	27.2	26.1	86.6	26.4	126.5	61.0
1999	75.6	37.4	29.7	20.2	27.5	26.1	88.7	25.5	137.5	60.6
2000	86.3	43.0	33.7	24.5	30.0	28.7	94.9	28.4	151.5	67.2
1991-2000	71.8	36.8	26.7	19.2	23.0	23.7	75.9	24.3	120.4	57.9
2001	85.0	44.2	35.1	24.7	30.4	28.8	94.4	28.8	151.1	65.8
2002	84.9	43.1	35.1	24.2	30.4	29.0	93.2	28.8	147.7	64.1
2003	87.5	44.2	36.8	24.8	31.8	30.0	94.3	30.0	150.6	65.2

⁽¹⁾ 1960-91: D_90.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	23.6	15.5	21.6	22.8	20.0	18.7	19.4	4.9	10.5
1961	23.3	14.5	20.5	22.2	19.8	18.2	18.9	4.9	9.1
1962	24.2	16.6	20.4	21.7	19.3	17.5	18.3	4.8	9.3
1963	24.4	16.9	19.5	21.7	19.3	17.4	18.2	4.8	8.9
1964	24.1	22.6	19.4	22.1	18.6	17.8	18.4	5.1	9.3
1965	24.4	23.7	19.5	21.7	18.4	18.1	18.5	5.0	10.3
1966	24.4	24.0	19.2	21.2	18.7	18.6	18.9	5.0	10.4
1967	24.4	24.1	19.0	20.9	18.3	18.7	18.9	5.0	9.5
1968	25.0	22.1	21.8	21.4	20.6	19.5	19.9	5.0	9.9
1969	27.6	21.6	23.3	22.6	21.5	20.3	20.8	5.1	10.4
1970	30.2	21.6	24.7	24.0	22.3	21.1	21.6	5.6	10.6
1961–70	25.2	20.8	20.7	22.0	19.7	18.7	19.2	5.0	9.8
1971	29.8	22.2	23.4	24.2	22.4	21.3	21.7	5.3	11.5
1972	29.7	24.1	24.5	24.1	21.1	21.6	21.7	5.4	10.4
1973	29.7	23.6	24.4	27.2	23.1	22.6	23.0	6.7	9.9
1974	32.1	23.8	26.6	32.0	27.3	26.4	26.8	8.4	13.4
1975	31.0	18.0	22.9	28.0	25.4	24.4	24.8	8.4	12.6
1976	31.7	15.4	24.4	27.5	28.0	25.5	26.0	8.2	13.4
1977	31.2	16.3	27.8	27.2	29.7	25.9	26.5	7.9	12.9
1978	32.3	17.8	29.4	28.1	28.3	25.6	26.1	8.2	11.0
1979	34.5	23.9	30.8	30.2	27.8	26.4	26.8	9.0	11.4
1980	35.9	24.2	32.2	29.6	27.1	26.8	27.1	10.1	13.5
1971–80	31.8	20.9	26.6	27.8	26.0	24.7	25.1	7.8	12.0
1981	37.3	23.0	32.9	30.1	26.7	28.6	28.5	9.8	14.5
1982	36.5	23.4	30.5	32.4	26.2	28.6	28.5	8.8	14.3
1983	35.8	27.7	30.2	35.8	26.4	28.6	28.6	7.9	13.7
1984	37.7	33.0	30.6	36.6	28.3	30.4	30.4	7.8	14.7
1985	39.5	33.0	29.2	35.5	28.8	30.9	30.8	7.3	14.2
1986	35.8	29.4	26.5	33.0	25.6	27.7	27.7	7.3	11.2
1987	34.9	30.9	25.5	32.7	25.4	26.9	27.0	7.8	10.2
1988	37.6	31.2	24.5	32.5	23.0	27.4	27.0	8.8	9.8
1989	39.3	33.3	23.6	32.2	23.7	28.6	28.1	9.4	10.3
1990	39.6	32.9	22.8	30.1	24.0	28.4	27.9	9.7	10.4
1981–90	37.4	29.8	27.6	33.1	25.8	28.6	28.5	8.4	12.3
1991	39.1	30.0	22.0	28.1	23.2	28.5	27.8	10.1	9.9
1991	39.1	30.0	22.0	28.1	23.2	26.4	26.2	10.1	9.9
1992	37.6	27.6	26.4	28.0	23.6	25.9	25.9	10.2	9.8
1993	36.0	26.6	32.5	32.9	25.5	26.2	26.4	10.0	9.1
1994	36.5	28.4	35.1	36.5	26.5	27.6	27.9	10.4	9.0
1995	36.8	30.2	37.0	40.5	28.3	29.3	29.6	11.2	9.1
1996	37.9	29.8	37.5	39.1	29.3	29.7	30.0	11.3	9.7
1997	41.8	30.3	39.1	42.7	28.6	32.1	31.9	11.7	10.7
1998	43.5	30.8	38.8	43.7	26.6	32.9	32.2	11.1	10.7
1999	45.6	29.7	37.8	43.5	26.3	33.2	32.4	10.8	10.0
2000	50.1	31.8	42.7	47.2	28.1	37.2	36.0	11.2	10.8
1991–2000	40.5	29.5	34.9	38.2	26.6	30.1	29.9	10.8	9.9
2001	52.2	32.6	41.0	47.6	27.7	37.8	36.4	10.4	10.8
2002	53.2	32.1	40.3	48.8	27.1	37.8	36.2	9.8	11.0
2003	56.2	33.0	41.0	50.5	27.8	39.2	37.5	9.7	11.3

⁽¹⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽²⁾ 1960–91: including D_90.

Table 37

Exports of goods and services at 1995 prices

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	9.2	4.3	5.0	12.3	7.9	5.1	17.2	14.7	3.5	2.3
1962	10.1	4.9	2.7	-7.2	12.8	1.8	-1.0	10.3	-1.6	6.2
1963	8.2	10.0	7.9	13.4	3.8	7.1	9.6	6.5	3.8	6.0
1964	9.4	8.5	8.3	-5.4	25.5	6.7	8.2	10.8	13.3	11.3
1965	6.1	7.9	6.4	16.0	6.8	11.5	8.9	20.0	5.8	7.6
1966	7.7	3.9	10.1	32.0	15.5	6.6	10.6	11.2	-0.2	5.2
1967	4.3	4.0	7.7	4.4	-4.6	7.3	10.3	7.2	1.9	6.6
1968	12.2	9.4	12.7	-2.1	18.4	9.4	9.0	13.9	10.7	12.8
1969	15.3	6.5	9.3	9.7	15.8	15.7	4.6	11.8	13.8	14.9
1970	9.2	5.5	6.9	13.3	18.0	16.1	18.8	5.8	9.0	12.2
1961-70	9.1	6.5	7.7	8.1	11.7	8.6	9.5	11.1	5.9	8.5
1971	4.5	6.1	4.4	14.5	14.2	9.2	4.1	7.6	3.9	10.3
1972	11.1	6.8	6.8	23.8	13.4	12.0	3.6	8.1	5.3	10.2
1973	14.1	7.3	10.6	31.9	10.0	10.8	10.9	6.2	13.9	12.0
1974	3.7	3.9	12.0	4.5	-1.0	8.8	0.7	7.6	10.7	2.9
1975	-8.3	-1.4	-6.3	8.2	-0.4	-1.7	7.6	1.5	-15.7	-3.0
1976	12.9	4.3	9.7	12.9	5.0	8.2	8.1	12.6	0.9	10.1
1977	2.1	3.9	3.9	6.0	12.1	7.4	14.0	10.5	4.2	-1.4
1978	2.3	1.2	2.9	10.9	10.7	5.9	12.3	10.1	2.7	3.4
1979	7.0	8.9	4.3	21.1	5.6	6.7	6.5	7.4	9.7	7.4
1980	-0.6	6.4	5.2	13.3	2.3	3.2	6.4	-8.6	-1.4	2.3
1971-80	4.7	4.7	5.2	14.4	7.1	7.0	7.3	6.1	3.1	5.3
1981	3.5	8.1	7.2	8.1	11.3	3.7	2.0	5.5	-4.8	1.8
1982	2.7	2.5	3.9	-16.1	5.6	-0.6	5.5	-0.9	-0.3	-0.8
1983	2.6	4.7	-0.8	-5.0	9.6	4.4	10.5	3.7	5.3	3.2
1984	6.4	3.9	8.2	10.1	12.0	7.1	16.6	7.7	18.0	7.5
1985	0.3	5.0	7.6	0.5	0.7	2.6	6.6	3.9	9.5	5.1
1986	2.8	0.4	-0.6	18.2	0.2	-0.4	3.1	0.8	3.3	1.8
1987	5.0	4.3	0.4	5.4	5.3	3.4	13.7	4.5	4.4	4.1
1988	9.6	11.2	5.5	-3.1	3.8	8.7	8.9	5.1	11.7	8.9
1989	8.3	4.2	10.2	4.8	1.4	10.0	10.3	7.8	8.1	7.9
1990	4.6	6.2	11.0	-4.1	4.7	4.8	8.7	7.5	3.4	5.1
1981-90	4.6	5.0	5.2	1.5	5.4	4.3	8.5	4.5	5.7	4.4
1991	3.1	6.1	12.6	3.7	8.2	5.9	5.7	-1.4	6.7	5.6
1992	3.6	-0.9	-0.8	10.4	7.5	5.4	13.9	7.3	4.8	2.4
1993	-0.4	-1.5	-5.5	-3.3	7.8	0.0	9.7	9.0	2.8	5.7
1994	8.4	7.0	7.6	6.6	16.7	7.7	15.1	9.8	4.4	9.7
1995	5.7	2.9	5.7	0.5	9.4	7.7	20.0	12.6	4.4	8.8
1996	2.9	4.3	5.1	3.5	10.4	3.5	12.2	0.6	5.4	4.6
1997	6.1	4.1	11.2	18.2	15.3	11.8	17.4	6.4	13.4	8.8
1998	5.8	2.4	6.8	5.9	8.2	8.3	21.4	3.6	12.9	7.4
1999	5.0	9.7	5.6	6.5	7.6	4.0	15.7	0.0	13.3	5.4
2000	9.7	11.6	13.2	18.9	9.6	12.6	17.8	10.2	16.4	9.5
1991-2000	5.0	4.5	6.0	6.9	10.0	6.6	14.8	5.7	8.3	6.8
2001	0.7	4.1	4.8	5.7	4.9	3.0	9.1	3.8	4.7	2.3
2002	1.9	1.8	1.2	2.6	3.9	2.5	5.3	1.8	2.5	1.1
2003	5.6	5.6	6.6	7.4	7.6	6.3	8.1	6.8	7.9	4.8

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	5.6	1.9	5.1	5.2	3.2	6.6	5.7	1.6	5.3
1962	9.8	22.7	7.1	8.1	1.7	5.6	4.8	5.4	17.2
1963	7.1	7.2	2.2	7.3	4.9	7.0	6.7	7.5	7.0
1964	5.5	39.9	5.8	12.0	3.3	9.9	8.5	13.4	21.6
1965	7.1	13.5	5.6	5.6	4.3	9.6	8.3	2.0	23.8
1966	6.7	12.8	6.4	4.9	5.2	9.0	8.0	6.7	16.9
1967	5.8	8.3	5.9	5.5	0.6	6.4	5.2	2.2	6.8
1968	8.5	-0.5	10.0	7.6	12.5	11.8	11.8	7.3	23.9
1969	17.6	8.7	16.7	11.5	9.8	12.6	11.9	5.4	20.8
1970	16.5	5.4	8.7	8.6	5.3	10.2	9.1	10.9	17.5
1961-70	9.0	11.5	7.3	7.6	5.0	8.9	8.0	6.2	15.9
1971	6.4	11.9	-1.2	4.8	6.9	7.2	7.0	0.7	16.0
1972	10.1	20.2	14.5	5.9	1.1	9.8	8.0	8.2	4.1
1973	5.4	9.2	7.2	13.7	12.3	10.3	10.7	21.8	5.2
1974	10.7	-13.3	0.1	5.3	7.3	7.0	6.9	9.6	23.1
1975	-2.4	-16.4	-13.1	-9.3	-3.0	-3.6	-3.6	-0.7	-1.0
1976	11.1	-0.8	13.4	4.3	9.1	9.9	9.4	5.9	16.6
1977	4.5	4.1	15.8	1.5	6.9	5.8	5.8	2.5	11.7
1978	7.7	9.1	9.8	7.8	1.8	5.9	5.1	10.5	-0.3
1979	11.9	33.0	7.9	6.1	3.8	7.1	6.5	9.6	4.3
1980	5.2	2.2	8.5	-0.6	-0.3	1.3	1.0	10.7	17.0
1971-80	7.0	5.0	5.9	3.8	4.5	6.0	5.6	7.7	9.4
1981	5.1	-4.4	6.8	2.1	-0.7	5.2	4.1	1.1	12.4
1982	1.6	4.7	-1.4	5.8	0.9	1.1	1.2	-7.1	0.8
1983	3.6	13.6	3.0	9.8	1.8	2.9	3.0	-2.4	4.9
1984	6.3	11.6	5.2	6.8	6.6	8.1	7.8	8.4	14.8
1985	7.1	6.7	0.7	1.4	5.9	4.4	4.5	2.7	5.5
1986	-2.3	6.8	0.7	3.7	4.3	0.8	1.4	7.4	-5.5
1987	3.1	11.2	2.9	4.3	6.1	3.4	3.9	11.2	-0.5
1988	10.2	8.2	3.5	2.5	0.6	6.7	5.7	16.1	5.9
1989	9.7	12.2	1.6	3.1	4.5	8.5	7.7	11.8	9.1
1990	7.8	9.5	1.2	1.6	5.4	7.1	6.6	8.7	7.0
1981-90	5.2	7.9	2.4	4.1	3.5	4.8	4.6	5.6	5.3
1991	5.2	1.2	-7.3	-2.3	-0.1	6.3	5.1	6.5	4.1
1992	1.5	3.2	10.3	2.3	4.3	3.6	3.6	6.2	3.9
1993	-1.4	-3.3	16.7	7.6	4.4	1.2	1.7	3.3	-0.1
1994	5.6	8.4	13.1	14.1	9.2	9.1	9.2	8.9	3.5
1995	3.0	8.8	8.6	11.3	9.0	8.1	8.3	10.3	4.1
1996	5.2	7.1	5.8	3.5	8.2	4.4	5.0	8.2	6.5
1997	12.4	7.1	14.1	13.7	8.3	10.4	10.1	12.3	11.2
1998	7.9	9.2	8.9	8.4	3.0	7.3	6.6	2.1	-2.3
1999	8.7	3.2	6.8	6.5	5.4	5.1	5.3	3.2	1.4
2000	12.2	8.1	18.1	10.3	10.2	11.9	11.6	9.5	12.1
1991-2000	5.9	5.2	9.3	7.4	6.1	6.7	6.6	7.0	4.4
2001	5.3	6.2	-2.6	-0.1	2.1	3.8	3.5	-4.2	-5.8
2002	4.0	2.0	2.2	3.3	1.0	2.1	2.0	-4.9	-1.1
2003	7.5	5.2	5.6	6.8	5.8	6.5	6.4	2.5	5.0

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 38

Intra-EU-15 exports of goods
Foreign trade statistics
(percentage of gross domestic product at market prices)

	B/L	DK	D ⁽¹⁾	EL	E	F	IRL	I	NL
1960	19.6	13.8	6.4	2.3	3.5	4.2	17.9	3.7	20.1
1961	20.1	12.4	6.6	2.1	3.1	4.6	19.7	4.0	19.9
1962	22.8	14.5	8.4	2.8	2.8	4.9	17.0	4.8	22.2
1963	25.0	15.6	9.1	2.6	2.4	4.9	18.0	4.5	22.9
1964	26.0	15.3	9.2	2.7	2.8	5.1	18.7	5.2	23.1
1965	27.3	14.8	9.2	2.5	2.2	5.4	17.7	6.0	22.9
1966	27.2	14.0	9.7	2.6	2.2	5.6	17.5	6.2	21.8
1967	26.1	13.0	10.2	3.1	2.2	5.3	18.9	5.9	21.3
1968	28.5	13.0	10.7	3.1	2.4	5.5	19.2	6.3	22.4
1969	33.1	13.0	11.4	3.0	2.6	6.3	18.1	6.7	24.2
1970	34.4	13.0	11.0	3.2	3.1	7.3	18.7	6.8	25.7
1971	32.5	12.5	10.7	3.0	3.5	7.6	19.8	7.2	26.5
1972	34.5	12.4	10.8	3.4	3.4	8.1	20.5	7.9	26.9
1973	37.0	13.7	11.7	4.6	3.7	8.6	23.3	7.9	28.4
1974	37.6	14.9	13.4	5.2	4.0	9.7	26.8	8.8	31.5
1975	33.9	14.4	12.1	5.0	3.5	8.3	28.4	8.6	29.1
1976	36.9	13.7	13.4	5.0	4.0	8.7	28.6	9.8	31.0
1977	35.1	12.9	13.1	4.4	4.2	9.0	32.1	10.2	28.2
1978	34.1	12.8	12.7	4.7	4.4	9.0	32.3	10.5	26.5
1979	38.0	14.0	13.7	4.2	4.7	9.7	32.8	11.2	30.1
1980	38.5	16.0	14.3	5.2	5.1	9.4	31.4	9.6	31.8
1981	39.3	16.3	14.9	4.3	5.0	9.2	28.6	9.1	34.8
1982	42.5	16.2	15.9	4.5	5.5	9.0	28.9	9.5	35.3
1983	44.2	16.4	15.3	5.6	6.3	9.4	31.2	9.1	35.8
1984	45.0	15.8	16.3	6.7	7.5	10.1	35.8	9.1	38.4
1985	44.9	15.9	17.2	6.3	7.6	10.3	35.9	9.6	39.4
1986	43.2	14.4	14.3	7.7	7.1	9.7	34.1	9.3	34.0
1987	42.7	14.4	16.5	8.1	7.4	10.0	37.2	9.3	32.3
1988	42.2	15.2	17.3	5.6	7.7	10.6	39.7	9.4	31.9
1989	46.5	16.3	18.6	7.6	7.7	11.3	42.3	9.8	33.7
1990	44.3	16.8	16.9	6.5	7.8	11.3	39.1	9.6	33.5
1991	43.2	17.2	14.3	6.4	8.0	11.4	39.2	9.2	33.1
1992	40.1	17.3	13.4	6.8	7.8	11.2	40.6	8.9	30.9
1993	39.9	15.6	11.4	5.5	8.4	10.0	41.2	9.7	28.3
1994	41.5	15.4	11.8	5.3	10.2	10.9	45.4	10.6	29.5
1995	41.0	15.7	12.4	5.7	11.1	11.6	47.5	12.0	30.5
1996	42.1	15.4	12.6	5.3	11.9	11.6	43.5	11.4	30.7
1997	46.8	17.1	13.5	4.8	13.2	12.6	45.3	11.1	38.0
1998	50.1	16.8	14.0	4.8	13.2	13.0	50.2	11.4	29.3
1999	51.6	17.1	14.1	4.0	13.2	13.2	47.8	11.5	31.0
2000	57.0	18.8	15.9	4.0	14.1	14.5	49.0	12.0	35.1
2001	56.0	18.5	16.4	4.0	14.1	14.4	48.5	12.1	34.2
2002	55.7	18.5	16.6	4.0	13.9	14.5	47.9	12.1	33.2
2003	57.2	19.0	17.5	4.0	14.5	15.0	48.5	12.6	33.7

⁽¹⁾ 1960–90: D₉₀.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-15 ⁽¹⁾
1960	:	4.3	:	:	3.3	:
1961	:	4.1	:	:	3.7	:
1962	:	4.9	:	10.5	4.6	:
1963	9.8	5.1	10.5	10.6	4.8	7.7
1964	9.5	6.1	11.1	11.1	4.7	8.0
1965	9.6	6.4	10.5	10.9	4.7	8.2
1966	9.1	6.2	10.4	10.7	4.7	8.2
1967	8.8	6.5	9.9	9.9	4.5	8.1
1968	9.0	6.3	11.8	10.4	5.1	8.7
1969	10.3	6.8	12.6	11.1	5.6	9.5
1970	10.7	6.8	13.2	11.8	6.1	10.0
1971	10.2	6.9	12.5	12.0	6.2	10.1
1972	10.3	7.6	13.2	12.0	6.0	10.4
1973	10.5	8.2	12.6	13.9	7.0	11.3
1974	10.9	8.6	14.2	15.8	8.5	12.7
1975	10.0	7.0	10.7	12.9	7.8	11.4
1976	11.0	6.3	11.7	13.1	9.2	12.6
1977	10.9	6.5	12.8	12.4	10.2	12.6
1978	11.6	7.4	13.3	12.9	10.0	12.4
1979	12.7	9.4	15.3	14.3	10.8	13.4
1980	13.1	10.1	15.5	13.9	10.6	13.3
1981	13.2	9.1	13.7	13.5	9.7	13.1
1982	13.1	10.2	12.3	14.4	9.8	13.5
1983	12.9	12.8	12.6	16.3	10.3	13.7
1984	13.8	15.5	13.3	16.5	11.5	14.5
1985	14.9	15.9	12.4	16.1	11.9	14.9
1986	14.8	15.3	12.2	15.5	10.1	13.5
1987	15.0	16.4	12.9	15.5	10.3	14.1
1988	16.1	16.8	11.8	15.9	9.5	14.2
1989	16.8	18.1	11.7	16.0	10.0	14.9
1990	17.5	18.5	11.7	15.0	10.7	14.5
1991	16.5	16.4	12.0	13.8	10.8	13.8
1992	15.9	15.3	14.4	13.6	10.6	13.4
1993	14.2	14.3	15.6	15.3	9.6	12.6
1994	14.6	15.9	16.8	16.4	11.0	13.6
1995	15.6	17.5	10.6	18.9	12.2	14.5
1996	16.0	16.4	16.8	17.7	12.3	14.6
1997	17.2	17.8	17.2	18.7	11.5	15.5
1998	18.5	17.5	18.1	19.5	10.8	15.4
1999	18.2	17.7	18.1	20.4	10.1	15.5
2000	20.1	18.3	20.1	22.2	10.5	16.9
2001	20.5	18.7	18.6	21.7	10.7	17.0
2002	20.6	18.4	18.3	22.2	10.6	17.0
2003	21.5	19.0	18.5	23.1	10.9	17.6

⁽¹⁾ 1960–90: including D₉₀.

Table 39

Extra-EU-15 exports of goods
Foreign trade statistics
(percentage of gross domestic product at market prices)

	B/L	DK	D ⁽¹⁾	EL	E	F	IRL	I	NL
1960	12.7	10.4	9.5	3.0	2.5	6.8	4.2	5.5	12.7
1961	11.6	10.0	8.9	3.1	2.1	6.1	4.5	5.5	12.1
1962	9.8	6.9	6.3	2.6	1.9	4.8	3.9	4.6	9.1
1963	9.0	7.5	6.2	3.1	1.6	4.5	4.2	4.4	8.4
1964	9.0	7.1	6.2	2.7	1.8	4.4	3.3	4.4	8.0
1965	9.5	7.0	6.4	2.5	1.7	4.4	3.1	4.7	7.8
1966	9.5	7.0	6.8	2.9	2.2	4.3	3.8	4.8	7.9
1967	9.2	6.9	7.4	3.1	2.2	4.2	4.0	5.0	7.9
1968	9.8	7.0	8.0	2.3	2.7	4.3	4.6	5.4	7.8
1969	9.4	7.1	7.8	2.5	2.8	4.2	4.7	5.5	7.7
1970	9.6	7.2	7.5	2.4	2.9	4.7	4.7	5.5	7.8
1971	9.3	7.2	7.4	2.2	3.1	4.7	6.1	5.5	7.4
1972	9.3	6.9	7.1	2.6	3.3	4.7	5.3	5.6	7.5
1973	10.3	7.0	7.8	3.0	3.2	5.0	6.1	5.5	7.7
1974	12.2	8.1	9.9	4.0	3.5	6.2	7.5	7.5	9.5
1975	10.7	7.9	9.4	4.2	3.4	6.4	6.2	7.7	9.0
1976	10.0	7.2	9.5	4.4	3.6	6.4	7.6	7.7	9.1
1977	10.9	7.8	9.8	4.4	3.9	6.8	8.4	8.5	8.8
1978	10.9	7.2	9.5	4.1	4.1	6.4	7.8	8.5	8.3
1979	11.1	7.1	9.0	4.0	4.2	6.6	7.6	8.4	8.4
1980	12.0	7.9	9.3	5.3	4.3	6.8	8.7	7.6	9.6
1981	13.8	10.2	10.9	5.1	5.5	7.7	10.2	9.4	11.3
1982	14.4	9.6	11.0	4.6	5.4	7.4	9.8	8.7	10.6
1983	15.4	10.4	10.6	4.7	5.9	7.5	11.4	8.3	10.8
1984	16.8	11.6	11.5	5.0	6.7	8.1	13.5	8.6	11.8
1985	16.5	11.4	12.2	4.8	6.5	8.0	14.0	8.8	11.6
1986	13.6	9.8	9.5	4.0	4.3	6.3	11.3	6.8	9.4
1987	12.5	9.0	10.0	3.4	3.8	5.9	11.3	6.0	8.8
1988	12.2	9.8	9.7	2.7	3.7	5.9	11.8	5.8	11.2
1989	14.0	9.7	10.2	3.5	3.5	6.3	12.4	6.3	11.7
1990	12.2	9.2	9.5	3.1	3.1	6.0	11.1	5.7	11.0
1991	12.0	9.3	8.3	3.1	2.9	6.0	11.4	5.4	11.0
1992	11.2	9.6	7.8	3.1	2.8	6.0	12.0	5.5	10.8
1993	12.9	11.2	8.0	3.9	3.8	6.1	16.7	7.3	12.1
1994	13.6	12.0	8.5	4.0	4.2	6.3	17.3	7.9	12.2
1995	16.0	11.4	8.9	3.7	4.2	6.7	18.2	9.1	12.2
1996	16.3	11.3	9.3	4.3	4.8	6.6	18.8	9.1	12.4
1997	18.8	11.0	10.8	4.4	5.7	7.5	21.6	9.3	10.9
1998	16.0	10.5	11.3	4.1	5.4	7.6	24.0	8.8	13.2
1999	16.1	10.7	11.3	4.1	5.3	7.4	26.2	8.4	11.8
2000	19.9	11.7	13.1	5.8	6.1	8.2	30.4	10.0	13.9
2001	19.5	12.2	13.9	5.6	6.1	8.2	30.7	10.1	13.6
2002	19.4	12.1	13.7	5.2	6.0	8.3	30.1	10.1	13.2
2003	20.0	12.4	14.4	5.4	6.2	8.6	30.3	10.5	13.5

⁽¹⁾ 1960–90: D₉₀.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-15 ⁽¹⁾
1960	:	6.8	:	:	11.1	:
1961	:	6.2	:	:	10.5	:
1962	:	6.1	:	6.5	8.7	:
1963	6.3	6.3	6.4	6.6	8.6	6.1
1964	6.5	6.8	5.8	6.6	8.1	5.9
1965	6.7	6.6	6.3	6.5	8.4	6.1
1966	6.6	6.5	6.1	6.5	8.5	6.2
1967	7.1	6.4	6.6	6.8	8.1	6.2
1968	7.2	6.3	7.0	6.8	9.1	6.6
1969	7.7	6.1	7.4	7.2	9.4	6.6
1970	8.3	6.1	7.5	7.7	9.5	6.8
1971	8.0	5.7	6.7	7.6	9.7	6.8
1972	7.8	5.2	7.2	7.5	9.1	6.6
1973	7.9	5.4	6.9	8.5	9.8	7.0
1974	10.0	5.6	8.5	10.6	11.2	8.5
1975	9.2	4.0	8.3	10.0	10.9	8.2
1976	9.3	3.5	8.6	9.5	11.3	8.3
1977	8.6	3.8	10.6	9.7	12.4	8.8
1978	8.5	3.9	10.9	9.9	12.2	8.6
1979	8.9	4.5	10.3	10.1	10.8	8.3
1980	8.9	5.3	11.4	9.7	10.7	8.5
1981	9.8	5.3	13.5	10.5	10.3	9.6
1982	9.7	4.9	13.1	11.1	10.2	9.4
1983	9.2	5.8	12.5	12.2	9.7	9.3
1984	10.1	7.3	12.7	12.8	10.3	10.0
1985	10.4	7.2	12.2	12.9	10.1	10.1
1986	8.7	5.0	10.7	11.5	9.0	8.2
1987	7.7	4.5	9.5	11.0	8.8	7.9
1988	8.1	4.6	8.5	10.6	7.9	7.7
1989	8.4	5.1	8.4	10.0	8.2	8.0
1990	8.3	4.5	7.7	9.1	8.0	7.5
1991	7.8	3.7	6.6	8.4	7.0	7.0
1992	7.4	3.6	7.6	8.2	7.1	6.8
1993	7.5	3.6	11.7	10.6	8.2	7.8
1994	7.9	3.9	12.8	13.2	8.5	8.3
1995	8.9	4.2	7.6	13.3	9.0	8.7
1996	9.0	4.2	15.0	13.9	9.5	9.1
1997	10.4	4.2	16.2	15.4	9.5	9.8
1998	10.3	4.0	15.3	14.9	8.2	9.7
1999	10.1	3.6	14.5	14.5	8.2	9.5
2000	11.4	4.5	17.4	15.7	9.0	10.9
2001	12.2	4.6	17.1	15.8	8.7	11.1
2002	12.6	4.5	16.5	16.3	8.1	10.9
2003	13.5	4.5	17.0	16.8	8.5	11.3

⁽¹⁾ 1960–90: including D_90.

Table 40

Imports of goods and services at current prices (national accounts)*(percentage of gross domestic product at market prices)*

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	39.3	32.8	16.5	15.8	7.0	12.4	35.1	13.2	85.0	45.2
1961	40.7	30.9	15.8	15.4	8.8	12.3	37.5	13.2	92.5	44.6
1962	41.5	31.0	16.1	16.1	10.5	11.9	36.7	13.6	91.4	43.8
1963	43.6	29.4	16.3	16.6	11.2	12.2	38.4	14.7	89.4	44.9
1964	43.8	31.1	16.5	18.1	11.5	12.8	38.6	13.1	90.8	44.9
1965	42.9	30.1	17.8	18.5	13.3	12.3	41.3	12.5	92.1	42.9
1966	45.3	29.4	17.5	17.0	13.7	12.9	40.7	13.4	86.6	42.4
1967	43.1	28.6	16.8	16.5	12.0	12.8	38.5	13.9	81.4	40.8
1968	45.3	28.2	17.7	17.0	12.7	13.1	42.6	13.6	81.2	40.4
1969	48.7	28.8	18.9	16.9	13.3	14.6	43.6	14.9	80.4	42.1
1970	49.2	30.1	19.1	16.5	13.5	15.3	42.4	16.0	87.3	45.9
1961-70	44.4	29.8	17.3	16.9	12.0	13.0	40.0	13.9	87.3	43.3
1971	48.1	28.7	19.0	16.5	12.7	15.4	40.9	15.9	97.3	44.6
1972	47.3	25.9	18.6	17.6	13.6	15.7	37.6	16.7	88.5	41.5
1973	53.1	29.7	18.9	21.9	14.6	16.7	42.2	19.2	88.3	43.2
1974	60.3	33.8	22.0	23.2	18.2	21.7	53.9	24.1	93.8	50.2
1975	52.5	30.1	21.8	23.1	16.4	17.9	45.9	20.4	101.6	45.6
1976	55.6	32.6	23.4	22.8	17.2	20.3	51.1	23.0	94.8	47.0
1977	55.5	31.6	23.1	22.6	15.7	20.4	55.2	22.2	95.4	46.0
1978	53.6	29.2	22.3	21.3	13.6	19.1	56.4	21.3	94.9	44.7
1979	59.5	31.7	24.4	22.3	13.9	20.6	62.2	23.2	100.1	49.3
1980	60.4	33.3	26.9	27.7	17.2	22.8	59.3	24.5	102.8	52.5
1971-80	54.6	30.7	22.0	21.9	15.3	19.1	50.5	21.1	95.7	46.5
1981	64.0	35.3	27.9	28.2	19.0	23.8	58.9	25.2	103.2	54.1
1982	68.2	35.4	27.5	27.1	19.4	24.0	52.1	23.9	104.5	52.5
1983	68.4	33.9	26.7	27.2	20.6	22.8	51.9	21.2	103.8	52.5
1984	72.8	35.2	28.2	26.5	20.1	23.9	56.2	22.8	114.5	55.7
1985	70.1	36.1	29.0	26.7	19.9	23.9	54.8	23.0	119.2	57.2
1986	62.8	32.5	25.0	27.5	17.0	20.6	49.4	18.5	109.0	48.0
1987	61.6	29.5	23.9	26.7	18.5	20.7	49.7	18.7	111.1	48.1
1988	64.9	30.3	24.3	25.7	19.3	21.2	51.4	18.7	113.0	49.4
1989	69.5	32.0	26.1	27.4	20.6	22.6	55.5	19.9	111.8	52.6
1990	67.8	30.8	26.3	28.0	19.7	22.2	52.4	19.7	113.2	50.6
1981-90	67.0	33.1	26.5	27.1	19.4	22.6	53.2	21.1	110.3	52.1
1991	66.2	31.3	27.8	27.0	19.6	22.0	52.9	18.6	115.9	50.6
1991	66.2	31.3	26.5	27.0	19.6	22.0	52.9	18.6	115.9	50.6
1992	63.7	29.9	24.8	26.5	19.7	21.0	53.2	19.1	104.8	48.7
1993	60.4	28.6	22.6	25.4	19.1	19.2	55.4	19.0	99.9	46.8
1994	63.0	30.1	23.3	24.0	21.2	20.1	60.9	20.4	96.7	48.8
1995	64.7	31.3	23.8	24.9	22.8	21.1	64.9	23.0	96.8	51.5
1996	66.5	30.8	24.3	25.5	23.4	21.4	65.9	20.9	100.0	52.2
1997	70.2	32.9	26.5	27.0	25.7	22.5	67.1	22.3	103.8	55.2
1998	71.0	33.4	27.6	28.9	27.2	23.5	75.2	23.0	108.4	55.5
1999	71.3	32.7	28.9	28.6	28.8	23.6	74.8	23.5	120.1	56.3
2000	83.0	37.1	33.3	33.7	32.2	27.2	80.7	27.2	127.5	62.4
1991-2000	68.0	31.8	26.2	27.1	24.0	22.2	65.1	21.7	107.4	52.8
2001	82.1	37.3	33.8	33.9	32.3	27.2	79.9	27.6	126.7	60.0
2002	81.6	36.7	33.9	33.3	32.2	27.2	78.9	27.9	122.5	57.8
2003	84.2	37.7	35.5	33.9	33.5	28.4	79.6	29.2	124.2	58.9

⁽¹⁾ 1960-91: D_90.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	24.4	20.3	22.6	23.3	21.4	17.7	19.1	4.4	10.1
1961	23.1	23.8	21.7	21.5	20.1	17.5	18.5	4.2	10.7
1962	22.9	20.1	21.8	21.2	19.5	17.5	18.3	4.3	9.1
1963	23.5	20.8	19.7	21.3	19.7	17.9	18.6	4.3	9.7
1964	24.2	25.6	21.5	21.7	20.4	18.1	19.0	4.3	9.5
1965	25.1	27.0	21.4	22.3	19.3	18.3	18.9	4.4	9.0
1966	25.8	26.6	21.0	21.7	18.9	18.6	19.0	4.8	8.9
1967	25.2	25.3	20.1	20.8	19.5	18.0	18.7	4.9	9.3
1968	25.3	25.5	20.6	21.4	21.4	18.6	19.4	5.2	8.9
1969	26.5	24.5	22.6	22.8	21.1	19.9	20.4	5.2	8.8
1970	29.4	26.5	26.2	24.3	21.5	20.9	21.3	5.4	9.4
1961–70	25.1	24.6	21.7	21.9	20.1	18.5	19.2	4.7	9.3
1971	29.2	27.5	25.5	22.9	21.0	20.7	21.0	5.6	8.9
1972	29.3	27.4	24.8	22.4	21.2	20.7	20.9	6.1	8.2
1973	29.4	28.9	25.6	24.3	25.5	22.0	22.8	6.7	9.9
1974	32.6	36.2	30.3	32.5	32.2	26.7	27.8	8.6	14.2
1975	30.5	28.1	29.0	28.0	27.1	24.0	24.7	7.6	12.6
1976	33.3	26.4	26.5	28.9	29.1	26.0	26.7	8.4	12.6
1977	33.9	28.7	26.3	28.7	29.0	25.8	26.4	9.1	11.3
1978	32.3	27.9	25.7	26.8	26.9	24.6	25.1	9.3	9.3
1979	35.0	32.5	29.5	31.0	27.4	26.6	27.0	9.9	12.3
1980	37.9	36.0	33.3	31.3	24.9	28.8	28.4	10.6	14.4
1971–80	32.3	30.0	27.7	27.7	26.4	24.6	25.1	8.2	11.4
1981	38.7	38.8	31.5	30.1	23.8	29.8	28.9	10.2	13.8
1982	35.0	38.6	29.7	32.7	24.4	29.3	28.7	9.4	13.6
1983	34.6	37.8	29.7	33.4	25.6	28.3	28.2	9.4	12.0
1984	37.7	38.7	28.1	32.6	28.6	29.6	29.7	10.4	12.1
1985	39.4	35.5	28.3	33.5	27.8	29.9	29.8	10.0	10.8
1986	35.0	30.8	25.1	29.6	26.5	25.6	26.0	10.3	7.3
1987	34.6	35.4	25.1	30.5	26.6	25.5	25.9	10.8	7.2
1988	37.2	39.1	24.9	30.6	26.6	26.0	26.4	10.9	7.6
1989	38.7	38.9	25.6	31.4	27.8	27.6	27.9	10.8	8.8
1990	38.4	39.5	24.4	29.5	26.6	27.2	27.2	10.9	9.4
1981–90	36.9	37.3	27.2	31.4	26.4	27.9	27.9	10.3	10.3
1991	38.4	37.2	22.9	26.3	24.2	27.2	26.8	10.5	8.3
1991	38.4	37.2	22.9	26.3	24.2	26.8	26.5	10.5	8.3
1992	36.8	35.0	25.4	26.1	24.8	26.0	25.9	10.6	7.7
1993	35.5	33.6	27.6	29.1	26.5	24.9	25.3	10.9	6.9
1994	36.9	35.2	29.2	31.8	27.2	26.1	26.5	11.6	7.0
1995	37.6	36.4	29.1	33.6	28.8	27.6	28.0	12.3	7.7
1996	39.0	36.3	30.0	32.4	29.8	27.6	28.1	12.4	9.2
1997	43.4	38.0	30.9	35.4	28.5	29.7	29.7	12.8	9.6
1998	44.1	39.6	30.0	37.4	27.7	30.7	30.5	12.8	8.8
1999	46.4	40.0	29.4	37.6	28.0	31.7	31.2	13.5	8.4
2000	51.1	43.2	33.3	41.8	29.8	36.3	35.3	15.0	9.4
1991–2000	40.9	37.5	28.8	33.2	27.5	28.7	28.7	12.2	8.3
2001	53.0	43.0	31.8	42.7	29.9	36.4	35.4	13.5	10.0
2002	53.7	42.1	32.1	44.6	29.7	36.4	35.4	12.5	9.8
2003	57.1	42.9	32.6	46.2	30.5	37.9	36.7	12.8	10.3

⁽¹⁾ EU-15 excluding DK, S and UK; 1960–91: including D_90.⁽²⁾ 1960–91: including D_90.

Table 41

Imports of goods and services at 1995 prices

(national currency; annual percentage change)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1961	7.2	4.4	7.7	12.8	40.1	6.9	13.7	13.7	7.3	6.4
1962	8.2	13.4	11.1	10.6	34.4	6.7	5.4	14.9	3.2	6.5
1963	8.6	-1.1	4.9	16.5	23.5	14.1	10.6	22.5	3.1	9.8
1964	8.9	19.6	9.3	19.2	13.0	15.1	12.9	-6.1	13.6	14.9
1965	6.6	6.9	14.2	16.8	32.9	2.2	11.0	2.0	4.5	6.1
1966	9.9	5.4	2.7	1.3	19.4	10.6	3.5	14.0	-2.5	7.0
1967	1.6	5.6	-1.3	5.4	-3.3	8.3	3.7	13.5	-4.8	6.3
1968	11.7	3.8	13.2	11.2	8.1	12.9	15.7	5.9	9.1	13.0
1969	15.5	12.3	17.0	14.1	16.0	19.5	13.4	19.3	11.2	14.1
1970	7.0	6.8	22.7	6.4	7.5	6.3	8.6	16.0	19.0	15.0
1961-70	8.5	7.6	9.9	11.3	18.5	10.2	9.8	11.3	6.1	9.9
1971	3.6	0.8	9.0	7.6	0.7	6.3	4.7	2.9	8.0	5.6
1972	9.6	0.3	5.8	13.9	24.3	13.2	5.1	9.8	2.7	5.0
1973	18.6	16.8	4.9	35.1	16.7	14.2	19.0	8.8	11.3	11.1
1974	4.4	-4.9	0.4	-15.4	8.0	1.9	-2.3	3.8	5.9	-0.6
1975	-9.1	-3.3	1.3	1.3	-0.9	-9.7	-10.2	-11.9	-9.0	-4.1
1976	12.4	17.6	10.5	9.9	9.8	17.4	14.7	10.3	1.2	10.3
1977	4.8	-0.4	3.4	10.2	-5.5	0.1	13.3	2.0	-0.4	3.3
1978	2.7	-0.7	5.5	4.0	-1.0	3.0	15.7	5.9	7.0	6.2
1979	9.0	6.2	9.2	9.4	11.4	10.0	13.9	11.1	6.4	5.9
1980	-2.8	-5.6	3.6	10.0	3.3	4.6	-4.5	5.5	3.9	0.3
1971-80	5.0	2.4	5.3	8.0	6.3	5.8	6.5	4.6	3.5	4.2
1981	-1.9	-0.2	-3.1	5.7	-3.6	-1.9	1.7	-1.6	-2.9	-5.9
1982	1.3	4.7	-1.1	-2.6	4.9	2.0	-3.1	0.5	-0.3	-0.5
1983	-1.2	1.0	1.4	2.7	-1.2	-3.4	4.7	-2.4	1.2	3.9
1984	6.4	5.7	5.2	-2.2	-1.3	3.5	9.9	12.4	13.9	5.1
1985	0.4	9.7	4.5	4.3	7.5	4.2	3.2	5.3	7.0	6.3
1986	4.5	9.5	2.7	14.4	17.2	6.5	6.3	4.0	3.8	3.5
1987	6.7	-3.1	4.2	2.5	24.8	7.7	6.2	12.2	7.5	4.2
1988	10.4	8.3	5.1	6.7	16.1	8.8	4.9	5.9	8.2	6.9
1989	9.6	4.1	8.3	10.7	17.7	8.0	13.5	8.9	6.6	8.2
1990	4.8	1.2	10.3	8.7	9.6	5.5	5.1	11.5	4.5	3.6
1981-90	4.0	4.0	3.7	5.0	8.8	4.0	5.1	5.5	4.9	3.5
1991	2.9	3.0	13.1	6.0	10.3	3.1	2.4	2.3	9.0	5.1
1992	4.1	-0.4	1.5	1.3	6.8	1.8	8.2	7.4	-0.8	1.4
1993	-0.4	-2.7	-5.5	0.2	-5.2	-3.7	7.5	-10.9	2.8	0.7
1994	7.3	12.3	7.4	1.3	11.4	8.2	15.5	8.1	-0.1	9.4
1995	4.9	7.3	5.6	9.2	11.1	8.0	16.4	9.7	3.8	10.6
1996	2.5	3.5	3.1	7.0	8.0	1.6	12.5	-0.3	6.1	4.4
1997	5.1	10.0	8.3	13.9	13.2	6.9	16.8	10.1	11.7	9.5
1998	7.5	7.4	8.9	11.3	13.3	11.6	25.8	9.0	11.4	8.5
1999	4.1	2.2	8.5	3.9	12.8	4.7	11.9	5.1	15.9	6.3
2000	9.7	10.8	10.0	15.0	9.8	14.2	16.6	8.3	12.3	9.4
1991-2000	4.7	5.2	6.0	6.8	9.0	5.5	13.2	4.7	7.1	6.5
2001	1.0	2.5	2.0	5.6	5.0	2.3	8.5	3.8	4.7	2.2
2002	2.0	2.8	2.1	4.1	3.8	3.2	6.0	3.9	2.5	1.0
2003	5.6	5.5	6.3	6.8	7.4	6.8	8.1	7.2	7.7	4.8

⁽¹⁾ 1961-91; D_90.

(national currency; annual percentage change)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1961	2.8	24.9	8.1	0.2	-0.7	9.6	6.5	-0.6	26.4
1962	4.7	-8.7	5.6	5.7	2.1	10.1	8.2	11.4	-1.2
1963	9.6	10.4	-2.8	7.1	4.2	11.5	9.3	2.7	19.6
1964	10.9	30.8	20.6	9.7	10.7	9.5	10.0	5.3	13.6
1965	10.6	14.3	8.3	11.3	1.0	9.4	7.6	10.6	5.6
1966	10.4	8.1	3.5	4.3	2.5	8.2	6.8	14.9	12.2
1967	2.3	8.9	-0.3	2.5	7.0	4.0	4.6	7.3	22.7
1968	7.2	14.6	-3.9	8.3	7.5	10.9	9.9	14.9	12.1
1969	9.0	4.3	22.3	12.9	3.4	16.5	13.5	5.7	13.7
1970	17.0	9.9	20.3	10.4	4.8	14.4	12.2	4.3	22.6
1961-70	8.3	11.3	7.8	7.2	4.2	10.4	8.8	7.5	14.5
1971	6.3	14.6	-0.2	-3.3	5.4	5.8	5.3	5.3	7.0
1972	12.1	12.1	5.0	4.0	9.9	9.6	9.2	11.2	10.5
1973	9.6	12.7	12.8	6.9	11.2	11.4	11.3	4.6	24.3
1974	6.9	4.6	6.5	9.9	1.0	2.2	2.0	-2.3	4.2
1975	-4.6	-24.2	2.5	-3.5	-6.6	-6.1	-6.0	-11.1	-10.3
1976	17.4	5.2	-0.9	9.0	5.2	11.6	10.4	19.6	6.7
1977	6.2	10.8	-1.3	-3.8	1.9	2.5	2.1	10.9	4.1
1978	0.1	0.2	-3.2	-5.5	3.7	4.2	3.7	8.7	6.9
1979	11.7	12.6	17.8	11.6	9.6	9.8	9.8	1.6	12.9
1980	6.2	6.9	9.0	0.4	-3.5	3.4	1.9	-6.6	-7.8
1971-80	7.0	4.9	4.6	2.4	3.6	5.3	4.9	3.8	5.4
1981	-0.8	2.3	-3.5	-5.4	-2.8	-2.3	-2.4	2.6	0.4
1982	-4.7	3.9	1.6	3.0	4.9	0.4	1.2	-1.3	-2.5
1983	5.7	-6.1	3.9	0.8	6.6	-0.3	0.7	12.6	-3.1
1984	10.0	-4.4	1.9	5.3	9.9	5.5	6.1	24.4	10.5
1985	6.2	1.4	6.2	6.9	2.5	4.6	4.4	6.4	-2.5
1986	-2.9	16.9	1.5	4.5	6.9	5.3	5.6	8.4	3.2
1987	5.4	23.1	9.2	7.7	7.9	8.4	8.0	6.1	11.3
1988	10.4	18.0	10.9	5.3	12.8	8.2	8.9	3.8	19.5
1989	8.0	5.9	9.0	7.4	7.4	9.3	8.8	4.0	15.7
1990	6.9	14.5	-0.8	0.7	0.5	7.9	6.3	3.8	7.0
1981-90	4.3	7.1	3.9	3.6	5.6	4.6	4.7	6.9	5.7
1991	5.8	7.2	-13.5	-4.9	-4.5	6.3	4.2	-0.5	-1.1
1992	1.4	10.7	0.6	1.1	6.8	3.4	3.7	6.6	-0.7
1993	-1.1	-3.3	1.3	-2.5	3.3	-4.1	-2.9	9.1	-1.4
1994	8.2	8.8	12.8	12.2	5.7	8.3	8.0	12.0	7.7
1995	5.6	7.4	7.8	7.2	5.4	7.9	7.5	8.2	12.8
1996	4.9	5.0	6.4	3.0	9.6	3.3	4.3	8.6	13.2
1997	12.0	10.0	11.3	12.5	9.7	9.3	9.4	13.7	1.2
1998	5.9	14.2	8.5	11.2	9.6	10.1	10.0	11.8	-6.8
1999	8.8	8.7	4.0	4.4	8.9	7.2	7.3	10.5	3.0
2000	11.1	6.0	15.7	11.5	10.7	10.6	10.7	13.4	9.9
1991-2000	6.2	7.4	5.2	5.4	6.4	6.2	6.1	9.3	3.6
2001	4.4	2.7	-2.2	-1.1	3.7	2.9	2.9	-3.0	-0.6
2002	3.3	1.9	3.0	3.7	2.7	2.8	2.8	-3.0	-2.1
2003	7.6	4.1	4.4	6.5	6.1	6.5	6.4	5.0	4.3

⁽¹⁾ PPS weighted; EU-15 excluding DK, S and UK; 1961-91: including D_90.⁽²⁾ PPS weighted; 1961-91: including D_90.

Table 42

Intra-EU-15 imports of goods
Foreign trade statistics
(percentage of gross domestic product at market prices)

	B/L	DK	D ⁽¹⁾	EL	E	F	IRL	I	NL
1960	19.2	16.1	5.6	8.4	2.1	3.5	20.9	4.4	20.0
1961	20.3	15.1	5.5	8.3	2.8	3.8	23.2	4.5	22.0
1962	22.1	18.8	6.8	9.9	4.4	4.4	24.0	5.6	23.5
1963	23.6	17.4	6.8	9.4	5.1	4.8	25.3	6.3	24.5
1964	24.6	18.7	7.2	9.3	5.5	5.2	25.3	5.3	24.8
1965	24.6	18.0	8.2	9.9	6.4	5.0	25.2	4.7	23.8
1966	26.2	17.5	7.9	9.7	6.6	5.6	23.7	5.2	23.4
1967	24.4	16.6	7.5	9.1	5.6	5.6	22.6	5.6	22.1
1968	26.2	16.6	8.4	9.6	5.3	6.2	25.9	5.5	22.3
1969	29.2	17.7	9.4	9.1	5.5	7.4	27.5	6.4	23.8
1970	29.8	18.6	9.3	9.8	5.3	7.6	27.8	7.1	25.5
1971	31.9	17.0	9.5	9.4	5.0	7.7	26.5	7.0	23.5
1972	32.1	15.3	9.5	9.5	5.6	8.1	25.6	7.6	22.6
1973	34.5	17.8	9.5	10.0	6.0	8.6	29.7	9.1	23.1
1974	36.6	19.2	10.0	9.6	6.5	9.8	36.8	10.4	25.0
1975	33.5	17.5	10.2	10.7	5.5	8.4	30.3	8.5	22.7
1976	35.9	19.4	11.1	10.7	5.5	9.7	33.7	10.0	23.3
1977	35.1	18.3	11.0	10.7	5.1	9.7	35.7	9.5	23.0
1978	35.1	17.4	10.9	9.9	4.5	9.5	37.3	9.6	22.9
1979	37.4	18.7	11.9	9.9	4.8	10.0	42.1	10.6	25.0
1980	37.4	19.0	12.6	9.6	5.1	10.3	39.6	11.0	25.0
1981	38.3	19.0	13.2	10.5	5.2	10.3	39.6	10.1	25.1
1982	41.9	19.3	13.2	10.8	5.7	11.0	34.5	10.0	25.4
1983	44.6	18.7	13.4	11.6	6.3	11.0	32.6	9.2	25.6
1984	46.9	19.4	14.0	12.0	6.4	11.6	34.2	9.9	27.7
1985	46.7	19.8	14.6	12.6	6.8	11.8	33.3	10.7	30.1
1986	42.8	18.3	12.8	14.3	7.9	10.9	29.2	9.9	27.6
1987	41.8	16.5	12.4	14.8	9.3	11.2	28.2	10.0	27.6
1988	42.8	16.0	12.5	12.4	10.2	11.5	29.5	10.2	28.1
1989	44.5	16.2	13.4	15.7	11.0	12.3	31.5	10.7	29.1
1990	44.0	15.9	13.6	15.9	10.8	12.0	30.3	10.1	28.6
1991	43.2	16.0	13.0	15.2	10.7	11.5	29.6	9.7	28.1
1992	39.9	15.4	12.0	15.6	10.5	11.1	28.9	9.6	27.1
1993	37.0	14.1	9.8	14.8	10.0	9.7	25.4	8.8	21.7
1994	37.8	14.7	10.1	14.5	11.7	10.5	27.2	9.9	23.1
1995	39.1	15.9	10.7	15.4	12.6	11.2	27.3	11.2	23.4
1996	41.1	15.2	10.8	15.2	13.4	11.2	27.6	10.3	23.0
1997	42.8	17.9	11.6	14.6	14.5	11.6	27.5	10.8	25.3
1998	43.7	18.4	11.7	16.3	15.5	12.3	27.6	11.1	21.7
1999	44.9	17.9	11.6	13.6	16.5	12.3	26.4	11.4	22.5
2000	50.2	19.5	13.0	13.9	17.2	14.8	28.5	12.3	23.8
2001	49.6	19.3	13.6	13.9	17.0	14.7	27.4	12.5	22.7
2002	49.2	19.6	13.7	14.0	17.0	14.8	27.0	12.8	21.7
2003	50.5	20.0	14.3	14.0	17.6	15.4	27.3	13.2	22.1

⁽¹⁾ 1960–90: D_90.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-15 ⁽¹⁾
1960	:	9.5	:	:	3.9	:
1961	:	11.6	:	:	3.9	:
1962	:	9.9	:	11.6	4.8	:
1963	13.7	9.6	10.5	11.5	4.8	7.9
1964	14.1	10.3	11.5	11.7	5.2	8.2
1965	14.7	11.5	12.0	12.1	5.1	8.3
1966	15.0	12.0	11.4	11.6	5.3	8.5
1967	14.2	11.1	10.9	10.9	5.7	8.3
1968	14.0	11.0	10.9	11.1	6.5	8.9
1969	14.5	11.5	12.5	12.1	6.2	9.7
1970	16.2	12.5	14.7	12.9	6.2	10.1
1971	16.5	12.4	14.3	11.9	6.4	10.1
1972	16.9	12.2	13.9	11.6	7.1	10.4
1973	17.2	12.8	13.7	12.7	9.1	11.3
1974	17.3	15.1	15.6	16.5	11.6	12.7
1975	16.0	10.6	14.8	14.7	10.3	11.6
1976	18.4	11.9	12.8	14.1	11.2	12.6
1977	19.5	13.2	11.8	14.0	11.6	12.6
1978	18.1	13.4	11.7	13.0	11.8	12.4
1979	19.2	13.6	13.3	15.4	12.6	13.3
1980	20.0	15.1	14.3	15.2	10.6	13.2
1981	18.9	16.5	12.7	14.1	10.1	13.1
1982	18.2	17.3	12.4	15.5	10.7	13.4
1983	18.3	15.8	12.2	16.5	11.6	13.6
1984	19.0	15.7	12.1	16.4	12.9	14.4
1985	19.9	15.0	12.4	17.3	12.9	14.8
1986	19.4	16.5	12.4	15.4	13.0	13.9
1987	19.2	20.5	13.0	15.9	13.1	14.0
1988	20.1	24.6	11.4	15.6	13.2	14.1
1989	21.3	24.6	12.6	15.6	13.7	14.9
1990	21.9	25.6	11.9	14.4	13.0	14.6
1991	21.0	24.3	10.4	12.7	11.4	13.8
1992	20.0	23.9	11.5	12.2	11.7	13.4
1993	18.1	21.0	11.9	13.9	10.5	11.9
1994	18.9	21.9	12.7	15.5	11.8	12.9
1995	20.2	23.2	7.9	17.8	12.7	13.7
1996	20.6	23.0	14.2	16.9	12.8	13.8
1997	21.6	24.6	14.5	18.0	12.1	14.4
1998	22.3	25.3	14.5	18.3	11.6	14.5
1999	22.1	27.0	13.7	19.4	11.1	14.6
2000	24.1	28.1	14.6	21.9	11.2	15.9
2001	24.7	28.2	13.7	22.0	11.4	16.1
2002	24.8	27.5	13.8	23.0	11.4	16.1
2003	26.1	28.0	14.0	23.9	11.5	16.6

⁽¹⁾ 1960–90: including D_90.

Table 43

Extra-EU-15 imports of goods
Foreign trade statistics
(percentage of gross domestic product at market prices)

	B/L	DK	D ⁽¹⁾	EL	E	F	IRL	I	NL
1960	14.7	13.4	8.5	10.2	3.9	6.5	11.8	7.5	16.9
1961	13.8	12.4	7.9	8.2	5.2	6.1	12.0	7.4	16.0
1962	12.3	9.1	6.8	5.6	5.5	5.5	10.0	6.6	13.1
1963	12.3	8.7	6.8	6.3	5.3	5.4	10.1	7.0	13.1
1964	12.6	9.4	6.7	6.0	5.2	5.5	10.0	6.3	12.9
1965	12.1	9.0	7.0	7.0	5.9	5.1	10.3	6.3	12.0
1966	12.4	8.7	6.9	6.7	6.0	5.1	10.1	6.6	11.9
1967	11.7	8.5	6.5	5.7	5.4	4.8	9.8	6.5	11.4
1968	12.9	8.2	6.7	6.3	6.0	4.6	10.0	6.3	11.3
1969	13.0	8.1	7.0	6.7	6.3	4.8	10.0	6.6	11.3
1970	13.3	8.3	6.8	7.4	6.7	5.3	9.1	6.8	12.6
1971	11.4	8.1	6.5	7.1	6.0	5.1	10.6	6.4	12.7
1972	10.5	7.1	5.9	6.5	6.3	5.1	8.7	6.4	11.6
1973	11.8	8.2	6.3	8.2	6.6	5.5	8.9	7.7	12.5
1974	15.5	10.3	8.0	10.2	9.8	8.6	13.0	11.6	15.8
1975	13.2	9.1	7.6	11.0	8.9	6.9	10.7	9.2	14.8
1976	14.4	9.5	8.7	11.8	9.8	7.8	12.1	10.4	16.1
1977	14.3	9.3	8.5	11.2	8.8	7.8	13.8	9.9	15.7
1978	13.4	8.0	7.9	10.0	7.6	6.9	12.8	9.1	14.0
1979	15.3	8.4	8.9	10.4	7.5	7.8	13.4	10.1	15.8
1980	18.8	9.2	10.3	11.9	10.2	9.4	13.1	10.8	18.1
1981	21.0	10.5	10.8	8.9	11.4	10.0	13.1	12.2	19.2
1982	21.0	9.8	10.5	10.5	11.2	9.5	12.1	11.4	17.8
1983	17.7	9.1	9.9	10.7	11.7	8.5	12.9	10.1	18.2
1984	19.2	9.9	10.8	11.2	11.2	8.7	15.2	10.4	19.7
1985	17.5	10.0	10.8	12.2	10.7	8.3	15.0	10.5	18.6
1986	13.8	8.5	8.6	8.9	6.9	6.4	12.4	7.0	13.1
1987	13.3	7.5	8.1	8.2	6.8	6.3	13.1	6.5	12.9
1988	13.2	7.8	8.5	6.3	6.7	6.6	13.2	6.3	13.4
1989	15.0	8.5	9.4	8.0	7.1	7.1	14.6	6.8	14.8
1990	13.3	7.7	9.1	7.6	6.4	7.1	13.4	6.2	14.1
1991	13.3	7.9	8.9	8.6	6.3	7.3	13.8	6.0	13.5
1992	12.1	7.4	8.1	7.9	6.0	6.6	12.9	5.7	13.0
1993	11.6	7.9	7.7	8.7	6.0	6.1	18.0	6.0	13.9
1994	12.6	8.6	8.1	6.9	6.6	6.3	19.7	6.5	14.2
1995	12.9	8.1	8.2	6.6	6.8	6.4	21.3	7.3	14.7
1996	13.7	8.4	8.4	7.7	6.8	6.5	21.3	6.6	16.1
1997	17.8	7.6	9.5	7.6	7.6	7.4	21.4	7.0	17.7
1998	17.9	7.7	10.2	8.6	7.3	7.4	23.7	6.9	18.1
1999	18.1	7.2	10.5	7.6	8.0	7.7	22.4	7.2	19.6
2000	22.1	7.9	12.9	7.9	10.0	8.9	24.4	9.6	23.7
2001	21.8	7.4	12.5	7.9	10.0	8.8	24.0	9.6	22.6
2002	21.7	7.3	12.4	7.9	9.7	8.8	23.5	9.5	21.7
2003	22.2	7.5	13.1	7.8	10.2	9.2	23.6	10.1	22.1

⁽¹⁾ 1960–90: D₉₀.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-15 ⁽¹⁾
1960	:	8.9	:	:	13.7	:
1961	:	9.0	:	:	12.3	:
1962	:	7.4	:	6.5	11.0	:
1963	6.6	8.3	7.2	6.7	11.0	7.8
1964	6.6	9.2	8.1	6.8	11.4	7.8
1965	6.7	9.3	7.4	7.0	10.9	7.7
1966	6.8	9.0	7.5	6.8	10.4	7.6
1967	6.1	8.3	7.4	6.4	10.4	7.3
1968	6.4	8.5	7.4	6.8	11.7	7.5
1969	6.7	8.1	7.9	6.8	11.5	7.7
1970	7.5	9.1	9.1	7.2	11.3	7.9
1971	7.6	9.4	8.5	6.7	10.6	7.5
1972	7.4	9.7	8.3	6.4	10.2	7.1
1973	7.6	9.7	8.4	6.8	12.3	7.9
1974	9.0	13.5	12.6	9.6	16.0	10.8
1975	8.0	11.2	11.6	9.0	12.4	9.3
1976	9.1	11.3	10.9	9.3	13.6	10.2
1977	8.8	12.2	11.4	9.3	13.4	10.0
1978	8.3	11.1	10.5	8.4	12.5	9.2
1979	9.0	13.3	12.8	9.9	11.9	9.9
1980	10.6	16.0	15.4	10.5	11.3	11.2
1981	11.6	17.7	14.9	10.1	9.9	11.6
1982	10.2	17.4	13.4	10.7	9.8	11.2
1983	9.5	17.6	13.6	10.6	10.2	10.6
1984	10.7	19.2	11.8	10.0	11.6	11.2
1985	11.0	16.1	11.7	9.9	10.9	10.9
1986	8.6	10.2	9.1	8.1	9.6	8.4
1987	8.0	10.3	9.3	8.4	9.3	8.1
1988	8.4	10.4	8.3	8.7	9.5	8.2
1989	8.9	10.0	8.7	9.2	10.0	8.9
1990	8.9	9.9	7.9	8.4	9.6	8.4
1991	8.9	8.2	7.3	7.4	8.8	8.2
1992	8.4	7.3	8.0	7.2	8.9	7.7
1993	8.0	7.2	9.0	8.3	9.9	7.9
1994	8.7	7.9	10.5	9.4	9.7	8.3
1995	8.0	7.9	6.0	7.9	10.4	8.5
1996	8.5	7.4	10.0	7.6	11.1	8.7
1997	9.3	7.6	10.7	8.4	10.9	9.5
1998	9.4	7.5	10.5	8.5	10.3	9.7
1999	9.3	7.6	10.9	8.8	10.5	10.0
2000	10.5	9.3	13.4	9.8	12.0	12.0
2001	11.1	9.2	12.8	9.6	11.9	11.8
2002	11.4	9.0	12.7	9.7	11.7	11.7
2003	12.3	9.2	13.0	10.1	12.3	12.2

⁽¹⁾ 1960–90: including D₉₀.

Table 44

Balance on current transactions with the rest of the world (national accounts)*(percentage of gross domestic product at market prices)*

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	0.2	-1.1	1.6	-0.4	3.8	1.5	-0.1	0.8	12.5	3.0
1961	0.2	-1.7	1.0	-0.1	1.9	1.1	0.2	1.2	6.5	1.4
1962	0.9	-3.2	-0.1	-1.3	-0.1	1.0	-1.8	0.6	0.6	1.0
1963	-0.2	0.1	0.2	-1.2	-1.5	0.3	-2.8	-1.4	0.2	0.7
1964	0.5	-2.2	0.2	-4.0	-1.3	-0.3	-3.5	1.1	-0.1	-1.1
1965	1.0	-1.8	-1.3	-4.6	-3.8	1.2	-4.4	3.6	0.7	0.1
1966	0.2	-1.6	0.2	-1.4	-3.8	0.5	-1.6	3.2	1.7	-1.0
1967	1.3	-2.2	2.2	-1.6	-2.5	0.6	1.4	2.2	7.4	-0.3
1968	1.4	-1.4	2.3	-2.9	-1.1	0.3	-1.3	3.3	9.7	0.3
1969	1.7	-2.6	1.4	-3.2	-0.9	-0.4	-4.8	2.7	14.0	0.4
1970	2.8	-3.6	0.6	-2.3	0.2	0.8	-4.0	0.8	15.5	-1.3
1961-70	1.0	-2.0	0.7	-2.3	-1.3	0.5	-2.3	1.7	5.6	0.0
1971	2.3	-2.3	0.4	-0.9	2.2	0.9	-3.8	1.4	6.6	0.0
1972	3.6	-0.2	0.6	-0.7	1.5	1.0	-2.2	1.5	10.6	3.0
1973	2.1	-2.1	1.5	-2.1	0.9	0.6	-3.5	-1.7	16.5	3.8
1974	0.5	-3.3	2.7	-0.5	-3.5	-1.3	-9.9	-4.4	26.5	3.3
1975	-0.1	-1.6	1.2	-0.5	-2.9	0.8	-1.5	-0.3	17.0	2.8
1976	0.2	-4.9	0.8	-0.5	-3.9	-0.9	-5.3	-1.3	21.6	3.1
1977	-1.2	-3.8	0.8	-0.4	-1.7	-0.1	-5.4	1.0	21.7	0.8
1978	-1.3	-2.2	1.4	-0.2	1.0	-0.5	-6.8	2.1	19.7	-0.7
1979	-3.0	-4.6	-0.5	0.8	0.5	-1.3	-13.3	1.6	21.7	-1.1
1980	-3.8	-3.6	-1.7	0.6	-2.3	-2.7	-11.7	-2.3	19.0	-1.3
1971-80	-0.1	-2.9	0.7	-0.4	-0.8	-0.4	-6.3	-0.2	18.1	1.4
1981	-3.2	-2.8	-0.6	1.7	-2.6	-3.0	-14.6	-2.4	21.3	2.2
1982	-3.2	-4.2	0.8	-1.8	-2.5	-4.1	-10.5	-1.8	34.4	3.2
1983	-0.9	-2.6	0.9	-2.8	-1.7	-2.5	-6.8	0.2	39.5	3.1
1984	-0.6	-3.4	1.4	-2.5	1.2	-2.1	-5.8	-0.7	39.1	4.1
1985	-0.1	-4.5	2.4	-4.5	1.4	-2.0	-3.8	-1.0	37.2	4.1
1986	1.6	-5.4	4.3	-3.6	1.6	-1.2	-3.3	0.4	33.6	3.0
1987	1.3	-2.9	4.1	-0.8	0.1	-1.6	-0.2	-0.3	26.9	2.3
1988	1.6	-1.4	4.3	-1.8	-1.0	-1.8	0.6	-0.8	25.6	3.3
1989	0.7	-1.6	4.8	-4.3	-3.1	-1.8	-1.1	-1.4	26.6	3.2
1990	0.9	0.4	3.5	-4.7	-3.6	-1.9	-1.8	-1.6	27.6	2.5
1981-90	-0.2	-2.8	2.6	-2.5	-1.0	-2.2	-4.7	-0.9	31.2	3.1
1991	1.3	0.9	0.7	-3.8	-3.5	-1.5	-0.4	-2.1	25.2	2.6
1991	1.3	0.9	-1.0	-3.8	-3.5	-1.5	-0.4	-2.1	25.2	2.6
1992	2.3	2.1	-0.7	-2.0	-3.5	-0.4	0.4	-2.5	26.1	2.0
1993	4.4	2.8	-0.5	-2.6	-1.0	0.7	3.7	0.8	20.1	4.6
1994	5.4	1.5	-1.2	-0.5	-1.3	0.2	2.9	1.2	18.2	5.9
1995	5.3	0.7	-0.8	-0.9	0.0	0.3	2.8	2.2	:	6.4
1996	4.8	1.5	-0.3	-2.4	0.2	0.9	3.3	3.2	:	5.4
1997	5.1	0.4	-0.1	-2.3	0.5	2.5	3.1	2.8	:	6.2
1998	5.0	-0.8	-0.3	-3.9	-0.6	2.4	0.9	1.8	:	3.0
1999	5.3	2.2	-0.8	-3.2	-2.3	2.3	0.4	1.0	:	4.1
2000	4.7	2.1	-1.0	-4.5	-3.4	1.4	-0.6	0.1	:	5.0
1991-2000	4.4	1.3	-0.7	-2.6	-1.5	0.9	1.6	0.9	:	4.5
2001	4.4	3.2	-0.1	-4.3	-3.1	1.7	-1.5	0.2	20.1	5.8
2002	4.6	2.5	-0.2	-4.5	-2.9	1.8	-2.0	-0.1	19.7	6.1
2003	4.5	2.7	-0.1	-4.7	-2.7	1.5	-2.2	-0.3	19.7	6.0

(1) 1960-91: D₉₀.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1960	-1.1	-4.0	-0.9	-0.6	-0.7	1.3	0.7	0.6	0.5
1961	-0.2	-10.0	-1.2	0.5	0.4	0.8	0.7	0.8	-1.6
1962	1.7	-3.4	-1.5	0.4	0.8	0.4	0.4	0.7	0.0
1963	0.7	-3.3	-0.4	0.3	0.7	-0.2	0.0	0.8	-1.0
1964	0.1	0.0	-2.4	0.4	-0.8	-0.1	-0.2	1.1	-0.5
1965	-0.5	-0.4	-2.3	-0.8	0.1	0.2	0.1	0.9	1.1
1966	-1.2	0.8	-2.2	-0.7	0.6	0.4	0.3	0.5	1.3
1967	-0.7	3.7	-1.7	-0.1	-0.5	1.0	0.6	0.4	0.0
1968	-0.4	1.5	0.7	-0.4	-0.3	1.3	0.9	0.2	0.8
1969	1.2	3.6	0.0	-0.7	1.2	0.8	0.7	0.2	1.3
1970	0.6	1.9	-2.4	-0.8	1.8	0.5	0.6	0.4	1.0
1961-70	0.1	-0.6	-1.3	-0.2	0.4	0.5	0.4	0.6	0.2
1971	0.5	2.5	-3.1	1.0	2.2	0.8	0.9	0.1	2.5
1972	0.1	5.5	-1.3	1.3	0.5	1.1	1.0	-0.3	2.2
1973	-0.3	3.0	-2.2	2.8	-1.2	0.7	0.5	0.6	0.0
1974	-1.0	-6.2	-4.8	-1.0	-3.8	-0.4	-1.0	0.5	-1.0
1975	-0.1	-5.5	-7.4	-0.5	-1.5	0.2	-0.1	1.3	-0.1
1976	-2.2	-8.0	-3.7	-2.1	-0.6	-0.5	-0.7	0.5	0.7
1977	-3.5	-9.4	-0.4	-2.6	0.1	0.0	-0.2	-0.4	1.5
1978	-0.7	-5.7	1.8	0.0	0.9	0.5	0.5	-0.5	1.7
1979	-1.0	-1.7	-0.4	-2.2	0.0	-0.6	-0.6	0.1	-0.9
1980	-2.6	-5.9	-2.8	-3.4	1.4	-2.3	-1.8	0.4	-1.1
1971-80	-1.1	-3.1	-2.4	-0.7	-0.2	0.0	-0.1	0.2	0.6
1981	-2.0	-12.2	-0.8	-2.5	2.6	-1.9	-1.2	0.2	0.4
1982	1.0	-13.5	-1.7	-3.4	1.5	-1.5	-1.2	0.0	0.6
1983	0.3	-8.3	-2.1	-1.1	1.1	-0.5	-0.3	-0.9	1.7
1984	-0.3	-3.4	0.1	0.3	0.4	-0.1	-0.1	-2.2	2.8
1985	-0.2	0.4	-1.3	-1.7	0.6	0.2	0.1	-2.7	3.6
1986	0.2	2.1	-0.9	0.2	-0.6	1.3	0.9	-3.2	4.1
1987	-0.2	0.3	-1.9	-0.6	-1.8	0.9	0.4	-3.2	3.3
1988	-0.2	-2.6	-2.5	-1.1	-4.2	0.7	-0.2	-2.2	2.6
1989	0.0	-0.1	-5.0	-2.7	-5.1	0.3	-0.7	-1.6	2.1
1990	0.6	-1.0	-5.1	-3.6	-4.0	-0.1	-0.8	-1.2	1.5
1981-90	-0.1	-3.8	-2.1	-1.6	-1.0	-0.1	-0.3	-1.7	2.3
1991	-0.4	-2.0	-5.4	-2.1	-1.8	-0.9	-1.1	0.3	2.0
1991	-0.4	-2.0	-5.4	-2.1	-1.8	-1.4	-1.5	0.3	2.0
1992	-0.4	-2.3	-4.7	-3.1	-2.1	-1.1	-1.2	-0.6	3.0
1993	-0.8	-2.1	-1.3	-1.4	-1.9	0.4	0.1	-1.1	3.0
1994	-1.6	-3.8	1.1	1.2	-1.0	0.2	0.1	-1.5	2.7
1995	-2.4	-3.0	4.1	3.7	-1.3	0.7	0.5	-1.3	2.1
1996	-2.2	-3.9	4.0	3.5	-1.1	1.1	0.9	-1.4	1.4
1997	-2.6	-6.2	5.6	4.3	-0.2	1.5	1.3	-1.5	2.2
1998	-2.0	-7.2	5.6	3.8	-0.6	0.9	0.7	-2.3	3.0
1999	-3.1	-8.9	6.0	4.0	-2.1	0.5	0.2	-3.3	2.5
2000	-2.7	-10.5	7.3	3.3	-2.0	0.0	-0.2	-4.4	2.5
1991-2000	-1.8	-5.0	2.2	1.7	-1.4	0.3	0.1	-1.7	2.4
2001	-2.7	-8.7	7.1	3.4	-1.9	0.4	0.1	-3.7	2.3
2002	-2.4	-8.3	6.2	2.4	-2.9	0.3	-0.1	-3.3	2.3
2003	-2.7	-8.2	6.6	2.2	-2.6	0.3	-0.1	-3.6	2.1

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1960-91: including D_90.⁽²⁾ EU-15 excluding L; 1960-91: including D_90.

Table 45

Gross national saving

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	19.4	24.9	28.9	13.7	22.7	24.4	16.3	25.5	35.8	30.3
1961	21.3	23.4	28.2	18.7	24.0	24.3	17.9	26.7	32.9	28.9
1962	22.2	22.9	27.3	18.3	24.3	24.4	17.7	26.0	32.1	27.0
1963	20.8	22.9	26.4	21.7	23.0	23.8	17.7	23.7	30.3	25.5
1964	24.3	24.0	28.3	22.5	25.0	24.9	18.2	23.8	32.4	27.4
1965	24.1	24.6	27.2	24.7	24.1	26.8	19.4	23.6	30.8	27.1
1966	24.0	23.9	26.8	25.0	24.2	26.9	19.0	22.8	30.0	26.5
1967	24.6	22.8	25.2	23.3	24.1	26.8	21.0	22.8	28.3	26.8
1968	23.7	23.4	26.8	24.1	25.3	25.9	20.7	23.6	29.9	27.7
1969	24.8	24.2	27.6	27.6	27.5	26.5	20.9	24.4	35.0	27.5
1970	27.1	22.8	28.1	28.2	27.0	27.6	20.4	27.6	41.3	27.0
1961-70	23.7	23.5	27.2	23.4	24.8	25.8	19.3	24.5	32.3	27.1
1971	25.7	23.1	27.1	31.0	26.8	27.1	20.2	25.8	36.3	26.7
1972	25.4	25.9	26.5	34.4	27.3	27.3	22.9	25.1	39.1	27.6
1973	24.7	25.1	26.7	38.8	28.0	27.8	23.4	25.1	43.5	28.5
1974	25.3	23.0	24.7	31.9	26.6	26.8	19.2	26.0	47.7	28.0
1975	21.7	20.5	21.0	30.2	25.6	24.3	21.7	24.6	39.9	24.2
1976	22.3	20.2	22.4	31.8	23.0	24.5	20.0	26.3	44.3	24.1
1977	20.6	20.4	21.7	28.0	23.2	24.4	22.4	26.4	42.1	19.6
1978	20.3	20.7	22.6	27.4	23.9	23.3	22.1	26.9	44.6	18.1
1979	18.3	18.4	22.8	28.0	22.8	23.0	19.5	26.9	43.8	17.3
1980	20.7	16.6	21.7	26.5	17.3	22.4	15.9	25.5	44.2	17.5
1971-80	22.5	21.4	23.7	30.8	24.5	25.1	20.7	25.9	42.5	23.2
1981	17.8	14.1	20.3	22.6	15.6	20.0	13.5	23.2	45.8	18.2
1982	17.0	13.8	20.2	23.6	16.3	18.8	17.1	22.8	59.3	18.1
1983	17.4	15.5	21.2	21.6	16.6	18.6	16.8	23.1	63.8	18.7
1984	18.3	17.1	21.7	22.9	18.6	18.3	16.8	23.1	63.8	20.1
1985	17.9	17.4	22.0	22.1	18.4	18.1	15.3	22.6	52.6	20.8
1986	19.4	18.3	23.8	22.1	19.5	19.4	14.9	22.4	52.1	20.8
1987	19.9	18.6	23.5	18.9	19.4	19.6	16.3	21.9	46.7	23.8
1988	22.2	19.2	24.3	20.3	20.2	20.8	16.3	21.8	47.2	25.6
1989	22.9	19.5	25.7	18.0	19.5	21.6	17.1	21.0	49.7	27.1
1990	23.7	20.7	24.9	18.0	19.3	21.5	18.0	20.7	50.6	26.0
1981-90	19.6	17.4	22.8	21.0	18.3	19.7	16.2	22.2	53.2	21.9
1991	22.7	20.0	22.7	19.6	18.4	20.9	17.7	19.6	50.8	25.4
1991	22.7	20.0	23.3	19.6	18.4	20.9	17.7	19.6	50.8	25.4
1992	23.5	20.3	23.1	18.9	16.4	20.5	15.6	18.3	48.3	24.4
1993	24.6	19.2	22.0	17.3	16.0	19.0	17.8	19.2	41.9	24.5
1994	24.9	19.1	22.0	18.2	15.8	19.2	18.1	19.7	39.5	26.2
1995	25.4	20.4	21.9	18.0	22.3	19.5	20.6	21.6	:	27.4
1996	24.3	20.4	21.3	17.4	22.1	19.2	22.1	21.9	:	26.7
1997	25.4	21.2	21.4	17.8	22.6	20.4	23.8	21.6	:	27.9
1998	25.5	20.9	21.5	18.0	22.6	21.4	25.3	21.1	:	25.2
1999	26.0	22.4	21.0	19.1	22.2	21.8	24.3	20.7	:	26.7
2000	26.2	23.7	21.3	18.2	22.3	22.0	24.0	20.6	:	27.6
1991-2000	24.9	20.7	21.9	18.3	20.1	20.4	20.9	20.4	:	26.2
2001	25.3	23.9	20.4	18.9	22.9	21.7	22.5	20.4	41.1	27.7
2002	25.1	23.5	20.3	19.8	23.1	21.4	21.9	19.9	40.4	27.3
2003	25.2	24.1	20.7	21.1	23.5	21.7	21.8	20.4	40.4	27.5

(1) 1960-91: D_90.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1960	27.1	15.0	27.1	24.1	18.7	25.8	24.1	19.0	33.4
1961	28.2	11.5	28.6	24.7	18.8	25.9	24.3	18.5	35.2
1962	27.9	15.4	25.9	24.5	18.1	25.5	23.9	19.3	34.3
1963	26.6	16.7	24.4	24.7	18.4	24.4	23.2	19.7	32.7
1964	28.1	20.6	23.6	26.9	20.2	25.7	24.7	20.3	34.1
1965	27.5	21.3	23.7	26.3	21.0	25.9	24.9	21.1	33.0
1966	28.6	21.6	23.5	25.2	20.7	25.6	24.6	20.8	33.7
1967	26.9	24.4	23.2	24.9	19.9	25.1	24.1	19.6	35.3
1968	27.0	21.5	25.6	23.8	20.5	25.6	24.6	19.4	37.6
1969	28.3	22.5	26.8	23.8	22.1	26.5	25.6	19.6	38.9
1970	30.3	25.5	29.1	24.8	22.3	27.7	26.6	18.4	40.0
1961–70	27.9	20.1	25.4	25.0	20.2	25.8	24.6	19.7	35.5
1971	30.2	24.5	29.0	24.0	21.5	26.9	25.8	19.1	38.3
1972	30.8	29.6	28.3	23.4	20.4	26.9	25.7	19.5	37.8
1973	30.6	29.3	29.8	24.1	21.3	27.3	26.3	21.2	38.1
1974	30.2	18.7	31.4	22.9	18.3	26.1	24.9	20.3	36.4
1975	25.9	10.8	27.3	23.8	17.1	23.3	22.4	18.7	32.7
1976	25.0	12.8	25.5	21.4	18.7	23.8	23.0	19.5	32.5
1977	24.7	19.7	24.4	17.9	20.1	23.2	22.5	20.1	32.4
1978	25.9	24.8	24.6	17.6	20.5	23.3	22.7	21.3	32.6
1979	26.4	27.8	26.4	17.8	20.4	23.2	22.5	22.0	31.6
1980	26.0	26.9	27.0	17.8	18.7	22.1	21.3	20.4	31.3
1971–80	27.6	22.5	27.4	21.1	19.7	24.6	23.7	20.2	34.4
1981	24.7	22.4	26.1	15.6	17.9	20.4	19.6	21.1	31.8
1982	23.8	20.6	24.7	14.2	18.0	20.0	19.3	18.4	30.7
1983	22.1	20.0	24.2	16.1	18.4	20.3	19.8	17.6	30.0
1984	23.1	18.8	25.4	17.9	19.0	20.8	20.3	18.9	31.0
1985	23.1	21.0	24.4	17.5	18.9	20.7	20.2	17.5	32.0
1986	23.2	25.4	23.8	18.1	17.5	21.7	20.9	16.4	32.2
1987	23.4	27.8	23.7	18.2	17.3	21.7	20.9	15.9	32.2
1988	23.9	28.0	26.1	18.8	17.2	22.5	21.5	16.3	33.3
1989	24.4	28.3	26.1	19.2	17.1	23.0	21.8	16.9	33.8
1990	25.0	26.8	24.5	17.7	16.2	22.6	21.4	16.4	34.2
1981–90	23.7	23.9	24.9	17.3	17.7	21.4	20.6	17.5	32.1
1991	24.8	23.8	16.8	15.8	15.3	21.2	20.1	16.4	34.4
1991	24.8	23.8	16.8	15.8	15.3	21.5	20.3	16.4	34.4
1992	23.9	22.7	14.0	13.4	14.0	20.8	19.6	15.8	33.6
1993	22.4	20.1	14.9	13.4	13.9	20.3	19.2	15.9	32.3
1994	22.3	19.2	18.4	17.1	15.5	20.6	19.8	16.6	30.8
1995	21.8	21.3	21.6	20.3	15.7	21.7	20.8	16.8	30.3
1996	21.5	20.5	20.7	19.4	15.6	21.4	20.5	17.1	30.5
1997	21.7	20.1	24.1	19.9	16.9	21.9	21.0	18.0	30.9
1998	21.9	20.5	24.9	20.6	17.6	21.9	21.2	18.0	29.9
1999	21.0	19.4	25.1	21.2	15.7	21.8	20.8	17.2	28.6
2000	21.8	19.0	27.6	21.2	15.7	22.1	20.9	16.3	28.4
1991–2000	22.3	20.7	20.8	18.2	15.6	21.4	20.4	16.8	31.0
2001	21.1	19.8	26.6	21.5	15.5	21.7	20.6	15.8	27.7
2002	21.0	20.2	25.8	20.7	14.8	21.5	20.3	16.1	26.7
2003	20.9	20.8	26.4	20.8	15.7	21.9	20.8	16.5	26.6

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1960–91: including D_90.⁽²⁾ EU-15 excluding L; 1960–91: including D_90.

Table 46a

Gross saving; private sector
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	21.2	19.2	21.6	10.3	:	20.5	16.2	23.1	30.1	25.5
1961	20.6	20.3	20.1	14.4	:	20.1	18.1	24.1	25.8	23.8
1962	21.1	19.1	19.7	13.9	:	21.2	17.8	23.6	27.1	23.1
1963	20.4	17.8	19.7	17.6	:	20.4	17.3	21.8	26.1	22.5
1964	22.1	18.9	21.2	18.7	:	20.4	17.9	21.5	27.9	24.4
1965	22.6	19.2	21.9	21.9	:	22.3	19.1	24.1	26.2	23.7
1966	21.7	18.0	21.4	21.7	:	22.4	17.6	23.4	26.1	23.0
1967	22.1	18.3	21.6	21.0	:	22.8	19.6	21.8	26.5	23.5
1968	22.1	18.0	22.5	20.7	:	22.6	19.4	23.1	28.5	23.5
1969	22.8	18.4	21.1	23.4	:	22.0	19.7	24.3	31.7	23.0
1970	24.5	13.1	21.8	24.4	23.1	22.6	18.8	27.4	34.6	22.8
1961–70	22.0	18.1	21.1	19.8	:	21.7	18.5	23.5	28.0	23.3
1971	23.3	14.0	21.1	27.6	23.7	22.6	18.3	27.7	29.4	22.2
1972	24.2	17.3	21.3	30.5	23.8	22.7	21.4	28.7	32.3	23.1
1973	23.5	15.9	20.1	35.2	23.9	23.5	22.4	28.5	35.0	23.1
1974	23.4	15.3	20.3	30.1	23.4	22.6	20.3	29.3	37.9	23.9
1975	21.8	17.3	21.1	29.7	22.2	22.3	27.1	31.4	32.4	21.8
1976	23.1	16.0	20.4	30.0	20.3	20.6	22.5	31.3	36.3	21.8
1977	21.5	16.9	18.9	27.4	20.3	21.6	24.4	30.8	33.6	16.7
1978	21.8	16.9	20.1	27.3	22.6	22.0	25.7	32.4	34.5	16.5
1979	20.5	15.9	20.2	27.2	21.7	20.3	24.2	32.1	36.7	15.8
1980	24.4	15.9	19.2	26.5	16.8	18.7	20.9	30.0	37.1	16.2
1971–80	22.8	16.1	20.3	29.2	21.9	21.7	22.7	30.2	34.5	20.1
1981	25.3	16.7	19.2	28.5	15.5	18.3	19.6	30.2	41.0	17.9
1982	23.3	19.0	19.1	27.4	16.8	17.9	24.1	29.8	53.3	19.3
1983	24.8	19.3	19.8	25.3	16.5	18.2	22.7	29.9	54.8	19.7
1984	24.3	18.4	19.7	27.1	19.2	17.8	21.7	30.2	54.9	20.7
1985	23.7	16.5	19.4	29.4	18.1	17.6	21.6	29.5	41.5	19.9
1986	25.9	12.8	21.4	27.8	19.7	18.8	21.2	29.1	43.4	21.1
1987	24.8	14.1	21.8	24.9	18.5	18.1	21.5	28.1	39.1	24.7
1988	26.3	16.0	23.0	27.9	18.4	18.9	18.8	27.5	:	25.9
1989	27.2	17.6	22.1	28.1	17.3	19.2	17.2	26.0	:	28.1
1990	27.3	20.5	23.6	27.4	17.6	19.1	18.8	26.4	:	27.5
1981–90	25.3	17.1	20.9	27.4	17.8	18.4	20.7	28.7	:	22.5
1991	27.1	21.0	21.6	26.0	17.2	19.5	18.9	25.3	:	25.1
1991	27.1	21.0	22.0	26.0	17.2	19.5	18.9	25.3	:	25.1
1992	28.5	20.6	21.6	25.9	15.7	20.9	16.8	25.4	:	25.3
1993	29.7	20.2	21.4	25.2	17.7	21.2	18.8	24.6	:	24.9
1994	27.9	19.9	21.0	25.3	17.3	21.3	17.5	25.1	:	27.2
1995	27.4	20.8	21.9	25.1	24.6	20.9	20.7	25.4	:	28.4

⁽¹⁾ 1960–91: D₉₀.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-12 ⁽²⁾	EU-14 ⁽³⁾	US	JP
1960	20.8	11.8	18.6	:	20.5	:	21.1	:	16.2	27.3
1961	20.2	9.5	21.0	:	16.7	:	19.9	:	17.0	28.3
1962	20.2	12.9	18.2	:	14.9	:	19.5	:	17.4	27.5
1963	20.4	14.1	18.8	:	16.7	:	19.5	:	17.0	26.5
1964	20.9	17.8	17.3	:	17.5	:	20.2	:	18.1	28.0
1965	19.9	17.9	17.0	:	17.5	:	21.2	:	18.4	27.4
1966	20.6	17.9	16.8	:	16.6	:	20.7	:	18.5	28.5
1967	20.6	21.1	15.7	:	15.8	:	20.5	:	18.8	29.4
1968	21.3	18.0	18.1	:	15.3	:	21.0	:	17.5	31.5
1969	22.4	18.1	19.3	:	14.7	:	20.7	:	16.4	32.5
1970	23.2	20.5	21.1	14.4	14.4	23.3	21.5	21.3	17.6	33.1
1961–70	21.0	16.8	18.3	:	16.0	:	20.5	:	17.7	29.3
1971	22.6	20.0	20.7	13.3	15.2	23.1	21.4	21.2	19.1	31.1
1972	22.1	26.0	20.4	13.6	17.3	23.6	22.3	22.0	18.3	31.4
1973	21.6	25.3	20.1	15.5	18.8	23.3	22.4	22.2	19.2	30.9
1974	21.9	17.2	23.0	16.6	16.6	23.1	21.9	21.8	18.8	29.7
1975	21.1	11.3	17.8	17.1	16.5	23.2	22.1	21.9	20.9	29.1
1976	22.1	14.2	14.4	13.0	18.8	22.3	21.8	21.3	20.3	30.1
1977	20.8	19.9	14.6	11.5	19.5	21.6	21.2	20.8	20.0	29.7
1978	22.5	26.7	17.3	13.1	21.4	22.7	22.3	22.0	20.1	30.7
1979	22.9	28.9	19.7	15.2	20.6	22.2	21.8	21.6	20.4	28.7
1980	21.8	30.4	19.7	17.1	19.2	21.1	21.0	20.5	20.5	28.2
1971–80	21.9	22.0	18.8	14.6	18.4	22.6	21.8	21.5	19.8	30.0
1981	20.4	29.2	17.8	15.9	18.4	21.1	20.9	20.4	21.1	28.2
1982	21.5	23.1	18.0	16.0	18.4	21.0	20.8	20.3	21.0	27.3
1983	20.2	21.8	19.1	16.1	19.1	21.4	21.3	20.8	21.0	27.0
1984	20.0	25.0	18.9	17.1	20.1	21.7	21.5	21.2	21.5	27.2
1985	20.0	27.0	17.8	17.6	19.4	21.3	21.1	20.8	20.1	27.2
1986	21.2	27.1	16.8	16.1	18.1	22.4	21.6	21.3	19.1	27.5
1987	22.4	29.9	18.7	13.0	17.3	22.3	21.5	21.0	17.7	26.0
1988	22.0	28.0	17.6	13.0	15.4	22.8	21.6	21.1	17.6	26.1
1989	22.6	27.3	16.7	11.4	14.3	22.3	21.2	20.6	17.7	25.6
1990	22.8	28.2	15.4	11.4	13.7	22.8	21.7	21.0	18.0	25.6
1981–90	21.3	26.7	17.7	14.8	17.4	21.9	21.3	20.9	19.5	26.8
1991	23.0	26.3	14.3	14.4	14.7	21.9	21.1	20.5	18.7	25.3
1991	23.0	26.3	14.3	14.4	14.7	22.0	21.2	20.7	18.7	25.3
1992	21.1	21.9	16.0	16.7	17.3	22.0	21.8	21.2	19.1	25.6
1993	21.6	22.1	19.8	20.2	18.9	22.1	21.9	21.6	18.4	26.2
1994	22.3	22.0	21.3	23.7	19.6	22.2	22.1	21.8	17.8	25.4
1995	22.2	23.6	23.9	24.8	18.7	23.2	22.4	22.6	17.4	26.2

(1) EU-15 excluding DK, L, S and UK; 1960–91: including D_90.

(2) EU-15 excluding E, L and S; 1960–91: including D_90.

(3) EU-15 excluding L; 1960–91: including D_90.

Table 46b

Gross saving; private sector
EU Member States: ESA 1995

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	23.8	:	:	:	:	:	:	:	:	:
1971	22.9	13.7	:	:	:	:	:	:	:	:
1972	24.2	17.1	:	:	:	:	:	:	:	:
1973	23.4	16.6	:	:	:	:	:	:	:	:
1974	23.3	15.4	:	:	:	:	:	:	:	:
1975	21.9	18.1	:	:	:	:	:	:	:	:
1976	22.8	16.3	:	:	:	:	:	:	:	:
1977	21.2	16.6	:	:	:	:	:	:	:	:
1978	21.8	17.0	:	:	:	20.8	:	:	:	:
1979	20.6	15.9	:	:	:	19.0	:	:	:	:
1980	24.8	15.9	:	:	:	18.3	:	:	:	:
1975–80	22.2	16.6	:	:	:	:	:	:	:	:
1981	25.7	16.8	:	:	:	18.1	:	:	:	:
1982	24.0	18.9	:	:	:	17.2	:	:	:	:
1983	25.0	19.2	:	:	:	17.4	:	:	:	:
1984	24.8	18.7	:	:	:	17.1	:	:	:	:
1985	24.2	16.9	:	:	:	17.2	:	:	:	:
1986	25.9	13.6	:	:	:	18.7	:	:	:	:
1987	24.6	14.6	:	:	:	17.8	:	:	:	23.8
1988	26.2	16.0	:	:	:	19.1	:	:	:	25.2
1989	28.1	17.6	:	:	:	19.2	:	:	:	28.1
1990	28.2	20.5	:	:	:	19.1	19.1	27.2	39.5	27.6
1981–90	25.7	17.3	:	:	:	18.1	:	:	:	:
1991	27.8	21.0	21.9	:	:	19.3	19.1	26.7	42.6	24.7
1992	29.0	20.6	21.5	:	:	20.3	17.0	26.6	40.7	25.4
1993	29.1	20.3	21.1	:	:	20.8	19.0	26.1	33.2	24.4
1994	27.3	19.7	20.9	:	:	20.4	17.6	25.7	30.8	26.9
1995	27.4	20.9	22.0	24.8	24.1	20.6	20.6	25.4	:	28.5
1996	25.8	19.5	21.9	22.7	23.3	19.5	20.4	25.6	:	26.1
1997	25.0	19.0	21.5	19.3	22.2	20.4	20.9	21.8	:	26.6
1998	23.9	18.1	21.0	17.9	21.4	20.4	21.0	20.9	:	23.4
1999	24.1	17.8	19.8	17.0	19.4	19.7	17.6	19.1	:	23.4
2000	23.6	19.7	19.8	15.6	18.8	19.8	15.8	18.8	:	23.1
1991–2000	26.3	19.7	21.1	:	:	20.1	18.9	23.7	:	25.2
2001	23.2	20.2	20.3	15.9	18.9	19.7	16.0	18.3	31.6	23.4
2002	23.1	20.3	20.4	16.0	19.3	19.8	15.6	18.1	32.4	23.9
2003	22.8	20.4	20.5	16.7	19.4	19.6	15.2	18.3	32.1	23.1

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	:	:	:	:	13.4	:	:	17.7	:
1971	:	:	:	:	14.4	:	:	19.2	:
1972	:	:	:	:	16.5	:	:	18.4	:
1973	:	:	:	:	18.2	:	:	19.3	:
1974	:	:	:	:	15.5	:	:	18.9	:
1975	:	:	17.0	:	15.6	:	:	21.1	:
1976	21.8	:	13.1	:	17.9	:	:	20.4	:
1977	20.5	:	13.6	:	18.8	:	:	20.1	:
1978	22.0	:	16.6	:	20.8	:	:	20.2	:
1979	22.6	:	19.1	:	20.3	:	:	20.6	:
1980	21.5	:	19.2	:	18.4	:	:	20.6	:
1975–80	:	:	16.4	:	18.6	:	:	20.5	:
1981	20.2	:	17.2	:	18.2	:	:	21.2	:
1982	21.3	:	17.2	:	17.6	:	:	21.2	:
1983	20.3	:	18.4	:	18.5	:	:	21.2	:
1984	20.0	:	18.2	:	19.2	:	:	21.6	:
1985	19.9	:	17.2	:	18.8	:	:	20.2	:
1986	21.3	:	16.1	:	17.5	:	:	19.3	:
1987	22.5	:	18.1	:	16.7	:	:	17.9	:
1988	22.4	:	16.5	:	14.7	:	:	17.8	:
1989	22.8	:	15.9	:	13.6	:	:	17.9	:
1990	22.6	:	15.2	:	13.6	:	:	18.2	26.6
1981–90	21.3	:	17.0	:	16.8	:	:	19.7	:
1991	22.8	:	13.6	:	14.9	:	:	18.9	26.7
1992	20.9	:	15.6	:	17.2	:	:	19.3	26.4
1993	21.5	:	18.9	19.5	18.7	:	:	18.6	27.2
1994	22.2	:	20.5	23.7	19.4	:	:	18.0	26.2
1995	22.1	22.5	22.1	24.2	18.6	23.0	22.4	17.6	27.1
1996	20.4	20.6	20.3	19.6	17.9	22.4	21.7	17.1	27.7
1997	19.8	19.2	22.5	18.4	17.5	21.7	20.9	16.6	28.1
1998	20.0	18.8	20.7	16.7	15.7	21.0	19.9	15.4	28.6
1999	19.3	17.6	20.5	16.8	13.1	19.9	18.6	13.9	28.6
2000	19.9	17.4	18.3	14.8	12.5	19.6	18.2	12.2	29.2
1991–2000	20.9	:	19.3	:	16.5	:	:	16.7	27.6
2001	17.8	18.1	19.5	15.2	12.5	19.7	18.3	13.2	28.0
2002	18.1	18.1	20.6	16.7	12.3	19.8	18.4	16.6	27.2
2003	17.3	18.2	21.9	16.6	13.0	19.7	18.4	16.9	27.1

⁽¹⁾ EU-15 excluding DK, L, S and UK.⁽²⁾ EU-15 excluding L.

Table 47a

Gross saving: general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	-1.8	5.7	7.3	3.4	:	3.9	0.1	2.4	5.8	4.8
1961	0.7	3.1	8.0	4.2	:	4.2	-0.2	2.6	7.1	5.1
1962	1.1	3.8	7.5	4.4	:	3.3	-0.2	2.4	5.1	3.8
1963	0.5	5.1	6.7	4.1	:	3.4	0.4	1.8	4.1	3.0
1964	2.3	5.1	7.1	3.9	:	4.4	0.3	2.3	4.5	3.0
1965	1.5	5.3	5.3	2.7	:	4.5	0.3	-0.5	4.6	3.4
1966	2.3	6.0	5.3	3.3	:	4.6	1.4	-0.6	3.8	3.5
1967	2.4	4.5	3.7	2.3	:	4.0	1.4	0.9	1.8	3.3
1968	1.7	5.3	4.2	3.3	:	3.2	1.4	0.5	1.4	4.1
1969	2.0	5.8	6.5	4.1	:	4.4	1.2	0.1	3.3	4.4
1970	2.6	9.7	6.3	3.9	3.9	5.0	1.7	0.2	6.6	4.2
1961-70	1.7	5.4	6.1	3.6	:	4.1	0.8	1.0	4.2	3.8
1971	2.4	9.2	6.1	3.4	3.1	4.5	1.9	-1.9	6.8	4.5
1972	1.2	8.6	5.2	3.9	3.5	4.6	1.4	-3.6	6.7	4.6
1973	1.2	9.3	6.6	3.6	4.1	4.3	0.9	-3.4	8.6	5.5
1974	1.9	7.7	4.5	1.7	3.3	4.2	-1.2	-3.3	9.8	4.1
1975	-0.1	3.2	-0.1	0.6	3.4	2.0	-5.4	-6.8	7.5	2.5
1976	-0.8	4.2	1.9	1.8	2.7	4.0	-2.6	-5.0	8.0	2.3
1977	-0.9	3.5	2.8	0.7	3.0	2.8	-2.0	-4.4	8.5	2.9
1978	-1.5	3.7	2.5	0.2	1.3	1.3	-3.6	-5.5	10.2	1.6
1979	-2.2	2.6	2.6	0.7	1.1	2.7	-4.7	-5.2	7.0	1.5
1980	-3.7	0.7	2.4	-0.1	0.5	3.7	-4.9	-4.6	7.1	1.3
1971-80	-0.2	5.3	3.5	1.6	2.6	3.4	-2.0	-4.4	8.0	3.1
1981	-7.5	-2.6	1.1	-5.9	0.1	1.7	-6.1	-7.0	4.8	0.3
1982	-6.2	-5.2	1.1	-3.7	-0.5	0.9	-7.0	-7.1	6.0	-1.2
1983	-7.4	-3.9	1.4	-3.8	0.0	0.3	-5.9	-6.8	9.0	-1.0
1984	-5.9	-1.4	2.0	-4.3	-0.7	0.6	-4.9	-7.1	9.0	-0.6
1985	-5.7	0.8	2.6	-7.4	0.3	0.5	-6.2	-6.9	11.1	0.9
1986	-6.5	5.5	2.4	-5.7	-0.3	0.6	-6.3	-6.8	8.7	-0.3
1987	-5.0	4.5	1.7	-5.9	0.9	1.4	-5.2	-6.2	7.6	-0.9
1988	-4.1	3.2	1.3	-7.6	1.8	1.9	-2.5	-5.7	:	-0.4
1989	-4.3	1.9	3.6	-10.1	2.2	2.4	-0.1	-5.1	:	-1.0
1990	-3.6	0.2	1.3	-9.4	1.7	2.4	-0.8	-5.7	:	-1.6
1981-90	-5.6	0.3	1.8	-6.4	0.6	1.3	-4.5	-6.4	:	-0.6
1991	-4.4	-1.0	1.1	-6.4	1.2	1.4	-1.2	-5.7	:	0.3
1991	-4.4	-1.0	1.2	-6.4	1.2	1.4	-1.2	-5.7	:	0.3
1992	-5.0	-0.4	1.4	-7.0	0.7	-0.4	-1.2	-7.1	:	-0.9
1993	-5.1	-1.0	0.5	-7.9	-1.7	-2.2	-1.0	-5.4	:	-0.3
1994	-3.0	-0.7	1.0	-7.1	-1.5	-2.1	0.6	-5.4	:	-1.0
1995	-2.0	-0.5	0.0	-7.1	-2.3	-1.4	-0.2	-3.8	:	-1.1

⁽¹⁾ 1960-91: D₉₀.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-12 ⁽²⁾	EU-14 ⁽³⁾	US	JP
1960	6.3	3.2	8.5	:	-1.8	:	3.1	:	2.8	6.1
1961	8.0	2.0	7.6	:	2.1	:	4.4	:	1.5	7.0
1962	7.7	2.5	7.7	:	3.2	:	4.3	:	1.8	6.8
1963	6.2	2.6	5.5	:	1.7	:	3.6	:	2.7	6.3
1964	7.1	2.8	6.4	:	2.7	:	4.3	:	2.2	6.1
1965	7.6	3.5	6.7	:	3.4	:	3.6	:	2.7	5.6
1966	7.9	3.7	6.6	:	4.1	:	3.9	:	2.3	5.2
1967	6.4	3.4	7.6	:	4.1	:	3.5	:	0.7	5.9
1968	5.7	3.5	7.5	:	5.2	:	3.6	:	1.9	6.0
1969	5.9	4.4	7.5	:	7.4	:	4.8	:	3.3	6.3
1970	7.1	5.0	8.0	10.4	8.0	4.4	5.2	5.3	0.8	6.9
1961-70	7.0	3.3	7.1	:	4.2	:	4.1	:	2.0	6.2
1971	7.6	4.5	8.3	10.7	6.3	3.8	4.4	4.6	0.0	7.1
1972	8.7	3.6	7.9	9.8	3.1	3.3	3.4	3.7	1.1	6.4
1973	9.0	4.0	9.7	8.6	2.6	4.0	3.9	4.1	2.0	7.1
1974	8.3	1.5	8.4	6.3	1.7	3.0	2.9	3.1	1.5	6.6
1975	4.9	-0.5	9.5	6.6	0.6	0.2	0.1	0.6	-2.3	3.6
1976	2.9	-1.4	11.1	8.3	-0.1	1.5	1.3	1.7	-0.8	2.4
1977	3.9	-0.2	9.8	6.3	0.6	1.6	1.5	1.8	0.1	2.7
1978	3.5	-1.9	7.3	4.5	-0.8	0.7	0.5	0.7	1.2	1.9
1979	3.5	-1.1	6.7	2.6	-0.2	1.0	0.8	0.9	1.5	2.9
1980	4.2	-3.5	7.4	0.7	-0.5	1.0	0.8	0.8	0.0	3.1
1971-80	5.6	0.5	8.6	6.5	1.3	2.0	2.0	2.2	0.4	4.4
1981	4.3	-6.8	8.3	-0.4	-0.5	-0.7	-0.8	-0.7	0.1	3.6
1982	2.2	-2.6	6.7	-1.7	-0.4	-1.0	-1.0	-1.0	-2.6	3.4
1983	1.9	-1.8	5.1	-0.1	-0.7	-1.1	-1.2	-1.1	-3.4	2.9
1984	3.1	-6.2	6.5	0.9	-1.1	-0.9	-1.0	-0.9	-2.5	3.8
1985	3.1	-6.0	6.5	-0.1	-0.5	-0.6	-0.6	-0.6	-2.6	4.8
1986	2.0	-1.7	7.0	2.1	-0.6	-0.7	-0.6	-0.5	-2.7	4.7
1987	1.0	-2.0	4.9	5.2	0.0	-0.6	-0.5	-0.2	-1.8	6.2
1988	2.0	0.0	8.5	5.7	1.9	-0.2	0.1	0.4	-1.3	7.3
1989	1.9	1.0	9.4	7.8	2.7	0.7	0.9	1.3	-0.8	8.2
1990	2.2	-1.4	9.1	6.3	2.4	-0.2	0.1	0.4	-1.7	8.6
1981-90	2.4	-2.7	7.2	2.6	0.3	-0.5	-0.5	-0.3	-1.9	5.4
1991	1.8	-2.5	2.6	1.4	0.5	-0.6	-0.6	-0.4	-2.3	9.1
1991	1.8	-2.5	2.6	1.4	0.5	-0.5	-0.5	-0.3	-2.3	9.1
1992	2.7	0.8	-2.1	-3.3	-3.2	-1.2	-1.7	-1.6	-3.3	8.0
1993	0.8	-2.0	-5.0	-6.9	-4.9	-1.8	-2.3	-2.4	-2.5	6.1
1994	0.0	-2.8	-2.9	-6.6	-4.1	-1.5	-1.9	-2.0	-1.2	5.4
1995	-0.4	-2.3	-2.2	-4.5	-3.0	-1.5	-1.6	-1.7	-0.7	4.1

(1) EU-15 excluding DK, L, S and UK; 1960-91: including D_90.

(2) EU-15 excluding E, L and S; 1960-91: including D_90.

(3) EU-15 excluding L; 1960-91: including D_90.

Table 47b

Gross saving: general government
EU Member States: ESA 1995

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	3.3	:	:	:	:	:	:	:	:	:
1971	2.8	9.5	:	:	:	:	:	:	:	:
1972	1.2	8.8	:	:	:	:	:	:	:	:
1973	1.4	8.6	:	:	:	:	:	:	:	:
1974	2.0	7.6	:	:	:	:	:	:	:	:
1975	-0.2	2.5	:	:	:	:	:	:	:	:
1976	-0.5	3.9	:	:	:	:	:	:	:	:
1977	-0.6	3.8	:	:	:	:	:	:	:	:
1978	-1.5	3.6	:	:	:	2.5	:	:	:	:
1979	-2.3	2.5	:	:	:	4.0	:	:	:	:
1980	-4.1	0.7	:	:	:	4.1	:	:	:	:
1975-80	-1.5	2.8	:	:	:	:	:	:	:	:
1981	-7.8	-2.7	:	:	:	1.9	:	:	:	:
1982	-7.0	-5.1	:	:	:	1.6	:	:	:	:
1983	-7.6	-3.7	:	:	:	1.2	:	:	:	:
1984	-6.5	-1.7	:	:	:	1.2	:	:	:	:
1985	-6.3	0.5	:	:	:	0.9	:	:	:	:
1986	-6.5	4.7	:	:	:	0.7	:	:	:	:
1987	-4.7	4.0	:	:	:	1.7	:	:	:	0.0
1988	-4.0	3.2	:	:	:	1.7	:	:	:	0.3
1989	-5.2	1.9	:	:	:	2.3	:	:	:	-1.0
1990	-4.6	0.2	:	:	:	2.5	-1.1	-6.6	11.1	-1.6
1981-90	-6.0	0.1	:	:	:	1.6	:	:	:	:
1991	-5.1	-1.0	1.4	:	:	1.7	-1.4	-7.2	8.2	0.7
1992	-5.5	-0.4	1.6	:	:	0.2	-1.4	-8.3	7.7	-1.0
1993	-4.5	-1.0	0.8	:	:	-1.9	-1.2	-6.9	8.7	0.1
1994	-2.4	-0.6	1.1	:	:	-1.2	0.5	-6.0	8.7	-0.7
1995	-2.0	-0.5	-0.1	-6.8	-1.8	-1.1	-0.1	-3.8	8.2	-1.1
1996	-1.5	0.9	-0.5	-5.2	-1.2	-0.3	1.7	-3.7	7.8	0.6
1997	0.5	2.2	-0.1	-1.5	0.4	-0.1	2.9	-0.2	8.5	1.3
1998	1.6	2.8	0.5	0.1	1.2	1.1	4.4	0.2	8.8	1.8
1999	1.9	4.6	1.2	2.0	2.9	2.1	6.7	1.6	9.0	3.3
2000	2.6	4.0	1.5	2.6	3.5	2.2	8.2	1.8	10.9	4.5
1991-2000	-1.4	1.1	0.7	:	:	0.3	2.0	-3.2	8.6	1.0
2001	2.1	3.7	0.1	3.0	4.0	2.0	6.5	2.1	9.5	4.3
2002	2.1	3.2	-0.2	3.8	3.9	1.6	6.3	1.8	8.0	3.5
2003	2.4	3.7	0.3	4.3	4.2	2.1	6.7	2.1	8.3	4.4

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	8.9	:	:	0.7	:
1971	:	:	:	:	7.1	:	:	-0.1	:
1972	:	:	:	:	4.0	:	:	1.0	:
1973	:	:	:	:	3.2	:	:	1.9	:
1974	:	:	:	:	2.8	:	:	1.4	:
1975	:	:	10.3	:	1.5	:	:	-2.4	:
1976	3.2	:	12.4	:	0.8	:	:	-0.9	:
1977	4.2	:	10.9	:	1.2	:	:	0.0	:
1978	3.9	:	8.0	:	-0.3	:	:	1.1	:
1979	3.8	:	7.3	:	0.0	:	:	1.4	:
1980	4.5	:	7.9	:	0.3	:	:	-0.2	:
1975-80	:	:	9.4	:	0.6	:	:	-0.2	:
1981	4.5	:	9.0	:	-0.2	:	:	-0.1	:
1982	2.4	:	7.5	:	0.4	:	:	-2.8	:
1983	1.7	:	5.8	:	-0.1	:	:	-3.6	:
1984	3.2	:	7.1	:	-0.3	:	:	-2.7	:
1985	3.2	:	7.2	:	0.1	:	:	-2.8	:
1986	1.9	:	7.7	:	0.0	:	:	-2.9	:
1987	0.9	:	5.6	:	0.5	:	:	-2.0	:
1988	1.5	:	9.5	:	2.6	:	:	-1.5	:
1989	1.7	:	10.3	:	3.4	:	:	-0.9	:
1990	2.4	:	9.4	:	2.6	:	:	-1.8	7.6
1981-90	2.3	:	7.9	:	0.9	:	:	-2.1	:
1991	2.0	:	3.3	:	0.4	:	:	-2.5	7.7
1992	2.9	:	-1.7	:	-3.2	:	:	-3.5	7.3
1993	0.9	:	-4.1	-6.2	-4.8	:	:	-2.7	5.1
1994	0.1	:	-2.0	-6.5	-3.9	:	:	-1.4	4.6
1995	-0.3	-1.2	-0.5	-3.9	-2.9	-1.3	-1.6	-0.8	3.2
1996	1.0	-0.1	0.4	-0.2	-2.3	-1.0	-1.1	0.0	2.9
1997	2.0	0.9	1.6	1.5	-0.6	0.2	0.1	1.3	2.9
1998	1.9	1.7	4.2	3.8	2.0	1.0	1.2	2.6	1.3
1999	1.7	1.8	4.7	4.4	2.6	2.0	2.2	3.3	0.0
2000	1.9	1.5	9.3	6.4	3.2	2.4	2.7	4.2	-0.8
1991-2000	1.4	:	1.5	:	-1.0	:	:	0.1	3.4
2001	3.3	1.7	7.1	6.3	3.0	2.0	2.3	2.7	-0.3
2002	3.0	2.2	5.2	4.0	2.5	1.7	2.0	-0.5	-0.5
2003	3.5	2.6	4.5	4.2	2.7	2.2	2.3	-0.3	-0.6

(1) EU-15 excluding DK, S and UK.

Table 48

Money supply (M2/M3)

(end year; annual percentage change)

	B/L	DK	D ⁽¹⁾	EL	E	F	IRL	I	NL
1960	4.3	8.0	11.1	20.2	:	16.7	5.5	19.6	7.0
1961	9.9	9.8	12.9	17.0	:	17.2	7.4	14.9	5.4
1962	7.4	8.5	10.4	21.5	:	18.7	9.6	17.0	6.7
1963	10.3	12.5	9.9	21.4	:	14.1	5.9	13.5	9.8
1964	7.6	11.1	9.4	16.1	:	9.8	9.4	12.8	10.4
1965	9.6	9.7	10.6	12.9	:	10.9	6.7	15.2	6.2
1966	8.2	12.8	8.3	18.2	:	10.6	10.6	13.0	5.9
1967	7.1	9.9	12.0	16.1	:	13.1	12.7	13.7	10.9
1968	8.6	14.5	11.8	17.8	:	11.6	16.9	13.1	14.8
1969	7.0	10.2	9.4	16.2	:	6.1	11.2	12.5	10.2
1970	10.0	3.3	9.1	19.3	15.8	15.3	14.0	15.9	11.0
1961-70	8.6	10.2	10.4	17.6	:	12.7	10.4	14.1	9.1
1971	12.9	8.5	13.5	22.4	24.0	18.0	12.9	17.2	9.0
1972	17.0	15.0	14.4	23.6	23.8	18.8	14.2	19.0	11.9
1973	15.4	12.6	10.1	14.5	24.8	14.7	26.1	23.1	21.9
1974	14.0	8.9	8.5	20.9	19.9	15.6	20.6	15.7	20.1
1975	15.1	25.1	8.6	26.5	18.9	18.1	18.9	23.7	5.7
1976	14.3	10.9	8.4	26.8	19.0	12.3	14.5	20.8	22.7
1977	10.3	9.8	11.2	22.7	18.9	14.2	17.1	21.7	3.6
1978	10.2	8.3	11.0	26.0	19.5	12.4	29.0	22.6	4.2
1979	8.2	9.7	6.0	18.4	18.5	14.0	18.7	20.8	6.9
1980	6.5	8.8	6.2	24.7	16.9	9.6	17.7	12.7	4.4
1971-80	12.4	11.8	9.8	22.6	20.4	14.8	19.0	19.7	11.0
1981	6.0	10.0	5.0	36.4	16.9	11.1	17.4	10.0	5.3
1982	5.5	11.4	7.1	28.5	17.0	11.6	13.0	18.1	7.6
1983	9.0	25.4	5.3	22.0	15.4	11.7	5.6	12.3	5.1
1984	6.0	17.8	4.7	30.8	15.0	9.9	10.1	12.1	5.8
1985	7.7	15.8	7.6	29.1	13.2	7.2	5.3	11.1	9.0
1986	12.8	10.8	6.6	20.6	13.5	6.4	-1.0	10.7	7.0
1987	10.2	4.4	5.9	24.3	14.9	11.2	10.9	7.2	3.1
1988	7.8	3.4	6.9	23.5	13.4	8.1	6.3	7.6	10.3
1989	13.5	6.2	5.5	24.7	14.9	9.9	5.0	9.9	12.0
1990	5.7	7.1	4.2	15.7	11.8	9.0	15.5	8.1	7.7
1981-90	8.4	11.2	5.9	25.6	14.6	9.6	8.8	10.7	7.3
1991	3.6	6.4	6.3	12.9	11.3	2.0	3.1	9.1	5.3
1992	7.8	-1.5	7.6	15.4	5.1	5.1	11.7	4.7	6.2
1993	14.2	13.8	10.9	16.8	10.1	-2.9	16.3	8.1	7.8
1994	-4.8	-5.0	1.6	9.2	7.1	1.8	10.2	0.9	0.3
1995	0.0	3.0	3.6	16.1	9.2	4.6	12.4	-2.0	4.3
1996	6.9	9.7	8.7	13.8	7.4	-3.3	15.9	4.0	6.0
1997	6.1	6.1	3.6	20.3	4.3	2.0	22.1	9.0	5.6
1998	9.8	4.0	7.3	15.5	1.1	2.7	17.3	6.5	11.7
1999	:	3.4	:	12.8	:	:	:	:	:
2000	:	-5.2	:	14.6	:	:	:	:	:
1991-2000	:	3.5	:	14.7	:	:	:	:	:

(1) 1960-90: D_90.

Definitions:

B: M3H;

DK: M2;

D: M3, until 1990 D_90, from 1991 onwards D;

EL: M3;

E: ALP;

F: M3;

IRL: M3;

I: M2;

NL: M3;

A: M3;

P: L-;

FIN: until 1984 M1, from 1985 onwards M3;

S: M3;

UK: M4;

EUR: chain weighted arithmetic mean; weights: GDP at current market prices and PPS;

US: M2;

JP: M2 plus certificates of deposit.

(end year; annual percentage change)

	A	P	FIN	S	UK	EUR-11 ⁽¹⁾	EU-15 ⁽²⁾	US	JP
1960	:	:	:	:	:	:	:	4.9	20.1
1961	10.8	:	14.8	:	:	14.1	:	7.4	20.2
1962	13.0	:	6.5	9.7	:	14.0	:	8.1	20.3
1963	10.5	:	8.8	8.6	:	12.3	:	8.4	24.0
1964	12.3	:	11.1	7.5	7.6	10.9	:	8.0	18.7
1965	12.0	:	10.4	5.3	9.4	11.9	:	8.1	18.0
1966	9.6	:	11.8	8.5	6.5	10.6	:	4.5	16.3
1967	9.2	11.7	8.5	12.7	12.8	12.7	:	9.2	15.5
1968	8.9	14.1	12.1	11.3	8.5	12.7	:	8.0	14.8
1969	11.2	17.8	12.6	4.8	5.1	9.9	:	4.1	18.5
1970	12.4	12.4	13.5	5.5	12.0	13.0	12.6	6.6	16.9
1961–70	11.0	:	11.0	:	:	12.2	:	7.2	18.3
1971	15.3	21.0	13.8	9.9	16.2	16.2	16.0	13.5	24.3
1972	16.5	23.4	17.1	11.8	23.2	17.6	18.5	13.0	24.7
1973	10.8	28.9	15.6	12.8	21.8	16.9	17.6	6.9	16.8
1974	9.6	12.1	17.5	8.9	10.8	14.2	13.5	5.5	11.5
1975	11.7	13.1	22.1	12.7	11.7	15.6	15.3	12.6	16.5
1976	14.4	16.4	8.9	5.1	11.3	14.6	13.9	13.7	15.4
1977	11.4	21.8	11.9	9.4	14.8	14.7	14.7	10.6	13.4
1978	13.6	26.0	15.3	18.0	15.0	14.9	15.1	8.0	14.0
1979	6.3	31.1	17.2	16.4	14.4	13.3	13.6	7.8	10.8
1980	9.1	28.4	11.2	10.8	17.1	10.2	11.6	8.9	9.5
1971–80	11.9	22.2	15.1	11.6	15.6	14.8	15.0	10.1	15.7
1981	10.3	24.0	14.9	13.6	20.4	9.6	12.0	10.1	11.0
1982	14.6	24.1	12.9	7.7	12.0	12.3	12.4	8.8	7.9
1983	7.2	17.0	12.2	7.0	13.2	9.9	10.9	11.8	7.3
1984	7.5	24.8	15.7	7.2	13.5	9.5	10.6	8.7	7.8
1985	6.6	28.5	16.7	-0.7	13.0	9.5	10.2	8.0	8.7
1986	10.2	26.3	8.6	10.7	15.6	8.9	10.3	9.5	9.2
1987	7.4	19.7	21.2	4.2	16.3	9.1	10.3	3.6	10.8
1988	4.1	17.8	24.6	5.2	17.6	8.8	10.4	5.8	10.2
1989	6.7	10.6	6.1	10.0	19.1	9.4	11.3	5.5	12.0
1990	7.6	10.9	6.8	11.3	11.8	7.7	8.6	3.8	11.7
1981–90	8.2	20.4	14.0	7.6	15.2	9.5	10.7	7.6	9.7
1991	8.0	18.1	6.8	4.0	5.9	7.5	6.7	3.1	3.6
1992	4.2	13.6	-0.1	3.2	3.6	7.1	3.1	1.6	-0.4
1993	4.0	6.2	3.8	4.0	4.6	6.4	6.9	2.2	1.4
1994	5.3	9.4	1.9	0.3	4.7	2.3	1.9	-1.6	2.9
1995	5.7	8.0	0.4	2.7	9.9	5.6	5.2	4.1	3.2
1996	1.8	8.8	-1.3	11.4	9.5	3.9	7.8	4.3	3.1
1997	1.2	6.2	8.8	1.3	12.1	3.9	7.5	5.6	3.5
1998	6.4	7.8	2.4	2.1	8.2	4.9	4.1	8.7	4.4
1999	:	:	:	9.9	4.2	6.0	:	6.2	4.3
2000	:	:	:	2.1	8.3	4.9	:	6.3	2.1
1991–2000	:	:	:	4.1	7.1	5.3	:	4.0	2.8

⁽¹⁾ EU-15 excluding DK, EL, S and UK; 1960–90: including D_90.⁽²⁾ 1960–90: including D_90.

Table 49

Nominal short-term interest rates

(%)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	NL
1960	:	:	5.1	:	:	4.1	:	3.5	2.1
1961	4.6	6.3	3.6	:	:	3.7	:	3.5	1.1
1962	3.4	6.5	3.4	:	:	3.6	:	3.5	1.9
1963	3.6	6.1	4.0	:	:	4.0	:	3.5	2.0
1964	4.9	6.2	4.1	:	:	4.7	:	3.5	3.5
1965	5.0	6.5	5.1	:	:	4.2	:	3.5	4.0
1966	5.6	6.5	6.6	:	:	4.8	:	3.5	4.9
1967	5.5	6.6	4.3	:	:	4.8	:	3.5	4.7
1968	4.5	6.6	3.8	:	:	6.2	:	3.5	4.6
1969	7.3	8.2	5.8	:	:	9.3	:	3.7	5.7
1970	8.1	9.0	9.4	:	:	8.6	:	5.3	6.2
1961–70	5.2	6.8	5.0	:	:	5.4	:	3.7	3.8
1971	5.4	7.6	7.1	:	:	6.0	6.6	5.7	4.5
1972	4.2	7.3	5.7	:	:	5.3	7.1	5.2	2.7
1973	6.6	7.6	12.2	:	:	9.3	12.2	7.0	7.5
1974	10.6	10.0	9.8	:	:	13.0	14.6	14.9	10.4
1975	7.0	8.0	4.9	:	:	7.6	10.9	10.4	5.4
1976	10.1	8.9	4.3	:	:	8.7	11.7	16.0	7.4
1977	7.3	14.5	4.3	:	15.5	9.1	8.4	14.0	4.8
1978	7.3	15.4	3.7	:	17.6	7.8	9.9	11.5	7.0
1979	10.9	12.5	6.9	:	15.5	9.7	16.0	12.0	9.6
1980	14.2	16.8	9.5	16.4	16.5	12.0	16.2	16.9	10.6
1971–80	8.4	10.9	6.9	:	:	8.8	11.4	11.3	7.0
1981	15.6	14.9	12.4	16.8	16.2	15.3	16.7	19.3	11.8
1982	14.1	16.4	8.8	18.9	16.3	14.6	17.5	19.9	8.2
1983	10.5	12.0	5.8	16.6	20.0	12.5	14.0	18.3	5.7
1984	11.5	11.5	6.0	15.7	14.9	11.7	13.2	17.3	6.1
1985	9.6	10.0	5.4	17.0	12.2	10.0	12.0	15.0	6.3
1986	8.1	9.1	4.6	19.8	11.7	7.7	12.4	12.8	5.7
1987	7.1	9.9	4.0	14.9	15.8	8.3	11.1	11.4	5.4
1988	6.7	8.3	4.3	15.9	11.6	7.9	8.1	11.3	4.8
1989	8.7	9.6	7.1	18.7	15.0	9.4	9.8	12.7	7.4
1990	9.8	10.9	8.4	19.9	15.2	10.3	11.4	12.3	8.7
1981–90	10.2	11.3	6.7	17.4	14.9	10.8	12.6	15.0	7.0
1991	9.4	9.7	9.2	22.7	13.2	9.6	10.4	12.2	9.3
1992	9.4	11.0	9.5	23.5	13.3	10.4	12.4	14.0	9.4
1993	8.2	10.4	7.2	23.5	11.7	8.6	9.3	10.2	6.9
1994	5.7	6.2	5.3	24.6	8.0	5.9	5.9	8.5	5.2
1995	4.7	6.1	4.5	16.3	9.4	6.6	6.3	10.3	4.4
1996	3.2	3.9	3.3	13.8	7.5	3.9	5.4	8.7	3.0
1997	3.4	3.7	3.3	12.8	5.4	3.5	6.0	6.8	3.3
1998	3.5	4.1	3.5	14.0	4.3	3.6	5.5	4.9	3.4
1999	3.0	3.3	3.0	10.4	3.0	3.0	3.0	3.0	3.0
2000	4.4	5.0	4.4	7.8	4.4	4.4	4.4	4.4	4.4
1991–2000	5.5	6.3	5.3	16.9	8.0	5.9	6.9	8.3	5.2

(1) 1960–90: D_90.

Definitions:

B: 1961–84, four-month certificates of 'Fonds des Rentes'; from 1985, three-month Treasury certificates.

DK: 1961–76, discount rate; 1977–88, call money; from 1989, three-month interbank rates.

D: Three-month interbank rates.

EL: 1960 to April 1980, credit for working capital to industry; May 1980–87, interbank sight deposits; from 1988, one-month interbank rates; since December 1994, three-month Athibor.

E: Three-month interbank rates.

F: 1960–68, call money; 1969–81, one-month sale and repurchase agreements on private sector paper; from 1982, three-month sale and repurchase agreements on private sector paper (Pibor).

IRL: 1961–70, three-month interbank deposits in London; from 1971, three-month interbank rates in Dublin.

I: 1960–70, 12-month Treasury bills; 1971–84, interbank sight deposits; from 1985, three-month interbank rates.

NL: 1960 to September 1972, three-month Treasury bills; from October 1972, three-month interbank rates.

A: 1960–79, day-to-day money; 1980–94 onwards, three-month interbank rates; from 1995, three-month Vitor.

P: 1966 to July 1985, six-month deposits; August 1985–92, three-month Treasury bills; from January 1993, three-month interbank rates.

FIN: Three-month Helibor.

S: 1982–86, three-month Treasury discount notes, from 1987 onwards, three-month Stibor.

UK: 1961 to September 1964, three-month Treasury bills; from October 1964, three-month interbank rates.

EU-15: Weighted geometric mean; weights: gross domestic product at current market prices and PPS.

US: Three-month money market.

JP: Bonds traded with three-month repurchase agreements; from January 1989, rates of three-month Certificate of Deposit.

(%)

	A	P	FIN	S	UK	EU-7 ⁽¹⁾	EUR-12 ⁽²⁾	EU-15 ⁽³⁾	US	JP
1960	:	:	:	:	:	:	:	:	:	:
1961	:	:	:	:	5.2	4.0	:	:	2.4	:
1962	:	:	:	:	4.1	3.6	:	:	2.8	:
1963	:	:	:	:	3.7	3.7	:	:	3.2	:
1964	:	:	:	:	5.0	4.4	:	:	3.6	:
1965	:	:	:	:	6.8	5.0	:	:	4.0	:
1966	:	3.0	:	:	7.0	5.6	:	:	4.9	:
1967	4.8	3.1	:	:	6.3	4.8	:	:	4.3	:
1968	4.1	3.4	:	:	7.9	5.3	:	:	5.4	:
1969	4.5	3.4	:	:	9.2	7.0	:	:	6.7	:
1970	5.6	4.0	10.6	:	8.1	7.9	:	:	6.3	:
1961-70	:	:	:	:	6.3	5.1	:	:	4.3	:
1971	4.4	4.3	8.1	:	6.2	6.2	:	:	4.3	6.5
1972	5.2	4.4	7.8	:	6.8	5.6	:	:	4.2	5.2
1973	6.9	4.4	9.3	:	11.8	9.9	:	:	7.2	8.3
1974	7.3	5.3	10.4	:	13.4	12.3	:	:	7.9	14.7
1975	5.5	6.8	11.7	:	10.6	7.9	:	:	5.8	10.1
1976	4.7	8.4	12.4	:	11.6	9.5	:	:	5.0	7.3
1977	7.5	11.1	11.8	:	8.0	8.3	9.1	:	5.3	6.4
1978	6.4	15.5	8.6	:	9.4	7.9	8.5	:	7.4	5.1
1979	5.6	16.1	8.5	:	13.9	10.4	10.1	:	10.1	5.9
1980	10.3	16.3	13.8	:	16.8	13.4	13.0	:	11.6	10.7
1971-80	6.4	9.3	10.2	:	10.8	9.1	:	:	6.9	8.0
1981	11.4	16.0	12.7	:	14.1	14.9	15.1	:	14.0	7.4
1982	8.8	16.8	13.7	13.3	12.2	13.3	13.9	13.7	10.6	6.9
1983	5.4	20.9	14.2	11.4	10.1	11.0	12.3	11.9	8.7	6.5
1984	6.6	22.5	15.8	11.9	10.0	10.7	11.5	11.3	9.5	6.3
1985	6.2	21.0	12.8	14.2	12.2	10.1	10.1	10.6	7.5	6.5
1986	5.3	15.6	11.7	9.8	10.9	8.5	8.7	9.1	6.0	5.0
1987	4.4	13.9	10.0	9.7	9.7	7.9	8.6	8.8	5.9	3.9
1988	4.6	13.0	10.0	10.2	10.3	8.0	8.1	8.5	6.9	4.0
1989	7.5	15.1	12.6	11.6	13.9	10.3	10.3	10.9	8.4	5.4
1990	8.5	16.9	14.0	13.8	14.8	11.0	11.0	11.7	7.8	7.8
1981-90	6.9	17.2	12.7	:	11.8	10.6	11.0	:	8.5	6.0
1991	9.1	17.7	13.1	11.8	11.5	10.3	10.8	11.0	5.5	7.4
1992	9.3	16.2	13.3	13.5	9.6	10.6	11.5	11.2	3.5	4.4
1993	7.2	13.3	7.8	8.8	5.9	7.9	9.1	8.6	3.1	3.0
1994	5.0	11.1	5.3	7.6	5.5	6.1	6.9	6.7	4.7	2.3
1995	4.5	9.8	5.8	8.9	6.7	6.5	7.0	7.0	6.0	1.2
1996	3.3	7.4	3.6	5.9	6.0	5.0	5.2	5.4	5.5	0.6
1997	3.5	5.7	3.2	4.5	6.8	4.7	4.5	4.9	5.7	0.6
1998	3.6	4.3	3.6	4.3	7.3	4.6	4.2	4.7	5.5	0.8
1999	3.0	3.0	3.0	3.3	5.5	3.5	3.1	3.5	5.4	0.3
2000	4.4	4.4	4.4	4.1	6.2	4.8	4.5	4.7	6.5	0.3
1991-2000	5.3	9.3	6.3	7.3	7.1	6.4	6.7	6.8	5.1	2.1

(¹) B, DK, D, F, I, NL and UK; 1960-90: including D_90.

(²) EU-15 excluding DK, S and UK; 1960-90: including D_90.

(³) 1960-90: including D_90.

Table 50

Nominal long-term interest rates

(%)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1960	:	:	6.3	:	:	5.7	:	5.3	:	4.2
1961	5.9	6.6	5.9	:	:	5.5	:	5.2	:	3.9
1962	5.2	6.6	5.9	:	:	5.4	:	5.8	:	4.2
1963	5.0	6.5	6.1	:	:	5.3	:	6.1	:	4.2
1964	5.6	7.1	6.2	:	:	5.5	:	7.4	:	4.9
1965	6.4	8.6	7.1	:	:	6.2	:	6.9	:	5.2
1966	6.7	8.7	8.1	:	:	6.6	:	6.5	:	6.2
1967	6.7	9.1	7.0	:	:	6.7	:	6.6	:	6.0
1968	6.6	8.7	6.5	:	:	7.0	:	6.7	:	6.2
1969	7.3	9.7	6.8	:	:	7.9	:	6.9	:	7.0
1970	7.8	11.1	8.3	:	:	8.6	:	9.0	:	7.8
1961-70	6.3	8.3	6.8	:	:	6.5	:	6.7	:	5.6
1971	7.3	11.0	8.0	:	:	8.4	9.2	8.3	:	7.1
1972	7.0	11.0	7.9	:	:	8.0	9.1	7.5	:	6.7
1973	7.5	12.6	9.3	9.3	:	9.0	10.7	7.4	6.8	7.3
1974	8.8	15.9	10.4	10.5	:	11.0	14.6	9.9	7.3	10.7
1975	8.5	12.7	8.5	9.4	:	10.3	14.0	11.5	6.7	9.2
1976	9.1	14.9	7.8	10.2	:	10.5	14.6	13.1	7.2	9.2
1977	8.8	16.2	6.2	9.5	:	11.0	12.9	14.6	7.0	8.5
1978	8.5	16.8	5.7	10.0	:	10.6	12.8	13.7	6.6	8.1
1979	9.7	16.7	7.4	11.2	13.3	10.9	15.1	14.1	6.8	9.2
1980	12.2	18.7	8.5	17.1	16.0	13.1	15.4	16.1	7.4	10.7
1971-80	8.7	14.6	8.0	:	:	10.3	12.8	11.6	:	8.7
1981	13.8	19.3	10.4	17.7	15.8	15.9	17.3	20.6	8.7	12.2
1982	13.5	20.5	9.0	15.4	16.0	15.7	17.0	20.9	10.4	10.5
1983	11.8	14.4	7.9	18.2	16.9	13.6	13.9	18.0	9.8	8.8
1984	12.0	14.0	7.8	18.5	16.5	12.5	14.6	15.0	10.3	8.6
1985	10.6	11.6	6.9	15.8	13.4	10.9	12.7	14.3	9.5	7.3
1986	7.9	10.6	5.9	15.8	11.4	8.4	11.1	11.7	8.7	6.4
1987	7.8	11.9	5.8	17.4	12.8	9.4	11.3	11.3	8.0	6.4
1988	7.9	10.6	6.1	16.6	11.7	9.0	9.4	12.1	7.1	6.3
1989	8.7	10.2	7.0	:	13.7	8.8	8.9	12.9	7.7	7.2
1990	10.1	11.0	8.9	:	14.7	9.9	10.1	13.4	8.6	9.0
1981-90	10.4	13.4	7.6	:	14.3	11.4	12.6	15.0	8.9	8.3
1991	9.3	10.1	8.6	:	12.4	9.0	9.2	13.0	8.2	8.7
1992	8.6	10.1	8.0	:	12.2	8.6	9.1	13.7	7.9	8.1
1993	7.2	7.2	6.4	:	10.1	6.7	7.8	11.1	6.8	6.3
1994	7.8	7.9	6.9	:	10.1	7.3	8.1	10.4	7.2	6.9
1995	7.5	8.3	6.8	:	11.3	7.5	8.3	11.9	7.2	6.9
1996	6.5	7.2	6.2	:	8.7	6.3	7.3	9.2	6.3	6.2
1997	5.8	6.2	5.7	:	6.4	5.6	6.3	6.7	5.6	5.6
1998	4.7	4.9	4.6	8.5	4.8	4.6	4.8	4.8	4.7	4.6
1999	4.8	4.9	4.5	6.5	4.7	4.6	4.6	4.8	4.7	4.6
2000	5.6	5.6	5.3	6.5	5.5	5.4	5.4	5.6	5.5	5.4
1991-2000	6.8	7.3	6.3	:	8.6	6.6	7.1	9.1	6.4	6.3

(1) 1960-90: D_90.

Definitions:

- B: Central government bonds over five years, secondary market; from 1993, central government benchmark bond of 10 years.
DK: State and mortgage bonds; from 1993, central government benchmark bond of 10 years.
D: Public sector bonds outstanding (over three years); from 1993, central government benchmark bond of 10 years.
EL: Central government bonds, based on 12-month Treasury bonds.
E: 1979-87, State bonds of two to four years; 1988-92, central government bonds at more than two years; from 1993, central government benchmark bond of 10 years.
F: 1960-79, public sector bonds; 1980-92, central government bonds of 7 to 10 years; from 1993, central government benchmark bond of 10 years.
IRL: 1960-70, central government bonds, 20 years in London; 1971-94, central government bonds with 15 years to maturity, in Dublin; from 1995, central government benchmark bond of 10 years.
I: 1960-84, Crediop bonds; 1985-91, rate of specialised industrial credit institutions (gross rate); 1992, public sector bonds outstanding; from 1993, central government benchmark bond of 10 years.
L: 1973-93, central government bonds of five to seven years, secondary market; from 1994, central government OLUX bonds of 10 years, secondary market.
NL: 1960-73, 3.25% State bond 1948; 1974-84, private loans to public enterprises; 1985-92, yield of five central government bonds with the longest maturity; from 1993, central government benchmark bond of 10 years.
A: Government bonds of more than one year, secondary market; from 1995, central government benchmark bond of 10 years.
P: Weighted average of public and private bonds over five years; from 1993, central government benchmark bond of 10 years.
FIN: 1960-79, non-central government taxable bonds, 1980-94, government bonds of five to seven years, secondary market; from 1995, central government benchmark bond of 10 years.
S: Central government bonds of 9 to 11 years; from 1995, central government benchmark bond of 10 years.
UK: Central government bonds 20 years; from 1993, central government benchmark bond of 10 years.
EU-15: Weighted geometric mean; weights: gross domestic product at current market prices and PPS.
US: 1960-88, federal government bonds over 10 years; 1989-92, federal government bonds over 30 years; from 1993, central government benchmark bond of 10 years.
JP: 1961-78, State bonds; 1979 to June 1987, over the counter sales of State bonds; 1987 to April 1989: benchmark: bond No 111 (1998); 1989 to August 1992: benchmark: bond No 119 (1999); from September 1992: benchmark bond No 145 (maturity in 2002).

(%)

	A	P	FIN	S	UK	EU-9 ⁽¹⁾	EUR-12 ⁽²⁾	EU-15 ⁽³⁾	US	JP
1960	:	:	:	5.2	5.4	:	:	:	:	:
1961	:	:	6.6	5.3	6.3	5.7	:	:	3.9	:
1962	:	:	7.1	5.0	5.9	5.7	:	:	3.9	:
1963	:	:	8.0	4.9	5.4	5.6	:	:	4.0	:
1964	:	:	8.4	5.6	6.0	6.2	:	:	4.1	:
1965	6.5	:	8.6	6.2	6.6	6.7	:	:	4.2	:
1966	6.9	:	8.4	6.6	6.9	7.1	:	:	4.7	:
1967	7.2	:	8.2	6.1	6.8	6.8	:	:	4.9	:
1968	7.7	:	8.2	6.3	7.6	6.9	:	:	5.3	:
1969	7.5	:	7.9	7.0	9.1	7.6	:	:	6.2	:
1970	7.8	:	7.8	7.4	9.3	8.7	:	:	6.6	:
1961-70	:	:	7.9	6.0	7.0	6.7	:	:	4.8	:
1971	7.7	:	8.1	7.2	8.9	8.3	:	:	5.7	:
1972	7.4	:	8.0	7.3	9.0	8.0	:	:	5.6	6.9
1973	8.3	:	8.3	7.4	10.8	9.0	:	:	6.3	7.0
1974	9.7	:	8.8	7.8	15.0	11.3	:	:	7.0	8.1
1975	9.6	:	9.6	8.8	14.5	10.8	:	:	7.0	8.4
1976	8.8	:	10.2	9.3	14.6	11.0	:	:	6.8	8.2
1977	8.7	:	10.8	9.7	12.5	10.6	:	:	7.1	7.4
1978	8.2	:	9.8	10.1	12.6	10.2	:	:	7.9	6.3
1979	8.0	:	9.5	10.5	13.0	11.0	10.6	11.1	8.7	8.3
1980	9.3	:	11.6	11.7	13.9	12.6	12.6	12.9	10.8	8.9
1971-80	8.6	:	9.5	9.0	12.5	10.3	:	:	7.3	:
1981	10.6	:	12.4	13.5	14.8	14.8	14.9	14.9	12.9	8.4
1982	9.9	:	12.4	13.0	12.7	14.0	14.3	14.1	12.2	8.3
1983	8.2	:	13.1	12.3	10.8	12.1	12.9	12.6	10.8	7.8
1984	8.0	:	14.0	12.3	10.7	11.3	11.9	11.8	12.0	7.3
1985	7.8	27.7	12.7	13.0	10.6	10.4	11.0	11.0	10.8	6.5
1986	7.3	19.5	11.7	10.3	9.8	8.8	9.0	9.2	8.1	5.2
1987	7.0	16.8	11.2	11.7	9.5	8.9	9.3	9.4	8.7	4.7
1988	6.7	15.5	10.6	11.4	9.3	8.9	9.3	9.4	9.0	4.7
1989	7.1	16.9	12.1	11.2	9.6	9.4	9.8	9.8	8.5	5.2
1990	8.7	16.8	13.2	14.2	11.1	10.7	11.0	11.1	8.6	7.5
1981-90	8.1	:	12.3	12.3	10.9	10.9	11.3	11.3	10.2	6.6
1991	8.6	18.3	11.7	11.8	9.9	10.0	10.3	10.3	8.1	6.7
1992	8.3	15.4	12.0	10.0	9.1	9.6	10.0	9.8	7.7	5.3
1993	6.6	9.5	8.2	8.6	7.3	7.6	7.9	7.8	5.8	4.0
1994	6.7	10.4	8.4	9.5	8.1	8.0	8.1	8.2	7.1	4.2
1995	7.2	11.5	8.8	10.2	8.2	8.3	8.6	8.6	6.6	3.3
1996	6.3	8.6	7.1	8.1	7.8	7.2	7.2	7.3	6.4	3.0
1997	5.7	6.4	6.0	6.7	7.0	6.1	6.0	6.2	6.3	2.2
1998	4.7	5.0	4.8	5.0	5.5	4.9	4.8	4.9	5.3	1.3
1999	4.7	4.8	4.7	5.0	5.0	4.7	4.7	4.7	5.6	1.8
2000	5.6	5.6	5.5	5.4	5.3	5.4	5.5	5.4	6.0	1.8
1991-2000	6.4	9.5	7.7	8.0	7.3	7.2	7.3	7.3	6.5	3.4

⁽¹⁾ B, DK, D, F, I, NL, FIN, S and UK; 1960-90: including D_90.

⁽²⁾ EU-15 excluding DK, S and UK; 1960-90: including D_90.

⁽³⁾ 1960-90: including D_90.

Table 51

ECU–EUR exchange rates ⁽¹⁾(annual average, national currency units per EUR ⁽¹⁾)

	BEF	DKK	DEM	100 GRD	100 ESP	FRF	IEP	1 000 ITL	LUF	NLG
1960	52.81	7.295	4.436	0.317	0.634	5.215	0.3772	0.660	52.81	4.014
1961	53.37	7.372	4.307	0.320	0.640	5.270	0.3812	0.667	53.37	3.899
1962	53.49	7.389	4.279	0.321	0.641	5.282	0.3821	0.669	53.49	3.873
1963	53.49	7.389	4.279	0.321	0.641	5.282	0.3821	0.669	53.49	3.873
1964	53.49	7.389	4.279	0.321	0.641	5.282	0.3821	0.669	53.49	3.873
1965	53.49	7.389	4.279	0.321	0.641	5.282	0.3821	0.669	53.49	3.873
1966	53.49	7.389	4.279	0.321	0.641	5.282	0.3821	0.669	53.49	3.873
1967	53.24	7.423	4.259	0.319	0.651	5.257	0.3877	0.666	53.24	3.855
1968	51.44	7.717	4.116	0.309	0.720	5.080	0.4287	0.643	51.44	3.725
1969	51.11	7.666	4.026	0.307	0.716	5.290	0.4259	0.639	51.11	3.700
1970	51.11	7.667	3.741	0.307	0.714	5.678	0.4259	0.639	51.11	3.700
1971	50.87	7.753	3.646	0.314	0.726	5.772	0.4286	0.647	50.87	3.658
1972	49.36	7.789	3.577	0.337	0.720	5.657	0.4489	0.654	49.36	3.600
1973	47.80	7.416	3.276	0.370	0.718	5.468	0.5023	0.716	47.80	3.429
1974	45.91	7.193	3.087	0.358	0.688	5.674	0.5135	0.792	45.91	3.171
1975	45.57	7.123	3.049	0.400	0.703	5.319	0.5598	0.810	45.57	3.135
1976	43.17	6.762	2.815	0.409	0.747	5.345	0.6219	0.930	43.17	2.955
1977	40.88	6.856	2.648	0.422	0.868	5.606	0.6537	1.007	40.88	2.800
1978	40.06	7.019	2.556	0.468	0.974	5.740	0.6639	1.080	40.06	2.754
1979	40.17	7.208	2.511	0.508	0.920	5.830	0.6694	1.138	40.17	2.749
1980	40.60	7.827	2.524	0.594	0.997	5.869	0.6760	1.189	40.60	2.760
1981	41.29	7.923	2.514	0.616	1.027	6.040	0.6910	1.263	41.29	2.775
1982	44.71	8.157	2.376	0.653	1.076	6.431	0.6896	1.324	44.71	2.614
1983	45.44	8.132	2.271	0.781	1.275	6.771	0.7150	1.350	45.44	2.537
1984	45.44	8.146	2.238	0.884	1.266	6.872	0.7259	1.381	45.44	2.523
1985	44.91	8.019	2.226	1.057	1.291	6.795	0.7152	1.448	44.91	2.511
1986	43.80	7.936	2.128	1.374	1.375	6.800	0.7335	1.462	43.80	2.401
1987	43.04	7.885	2.072	1.563	1.422	6.929	0.7754	1.495	43.04	2.334
1988	43.43	7.952	2.074	1.676	1.376	7.036	0.7757	1.537	43.43	2.335
1989	43.38	8.049	2.070	1.788	1.304	7.024	0.7768	1.510	43.38	2.335
1990	42.43	7.857	2.052	2.014	1.294	6.914	0.7678	1.522	42.43	2.312
1991	42.22	7.909	2.051	2.252	1.285	6.973	0.7678	1.533	42.22	2.311
1992	41.59	7.809	2.020	2.470	1.325	6.848	0.7607	1.596	41.59	2.275
1993	40.47	7.594	1.936	2.686	1.491	6.634	0.8000	1.841	40.47	2.175
1994	39.66	7.543	1.925	2.880	1.589	6.583	0.7936	1.915	39.66	2.158
1995	38.55	7.328	1.874	3.030	1.630	6.525	0.8155	2.130	38.55	2.099
1996	39.30	7.359	1.910	3.055	1.607	6.493	0.7934	1.959	39.30	2.140
1997	40.53	7.484	1.964	3.094	1.659	6.613	0.7475	1.929	40.53	2.211
1998	40.62	7.499	1.969	3.307	1.672	6.601	0.7862	1.944	40.62	2.220
1999	–	7.436	–	3.258	–	–	–	–	–	–
2000	–	7.454	–	3.366	–	–	–	–	–	–

⁽¹⁾ As from 1999 euro conversion rates for BEF, DEM, ESP, FRF, IEP, ITL, LUF, NLG, ATS, PTE and FIM.
As from 2001 euro conversion rates for GRD.

(annual average, national currency units per EUR ⁽¹⁾)

	ATS	100 PTE	FIM	SEK	GBP	USD	100 YEN
1960	27.46	0.304	3.380	5.464	0.3772	1.056	3.802
1961	27.75	0.307	3.416	5.522	0.3812	1.067	3.842
1962	27.82	0.308	3.423	5.534	0.3821	1.070	3.851
1963	27.82	0.308	3.423	5.534	0.3821	1.070	3.851
1964	27.82	0.308	3.423	5.534	0.3821	1.070	3.851
1965	27.82	0.308	3.423	5.534	0.3821	1.070	3.851
1966	27.82	0.308	3.423	5.534	0.3821	1.070	3.851
1967	27.69	0.306	3.674	5.509	0.3877	1.065	3.833
1968	26.75	0.296	4.321	5.323	0.4287	1.029	3.704
1969	26.58	0.294	4.293	5.288	0.4259	1.022	3.680
1970	26.58	0.294	4.293	5.288	0.4259	1.022	3.680
1971	26.18	0.296	4.384	5.371	0.4286	1.048	3.638
1972	25.93	0.305	4.651	5.342	0.4489	1.122	3.397
1973	24.12	0.303	4.707	5.379	0.5023	1.232	3.332
1974	22.47	0.299	4.536	5.337	0.5135	1.202	3.397
1975	21.55	0.314	4.564	5.141	0.5600	1.241	3.607
1976	20.03	0.336	4.311	4.867	0.6216	1.118	3.312
1977	18.84	0.436	4.593	5.119	0.6537	1.141	3.058
1978	18.46	0.559	5.239	5.749	0.6639	1.274	2.671
1979	18.31	0.670	5.322	5.872	0.6463	1.370	3.005
1980	17.97	0.696	5.172	5.881	0.5985	1.392	3.150
1981	17.72	0.685	4.793	5.635	0.5531	1.116	2.454
1982	16.70	0.780	4.707	6.143	0.5605	0.980	2.435
1983	15.97	0.987	4.948	6.821	0.5870	0.890	2.114
1984	15.73	1.157	4.724	6.511	0.5906	0.789	1.871
1985	15.64	1.303	4.694	6.521	0.5890	0.763	1.806
1986	14.96	1.471	4.980	6.996	0.6715	0.984	1.650
1987	14.57	1.626	5.065	7.310	0.7046	1.154	1.666
1988	14.59	1.701	4.944	7.242	0.6644	1.182	1.515
1989	14.57	1.734	4.723	7.099	0.6733	1.102	1.519
1990	14.44	1.811	4.855	7.521	0.7139	1.273	1.837
1991	14.43	1.786	5.002	7.479	0.7010	1.239	1.665
1992	14.22	1.747	5.807	7.533	0.7377	1.298	1.642
1993	13.62	1.884	6.696	9.122	0.7800	1.171	1.301
1994	13.54	1.969	6.191	9.163	0.7759	1.190	1.213
1995	13.18	1.961	5.709	9.332	0.8288	1.308	1.230
1996	13.43	1.958	5.828	8.515	0.8138	1.270	1.381
1997	13.82	1.986	5.881	8.651	0.6923	1.134	1.371
1998	13.85	2.017	5.983	8.916	0.6764	1.121	1.464
1999	–	–	–	8.808	0.6587	1.066	1.213
2000	–	–	–	8.445	0.6095	0.922	0.995

Table 52

Irrevocably fixed conversion rates between the euro and the currencies of the Member States

1 EUR	=	40.3399	Belgian francs
	=	1.95583	German marks
	=	340.75	Greek drachmas
	=	166.386	Spanish pesetas
	=	6.55957	French francs
	=	0.787564	Irish pounds
	=	1 936.27	Italian lire
	=	40.3399	Luxembourg francs
	=	2.20371	Dutch guilders
	=	13.7603	Austrian schillings
	=	200.482	Portuguese escudos
	=	5.94573	Finnish marks

Table 53

Nominal effective exchange rates
Performance relative to the rest of 22 industrial countries; double export weights

(1991 = 100)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	NL
1960	85.6	98.6	39.8	765.2	174.9	137.0	145.2	248.8	61.6
1961	84.4	97.7	41.3	757.2	173.6	135.8	145.1	246.0	63.5
1962	84.2	97.6	41.7	755.9	173.5	135.6	145.2	245.8	64.0
1963	84.2	97.6	41.7	756.0	173.5	135.6	145.2	245.8	64.0
1964	84.2	97.6	41.7	756.0	173.5	135.6	145.2	245.8	64.0
1965	84.2	97.6	41.7	756.0	173.5	135.6	145.2	245.8	64.0
1966	84.2	97.6	41.7	756.0	173.5	135.6	145.2	245.8	64.0
1967	84.4	97.5	41.8	758.7	169.3	136.1	144.6	246.5	64.2
1968	85.6	94.1	42.7	772.8	152.4	139.4	138.6	251.5	65.6
1969	86.2	94.1	43.7	774.1	153.0	132.0	138.8	252.7	65.7
1970	85.8	93.2	47.5	763.9	152.4	121.1	138.7	250.9	64.8
1971	85.7	92.5	48.9	748.0	151.1	118.7	138.7	247.5	65.2
1972	88.6	93.2	50.4	697.0	154.3	121.7	137.4	245.6	66.2
1973	89.6	99.4	55.5	641.7	157.8	125.8	131.4	221.0	68.2
1974	90.8	100.0	58.6	642.2	162.4	117.3	128.8	199.2	71.7
1975	92.0	103.5	59.6	583.1	158.8	128.6	123.2	190.9	73.5
1976	94.4	106.9	63.2	551.7	146.7	123.9	113.8	158.6	75.8
1977	99.7	106.9	68.4	535.9	128.4	119.1	110.7	146.5	79.8
1978	102.8	107.6	72.6	486.6	117.1	117.6	111.4	137.8	81.7
1979	103.9	106.7	76.1	457.6	128.1	118.2	111.0	133.1	82.8
1980	103.3	98.1	76.4	395.7	119.2	118.6	107.5	128.2	82.9
1981	98.4	91.7	72.9	361.9	109.4	109.5	99.0	114.0	79.9
1982	89.7	88.4	77.3	333.8	105.3	101.2	99.0	107.3	84.4
1983	87.8	88.8	81.1	273.2	89.4	94.9	96.0	104.3	86.6
1984	86.4	86.2	80.3	235.6	88.2	91.2	92.7	99.1	85.6
1985	87.2	87.4	80.8	199.9	86.9	92.5	94.0	94.5	86.0
1986	93.1	94.6	90.7	158.8	87.3	98.2	100.1	99.7	93.1
1987	97.0	98.9	97.4	143.0	88.1	99.5	98.1	101.1	98.0
1988	95.9	97.0	96.9	133.1	91.4	97.5	96.5	97.8	97.7
1989	95.1	94.7	95.9	123.2	95.4	96.2	95.6	98.4	96.8
1990	100.1	101.5	100.9	112.6	99.8	102.0	101.2	101.7	100.6
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	102.1	102.6	103.3	92.5	97.8	103.6	103.2	97.0	102.4
1993	103.1	105.5	107.0	85.4	86.2	106.4	98.3	81.2	106.0
1994	105.0	105.6	107.2	79.7	81.0	107.2	97.9	77.8	106.4
1995	109.8	110.8	113.7	77.7	81.7	111.7	98.2	71.0	111.1
1996	107.5	109.9	110.9	76.2	82.5	111.9	100.6	77.7	108.8
1997	102.9	106.4	105.1	74.2	78.5	107.5	102.3	77.6	104.0
1998	103.2	107.4	105.7	69.8	78.4	108.5	97.6	77.7	104.1
1999	101.7	105.6	103.5	69.5	77.2	106.3	94.6	75.9	102.8
2000	98.0	100.9	98.3	64.9	74.5	101.4	89.1	72.5	99.4
2001	98.7	102.2	99.0	64.5	74.9	102.1	89.8	72.9	100.1
2002	98.9	102.7	99.3	64.7	75.1	102.3	90.2	73.1	100.3
2003	98.9	102.6	99.3	64.6	75.1	102.3	90.1	73.0	100.3

⁽¹⁾ 1960–91: D₉₀.

(1991 = 100)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1960	58.1	521.0	138.0	126.9	180.7	80.9	118.4	84.6	34.7
1961	57.4	517.9	136.8	125.8	180.1	82.5	120.0	84.7	34.7
1962	57.2	517.9	136.6	125.6	180.5	83.0	120.8	85.5	34.7
1963	57.2	518.0	136.6	125.6	180.6	83.0	120.9	85.6	34.7
1964	57.2	518.0	136.6	125.6	180.6	83.0	120.9	85.6	34.7
1965	57.2	518.0	136.6	125.6	180.6	83.0	120.9	85.6	34.7
1966	57.2	518.0	136.6	125.6	180.6	83.0	120.9	85.6	34.7
1967	57.4	520.6	127.2	126.5	178.7	83.0	120.3	85.9	34.8
1968	58.6	543.8	108.5	131.9	157.9	85.2	115.5	87.8	35.4
1969	58.5	546.1	108.7	132.0	158.4	84.8	115.1	87.9	35.5
1970	57.5	545.3	107.8	131.0	157.7	86.1	116.1	86.9	35.3
1971	58.4	544.1	106.3	129.9	157.3	86.8	116.6	84.9	35.8
1972	59.0	540.0	100.8	131.7	151.8	90.4	119.5	79.3	40.2
1973	63.1	558.1	100.9	131.7	136.5	97.3	122.7	74.0	42.8
1974	66.7	548.5	103.5	130.6	131.6	97.4	120.4	75.2	39.9
1975	69.1	535.5	103.6	136.1	121.4	102.0	123.4	75.1	39.1
1976	72.0	494.8	106.7	139.5	104.5	99.0	111.3	79.7	41.2
1977	76.8	388.7	101.5	134.5	100.6	101.3	110.8	80.8	45.8
1978	78.8	310.9	91.5	123.1	101.8	102.1	110.0	74.3	55.8
1979	80.7	263.4	91.6	123.4	108.1	106.3	118.6	72.6	52.0
1980	83.2	254.0	94.6	123.9	119.1	104.4	121.1	72.6	49.9
1981	81.4	245.8	96.8	122.0	120.6	89.1	100.0	81.4	56.6
1982	84.8	214.7	98.2	110.3	116.6	86.5	93.5	96.4	54.4
1983	87.3	170.1	93.4	99.0	109.3	83.0	84.9	106.7	61.0
1984	86.8	142.7	95.3	100.9	104.4	78.0	77.3	116.6	64.7
1985	87.5	127.1	96.0	100.7	104.5	77.1	76.3	124.6	66.9
1986	94.1	118.3	96.0	101.1	98.5	89.3	87.6	110.6	87.5
1987	98.2	110.1	97.3	100.9	97.7	96.8	95.7	103.2	96.0
1988	98.0	104.3	98.9	101.2	103.8	94.0	94.8	100.0	106.5
1989	97.3	100.9	102.2	101.6	100.3	93.0	91.9	104.6	101.8
1990	100.5	99.3	103.9	100.2	99.1	103.3	103.8	100.3	91.9
1991	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1992	102.3	103.5	87.3	101.2	96.1	103.4	102.5	98.5	105.3
1993	105.3	96.7	75.8	82.3	88.3	98.0	89.8	102.2	126.8
1994	105.4	92.8	81.6	81.4	88.7	96.3	87.9	101.2	136.8
1995	109.5	94.1	90.7	81.4	85.2	102.0	92.5	102.3	144.2
1996	107.3	94.6	88.2	89.4	86.5	102.4	94.9	108.0	125.8
1997	104.0	92.1	85.3	85.7	100.3	93.4	90.3	116.6	118.7
1998	104.4	91.1	84.8	84.3	104.2	93.9	92.4	123.7	112.0
1999	103.2	90.0	83.0	82.9	103.6	89.6	86.7	123.1	130.8
2000	100.2	87.3	79.2	82.4	106.2	80.6	77.0	128.7	146.7
2001	100.6	87.8	80.3	75.3	104.4	81.9	76.9	134.9	133.5
2002	100.7	88.0	80.7	72.9	104.3	82.4	77.1	135.0	134.8
2003	100.6	88.0	80.6	72.7	103.5	82.3	76.6	135.3	137.5

⁽¹⁾ EU-15 excluding DK, L, S and UK relative to 11 industrial countries.⁽²⁾ EU-15 excluding L relative to eight industrial non-member countries.

Table 54a

Taxes linked to imports and production (indirect taxes); general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	13.1	17.9	13.2	12.1	7.4	14.6	17.2	10.4	8.5	10.7
1971	12.9	16.9	13.2	11.8	7.2	14.4	17.1	10.3	9.4	10.8
1972	12.2	16.9	13.4	11.4	7.3	14.5	16.4	9.7	10.1	11.1
1973	12.0	16.3	13.2	10.8	7.5	14.4	15.9	9.3	10.1	10.9
1974	11.7	15.4	12.7	10.4	6.6	13.9	18.4	9.1	9.3	10.2
1975	11.5	15.0	12.7	11.6	6.4	14.1	15.6	8.1	11.4	10.4
1976	12.2	15.7	12.7	11.5	6.3	14.6	17.5	8.8	11.1	10.9
1977	12.4	16.6	12.8	12.2	6.4	13.9	16.3	9.5	11.6	12.1
1978	12.4	17.6	13.1	12.1	5.9	14.2	15.1	9.2	12.1	12.1
1979	12.6	18.4	13.2	11.8	6.0	14.8	14.2	8.8	11.6	12.1
1980	12.2	18.0	13.1	10.4	6.4	14.9	15.3	9.3	12.4	11.7
1981	12.2	17.8	12.9	10.6	7.0	14.8	15.9	9.0	12.6	11.2
1982	12.4	17.0	12.7	11.7	7.4	15.1	16.5	9.2	13.2	11.3
1983	12.5	17.2	12.8	12.5	8.2	15.1	17.2	9.8	14.9	11.4
1984	12.1	17.5	12.9	12.5	8.6	15.4	17.3	9.9	14.6	11.7
1985	12.0	17.8	12.6	12.5	9.1	15.6	16.7	9.5	14.8	11.7
1986	11.7	19.1	12.3	14.1	10.4	15.3	16.8	9.9	14.4	12.2
1987	12.2	18.9	12.3	14.6	10.4	15.4	16.6	10.3	14.5	12.8
1988	12.0	18.6	12.3	13.5	10.6	15.3	16.6	10.8	14.7	12.8
1989	12.0	17.7	12.5	12.2	10.5	14.9	16.4	11.1	14.8	12.0
1990	12.1	17.0	12.5	13.9	10.3	14.9	15.5	11.3	15.3	11.9
1991	12.0	16.7	12.7	14.6	10.3	14.5	15.2	11.8	15.5	11.9
1991	12.0	16.7	12.2	14.6	10.3	14.5	15.2	11.8	15.5	11.9
1992	12.0	16.6	12.4	15.3	10.8	14.3	15.2	11.8	15.6	12.3
1993	12.3	16.9	12.7	14.7	10.1	14.3	14.4	12.7	16.3	12.4
1994	12.6	17.3	13.1	14.3	10.6	14.7	15.3	12.3	16.3	12.4
1995	12.2	17.2	12.7	14.2	10.3	14.9	14.6	12.4	16.2	12.3

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	15.8	10.1	12.9	12.1	16.2	12.5	13.2	8.4	7.0
1971	16.1	9.4	13.3	14.2	15.1	12.4	13.0	8.5	7.0
1972	16.6	9.2	13.3	13.6	14.3	12.4	12.9	8.3	6.9
1973	17.3	9.0	12.8	13.8	13.6	12.3	12.6	8.1	6.9
1974	16.7	9.1	12.2	12.7	13.6	11.8	12.1	7.9	6.8
1975	16.4	9.4	12.1	13.2	13.3	11.7	12.0	7.9	6.5
1976	15.9	11.0	12.1	13.8	13.0	12.0	12.3	7.6	6.4
1977	16.4	11.2	13.1	14.6	13.6	12.1	12.5	7.5	6.9
1978	15.9	10.5	13.4	13.3	13.5	12.2	12.5	7.0	6.7
1979	15.8	10.3	13.2	12.8	15.0	12.2	12.8	6.6	7.2
1980	15.8	12.2	13.1	13.0	15.8	12.3	13.0	6.7	7.3
1981	15.9	12.5	13.4	13.7	16.8	12.2	13.1	7.0	7.5
1982	15.7	13.1	13.3	13.6	16.8	12.3	13.2	6.9	7.4
1983	15.7	14.0	13.3	14.7	16.4	12.5	13.3	7.0	7.2
1984	16.4	13.5	14.0	15.2	16.3	12.7	13.4	6.9	7.5
1985	16.3	13.7	14.1	15.9	16.0	12.6	13.4	6.8	7.6
1986	16.1	14.3	14.5	16.2	16.5	12.6	13.5	6.8	7.4
1987	16.2	13.7	14.6	16.7	16.4	12.8	13.6	6.9	8.0
1988	16.1	13.8	15.0	15.8	16.2	12.8	13.6	6.9	8.1
1989	16.0	13.0	15.2	15.7	15.7	12.7	13.4	6.8	7.9
1990	15.7	13.0	14.9	16.6	15.6	12.7	13.4	6.9	8.0
1991	15.5	12.9	15.0	17.1	16.0	12.8	13.5	7.2	7.5
1991	15.5	12.9	15.0	17.1	16.0	12.6	13.4	7.2	7.5
1992	15.6	13.7	14.7	15.7	15.6	12.7	13.3	7.2	7.7
1993	15.7	12.9	14.5	15.1	15.3	13.0	13.4	7.2	7.6
1994	15.7	13.4	14.2	14.3	15.4	13.2	13.6	7.2	7.7
1995	15.5	13.6	13.6	13.8	15.7	13.1	13.5	7.2	7.9

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 54b

Taxes linked to imports and production (indirect taxes); general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	13.9	:	:	:	:	:	:	:	:	:
1971	13.5	17.7	:	:	:	:	:	:	:	:
1972	12.5	18.0	:	:	:	:	:	:	:	:
1973	12.3	15.9	:	:	:	:	:	:	:	:
1974	12.2	14.9	:	:	:	:	:	:	:	:
1975	11.9	14.6	:	:	:	:	:	:	:	:
1976	12.3	15.2	:	:	:	:	:	:	:	:
1977	12.7	16.2	:	:	:	:	:	:	:	:
1978	12.7	17.3	:	:	:	14.4	:	:	:	:
1979	12.6	18.0	:	:	:	15.1	:	:	:	:
1980	11.7	17.7	:	:	:	15.0	:	:	:	:
1981	11.8	17.4	:	:	:	15.1	:	:	:	:
1982	11.8	16.6	:	:	:	15.3	:	:	:	:
1983	12.2	16.8	:	:	:	15.3	:	:	:	:
1984	11.9	17.1	:	:	:	15.7	:	:	:	:
1985	11.8	17.3	:	:	:	15.8	:	:	:	:
1986	11.4	18.6	:	:	:	15.4	:	:	:	:
1987	11.7	18.4	:	:	:	15.5	:	:	:	11.1
1988	11.7	18.3	:	:	:	15.3	:	:	:	11.0
1989	11.6	17.4	:	:	:	14.9	:	:	:	10.3
1990	11.7	16.7	:	:	:	14.8	14.4	10.7	12.3	10.3
1991	11.6	16.4	11.1	:	:	14.6	14.0	11.1	12.6	10.4
1992	11.7	16.3	11.1	:	:	14.4	14.0	11.3	12.5	10.4
1993	12.1	16.6	11.5	:	:	14.7	13.1	12.0	13.8	11.1
1994	12.5	17.0	11.8	:	:	15.2	14.0	11.8	13.4	10.7
1995	12.2	16.9	11.4	13.5	10.2	15.4	13.5	12.1	12.6	10.7
1996	12.7	17.3	11.4	14.0	10.2	16.1	13.7	11.8	12.6	11.2
1997	12.8	17.5	11.4	14.3	10.5	16.0	13.5	12.4	12.7	11.4
1998	12.8	18.0	11.6	14.4	11.1	16.0	13.2	15.3	13.0	11.6
1999	13.2	17.8	12.2	15.1	11.7	15.9	13.1	15.2	13.9	12.2
2000	13.1	16.7	12.1	15.5	11.7	15.5	13.3	15.1	14.2	12.2
2001	12.8	16.4	11.8	15.5	11.6	15.3	12.3	14.8	14.2	12.7
2002	12.7	16.3	11.9	15.3	11.6	15.3	12.4	15.0	14.1	12.7
2003	13.0	16.2	11.7	15.3	11.6	15.3	12.3	14.9	14.4	12.7

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	14.5	:	:	8.4	:
1971	:	:	:	:	13.3	:	:	8.5	:
1972	:	:	:	:	12.5	:	:	8.3	:
1973	:	:	:	:	11.1	:	:	8.1	:
1974	:	:	:	:	11.5	:	:	7.9	:
1975	:	:	12.2	:	11.1	:	:	7.9	:
1976	15.8	:	12.3	:	10.9	:	:	7.6	:
1977	16.3	:	13.3	:	11.3	:	:	7.5	:
1978	15.8	:	13.6	:	11.2	:	:	7.0	:
1979	15.7	:	13.4	:	11.9	:	:	6.6	:
1980	15.7	:	13.3	:	13.2	:	:	6.7	:
1981	15.8	:	13.6	:	13.5	:	:	7.0	:
1982	15.7	:	13.5	:	13.7	:	:	6.9	:
1983	15.7	:	13.5	:	13.3	:	:	7.0	:
1984	16.3	:	14.2	:	13.6	:	:	6.9	:
1985	16.2	:	14.4	:	13.0	:	:	6.8	:
1986	16.0	:	14.8	:	13.1	:	:	6.8	:
1987	16.1	:	14.9	:	13.1	:	:	6.9	:
1988	16.0	:	16.1	:	13.1	:	:	6.9	:
1989	15.9	:	15.9	:	12.6	:	:	6.8	:
1990	15.6	:	15.2	:	12.2	:	:	6.9	7.9
1991	15.4	:	15.3	:	13.2	:	:	7.2	7.3
1992	15.5	:	15.0	:	13.1	:	:	7.2	7.8
1993	15.6	:	14.7	15.1	12.7	:	:	7.2	7.5
1994	15.5	:	14.6	14.4	13.1	:	:	7.2	7.6
1995	14.2	14.0	13.7	13.7	13.1	12.5	12.7	7.2	7.7
1996	14.5	14.1	13.5	14.3	13.1	12.7	12.9	7.0	7.9
1997	14.9	13.9	14.3	14.8	13.5	12.9	13.1	6.9	7.8
1998	14.9	14.3	14.1	15.3	13.5	13.5	13.6	6.8	8.3
1999	15.0	14.9	14.1	16.8	13.9	13.8	14.0	6.8	8.4
2000	14.7	14.7	13.4	14.6	14.0	13.6	13.8	6.7	8.5
2001	14.8	14.6	13.2	14.5	13.6	13.4	13.5	6.7	8.9
2002	14.7	14.6	12.9	14.4	13.5	13.4	13.5	6.7	9.2
2003	14.7	14.8	12.5	14.2	13.4	13.4	13.5	6.6	9.4

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 55a

**Current taxes on income and wealth (direct taxes); general government
EU Member States: former definition**

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	11.2	22.0	10.8	3.0	3.3	6.9	7.8	5.1	10.5	12.4
1971	11.8	23.5	11.3	3.4	3.5	6.4	8.6	5.3	11.5	13.3
1972	12.5	22.9	11.1	3.3	3.5	6.5	8.2	5.9	11.0	13.8
1973	13.4	23.8	12.6	3.0	3.7	6.7	8.3	5.6	11.9	14.0
1974	14.5	26.7	13.0	4.2	3.8	7.1	9.0	5.4	13.4	14.3
1975	16.4	24.3	12.1	3.2	4.2	6.9	9.1	6.0	14.7	14.9
1976	16.0	23.9	12.8	4.3	4.5	7.8	10.2	6.9	14.7	14.6
1977	17.1	23.2	13.8	3.5	4.6	7.8	10.0	7.7	17.3	14.8
1978	18.3	23.7	13.0	3.7	5.3	7.4	9.8	8.9	18.4	14.9
1979	18.8	24.0	12.6	3.9	5.8	7.5	10.2	8.6	16.2	15.0
1980	18.0	25.0	12.8	4.5	6.7	8.1	11.5	9.7	15.6	15.2
1981	17.8	24.9	12.3	3.8	6.9	8.4	11.8	11.0	15.7	14.6
1982	19.3	24.5	12.2	4.8	6.5	8.6	12.1	11.9	15.7	14.4
1983	18.6	25.7	12.0	4.5	7.5	8.7	12.6	12.4	17.4	13.2
1984	19.1	26.6	12.2	4.9	7.9	9.1	13.4	12.6	16.5	12.5
1985	19.1	27.7	12.6	4.6	8.2	8.9	13.1	13.0	17.5	12.3
1986	18.8	28.5	12.3	5.0	7.9	9.1	13.9	12.8	15.9	12.9
1987	18.5	29.0	12.4	5.0	9.9	9.2	14.3	13.3	15.8	13.7
1988	17.7	30.3	12.2	5.3	10.1	8.8	15.1	13.3	:	13.9
1989	16.3	30.0	12.7	4.5	11.6	8.8	12.6	14.3	:	13.4
1990	16.5	28.3	11.2	5.4	11.6	8.7	13.1	14.3	:	14.9
1991	16.2	28.5	11.9	5.5	11.6	9.2	13.7	14.4	:	16.2
1991	16.2	28.5	11.3	5.5	11.6	9.2	13.7	14.4	:	16.2
1992	16.1	29.0	11.6	5.4	12.0	8.8	14.1	14.6	:	15.3
1993	16.2	30.1	11.2	5.7	11.5	9.0	14.8	16.0	:	16.1
1994	17.5	30.6	10.8	6.8	11.0	9.2	15.2	14.8	:	13.6
1995	17.8	30.3	11.1	7.2	11.0	9.4	13.5	14.5	:	12.5

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	10.6	5.1	12.9	19.4	14.4	8.2	10.0	13.4	8.0
1971	10.7	4.7	13.8	19.2	14.0	8.4	10.1	12.5	8.6
1972	11.1	4.4	13.8	19.1	12.6	8.5	9.9	13.5	8.5
1973	11.0	4.4	14.5	17.6	12.5	9.2	10.3	13.3	9.4
1974	11.8	4.5	14.9	19.7	15.2	9.5	11.1	13.7	10.8
1975	11.2	4.5	16.1	20.3	15.8	9.3	11.0	12.3	9.4
1976	11.0	4.8	18.5	21.6	15.1	10.1	11.6	13.1	8.9
1977	11.3	5.1	17.2	21.7	14.1	10.6	11.8	13.5	9.1
1978	12.6	5.2	15.0	21.8	13.5	10.6	11.7	13.8	9.0
1979	12.3	5.7	14.1	21.6	12.8	10.4	11.4	14.0	9.8
1980	12.5	5.6	14.2	20.7	13.4	10.8	11.8	13.8	10.6
1981	13.2	6.5	15.6	20.2	14.3	10.9	12.1	13.7	11.1
1982	12.7	6.9	15.3	20.7	14.5	11.0	12.2	12.9	11.2
1983	12.5	7.8	15.5	20.9	14.3	11.2	12.3	12.3	11.4
1984	13.2	7.6	15.9	20.5	14.4	11.4	12.5	12.1	11.6
1985	14.0	7.7	16.5	20.2	14.5	11.6	12.7	12.3	11.8
1986	14.0	5.9	17.5	21.0	13.6	11.6	12.6	12.3	11.9
1987	13.5	5.3	15.6	23.0	13.3	11.8	12.8	13.1	12.5
1988	13.5	6.5	16.7	23.4	13.2	11.7	12.8	12.7	12.7
1989	12.6	7.8	16.5	24.4	13.6	12.1	13.1	13.0	13.2
1990	11.6	7.9	17.7	22.6	13.8	11.8	12.8	12.7	13.2
1991	12.2	8.8	17.6	19.2	12.8	12.2	12.8	12.2	13.3
1991	12.2	8.8	17.6	19.2	12.8	12.0	12.7	12.2	13.3
1992	12.7	9.8	16.9	19.8	12.1	12.0	12.6	12.0	12.4
1993	12.8	9.0	15.2	20.1	11.4	12.1	12.5	12.3	11.3
1994	11.3	8.8	16.8	20.3	11.8	11.6	12.3	12.6	10.2
1995	11.9	9.1	16.7	20.8	12.6	11.7	12.4	13.0	9.7

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 55b

**Current taxes on income and wealth (direct taxes); general government
EU Member States: ESA 95**

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	10.5	:	:	:	:	:	:	:	:	:
1971	11.2	23.9	:	:	:	:	:	:	:	:
1972	11.8	23.1	:	:	:	:	:	:	:	:
1973	12.9	24.1	:	:	:	:	:	:	:	:
1974	13.8	27.2	:	:	:	:	:	:	:	:
1975	15.6	23.8	:	:	:	:	:	:	:	:
1976	15.2	24.1	:	:	:	:	:	:	:	:
1977	16.5	23.5	:	:	:	:	:	:	:	:
1978	17.4	23.7	:	:	:	6.8	:	:	:	:
1979	17.8	24.0	:	:	:	7.1	:	:	:	:
1980	17.1	25.0	:	:	:	7.6	:	:	:	:
1981	17.0	24.9	:	:	:	7.8	:	:	:	:
1982	17.9	24.5	:	:	:	8.0	:	:	:	:
1983	17.9	25.7	:	:	:	8.1	:	:	:	:
1984	18.4	26.7	:	:	:	8.4	:	:	:	:
1985	18.1	27.8	:	:	:	8.3	:	:	:	:
1986	17.8	28.6	:	:	:	8.3	:	:	:	:
1987	17.5	29.0	:	:	:	8.3	:	:	:	13.7
1988	16.8	30.3	:	:	:	7.9	:	:	:	14.0
1989	15.3	30.0	:	:	:	8.0	:	:	:	13.5
1990	15.5	28.3	:	:	:	8.2	13.2	14.2	17.2	15.0
1991	15.3	28.5	11.3	:	:	8.5	13.9	14.4	15.9	16.3
1992	14.7	29.0	11.7	:	:	8.3	14.2	14.7	14.6	15.3
1993	15.8	30.1	11.5	:	:	8.2	14.9	16.1	16.7	16.2
1994	16.2	30.8	11.0	:	:	8.5	15.3	15.0	16.9	13.4
1995	16.7	30.4	11.1	7.4	10.1	8.5	13.6	14.8	17.6	12.4
1996	16.6	30.6	11.5	7.1	10.3	8.9	14.1	15.4	17.9	12.9
1997	17.0	30.3	11.2	7.8	10.5	9.5	14.0	16.1	17.3	12.4
1998	17.6	29.6	11.5	9.5	10.2	11.7	13.8	14.4	16.5	12.2
1999	17.1	30.2	12.0	10.0	10.2	12.2	13.8	15.1	15.9	12.2
2000	17.3	28.7	12.5	10.5	10.5	12.3	13.4	14.6	15.7	12.1
2001	17.5	28.5	11.4	9.7	10.5	12.3	12.8	14.8	14.5	11.8
2002	17.6	28.4	11.8	9.6	10.4	12.1	12.9	14.8	13.5	12.2
2003	17.4	28.6	12.0	9.3	10.6	12.0	12.9	14.5	13.4	12.3

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	16.8	:	:	13.4	:
1971	:	:	:	:	16.3	:	:	12.5	:
1972	:	:	:	:	15.0	:	:	13.5	:
1973	:	:	:	:	14.9	:	:	13.3	:
1974	:	:	:	:	17.6	:	:	13.7	:
1975	:	:	16.2	:	18.2	:	:	12.3	:
1976	10.5	:	19.0	:	17.3	:	:	13.1	:
1977	10.8	:	17.6	:	16.2	:	:	13.5	:
1978	12.0	:	15.3	:	15.5	:	:	13.8	:
1979	11.7	:	14.2	:	15.0	:	:	14.0	:
1980	11.9	:	14.3	:	15.8	:	:	13.8	:
1981	12.5	:	15.8	:	16.8	:	:	13.7	:
1982	11.9	:	15.6	:	17.3	:	:	12.9	:
1983	11.5	:	15.6	:	16.9	:	:	12.3	:
1984	11.9	:	16.0	:	17.0	:	:	12.1	:
1985	12.7	:	16.6	:	17.1	:	:	12.3	:
1986	12.7	:	17.6	:	16.4	:	:	12.3	:
1987	12.1	:	15.7	:	16.0	:	:	13.1	:
1988	12.0	:	17.1	:	16.1	:	:	12.7	:
1989	11.1	:	16.8	:	16.5	:	:	13.0	:
1990	11.7	:	17.5	:	16.7	:	:	12.7	13.2
1991	12.3	:	17.7	:	15.7	:	:	12.2	13.3
1992	12.7	:	16.7	:	14.8	:	:	12.0	12.5
1993	12.8	:	15.8	19.9	13.8	:	:	12.3	11.3
1994	11.3	:	17.2	19.7	14.2	:	:	12.6	10.2
1995	12.0	9.6	17.4	20.2	14.9	11.4	12.5	13.0	9.7
1996	13.1	10.1	18.9	21.6	14.7	11.9	13.0	13.6	9.7
1997	13.5	10.3	18.4	21.7	15.0	12.1	13.2	14.1	9.7
1998	13.7	9.9	18.8	22.4	16.2	12.4	13.7	14.5	8.4
1999	13.4	10.5	18.7	22.1	16.1	12.8	14.0	14.9	8.1
2000	13.4	10.7	21.1	22.3	16.8	13.0	14.3	15.4	8.8
2001	15.1	10.5	20.7	22.0	16.9	12.6	14.0	13.9	9.9
2002	14.7	10.6	20.2	20.1	16.8	12.7	14.0	12.0	10.0
2003	15.0	10.6	19.6	20.3	16.6	12.7	14.0	11.7	9.9

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 56a

**Social contributions received; general government
EU Member States: former definition**
(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	12.3	2.4	12.6	7.7	7.4	13.8	2.3	11.2	8.5	13.2
1971	12.7	2.4	13.1	7.7	8.1	14.0	2.4	11.6	9.3	13.9
1972	13.0	2.5	13.7	7.7	8.5	14.2	2.4	11.7	9.3	14.1
1973	13.4	1.7	14.6	7.0	8.6	14.2	2.6	11.7	8.9	15.3
1974	13.6	1.5	15.2	7.5	8.7	14.7	3.4	11.6	9.3	16.1
1975	14.8	1.5	16.3	7.7	9.8	16.2	4.0	12.6	12.3	16.6
1976	14.7	1.5	16.8	8.1	10.5	16.7	4.2	12.5	12.9	16.3
1977	15.0	1.5	16.8	8.7	11.3	17.3	4.1	12.3	13.8	16.3
1978	14.7	1.5	16.6	8.9	11.9	17.4	3.9	12.4	13.2	16.6
1979	14.8	1.6	16.6	8.9	12.4	18.2	4.1	12.8	13.0	17.2
1980	14.9	1.8	16.9	9.3	12.6	19.1	4.4	12.9	13.4	17.5
1981	15.3	2.0	17.5	9.5	12.8	19.2	4.5	12.9	13.6	18.0
1982	15.4	2.3	17.9	10.6	12.8	19.7	5.0	13.7	13.2	18.9
1983	15.9	2.8	17.4	11.1	13.1	20.2	5.2	14.0	12.7	21.0
1984	16.5	2.8	17.4	11.4	12.5	20.6	5.2	13.6	12.5	20.0
1985	17.1	2.8	17.6	11.6	12.7	20.8	5.1	13.5	12.4	19.8
1986	17.3	2.5	17.5	11.2	12.5	20.5	5.1	13.9	12.1	18.9
1987	17.6	2.9	17.6	11.4	12.5	20.6	5.0	13.8	12.5	19.8
1988	17.0	2.2	17.5	10.8	12.3	20.4	5.1	13.7	:	19.8
1989	16.5	2.2	17.2	11.2	12.6	20.5	4.9	14.0	:	18.1
1990	16.7	2.3	16.9	11.5	12.9	20.6	5.0	14.3	:	16.4
1991	17.4	2.3	17.0	11.1	13.2	20.7	5.2	14.6	:	17.3
1991	17.4	2.3	17.5	11.1	13.2	20.7	5.2	14.6	:	17.3
1992	17.6	2.4	17.8	11.0	14.0	20.9	5.3	14.9	:	17.8
1993	18.1	2.5	18.4	11.9	14.3	21.1	5.3	15.4	:	17.8
1994	17.6	2.8	18.9	12.1	14.0	20.7	5.1	14.8	:	18.4
1995	17.3	2.6	19.1	12.4	13.1	21.0	4.7	14.6	:	18.2

⁽¹⁾ 1970–91: D₉₀.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	10.5	5.1	5.5	8.6	5.2	11.9	10.4	4.5	4.3
1971	10.8	5.5	6.1	9.1	4.9	12.3	10.8	4.6	4.6
1972	10.7	5.9	6.0	9.6	5.2	12.6	11.1	4.8	4.6
1973	11.0	6.0	6.4	9.1	5.3	13.0	11.5	5.5	4.6
1974	11.3	6.2	6.5	9.2	6.0	13.4	11.9	5.7	5.1
1975	12.2	8.5	10.5	9.7	6.5	14.5	12.9	5.5	6.3
1976	12.3	8.4	11.4	12.1	6.7	14.9	13.4	5.6	6.3
1977	12.7	8.4	11.8	13.6	6.5	15.1	13.6	5.6	6.7
1978	14.1	8.0	10.8	14.4	6.0	15.2	13.7	5.8	6.7
1979	14.1	7.7	10.6	14.3	5.8	15.5	13.8	6.0	7.2
1980	14.4	7.9	10.9	14.7	6.0	15.9	14.0	6.0	7.2
1981	14.6	8.4	11.1	15.1	6.3	16.1	14.1	6.3	7.7
1982	14.3	9.0	10.6	14.6	6.5	16.5	14.5	6.5	7.9
1983	14.1	9.1	10.2	14.3	6.9	16.7	14.7	6.5	8.0
1984	14.3	9.1	10.5	13.8	6.9	16.6	14.6	6.6	8.0
1985	14.7	8.6	11.4	13.5	6.8	16.7	14.7	6.7	8.0
1986	14.7	9.8	11.4	13.7	6.9	16.7	14.8	6.9	8.1
1987	14.7	10.0	11.4	13.3	6.6	16.8	14.9	6.9	8.3
1988	14.7	9.6	11.3	13.6	6.6	16.5	14.5	7.1	8.2
1989	14.6	9.6	11.4	14.6	6.5	16.4	14.5	7.1	8.2
1990	15.5	10.1	12.9	15.0	6.2	16.4	14.5	7.1	8.8
1991	15.6	10.5	13.6	14.9	6.2	16.5	14.7	7.3	8.8
1991	15.6	10.5	13.6	14.9	6.2	16.7	14.8	7.3	8.8
1992	16.2	11.1	14.6	14.3	6.1	17.1	15.2	7.3	9.0
1993	16.8	11.7	15.0	13.9	6.1	17.7	15.7	7.3	9.2
1994	17.2	11.5	15.8	13.8	6.2	17.7	15.7	7.3	9.3
1995	17.3	11.7	14.8	14.2	6.2	17.7	15.8	7.3	10.0

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 56b

Social contributions received; general government
EU Member States: ESA 95
(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	11.3	:	:	:	:	:	:	:	:	:
1971	11.9	2.4	:	:	:	:	:	:	:	:
1972	12.1	2.5	:	:	:	:	:	:	:	:
1973	12.4	1.7	:	:	:	:	:	:	:	:
1974	12.7	1.5	:	:	:	:	:	:	:	:
1975	13.8	1.5	:	:	:	:	:	:	:	:
1976	13.9	1.5	:	:	:	:	:	:	:	:
1977	14.1	1.5	:	:	:	:	:	:	:	:
1978	14.0	1.5	:	:	:	17.8	:	:	:	:
1979	14.1	1.6	:	:	:	18.8	:	:	:	:
1980	14.0	1.8	:	:	:	19.3	:	:	:	:
1981	14.4	2.0	:	:	:	19.3	:	:	:	:
1982	14.6	2.3	:	:	:	20.0	:	:	:	:
1983	15.1	2.8	:	:	:	20.4	:	:	:	:
1984	15.8	2.8	:	:	:	20.8	:	:	:	:
1985	16.3	2.8	:	:	:	20.8	:	:	:	:
1986	16.6	2.0	:	:	:	20.3	:	:	:	:
1987	17.0	2.9	:	:	:	20.5	:	:	:	20.1
1988	16.4	2.2	:	:	:	20.3	:	:	:	20.0
1989	15.9	2.2	:	:	:	20.4	:	:	:	18.3
1990	16.0	2.3	:	:	:	20.5	7.1	14.4	12.8	16.5
1991	16.7	2.3	17.2	:	:	20.4	7.4	14.8	13.0	17.3
1992	16.9	2.4	17.6	:	:	20.7	7.5	15.1	13.2	17.8
1993	17.3	2.5	18.2	:	:	20.8	7.6	15.3	13.1	17.7
1994	17.1	2.8	18.6	:	:	20.6	7.3	15.0	12.2	18.5
1995	16.8	2.6	18.8	12.6	13.0	20.5	6.8	14.8	12.5	17.2
1996	16.7	2.6	19.4	12.9	13.2	20.7	6.3	15.0	12.1	16.6
1997	16.5	2.6	19.7	13.3	13.1	20.3	5.9	15.3	11.4	16.6
1998	16.5	2.6	19.3	13.6	13.0	18.1	5.7	12.8	11.2	16.4
1999	16.4	3.1	19.0	13.8	13.1	18.4	5.7	12.8	11.4	17.2
2000	16.1	3.2	18.7	13.6	13.3	18.3	5.7	12.7	11.2	17.2
2001	16.2	3.2	18.6	13.5	13.5	18.3	5.6	12.8	11.5	15.5
2002	16.1	3.1	18.8	13.5	13.5	18.3	5.7	12.8	11.6	14.6
2003	15.9	3.0	18.5	13.5	13.5	18.2	5.6	12.8	11.5	14.7

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	6.2	:	:	4.5	:
1971	:	:	:	:	6.1	:	:	4.6	:
1972	:	:	:	:	6.4	:	:	4.8	:
1973	:	:	:	:	6.6	:	:	5.5	:
1974	:	:	:	:	7.3	:	:	5.7	:
1975	:	:	10.6	:	8.0	:	:	5.5	:
1976	12.5	:	11.4	:	8.3	:	:	5.6	:
1977	12.8	:	11.9	:	8.0	:	:	5.6	:
1978	14.3	:	10.8	:	7.5	:	:	5.8	:
1979	14.3	:	10.6	:	7.3	:	:	6.0	:
1980	14.7	:	10.9	:	7.6	:	:	6.0	:
1981	14.9	:	11.1	:	8.0	:	:	6.3	:
1982	14.9	:	10.6	:	8.2	:	:	6.5	:
1983	14.8	:	10.3	:	8.5	:	:	6.5	:
1984	15.3	:	10.5	:	8.5	:	:	6.6	:
1985	15.7	:	11.4	:	8.4	:	:	6.7	:
1986	15.7	:	11.4	:	8.4	:	:	6.9	:
1987	15.8	:	11.4	:	8.1	:	:	6.9	:
1988	15.9	:	11.4	:	8.0	:	:	7.1	:
1989	15.8	:	11.5	:	7.8	:	:	7.1	:
1990	15.6	:	12.9	:	7.5	:	:	7.1	8.8
1991	15.7	:	13.7	:	7.6	:	:	7.3	8.9
1992	16.3	:	14.6	:	7.6	:	:	7.3	9.1
1993	16.9	:	15.1	13.8	7.6	:	:	7.3	9.2
1994	17.3	:	15.8	13.8	7.6	:	:	7.3	9.4
1995	17.4	11.0	14.9	14.2	7.5	17.4	15.7	7.3	9.9
1996	17.5	11.0	14.3	15.2	7.4	17.6	15.8	7.2	10.0
1997	17.4	11.1	13.4	15.0	7.4	17.5	15.5	7.1	10.2
1998	17.2	11.3	13.0	15.0	7.5	16.4	14.6	7.1	10.3
1999	17.3	11.4	13.1	13.7	7.5	16.4	14.5	7.2	10.2
2000	17.2	11.7	12.2	16.2	7.5	16.2	14.4	7.2	10.4
2001	17.1	12.0	11.9	17.0	7.5	16.1	14.3	7.2	10.8
2002	17.0	12.1	11.5	16.9	7.4	16.1	14.2	7.2	11.1
2003	16.9	12.2	11.1	16.8	7.3	15.9	14.1	7.2	11.3

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 57

Actual social contributions received; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	10.1	:	:	:	:	:	:	:	:	:
1971	10.6	1.6	:	:	:	:	:	:	:	:
1972	10.8	1.7	:	:	:	:	:	:	:	:
1973	11.1	0.8	:	:	:	:	:	:	:	:
1974	11.3	0.6	:	:	:	:	:	:	:	:
1975	12.3	0.6	:	:	:	:	:	:	:	:
1976	12.4	0.6	:	:	:	:	:	:	:	:
1977	12.5	0.6	:	:	:	:	:	:	:	:
1978	12.4	0.6	:	:	:	16.0	:	:	:	:
1979	12.4	0.7	:	:	:	17.1	:	:	:	:
1980	12.3	0.8	:	:	:	17.6	:	:	:	:
1981	12.5	1.0	:	:	:	17.6	:	:	:	:
1982	12.7	1.2	:	:	:	18.2	:	:	:	:
1983	13.3	1.8	:	:	:	18.6	:	:	:	:
1984	13.9	1.8	:	:	:	19.0	:	:	:	:
1985	14.5	1.9	:	:	:	19.0	:	:	:	:
1986	14.8	1.5	:	:	:	18.5	:	:	:	:
1987	15.2	1.9	:	:	:	18.7	:	:	:	18.7
1988	14.6	1.4	:	:	:	18.6	:	:	:	18.6
1989	14.2	1.4	:	:	:	18.8	:	:	:	16.9
1990	14.3	1.5	:	:	:	18.9	5.3	12.9	11.3	15.2
1991	14.8	1.5	16.2	:	:	18.8	5.4	13.3	11.5	16.0
1992	15.0	1.5	16.6	:	:	19.0	5.6	13.4	11.8	16.5
1993	15.3	1.6	17.2	:	:	19.1	5.6	13.5	11.8	16.4
1994	15.1	1.6	17.5	:	:	18.8	5.4	13.2	11.0	17.3
1995	14.7	1.6	17.7	10.5	12.0	18.7	5.0	13.0	11.2	16.0
1996	14.6	1.6	18.3	10.8	12.2	18.9	4.6	14.6	10.9	15.5
1997	14.4	1.6	18.5	11.2	12.2	18.4	4.4	14.9	10.3	15.5
1998	14.4	1.6	18.2	11.5	12.1	16.3	4.2	12.5	10.2	15.3
1999	14.3	2.1	18.0	11.5	12.2	16.6	4.4	12.4	10.5	16.0
2000	14.1	2.3	17.6	11.4	12.5	16.5	4.4	12.4	10.5	16.1
2001	14.2	2.2	17.6	11.4	12.7	16.5	4.4	12.5	10.7	14.5
2002	14.1	2.1	17.7	11.4	12.6	16.5	4.4	12.5	10.8	13.7
2003	13.9	2.0	17.5	11.4	12.6	16.3	4.4	12.5	10.7	13.8

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	5.7	:	:	:	:
1971	:	:	:	:	5.5	:	:	:	:
1972	:	:	:	:	5.8	:	:	:	:
1973	:	:	:	:	5.9	:	:	:	:
1974	:	:	:	:	6.6	:	:	:	:
1975	:	:	9.1	:	7.3	:	:	:	:
1976	10.6	:	9.8	:	7.5	:	:	:	:
1977	11.0	:	10.2	:	7.2	:	:	:	:
1978	12.4	:	9.3	:	6.7	:	:	:	:
1979	12.3	:	9.1	:	6.5	:	:	:	:
1980	12.7	:	9.3	:	6.7	:	:	:	:
1981	12.9	:	9.5	:	7.0	:	:	:	:
1982	12.8	:	9.0	:	7.3	:	:	:	:
1983	12.7	:	8.6	:	7.6	:	:	:	:
1984	13.1	:	8.8	:	7.6	:	:	:	:
1985	13.5	:	9.7	:	7.5	:	:	:	:
1986	13.5	:	9.7	:	7.6	:	:	:	:
1987	13.5	:	9.6	:	7.3	:	:	:	:
1988	13.7	:	10.6	:	7.3	:	:	:	:
1989	13.6	:	10.7	:	7.1	:	:	:	:
1990	13.4	:	12.1	:	6.8	:	:	:	8.3
1991	13.5	:	13.4	:	6.8	:	:	:	8.4
1992	14.1	:	14.4	:	6.7	:	:	:	8.6
1993	14.6	:	14.9	13.3	6.8	:	:	:	8.7
1994	15.1	:	15.6	13.1	6.8	:	:	:	8.9
1995	15.2	10.1	14.6	13.6	6.8	16.0	14.4	:	9.4
1996	15.3	10.3	14.0	14.6	6.7	16.4	14.7	:	9.5
1997	15.3	10.4	13.2	14.5	6.8	16.3	14.4	:	9.7
1998	15.2	10.6	12.9	14.5	6.8	15.3	13.6	:	9.9
1999	15.2	10.6	13.1	13.1	6.8	15.3	13.5	:	9.8
2000	15.0	10.9	12.2	15.5	6.8	15.1	13.3	:	9.9
2001	14.9	11.2	11.9	15.4	6.9	15.0	13.2	:	10.3
2002	14.7	11.3	11.5	15.2	6.7	14.9	13.2	:	10.6
2003	14.6	11.4	11.1	15.1	6.7	14.8	13.0	:	10.8

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 58a

Other current revenue; general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	2.1	2.5	2.2	1.7	3.2	2.6	3.1	2.3	4.0	2.9
1971	1.9	2.5	2.1	1.4	2.8	2.7	3.0	2.6	4.1	2.8
1972	1.6	2.8	2.0	1.5	2.7	2.6	3.1	2.5	4.0	2.9
1973	1.6	2.8	2.1	1.5	2.6	2.6	2.7	2.5	3.9	2.9
1974	1.7	2.8	2.1	2.3	3.0	2.8	2.9	2.4	3.8	3.4
1975	2.1	3.4	2.0	2.0	3.1	3.1	2.8	2.3	4.9	4.3
1976	2.0	3.7	2.0	1.8	3.1	3.2	2.8	2.1	5.8	4.9
1977	2.1	3.8	2.0	1.6	3.3	3.0	3.2	2.2	5.2	5.3
1978	2.0	4.1	2.1	1.3	3.1	2.9	3.3	2.4	5.3	5.2
1979	2.1	4.3	2.2	1.6	3.3	3.0	3.1	2.5	5.5	5.7
1980	2.6	5.1	2.3	1.9	3.4	3.2	3.2	2.4	6.3	6.4
1981	2.8	5.2	2.6	1.6	3.6	3.8	3.1	2.5	6.4	7.5
1982	3.0	5.2	3.2	1.4	3.8	3.7	3.6	2.2	6.1	7.6
1983	2.5	5.6	3.2	1.4	3.7	3.7	3.9	2.6	5.5	7.5
1984	2.4	6.1	3.2	1.6	3.3	3.6	3.6	2.5	5.2	8.2
1985	2.2	6.0	3.2	1.7	4.2	3.8	3.8	2.9	5.7	8.8
1986	2.0	6.1	3.1	1.3	4.0	3.9	3.1	3.4	4.9	7.0
1987	1.8	5.7	2.7	1.5	3.7	3.8	3.1	2.8	5.5	5.4
1988	1.7	7.1	2.3	1.4	3.7	3.9	2.9	2.7	:	4.7
1989	1.7	7.5	2.7	1.6	3.4	3.6	2.2	2.8	:	4.7
1990	1.8	7.5	2.7	1.7	3.7	4.0	2.2	2.9	:	4.9
1991	1.9	7.2	2.6	2.2	4.1	3.9	2.5	3.0	:	5.2
1991	1.9	7.2	2.6	2.2	4.1	3.9	2.5	3.0	:	5.2
1992	1.8	8.0	3.1	2.5	4.0	4.1	2.5	3.3	:	4.8
1993	1.8	8.4	3.0	3.1	5.0	4.1	2.4	3.6	:	4.6
1994	1.5	7.5	3.0	3.8	4.2	3.7	2.1	3.6	:	4.1
1995	1.5	6.8	2.7	4.2	3.6	3.8	1.8	3.7	:	3.7

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	2.0	2.3	:	5.9	4.1	:	:	2.6	:
1971	2.2	2.2	:	6.3	4.2	:	:	2.7	:
1972	1.9	2.2	2.5	6.5	4.0	2.3	2.8	2.7	:
1973	1.8	2.2	2.3	6.5	4.0	2.4	2.8	2.7	:
1974	1.9	2.1	2.4	6.5	4.6	2.5	2.9	2.9	:
1975	2.2	1.9	3.2	6.6	4.4	2.6	3.0	2.8	:
1976	2.3	2.6	3.5	6.6	4.5	2.7	3.1	2.7	:
1977	2.2	1.8	3.7	7.0	4.3	2.7	3.1	2.6	:
1978	2.4	2.1	3.9	7.0	4.1	2.7	3.1	2.8	:
1979	2.4	2.6	3.8	7.0	4.2	2.8	3.2	3.0	:
1980	2.8	2.0	3.8	7.2	4.5	3.0	3.4	3.3	:
1981	3.1	2.2	3.9	7.8	4.6	3.3	3.7	3.6	:
1982	3.0	2.7	4.4	8.5	4.5	3.4	3.8	3.9	:
1983	2.9	3.3	4.7	9.0	4.1	3.5	3.8	3.9	:
1984	2.8	3.2	4.9	8.9	3.9	3.4	3.8	4.0	:
1985	2.9	2.7	5.1	9.3	4.1	3.7	4.0	4.2	:
1986	2.8	2.7	5.1	8.8	3.4	3.6	3.8	4.2	:
1987	3.0	3.0	5.0	8.4	3.2	3.3	3.5	4.1	:
1988	2.9	3.0	5.1	8.0	2.9	3.1	3.3	4.0	3.8
1989	2.9	2.6	5.5	8.4	2.9	3.1	3.4	4.0	3.7
1990	4.4	2.9	5.9	8.4	2.7	3.3	3.5	3.9	3.8
1991	4.4	3.1	6.8	8.2	2.5	3.4	3.5	4.1	4.1
1991	4.4	3.1	6.8	8.2	2.5	3.4	3.5	4.1	4.1
1992	4.8	3.6	7.6	9.0	2.3	3.6	3.7	4.0	3.9
1993	4.6	3.1	8.0	9.2	2.2	3.7	3.7	3.8	3.8
1994	4.4	2.6	6.7	8.5	2.2	3.5	3.5	3.8	4.6
1995	4.5	2.8	7.0	8.1	2.2	3.3	3.4	3.9	4.1

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 58b

Other current revenue; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	4.3	:	:	:	:	:	:	:	:	:
1971	4.0	4.0	:	:	:	:	:	:	:	:
1972	3.7	4.0	:	:	:	:	:	:	:	:
1973	3.7	3.5	:	:	:	:	:	:	:	:
1974	3.5	4.4	:	:	:	:	:	:	:	:
1975	4.0	4.8	:	:	:	:	:	:	:	:
1976	3.9	5.1	:	:	:	:	:	:	:	:
1977	4.0	5.3	:	:	:	:	:	:	:	:
1978	3.9	5.6	:	:	:	3.4	:	:	:	:
1979	4.0	5.9	:	:	:	3.3	:	:	:	:
1980	4.4	6.6	:	:	:	3.5	:	:	:	:
1981	4.8	6.9	:	:	:	3.7	:	:	:	:
1982	5.1	7.1	:	:	:	3.9	:	:	:	:
1983	4.6	7.3	:	:	:	4.0	:	:	:	:
1984	4.4	7.7	:	:	:	3.9	:	:	:	:
1985	4.3	7.4	:	:	:	4.1	:	:	:	:
1986	3.9	7.4	:	:	:	4.1	:	:	:	:
1987	3.6	6.8	:	:	:	4.0	:	:	:	7.9
1988	3.4	7.3	:	:	:	3.8	:	:	:	7.2
1989	3.3	7.5	:	:	:	3.8	:	:	:	7.1
1990	3.4	7.6	:	:	:	3.9	3.3	3.1	8.0	7.2
1991	3.5	7.4	3.4	:	:	4.2	4.1	3.2	7.5	7.6
1992	3.4	8.1	3.9	:	:	4.1	3.9	2.8	7.4	7.2
1993	3.4	8.5	3.8	:	:	4.2	3.8	3.1	6.1	7.0
1994	3.1	7.5	3.8	:	:	3.9	3.4	2.9	5.8	6.4
1995	3.1	6.8	3.5	2.9	4.1	3.7	2.8	3.1	5.7	6.0
1996	3.2	7.1	3.4	2.9	4.2	4.0	2.9	3.2	5.4	5.8
1997	3.0	6.7	3.2	3.4	4.0	3.9	2.7	3.2	5.3	5.5
1998	3.0	6.6	3.1	2.9	3.7	3.7	2.5	3.2	5.2	5.0
1999	2.8	5.9	3.0	3.5	3.6	3.6	2.2	3.3	4.9	4.7
2000	2.9	5.7	2.8	3.7	3.3	3.6	2.2	3.0	4.6	4.8
2001	2.6	5.6	3.0	4.7	3.4	3.6	2.1	3.2	4.5	5.1
2002	2.4	5.4	2.9	4.9	3.4	3.7	2.1	3.2	4.4	4.7
2003	2.5	5.1	2.8	5.0	3.4	3.6	2.1	3.1	4.3	4.7

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	:	:	:	2.9	:
1971	:	:	:	:	:	:	:	2.9	:
1972	:	:	:	:	:	:	:	2.9	:
1973	:	:	:	:	:	:	:	2.9	:
1974	:	:	:	:	:	:	:	3.1	:
1975	:	:	3.8	:	:	:	:	3.1	:
1976	4.5	:	4.0	:	:	:	:	3.0	:
1977	4.5	:	4.3	:	:	:	:	2.9	:
1978	4.8	:	4.4	:	:	:	:	3.1	:
1979	4.8	:	4.3	:	:	:	:	3.3	:
1980	5.2	:	4.3	:	:	:	:	3.6	:
1981	5.6	:	4.5	:	:	:	:	3.9	:
1982	5.5	:	4.9	:	:	:	:	4.3	:
1983	5.4	:	5.2	:	:	:	:	4.2	:
1984	5.5	:	5.3	:	:	:	:	4.3	:
1985	5.5	:	5.5	:	:	:	:	4.5	:
1986	5.5	:	5.5	:	:	:	:	4.6	:
1987	5.6	:	5.4	:	3.4	:	:	4.4	:
1988	5.6	:	5.3	:	3.2	:	:	4.3	:
1989	5.7	:	5.6	:	3.3	:	:	4.3	:
1990	5.8	:	6.2	:	3.2	:	:	4.3	3.9
1991	5.7	:	7.3	:	3.0	:	:	4.4	4.0
1992	6.1	:	8.2	:	2.5	:	:	4.3	4.0
1993	5.9	:	8.7	9.2	2.4	:	:	4.2	4.0
1994	5.7	:	6.7	8.4	2.2	:	:	4.1	5.0
1995	5.8	3.9	7.3	8.3	2.2	3.8	3.8	4.2	4.6
1996	5.2	4.1	6.7	8.0	2.3	3.8	3.8	4.2	4.3
1997	3.8	3.7	6.3	7.2	2.0	3.6	3.5	4.2	4.3
1998	3.5	3.7	5.9	7.1	1.9	3.5	3.4	4.1	4.3
1999	3.1	3.6	5.5	6.2	2.0	3.4	3.3	4.1	4.5
2000	3.1	3.1	6.5	5.7	2.6	3.3	3.3	4.1	4.4
2001	2.9	3.1	4.8	4.4	2.6	3.4	3.3	4.7	4.5
2002	2.7	3.1	4.4	4.3	2.5	3.3	3.2	4.7	4.6
2003	2.7	3.1	4.2	4.2	2.5	3.2	3.2	4.7	4.6

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 59a

**Total current revenue; general government
EU Member States: former definition**

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	38.7	44.8	38.7	24.5	21.3	37.9	30.3	29.0	31.6	39.2
1971	39.4	45.4	39.8	24.3	21.6	37.5	31.2	29.8	34.4	40.8
1972	39.4	45.0	40.1	23.9	22.0	37.8	30.1	29.7	34.5	41.9
1973	40.5	44.6	42.5	22.3	22.5	37.9	29.5	29.1	34.8	43.1
1974	41.5	46.5	43.1	24.4	22.0	38.6	33.7	28.5	35.7	44.0
1975	44.8	44.2	43.1	24.4	23.5	40.2	31.5	29.0	43.2	46.1
1976	44.9	44.7	44.3	25.7	24.4	42.3	34.8	30.3	44.5	46.7
1977	46.6	45.2	45.3	26.0	25.5	42.0	33.6	31.6	48.0	48.6
1978	47.4	46.9	44.8	26.0	26.2	41.9	32.1	33.0	49.0	48.8
1979	48.3	48.3	44.6	26.3	27.4	43.5	31.6	32.7	46.2	50.0
1980	47.6	49.9	45.1	26.2	29.0	45.3	34.5	34.4	47.7	50.7
1981	48.1	49.9	45.3	25.6	30.2	46.2	35.4	35.4	48.3	51.4
1982	50.1	49.0	46.0	28.5	30.5	47.1	37.2	37.0	48.2	52.3
1983	49.6	51.3	45.4	29.6	32.5	47.7	38.9	38.8	50.5	53.2
1984	50.1	53.0	45.6	30.3	32.3	48.7	39.4	38.6	48.8	52.4
1985	50.4	54.4	46.0	30.3	34.2	49.1	38.7	38.9	50.4	52.5
1986	49.7	56.1	45.2	31.6	34.9	48.8	38.8	40.1	47.3	51.0
1987	50.0	56.4	45.0	32.4	36.6	49.1	39.0	40.2	48.3	51.7
1988	48.4	58.2	44.2	31.0	36.6	48.3	39.7	40.5	:	51.2
1989	46.5	57.3	45.1	29.6	38.1	47.8	36.1	42.1	:	48.2
1990	47.1	55.1	43.3	32.5	38.4	48.2	35.9	42.8	:	48.1
1991	47.4	54.7	44.3	33.4	39.2	48.2	36.6	43.8	:	50.6
1991	47.4	54.7	43.5	33.4	39.2	48.2	36.6	43.8	:	50.6
1992	47.4	56.0	44.9	34.2	40.9	48.0	37.0	44.5	:	50.2
1993	48.3	57.9	45.3	35.4	40.9	48.4	36.9	47.7	:	50.9
1994	49.2	58.1	45.9	36.9	39.8	48.3	37.6	45.5	:	48.4
1995	48.8	56.9	45.6	38.0	38.0	49.0	34.6	45.3	:	46.6

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	38.9	22.5	34.1	45.9	39.9	35.0	36.5	29.0	20.8
1971	39.7	21.8	35.7	48.7	38.1	35.6	36.8	28.3	21.8
1972	40.3	21.7	35.5	48.7	36.1	35.9	36.7	29.3	21.7
1973	41.1	21.7	36.0	47.0	35.4	36.8	37.2	29.5	22.6
1974	41.6	21.8	35.9	48.1	39.3	37.1	38.1	30.2	24.6
1975	42.0	24.3	41.9	49.7	39.9	38.1	39.0	28.4	24.2
1976	41.6	26.7	45.4	54.2	39.4	39.6	40.4	29.0	23.7
1977	42.5	26.5	45.8	57.0	38.5	40.5	41.0	29.2	24.8
1978	45.0	25.8	43.1	56.6	37.1	40.6	40.9	29.4	24.7
1979	44.6	26.3	41.6	55.6	37.8	40.9	41.2	29.6	26.5
1980	45.6	27.8	42.0	55.6	39.8	41.9	42.2	29.9	27.8
1981	46.8	29.7	44.0	56.9	41.9	42.4	43.1	30.7	29.3
1982	45.8	31.7	43.6	57.3	42.4	43.3	43.7	30.2	29.6
1983	45.2	34.2	43.7	59.0	41.6	43.9	44.2	29.6	29.9
1984	46.8	33.4	45.2	58.5	41.5	44.1	44.4	29.6	30.4
1985	47.9	32.7	47.0	59.0	41.4	44.6	44.8	30.0	31.0
1986	47.6	32.7	48.5	59.7	40.3	44.5	44.7	30.3	31.1
1987	47.4	32.0	46.7	61.4	39.4	44.6	44.7	30.9	32.6
1988	47.3	32.8	48.2	60.9	38.9	44.1	44.2	30.7	32.8
1989	46.1	33.1	48.7	63.1	38.7	44.3	44.4	30.9	32.9
1990	47.1	33.9	51.4	62.7	38.3	44.2	44.2	30.7	33.8
1991	47.7	35.2	53.1	59.5	37.4	44.9	44.5	30.7	33.6
1991	47.7	35.2	53.1	59.5	37.4	44.7	44.3	30.7	33.6
1992	49.2	38.1	53.7	58.8	36.1	45.4	44.8	30.4	33.0
1993	49.9	36.7	52.7	58.2	35.1	46.4	45.4	30.6	31.9
1994	48.6	36.3	53.5	57.0	35.6	46.0	45.1	30.9	31.8
1995	49.2	37.1	52.0	56.9	36.7	45.7	45.1	31.3	31.7

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 59b

Total current revenue; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	40.2	:	:	:	:	:	:	:	:	:
1971	40.6	48.0	:	:	:	:	:	:	:	:
1972	40.2	47.6	:	:	:	:	:	:	:	:
1973	41.3	45.1	:	:	:	:	:	:	:	:
1974	42.2	48.1	:	:	:	:	:	:	:	:
1975	45.3	44.7	:	:	:	:	:	:	:	:
1976	45.3	45.9	:	:	:	:	:	:	:	:
1977	47.2	46.5	:	:	:	:	:	:	:	:
1978	48.0	48.2	:	:	:	42.4	:	:	:	:
1979	48.5	49.5	:	:	:	44.4	:	:	:	:
1980	47.2	51.2	:	:	:	45.4	:	:	:	:
1981	48.0	51.2	:	:	:	45.9	:	:	:	:
1982	49.4	50.5	:	:	:	47.2	:	:	:	:
1983	49.8	52.6	:	:	:	47.8	:	:	:	:
1984	50.4	54.3	:	:	:	48.8	:	:	:	:
1985	50.4	55.3	:	:	:	49.0	:	:	:	:
1986	49.7	56.6	:	:	:	48.1	:	:	:	:
1987	49.8	57.2	:	:	:	48.3	:	:	:	52.9
1988	48.2	58.1	:	:	:	47.3	:	:	:	52.1
1989	46.1	57.0	:	:	:	47.2	:	:	:	49.2
1990	46.7	55.0	:	:	:	47.5	38.0	42.4	50.2	49.1
1991	47.1	54.6	43.0	:	:	47.6	39.4	43.5	48.9	51.6
1992	46.6	55.8	44.3	:	:	47.5	39.6	43.8	47.8	50.8
1993	48.6	57.8	44.9	:	:	48.0	39.4	46.5	49.7	51.9
1994	49.0	58.1	45.3	:	:	48.2	40.0	44.8	48.3	49.0
1995	48.7	56.8	44.8	36.4	37.4	48.1	36.7	44.8	48.4	46.3
1996	49.3	57.7	45.7	36.9	37.8	49.7	37.0	45.5	48.0	46.5
1997	49.4	57.1	45.5	38.8	38.0	49.7	36.1	47.2	46.8	45.9
1998	49.9	56.7	45.5	40.5	38.0	49.5	35.2	45.8	45.8	45.2
1999	49.5	57.0	46.3	42.4	38.6	50.2	34.9	46.3	46.2	46.2
2000	49.4	54.4	46.1	43.3	38.9	49.7	34.6	45.5	45.7	46.2
2001	49.1	53.7	44.8	43.5	38.9	49.4	32.8	45.7	44.7	45.1
2002	48.9	53.2	45.3	43.3	39.0	49.3	33.0	45.7	43.6	44.2
2003	48.9	52.9	45.0	43.1	39.1	49.1	32.9	45.3	43.5	44.5

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	:	:	:	29.2	:
1971	:	:	:	:	:	:	:	28.5	:
1972	:	:	:	:	:	:	:	29.6	:
1973	:	:	:	:	:	:	:	29.8	:
1974	:	:	:	:	:	:	:	30.5	:
1975	:	:	42.8	:	:	:	:	28.7	:
1976	43.3	:	46.8	:	:	:	:	29.3	:
1977	44.4	:	47.1	:	:	:	:	29.5	:
1978	47.0	:	44.2	:	:	:	:	29.7	:
1979	46.6	:	42.5	:	:	:	:	29.9	:
1980	47.5	:	42.8	:	:	:	:	30.2	:
1981	48.8	:	44.9	:	:	:	:	31.0	:
1982	47.9	:	44.6	:	:	:	:	30.6	:
1983	47.3	:	44.6	:	:	:	:	29.9	:
1984	49.0	:	46.0	:	:	:	:	29.9	:
1985	50.0	:	47.9	:	:	:	:	30.3	:
1986	49.8	:	49.3	:	:	:	:	30.6	:
1987	49.6	:	47.5	:	40.5	:	:	31.2	:
1988	49.6	:	49.8	:	40.5	:	:	31.0	:
1989	48.4	:	49.7	:	40.1	:	:	31.2	:
1990	48.6	:	51.9	:	39.5	:	:	31.0	33.8
1991	49.1	:	54.0	:	39.5	:	:	31.0	33.5
1992	50.7	:	54.5	:	38.1	:	:	30.7	33.3
1993	51.2	:	54.3	57.9	36.5	:	:	31.0	32.0
1994	49.8	:	54.4	56.3	37.0	:	:	31.2	32.2
1995	49.4	38.4	53.2	56.5	37.7	45.1	44.7	31.7	32.0
1996	50.3	39.3	53.5	59.1	37.5	46.0	45.5	32.0	31.8
1997	49.5	39.0	52.3	58.7	37.9	46.1	45.4	32.3	32.0
1998	49.4	39.3	51.8	59.9	39.2	45.8	45.3	32.6	31.4
1999	48.9	40.3	51.5	58.8	39.4	46.4	45.8	32.9	31.2
2000	48.4	40.1	53.2	58.8	40.8	46.1	45.7	33.4	32.2
2001	49.9	40.2	50.6	58.0	40.6	45.5	45.1	32.6	34.1
2002	49.2	40.4	49.1	55.7	40.3	45.5	45.0	30.6	34.9
2003	49.2	40.6	47.5	55.5	39.8	45.3	44.7	30.2	35.2

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 60a

Final consumption expenditure of general government
EU Member States: former definition
(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	13.2	19.4	15.8	11.0	7.9	14.3	12.8	13.2	9.1	14.7
1971	13.9	20.6	16.9	10.9	8.1	14.5	13.4	14.8	10.1	15.2
1972	14.3	20.7	17.1	10.4	8.1	14.4	13.4	15.3	10.2	15.1
1973	14.3	20.7	17.8	9.6	7.8	14.4	13.6	14.7	9.8	14.8
1974	14.4	22.7	19.3	11.9	8.3	14.9	15.7	14.0	9.9	15.4
1975	16.1	23.8	20.5	12.9	8.8	16.1	17.0	14.3	12.9	16.5
1976	16.1	23.4	19.8	12.6	9.4	16.4	16.5	13.6	12.8	16.4
1977	16.4	23.3	19.7	13.3	9.6	16.7	15.6	14.1	13.8	16.3
1978	17.0	23.8	19.7	13.1	9.9	17.1	15.6	14.5	13.6	16.6
1979	17.1	24.3	19.7	13.4	10.4	17.1	16.5	14.9	13.8	17.0
1980	17.3	25.9	20.2	13.4	12.2	17.7	18.1	15.0	14.5	16.8
1981	17.9	26.8	20.7	14.7	12.6	18.4	18.2	16.3	15.1	16.7
1982	17.5	27.2	20.6	14.4	12.8	18.9	18.1	16.3	14.2	16.7
1983	17.0	26.4	20.2	14.9	13.3	19.1	17.6	16.6	13.7	16.5
1984	16.5	25.0	20.0	15.3	13.1	19.2	17.0	16.5	13.3	15.7
1985	16.7	24.5	20.1	16.1	14.2	19.1	16.9	16.6	13.6	15.2
1986	16.6	23.2	19.9	15.2	14.2	18.7	17.1	16.4	13.4	15.0
1987	16.0	24.4	20.0	15.4	14.6	18.5	16.1	16.8	14.5	15.4
1988	14.9	26.3	19.7	14.1	14.2	18.1	14.8	17.0	12.4	14.9
1989	14.1	25.9	18.8	15.0	14.6	17.6	13.8	16.7	11.9	14.3
1990	13.8	25.6	18.3	15.1	15.0	17.7	14.2	17.4	12.8	14.0
1991	14.2	25.7	17.6	14.2	15.6	17.9	15.1	17.4	12.7	13.9
1991	14.2	25.7	18.9	14.2	15.6	17.9	15.1	17.4	12.7	13.9
1992	14.1	25.8	19.5	13.7	16.4	18.5	15.4	17.5	12.5	14.1
1993	14.6	26.8	19.6	14.3	16.8	19.4	15.3	17.5	12.4	14.3
1994	14.6	25.9	19.4	13.8	16.2	19.2	15.2	17.0	11.9	13.9
1995	14.5	25.7	19.5	15.3	16.0	19.0	14.1	15.9	12.6	13.8

⁽¹⁾ 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	14.2	12.1	14.2	20.5	17.9	14.0	15.0	18.3	7.3
1971	14.3	11.9	14.9	21.5	18.4	14.8	15.8	17.8	7.9
1972	14.1	11.7	15.0	21.7	18.7	14.9	15.9	17.6	8.1
1973	14.5	11.1	14.7	21.7	18.6	15.0	15.9	16.7	8.2
1974	15.2	12.2	14.9	22.2	20.5	15.6	16.7	17.2	9.0
1975	16.6	13.4	16.6	22.8	22.4	16.5	17.8	17.7	9.9
1976	17.0	12.8	17.5	23.8	22.1	16.4	17.6	17.0	9.7
1977	16.7	12.5	18.0	26.3	20.7	16.6	17.7	16.7	9.7
1978	17.6	12.5	17.8	26.7	20.3	16.8	17.8	16.1	9.5
1979	17.3	12.6	17.4	27.0	20.1	16.9	17.9	15.9	9.6
1980	17.4	13.3	17.6	28.3	21.7	17.3	18.6	16.4	9.7
1981	17.8	13.8	18.2	28.6	22.3	17.9	19.3	16.4	9.8
1982	18.2	13.7	18.4	28.5	22.2	18.0	19.3	17.3	9.8
1983	18.1	13.9	18.9	27.9	22.2	18.1	19.2	17.2	9.8
1984	18.1	13.8	18.9	27.1	22.0	17.9	19.0	16.8	9.7
1985	18.4	14.0	19.8	26.9	21.2	18.0	19.0	17.1	9.4
1986	18.6	13.6	20.2	26.5	21.2	17.8	18.7	17.3	9.5
1987	18.6	13.4	20.4	25.8	20.7	17.9	18.8	17.3	9.3
1988	18.2	14.0	19.6	25.2	20.0	17.6	18.4	16.8	9.0
1989	17.8	14.6	19.4	25.3	19.8	17.1	18.0	16.4	8.9
1990	18.4	15.0	20.8	26.4	20.3	17.2	18.1	16.5	8.8
1991	18.7	16.7	23.8	26.3	21.2	17.2	18.3	16.7	8.8
1991	18.7	16.7	23.8	26.3	21.2	17.6	18.6	16.7	8.8
1992	19.1	16.7	24.3	27.0	21.6	18.0	19.0	16.3	9.0
1993	19.9	17.4	22.8	27.1	21.5	18.4	19.2	15.7	9.2
1994	20.0	17.1	21.8	26.1	21.2	18.1	18.9	15.1	9.3
1995	19.8	17.3	21.2	24.8	20.9	17.9	18.6	14.8	9.5

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 60b

Final consumption expenditure of general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	16.9	:	:	:	:	:	:	:	:	:
1971	17.9	22.2	:	:	:	:	:	:	:	:
1972	18.4	22.0	:	:	:	:	:	:	:	:
1973	18.7	22.1	:	:	:	:	:	:	:	:
1974	19.0	24.1	:	:	:	:	:	:	:	:
1975	21.2	25.3	:	:	:	:	:	:	:	:
1976	21.4	24.7	:	:	:	:	:	:	:	:
1977	21.9	24.6	:	:	:	:	:	:	:	:
1978	22.7	25.2	:	:	:	20.7	:	:	:	:
1979	23.1	25.7	:	:	:	20.8	:	:	:	:
1980	23.0	27.3	:	:	:	21.5	:	:	:	:
1981	24.2	28.4	:	:	:	22.4	:	:	:	:
1982	23.9	28.7	:	:	:	23.1	:	:	:	:
1983	23.5	27.9	:	:	:	23.3	:	:	:	:
1984	23.5	26.6	:	:	:	23.7	:	:	:	:
1985	22.9	25.9	:	:	:	23.7	:	:	:	:
1986	22.8	24.6	:	:	:	23.4	:	:	:	:
1987	22.6	25.8	:	:	:	23.1	:	:	:	25.3
1988	21.2	26.3	:	:	:	22.7	:	:	:	24.7
1989	20.4	25.9	:	:	:	22.3	:	:	:	23.9
1990	20.2	25.6	:	:	:	22.3	16.4	20.2	18.7	23.5
1991	20.8	25.7	19.2	:	:	22.5	17.4	20.3	18.6	23.8
1992	20.9	25.8	19.8	:	:	23.1	17.8	20.1	18.8	24.3
1993	21.4	26.8	19.9	:	:	24.5	17.6	19.9	18.8	24.6
1994	21.3	25.9	19.7	:	:	24.1	17.4	19.1	17.9	24.2
1995	21.4	25.8	19.8	15.3	18.1	23.9	16.4	17.9	18.4	24.0
1996	21.6	25.9	19.9	14.5	17.9	24.2	15.8	18.1	18.9	23.1
1997	21.2	25.5	19.5	15.1	17.5	24.2	15.2	18.2	17.8	22.9
1998	21.1	25.7	19.2	15.4	17.5	23.4	14.5	17.9	16.8	22.7
1999	21.2	25.5	19.2	15.3	17.4	23.4	14.0	18.1	17.1	23.0
2000	21.2	24.8	19.0	15.6	17.4	23.3	13.4	18.0	16.0	22.7
2001	21.5	24.9	19.1	15.8	17.2	23.2	13.9	18.1	16.4	23.0
2002	21.6	25.1	19.1	15.5	17.3	23.4	14.3	18.2	16.4	23.3
2003	21.5	24.9	18.8	15.4	17.3	23.1	14.0	17.9	16.2	23.1

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	18.0	:	:	18.6	:
1971	:	:	:	:	18.4	:	:	18.2	:
1972	:	:	:	:	18.7	:	:	17.9	:
1973	:	:	:	:	18.6	:	:	17.1	:
1974	:	:	:	:	20.4	:	:	17.6	:
1975	:	:	17.8	:	22.3	:	:	18.1	:
1976	18.1	:	18.8	:	22.0	:	:	17.4	:
1977	17.8	:	19.3	:	20.7	:	:	17.1	:
1978	18.5	:	19.0	:	20.3	:	:	16.5	:
1979	18.5	:	18.5	:	20.0	:	:	16.3	:
1980	18.5	:	18.7	:	21.5	:	:	16.9	:
1981	18.9	:	19.2	:	22.2	:	:	16.9	:
1982	19.4	:	19.3	:	22.1	:	:	17.8	:
1983	19.4	:	19.8	:	22.0	:	:	17.7	:
1984	19.4	:	19.7	:	21.7	:	:	17.3	:
1985	19.6	:	20.6	:	20.9	:	:	17.6	:
1986	19.9	:	21.0	:	20.9	:	:	17.8	:
1987	19.9	:	21.3	:	20.4	:	:	17.8	:
1988	19.6	:	20.4	:	19.7	:	:	17.2	:
1989	19.3	:	20.2	:	19.4	:	:	16.8	:
1990	18.9	:	21.6	:	19.8	:	:	17.0	13.3
1991	19.2	:	24.8	:	20.7	:	:	17.2	13.3
1992	19.6	:	25.4	:	21.1	:	:	16.8	13.7
1993	20.4	:	24.3	28.4	20.5	:	:	16.2	14.2
1994	20.5	:	23.4	27.4	20.0	:	:	15.7	14.5
1995	20.4	18.6	22.8	26.3	19.6	20.5	20.7	15.3	15.0
1996	20.3	18.9	23.2	27.1	19.3	20.5	20.7	15.0	15.1
1997	19.7	19.0	22.4	26.5	18.4	20.3	20.3	14.6	15.2
1998	19.6	18.9	21.7	26.7	18.0	19.9	19.9	14.3	15.7
1999	19.7	19.6	21.7	26.8	18.5	20.0	20.0	14.3	16.1
2000	19.4	20.1	20.7	26.1	18.5	19.8	19.9	14.4	16.6
2001	19.2	20.1	21.2	26.5	18.8	19.8	19.9	14.8	17.2
2002	18.8	20.0	21.6	26.8	19.2	19.9	20.1	15.6	17.5
2003	18.6	19.9	21.5	26.8	19.3	19.7	19.9	15.3	17.5

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 61a

Compensation of employees; general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	9.8	13.4	8.8	8.1	6.3	10.5	10.0	9.6	6.2	10.5
1971	10.2	13.9	9.4	8.1	6.4	10.7	10.3	10.7	7.0	10.9
1972	10.7	14.1	9.6	7.6	6.2	10.8	10.4	11.2	7.0	11.2
1973	10.9	14.3	10.1	7.0	6.3	10.7	10.6	10.8	6.9	11.2
1974	11.1	15.7	10.9	8.2	6.5	11.2	10.5	10.1	7.1	11.7
1975	12.3	16.7	11.4	8.3	6.8	12.1	11.3	10.1	9.0	12.3
1976	12.3	16.6	11.0	8.2	7.5	12.4	10.9	9.8	9.0	12.2
1977	12.5	16.7	11.0	8.7	7.7	12.8	10.1	10.2	9.8	12.4
1978	12.8	16.9	10.9	8.9	8.0	13.1	10.1	10.5	9.6	12.5
1979	13.1	17.3	10.8	9.2	8.3	13.1	10.8	10.6	9.7	12.6
1980	13.4	18.0	11.0	9.3	9.4	13.4	11.8	11.1	10.1	12.4
1981	13.9	18.9	11.3	9.9	9.8	13.9	12.1	12.2	10.6	12.1
1982	13.7	19.5	11.2	10.4	9.8	14.2	12.1	12.0	10.0	12.1
1983	13.2	19.0	11.0	10.6	10.1	14.3	11.9	12.0	10.0	11.7
1984	12.9	18.0	10.7	10.8	10.0	14.4	11.7	11.9	9.7	11.0
1985	13.0	17.4	10.6	11.4	10.2	14.4	11.5	11.8	9.7	10.6
1986	12.9	16.7	10.6	10.8	10.0	14.2	11.6	11.7	9.5	10.4
1987	12.3	17.4	10.6	11.0	10.0	13.9	11.3	11.9	10.2	10.6
1988	11.6	18.2	10.3	11.1	10.1	13.4	10.5	12.1	:	10.1
1989	11.2	18.0	10.0	12.1	10.3	13.1	9.8	11.9	:	9.6
1990	11.1	17.7	9.7	12.5	10.7	13.0	9.8	12.6	:	9.3
1991	11.5	17.7	9.6	11.5	11.1	13.1	10.5	12.6	:	9.2
1991	11.5	17.7	10.1	11.5	11.1	13.1	10.5	12.6	:	9.2
1992	11.5	17.8	10.4	10.9	11.8	13.4	10.6	12.5	:	9.4
1993	12.0	18.1	10.6	10.9	11.8	14.0	10.8	12.4	:	9.6
1994	12.0	17.5	10.3	10.6	11.3	14.0	10.4	11.9	:	9.3
1995	12.1	17.3	10.2	11.3	11.2	14.1	9.6	11.3	:	9.2

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	9.8	7.2	10.1	13.9	10.5	9.4	9.8	11.5	5.8
1971	9.8	7.0	10.4	14.7	11.1	9.9	10.4	11.7	6.2
1972	9.7	7.6	10.3	15.1	11.6	10.0	10.6	11.6	6.5
1973	10.0	7.2	10.1	14.8	11.4	10.1	10.5	11.3	6.6
1974	10.2	7.3	10.1	15.1	12.6	10.4	11.0	11.4	7.4
1975	11.1	9.2	11.5	15.7	14.0	11.0	11.8	11.6	8.3
1976	11.3	9.6	12.4	16.5	13.5	11.0	11.7	11.4	8.2
1977	11.1	9.7	12.5	18.4	12.5	11.2	11.8	11.1	8.1
1978	11.8	9.7	12.4	19.2	12.1	11.4	11.9	10.7	7.9
1979	11.7	9.6	12.2	19.4	11.8	11.4	11.9	10.4	7.9
1980	11.6	10.2	12.0	20.0	12.8	11.7	12.3	10.6	7.8
1981	12.0	10.3	12.5	20.0	13.3	12.1	12.8	10.4	7.8
1982	12.2	10.2	12.8	19.9	12.9	12.2	12.7	10.9	7.8
1983	12.2	10.3	13.2	19.2	12.9	12.2	12.7	10.7	7.7
1984	12.2	10.2	13.3	18.6	12.7	12.0	12.5	10.5	7.6
1985	12.4	10.2	13.9	18.2	12.2	12.0	12.4	10.6	7.4
1986	12.6	10.1	14.1	18.1	12.2	11.9	12.2	10.6	7.4
1987	12.7	10.2	14.2	17.5	12.1	11.8	12.2	10.6	7.3
1988	12.4	10.7	13.7	17.1	11.8	11.6	12.0	10.4	7.1
1989	12.1	11.4	13.6	17.3	11.4	11.4	11.7	10.3	6.9
1990	11.7	11.8	14.4	18.1	11.5	11.5	11.8	10.5	6.8
1991	11.8	12.8	16.8	18.3	11.7	11.5	11.9	10.8	6.7
1991	11.8	12.8	16.8	18.3	11.7	11.6	12.0	10.8	6.7
1992	12.0	13.8	17.3	18.7	11.8	11.8	12.1	10.6	6.9
1993	12.5	14.2	16.2	18.5	10.7	11.9	12.1	10.5	7.0
1994	12.4	13.7	15.2	17.6	9.1	11.7	11.6	10.2	7.1
1995	12.4	13.7	14.8	16.7	8.4	11.5	11.4	9.9	7.2

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 61b

Compensation of employees; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	9.7	:	:	:	:	:	:	:	:	:
1971	10.1	14.5	:	:	:	:	:	:	:	:
1972	10.6	14.6	:	:	:	:	:	:	:	:
1973	10.8	14.9	:	:	:	:	:	:	:	:
1974	11.0	16.0	:	:	:	:	:	:	:	:
1975	12.2	17.2	:	:	:	:	:	:	:	:
1976	12.2	17.1	:	:	:	:	:	:	:	:
1977	12.5	16.7	:	:	:	:	:	:	:	:
1978	12.9	17.0	:	:	:	12.6	:	:	:	:
1979	13.2	17.3	:	:	:	12.6	:	:	:	:
1980	13.3	18.0	:	:	:	12.9	:	:	:	:
1981	13.9	19.0	:	:	:	13.3	:	:	:	:
1982	13.7	19.5	:	:	:	13.7	:	:	:	:
1983	13.2	19.0	:	:	:	13.8	:	:	:	:
1984	13.3	18.0	:	:	:	13.8	:	:	:	:
1985	12.7	17.4	:	:	:	13.8	:	:	:	:
1986	12.5	16.7	:	:	:	13.7	:	:	:	:
1987	12.1	17.4	:	:	:	13.3	:	:	:	12.4
1988	11.4	18.2	:	:	:	12.8	:	:	:	11.9
1989	11.1	18.0	:	:	:	12.5	:	:	:	11.3
1990	11.1	17.7	:	:	:	12.5	10.4	12.6	10.3	11.0
1991	11.4	17.7	9.0	:	:	12.7	11.0	12.6	10.2	10.8
1992	11.4	17.8	9.2	:	:	13.0	11.2	12.4	10.2	11.0
1993	11.9	18.1	9.3	:	:	13.5	11.4	12.3	10.1	11.2
1994	11.9	17.5	9.0	:	:	13.5	11.0	11.9	9.6	10.9
1995	11.9	17.3	9.0	11.3	11.3	13.7	10.2	11.2	9.7	10.8
1996	11.9	17.3	8.9	10.7	11.3	13.9	9.7	11.5	9.6	10.4
1997	11.7	17.1	8.7	11.6	10.9	13.8	9.2	11.6	9.2	10.2
1998	11.6	17.3	8.5	11.7	10.7	13.7	8.7	10.7	8.8	10.1
1999	11.6	17.1	8.4	11.9	10.6	13.6	8.3	10.7	8.5	10.2
2000	11.4	16.5	8.1	11.8	10.4	13.5	7.9	10.5	7.8	10.0
2001	11.4	16.5	8.0	11.8	10.2	13.6	8.2	10.5	8.0	10.0
2002	11.4	16.6	8.0	11.7	10.3	13.7	8.4	10.5	8.1	10.2
2003	11.2	16.5	7.7	11.5	10.3	13.5	8.2	10.3	8.1	10.2

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	10.8	:	:	11.5	:
1971	:	:	:	:	11.4	:	:	11.7	:
1972	:	:	:	:	11.9	:	:	11.6	:
1973	:	:	:	:	11.7	:	:	11.3	:
1974	:	:	:	:	12.9	:	:	11.4	:
1975	:	:	12.6	:	14.3	:	:	11.6	:
1976	11.3	:	13.5	:	13.9	:	:	11.4	:
1977	11.1	:	13.6	:	12.9	:	:	11.1	:
1978	11.8	:	13.4	:	12.4	:	:	10.7	:
1979	11.6	:	13.1	:	12.0	:	:	10.4	:
1980	11.6	:	13.0	:	13.0	:	:	10.6	:
1981	11.9	:	13.4	:	13.4	:	:	10.4	:
1982	12.1	:	13.8	:	13.2	:	:	10.9	:
1983	12.1	:	14.2	:	13.1	:	:	10.7	:
1984	12.2	:	14.1	:	12.8	:	:	10.5	:
1985	12.3	:	14.7	:	12.3	:	:	10.6	:
1986	12.5	:	14.9	:	12.3	:	:	10.6	:
1987	12.6	:	15.0	:	12.2	:	:	10.6	:
1988	12.3	:	14.6	:	11.8	:	:	10.4	:
1989	12.1	:	14.3	:	11.4	:	:	10.3	:
1990	11.9	:	15.1	:	11.5	:	:	10.5	:
1991	12.1	:	17.6	:	11.7	:	:	10.8	:
1992	12.3	:	18.0	:	11.8	:	:	10.6	:
1993	12.7	:	16.8	19.1	10.5	:	:	10.5	:
1994	12.7	:	15.9	18.2	8.9	:	:	10.2	:
1995	12.6	13.6	15.4	17.3	8.3	11.1	11.1	9.9	:
1996	12.4	13.7	15.6	17.8	7.9	11.2	11.1	9.7	:
1997	11.5	13.8	14.6	17.4	7.5	11.1	10.8	9.5	:
1998	11.3	13.9	13.9	16.8	7.2	10.8	10.5	9.3	:
1999	11.5	14.4	13.7	16.4	7.2	10.7	10.4	9.2	:
2000	11.4	14.8	13.0	16.6	7.2	10.5	10.2	9.1	:
2001	11.3	15.0	13.3	16.7	7.3	10.5	10.2	:	:
2002	11.2	15.1	13.3	16.7	7.5	10.6	10.3	:	:
2003	11.3	15.1	13.2	16.6	7.5	10.4	10.2	:	:

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 62

Collective consumption expenditure
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	7.4	:	:	:	:	:	:	:	:	:
1971	7.8	7.3	:	:	:	:	:	:	:	:
1972	7.9	7.2	:	:	:	:	:	:	:	:
1973	8.1	7.0	:	:	:	:	:	:	:	:
1974	7.9	7.8	:	:	:	:	:	:	:	:
1975	8.6	7.8	:	:	:	:	:	:	:	:
1976	8.5	7.3	:	:	:	:	:	:	:	:
1977	8.7	7.5	:	:	:	:	:	:	:	:
1978	9.2	7.9	:	:	:	9.0	:	:	:	:
1979	9.4	8.1	:	:	:	9.1	:	:	:	:
1980	9.4	8.8	:	:	:	9.4	:	:	:	:
1981	9.9	9.0	:	:	:	9.8	:	:	:	:
1982	9.6	8.8	:	:	:	10.0	:	:	:	:
1983	9.4	8.5	:	:	:	10.2	:	:	:	:
1984	9.2	8.3	:	:	:	10.3	:	:	:	:
1985	9.1	8.0	:	:	:	10.3	:	:	:	:
1986	9.0	7.7	:	:	:	10.2	:	:	:	:
1987	8.7	8.3	:	:	:	10.1	:	:	:	12.7
1988	8.1	8.3	:	:	:	10.0	:	:	:	12.5
1989	7.8	8.3	:	:	:	9.5	:	:	:	12.1
1990	7.6	8.2	:	:	:	9.4	6.6	7.9	8.0	11.9
1991	7.8	8.5	8.7	:	:	9.6	7.0	7.8	7.8	11.9
1992	7.6	8.6	8.7	:	:	9.8	7.0	7.7	7.8	11.8
1993	7.8	9.3	8.8	:	:	10.4	6.6	7.9	7.6	11.9
1994	7.9	9.0	8.5	:	:	10.0	6.4	7.7	7.3	11.6
1995	7.9	8.4	8.4	9.4	8.0	9.8	6.1	7.3	8.0	11.6
1996	7.8	8.5	8.4	8.5	7.8	9.9	5.8	7.3	8.0	11.3
1997	7.8	8.1	8.1	8.8	7.7	10.0	5.5	7.2	7.6	11.0
1998	7.8	8.1	8.0	9.3	7.5	9.4	5.3	7.2	7.1	10.8
1999	7.9	8.0	8.0	9.4	7.5	9.4	4.9	7.2	7.1	11.0
2000	7.9	7.6	7.9	9.9	7.9	9.3	4.7	7.2	6.6	10.8
2001	8.0	7.7	7.9	10.1	7.8	9.1	4.9	7.1	7.0	10.9
2002	8.1	7.7	7.9	10.0	7.8	9.1	5.0	7.2	7.0	11.1
2003	8.1	7.7	7.8	9.9	7.8	9.0	5.0	7.1	6.9	10.9

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	9.1	:	:	:	:
1971	:	:	:	:	9.3	:	:	:	:
1972	:	:	:	:	9.4	:	:	:	:
1973	:	:	:	:	9.3	:	:	:	:
1974	:	:	:	:	9.4	:	:	:	:
1975	:	:	7.2	:	10.2	:	:	:	:
1976	7.9	:	7.3	:	10.2	:	:	:	:
1977	7.6	:	7.5	:	9.6	:	:	:	:
1978	7.8	:	7.3	:	9.8	:	:	:	:
1979	7.9	:	7.0	:	9.7	:	:	:	:
1980	7.7	:	7.2	:	10.4	:	:	:	:
1981	7.7	:	7.3	:	10.6	:	:	:	:
1982	8.0	:	7.4	:	10.6	:	:	:	:
1983	8.1	:	7.6	:	10.3	:	:	:	:
1984	8.2	:	7.3	:	10.3	:	:	:	:
1985	8.2	:	7.5	:	10.0	:	:	:	:
1986	8.3	:	7.4	:	9.9	:	:	:	:
1987	8.2	:	7.5	:	9.4	:	:	:	:
1988	8.0	:	7.2	:	8.8	:	:	:	:
1989	7.8	:	6.9	:	8.8	:	:	:	:
1990	7.6	:	7.4	:	9.0	:	:	:	5.9
1991	7.6	:	8.8	:	9.3	:	:	:	5.9
1992	7.6	:	9.2	:	9.1	:	:	:	6.0
1993	7.8	:	9.0	:	8.9	:	:	:	6.2
1994	7.8	:	8.8	:	8.6	:	:	:	6.3
1995	8.1	7.9	8.3	:	8.3	8.6	:	:	6.6
1996	8.0	7.5	8.4	:	8.1	8.6	:	:	6.5
1997	7.8	7.7	8.4	:	7.6	8.4	:	:	6.6
1998	7.8	8.1	8.1	:	7.3	8.2	:	:	6.9
1999	7.8	8.5	8.1	:	7.3	8.3	:	:	7.1
2000	7.7	8.7	7.6	:	7.3	8.2	:	:	7.3
2001	7.5	8.7	7.8	:	7.2	8.2	:	:	7.3
2002	7.3	8.6	7.9	:	7.4	8.2	:	:	7.2
2003	7.3	8.6	7.9	:	7.4	8.1	:	:	7.2

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 63

Social benefits in kind
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	9.5	:	:	:	:	:	:	:	:	:
1971	10.0	14.8	:	:	:	:	:	:	:	:
1972	10.5	14.8	:	:	:	:	:	:	:	:
1973	10.6	15.1	:	:	:	:	:	:	:	:
1974	11.1	16.3	:	:	:	:	:	:	:	:
1975	12.6	17.5	:	:	:	:	:	:	:	:
1976	12.9	17.5	:	:	:	:	:	:	:	:
1977	13.2	17.0	:	:	:	:	:	:	:	:
1978	13.5	17.3	:	:	:	11.6	:	:	:	:
1979	13.6	17.6	:	:	:	11.8	:	:	:	:
1980	13.5	18.5	:	:	:	12.1	:	:	:	:
1981	14.3	19.4	:	:	:	12.6	:	:	:	:
1982	14.2	19.9	:	:	:	13.1	:	:	:	:
1983	14.2	19.4	:	:	:	13.1	:	:	:	:
1984	14.2	18.2	:	:	:	13.5	:	:	:	:
1985	13.9	17.9	:	:	:	13.4	:	:	:	:
1986	13.8	17.0	:	:	:	13.2	:	:	:	:
1987	13.9	17.5	:	:	:	13.0	:	:	:	12.6
1988	13.1	18.0	:	:	:	12.8	:	:	:	12.2
1989	12.6	17.7	:	:	:	12.8	:	:	:	11.8
1990	12.6	17.4	:	:	:	12.9	9.8	12.3	10.8	11.6
1991	13.0	17.3	10.5	:	:	13.0	10.4	12.5	10.8	11.9
1992	13.3	17.2	11.0	:	:	13.2	10.8	12.3	11.0	12.5
1993	13.6	17.5	11.0	:	:	14.1	10.9	12.0	11.2	12.7
1994	13.4	16.9	11.2	:	:	14.1	11.0	11.4	10.6	12.6
1995	13.5	17.4	11.4	5.9	10.1	14.1	10.4	10.6	10.5	12.5
1996	13.9	17.4	11.6	6.0	10.1	14.2	9.9	10.8	10.9	11.9
1997	13.4	17.3	11.3	6.3	9.9	14.2	9.6	11.0	10.2	11.9
1998	13.4	17.6	11.2	6.0	9.9	14.1	9.2	10.8	9.7	11.9
1999	13.3	17.5	11.1	5.9	9.8	14.0	9.1	10.8	10.1	12.0
2000	13.2	17.1	11.1	5.7	9.5	14.0	8.7	10.8	9.4	12.0
2001	13.4	17.3	11.2	5.7	9.4	14.1	9.0	11.0	9.4	12.1
2002	13.6	17.4	11.2	5.5	9.5	14.2	9.2	11.1	9.5	12.3
2003	13.5	17.2	11.0	5.4	9.5	14.1	9.1	10.9	9.4	12.1

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	8.9	:	:	:	:
1971	:	:	:	:	9.1	:	:	:	:
1972	:	:	:	:	9.3	:	:	:	:
1973	:	:	:	:	9.2	:	:	:	:
1974	:	:	:	:	11.0	:	:	:	:
1975	:	:	10.6	:	12.1	:	:	:	:
1976	10.3	:	11.5	:	11.9	:	:	:	:
1977	10.2	:	11.8	:	11.1	:	:	:	:
1978	10.7	:	11.7	:	10.5	:	:	:	:
1979	10.6	:	11.4	:	10.3	:	:	:	:
1980	10.8	:	11.5	:	11.1	:	:	:	:
1981	11.3	:	11.8	:	11.6	:	:	:	:
1982	11.4	:	11.9	:	11.5	:	:	:	:
1983	11.2	:	12.2	:	11.6	:	:	:	:
1984	11.2	:	12.4	:	11.4	:	:	:	:
1985	11.4	:	13.1	:	10.9	:	:	:	:
1986	11.6	:	13.6	:	11.0	:	:	:	:
1987	11.7	:	13.8	:	11.0	:	:	:	:
1988	11.6	:	13.3	:	10.9	:	:	:	:
1989	11.5	:	13.3	:	10.6	:	:	:	:
1990	11.4	:	14.2	:	10.7	:	:	:	7.5
1991	11.6	:	16.1	:	11.4	:	:	:	7.4
1992	12.0	:	16.2	:	12.0	:	:	:	7.7
1993	12.6	:	15.3	:	11.6	:	:	:	8.0
1994	12.7	:	14.6	:	11.4	:	:	:	8.2
1995	12.4	10.7	14.5	:	11.3	11.9	:	:	8.5
1996	12.3	11.3	14.8	:	11.1	12.0	:	:	8.6
1997	11.9	11.2	14.1	:	10.8	11.8	:	:	8.6
1998	11.8	10.7	13.6	:	10.7	11.7	:	:	8.8
1999	11.8	11.1	13.6	:	11.2	11.7	:	:	9.0
2000	11.7	11.4	13.1	:	11.3	11.6	:	:	9.3
2001	11.6	11.4	13.5	:	11.6	11.7	:	:	9.4
2002	11.5	11.4	13.7	:	11.8	11.7	:	:	9.4
2003	11.3	11.3	13.6	:	11.9	11.6	:	:	9.3

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 64a

**Social transfers other than in kind; general government
EU Member States: former definition**

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	16.4	11.1	13.0	8.6	7.1	14.3	7.9	11.6	13.1	16.0
1971	16.6	11.0	13.3	8.7	7.9	14.3	8.2	12.2	14.5	17.1
1972	17.2	11.1	13.8	8.1	8.0	14.5	8.1	13.0	14.8	18.2
1973	17.8	10.8	13.9	7.2	8.1	14.6	8.7	12.8	13.9	18.6
1974	18.3	11.7	15.1	7.9	8.1	15.0	10.4	12.4	13.2	19.8
1975	21.4	13.4	18.1	8.1	8.8	16.8	11.7	14.1	19.1	22.0
1976	21.8	13.2	17.8	8.1	9.5	16.7	11.7	14.0	19.8	22.5
1977	22.6	13.8	17.8	8.8	9.9	17.1	10.9	13.6	21.0	23.3
1978	23.1	14.6	17.4	9.4	11.4	17.9	10.5	14.6	21.2	24.1
1979	23.6	15.1	17.1	9.0	12.4	18.0	10.5	13.9	20.9	24.9
1980	23.6	16.3	17.2	9.3	12.1	18.6	11.6	14.5	21.6	25.4
1981	25.4	17.3	17.9	10.8	13.5	19.7	12.5	15.9	22.8	26.5
1982	25.3	17.5	18.3	12.6	13.4	20.7	14.3	16.4	22.1	28.0
1983	25.9	17.2	17.7	12.9	13.9	20.9	14.9	17.5	21.3	28.5
1984	25.4	16.6	17.1	13.3	13.9	21.2	14.8	17.0	20.8	27.4
1985	24.8	15.9	16.8	14.1	13.8	21.7	15.1	17.3	20.7	26.4
1986	24.6	15.1	16.6	14.2	13.5	21.6	15.6	17.4	20.2	26.1
1987	24.5	15.8	16.8	14.6	13.3	21.2	16.1	17.5	20.9	26.5
1988	23.6	17.1	16.7	14.7	13.4	21.0	15.4	17.5	:	26.1
1989	22.9	18.0	16.4	15.1	13.4	20.7	13.6	17.8	:	25.2
1990	22.9	18.0	15.8	15.0	13.9	20.9	13.4	18.3	:	26.2
1991	23.9	18.7	15.4	14.9	14.7	21.4	14.1	18.4	:	26.2
1991	23.9	18.7	16.6	14.9	14.7	21.4	14.1	18.4	:	26.2
1992	24.2	19.2	17.3	14.8	15.5	22.0	14.6	19.5	:	26.8
1993	24.6	20.3	18.4	15.1	16.2	23.1	14.5	19.7	:	26.9
1994	24.2	21.7	18.6	15.2	15.8	22.9	14.4	19.7	:	26.0
1995	24.2	20.8	19.0	15.5	15.1	23.0	13.6	19.1	:	25.1

(1) 1970–91: D₉₀.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	14.8	3.6	8.0	11.0	8.0	12.7	11.8	7.0	4.8
1971	15.0	3.7	8.7	12.1	7.9	13.1	12.1	7.6	5.0
1972	14.9	4.8	8.8	12.7	8.6	13.5	12.7	7.7	5.3
1973	14.8	5.2	8.3	12.3	8.2	13.6	12.7	7.9	5.3
1974	15.0	5.8	8.6	14.4	8.9	14.1	13.4	8.7	6.4
1975	16.3	8.8	11.2	14.3	9.2	16.3	15.1	10.1	8.0
1976	17.1	11.3	12.2	15.2	9.7	16.4	15.4	9.8	8.7
1977	17.2	9.7	13.4	16.8	9.8	16.6	15.7	9.4	9.2
1978	18.6	8.9	13.6	17.5	10.2	17.1	16.1	8.9	9.7
1979	18.5	8.5	12.8	17.6	10.2	17.0	16.0	8.9	10.1
1980	18.4	9.3	12.5	17.4	10.6	17.2	16.1	9.8	10.4
1981	18.8	10.3	12.8	18.0	11.9	18.2	17.1	9.9	10.8
1982	19.2	10.4	13.7	18.0	12.7	18.7	17.7	10.6	11.2
1983	19.2	10.3	14.5	18.2	12.7	19.0	17.9	10.5	11.5
1984	19.4	10.4	14.5	17.4	12.8	18.6	17.6	9.7	11.3
1985	19.8	10.4	15.3	18.1	12.8	18.7	17.6	9.7	11.2
1986	20.0	10.5	15.9	18.3	13.0	18.6	17.7	9.7	11.5
1987	20.6	11.2	16.1	18.6	12.1	18.6	17.6	9.5	11.8
1988	20.1	11.0	14.4	19.3	11.1	18.3	17.2	9.4	11.1
1989	19.6	10.9	14.1	19.2	10.5	18.1	16.9	9.5	10.7
1990	19.5	11.4	15.5	19.2	10.6	18.2	17.1	10.0	11.1
1991	19.7	12.5	19.3	20.6	11.8	18.3	17.4	10.9	10.6
1991	19.7	12.5	19.3	20.6	11.8	18.6	17.7	10.9	10.6
1992	19.9	13.4	23.2	22.7	13.1	19.4	18.6	11.6	11.0
1993	21.5	15.0	24.7	24.4	13.8	20.3	19.5	11.8	11.6
1994	21.7	14.8	24.5	24.1	13.6	20.2	19.4	11.6	12.2
1995	21.6	15.1	22.9	22.5	13.4	20.1	19.3	11.7	13.0

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 64b

Social transfers other than in kind; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	11.7	:	:	:	:	:	:	:	:	:
1971	11.9	11.0	:	:	:	:	:	:	:	:
1972	12.3	11.0	:	:	:	:	:	:	:	:
1973	12.8	10.5	:	:	:	:	:	:	:	:
1974	13.2	12.0	:	:	:	:	:	:	:	:
1975	15.6	13.2	:	:	:	:	:	:	:	:
1976	15.8	13.1	:	:	:	:	:	:	:	:
1977	16.5	13.7	:	:	:	:	:	:	:	:
1978	16.8	14.5	:	:	:	14.9	:	:	:	:
1979	17.2	14.9	:	:	:	15.1	:	:	:	:
1980	17.3	16.0	:	:	:	15.5	:	:	:	:
1981	18.5	17.2	:	:	:	16.4	:	:	:	:
1982	18.8	17.4	:	:	:	17.1	:	:	:	:
1983	19.4	16.9	:	:	:	17.3	:	:	:	:
1984	18.7	16.6	:	:	:	17.5	:	:	:	:
1985	18.3	15.8	:	:	:	17.7	:	:	:	:
1986	18.0	15.1	:	:	:	17.5	:	:	:	:
1987	17.6	15.8	:	:	:	17.2	:	:	:	18.3
1988	16.9	17.0	:	:	:	17.0	:	:	:	17.9
1989	16.2	17.8	:	:	:	16.7	:	:	:	17.3
1990	16.1	17.9	:	:	:	16.9	11.9	15.5	14.5	18.3
1991	16.6	18.4	15.7	:	:	17.3	12.6	15.6	15.7	17.9
1992	16.6	18.9	16.3	:	:	17.7	13.0	16.5	15.5	17.8
1993	17.0	19.8	17.4	:	:	18.5	12.9	17.0	16.0	17.8
1994	16.8	21.2	17.7	:	:	18.4	12.7	17.3	15.7	16.6
1995	16.6	20.4	18.1	15.1	13.9	18.5	11.8	16.7	16.5	15.3
1996	16.6	19.8	19.3	15.4	13.8	18.7	11.5	16.9	16.2	14.8
1997	16.2	18.8	19.3	15.6	13.3	18.8	10.6	17.3	15.4	13.9
1998	16.1	18.1	18.9	15.8	12.8	18.4	9.9	17.0	14.8	13.0
1999	15.7	17.5	19.0	16.1	12.4	18.3	9.0	17.2	14.8	12.5
2000	15.3	16.8	18.8	16.4	12.3	18.0	8.2	16.7	13.9	11.9
2001	15.4	16.8	18.9	16.7	12.2	18.1	8.0	16.7	13.7	11.3
2002	15.5	16.7	19.4	16.8	12.3	18.2	8.2	17.2	13.8	11.5
2003	15.5	16.2	19.1	16.9	12.2	17.9	8.3	17.0	13.6	11.4

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	8.8	:	:	7.0	:
1971	:	:	:	:	8.7	:	:	7.6	:
1972	:	:	:	:	9.4	:	:	7.7	:
1973	:	:	:	:	9.0	:	:	7.9	:
1974	:	:	:	:	9.8	:	:	8.7	:
1975	:	:	9.4	:	10.2	:	:	10.1	:
1976	15.3	:	10.4	:	10.7	:	:	9.8	:
1977	15.5	:	11.7	:	10.9	:	:	9.4	:
1978	16.9	:	12.1	:	11.3	:	:	8.9	:
1979	16.9	:	11.3	:	11.4	:	:	8.9	:
1980	16.8	:	11.0	:	11.9	:	:	9.8	:
1981	17.2	:	11.2	:	13.4	:	:	9.9	:
1982	17.6	:	12.2	:	14.2	:	:	10.6	:
1983	17.7	:	13.0	:	14.1	:	:	10.5	:
1984	17.9	:	13.2	:	14.2	:	:	9.7	:
1985	18.3	:	13.9	:	14.2	:	:	9.7	:
1986	18.4	:	14.4	:	14.3	:	:	9.7	:
1987	18.9	:	14.5	:	13.5	:	:	9.5	:
1988	18.6	:	13.8	:	12.5	:	:	9.4	:
1989	18.0	:	13.5	:	11.9	:	:	9.5	:
1990	17.8	:	14.9	:	12.0	:	:	10.0	7.4
1991	17.8	:	18.6	:	14.2	:	:	10.9	7.1
1992	18.1	:	22.5	:	15.6	:	:	11.6	7.3
1993	19.5	:	24.0	23.3	16.0	:	:	11.8	7.7
1994	19.6	:	23.8	22.8	15.6	:	:	11.6	8.1
1995	19.5	11.8	22.2	21.3	15.4	17.3	17.2	11.7	8.6
1996	19.5	11.8	21.5	20.3	14.8	17.7	17.4	11.6	8.7
1997	18.9	11.6	19.9	19.6	14.4	17.6	17.1	11.3	8.9
1998	18.6	11.7	18.4	19.3	13.7	17.1	16.6	11.0	9.4
1999	18.8	11.9	18.0	18.8	13.4	17.1	16.5	10.7	9.8
2000	18.8	12.1	16.5	18.3	13.2	16.7	16.1	10.6	10.1
2001	19.0	12.0	16.2	18.9	13.3	16.7	16.1	11.0	10.4
2002	19.3	12.0	16.1	18.9	13.4	16.9	16.3	11.5	10.7
2003	19.1	12.0	15.6	18.9	13.2	16.7	16.1	11.3	10.9

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 65a

Interest; general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	3.2	1.3	1.0	0.8	0.6	1.1	3.6	1.7	1.0	2.8
1971	3.1	1.3	1.0	0.9	0.5	1.0	3.5	1.9	1.0	2.7
1972	3.1	1.3	1.0	0.8	0.5	0.8	3.3	2.1	1.0	2.6
1973	3.1	1.2	1.1	0.8	0.6	0.7	3.3	2.3	0.8	2.6
1974	3.3	1.2	1.2	1.1	0.5	0.8	3.6	2.8	0.7	2.8
1975	3.4	1.2	1.4	1.2	0.5	1.2	4.1	3.6	0.7	2.9
1976	3.6	1.3	1.6	1.3	0.4	1.1	4.8	4.0	0.7	2.9
1977	4.0	1.8	1.7	1.2	0.5	1.2	4.9	4.4	0.8	3.0
1978	4.4	2.1	1.7	1.4	0.5	1.3	5.3	5.2	0.8	3.2
1979	5.0	3.4	1.7	1.8	0.6	1.4	5.7	5.1	0.7	3.3
1980	5.9	3.8	1.9	2.0	0.7	1.4	6.0	5.5	1.2	3.7
1981	7.6	5.1	2.3	2.6	0.8	1.9	6.8	6.2	1.2	4.4
1982	8.9	5.8	2.8	2.8	0.9	2.0	8.2	7.1	1.4	5.1
1983	9.1	7.8	3.0	3.6	1.2	2.5	8.5	7.5	1.4	5.6
1984	9.5	9.3	3.0	4.3	1.9	2.6	8.6	8.0	1.5	5.9
1985	10.3	9.6	3.0	4.9	1.9	2.8	9.3	8.0	1.0	6.1
1986	10.9	8.6	3.0	5.2	3.8	2.8	8.8	8.5	0.9	6.2
1987	10.4	8.0	2.9	6.5	4.2	2.7	8.8	7.9	1.0	6.2
1988	9.9	7.6	2.9	7.4	3.3	2.6	8.2	7.9	:	6.1
1989	10.0	7.2	2.7	7.5	3.9	2.7	7.4	8.7	:	5.8
1990	10.3	7.3	2.6	10.0	3.9	2.9	7.4	9.4	0.4	5.8
1991	10.0	7.3	2.8	9.3	3.7	2.9	7.2	10.1	0.4	5.9
1991	10.0	7.3	2.6	9.3	3.7	2.9	7.2	10.1	0.4	5.9
1992	10.6	6.6	3.2	11.5	4.3	3.2	6.7	11.4	0.3	6.0
1993	10.6	7.3	3.2	12.6	5.0	3.3	6.3	12.0	0.4	6.0
1994	10.0	6.7	3.3	13.9	4.7	3.5	5.6	10.9	0.3	5.6
1995	8.8	6.4	3.7	12.7	5.3	3.7	5.0	11.3	0.3	5.7

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	1.0	0.5	1.0	1.8	3.9	1.3	1.8	2.3	0.6
1971	1.0	0.5	0.9	1.9	3.6	1.3	1.7	2.2	0.6
1972	1.0	0.6	0.8	1.8	3.5	1.3	1.7	2.1	0.7
1973	1.0	0.4	0.7	1.8	3.6	1.3	1.7	2.3	0.8
1974	1.0	0.4	0.6	2.0	4.2	1.5	1.9	2.4	0.9
1975	1.3	0.7	0.7	2.1	3.9	1.8	2.1	2.5	1.2
1976	1.6	0.9	0.7	2.0	4.2	1.9	2.2	2.6	1.5
1977	1.8	1.4	0.8	2.4	4.3	2.1	2.4	2.5	1.9
1978	2.1	2.2	0.8	2.5	4.2	2.3	2.5	2.6	2.2
1979	2.2	2.4	0.9	2.9	4.4	2.4	2.7	2.9	2.6
1980	2.4	2.6	1.0	3.9	4.7	2.6	3.0	3.2	3.1
1981	2.7	4.5	1.1	5.1	5.0	3.2	3.6	3.8	3.5
1982	3.0	5.0	1.3	6.6	5.0	3.6	4.0	4.3	3.8
1983	2.9	5.9	1.5	6.9	4.7	4.0	4.3	4.5	4.1
1984	3.3	6.6	1.7	7.3	4.9	4.3	4.6	4.8	4.3
1985	3.5	7.4	1.8	8.1	5.0	4.5	4.8	5.1	4.4
1986	3.6	7.5	1.7	7.1	4.5	4.7	4.9	5.1	4.3
1987	3.9	7.4	1.7	6.2	4.3	4.6	4.7	5.0	4.3
1988	3.9	6.7	1.6	5.4	3.9	4.5	4.5	5.0	4.1
1989	3.9	6.0	1.5	5.2	3.7	4.7	4.6	5.1	3.9
1990	4.0	7.8	1.4	4.8	3.1	4.9	4.7	5.2	3.8
1991	4.2	7.6	1.9	5.0	2.7	5.1	4.8	5.3	3.7
1991	4.2	7.6	1.9	5.0	2.7	5.0	4.7	5.3	3.7
1992	4.2	7.0	2.6	5.2	2.7	5.5	5.2	5.1	3.6
1993	4.3	6.0	4.5	6.0	2.8	5.6	5.3	4.8	3.6
1994	4.0	6.1	5.0	6.6	3.1	5.4	5.2	4.7	3.6
1995	4.3	6.2	5.2	6.8	3.4	5.6	5.3	4.9	3.7

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 65b

Interest; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	3.6	:	:	:	:	:	:	:	:	:
1971	3.7	1.3	:	:	:	:	:	:	:	:
1972	3.7	1.3	:	:	:	:	:	:	:	:
1973	3.7	1.2	:	:	:	:	:	:	:	:
1974	3.8	1.2	:	:	:	:	:	:	:	:
1975	4.1	1.2	:	:	:	:	:	:	:	:
1976	4.2	1.3	:	:	:	:	:	:	:	:
1977	4.7	1.8	:	:	:	:	:	:	:	:
1978	5.1	2.1	:	:	:	1.3	:	:	:	:
1979	5.8	3.4	:	:	:	1.4	:	:	:	:
1980	6.6	3.8	:	:	:	1.4	:	:	:	:
1981	8.3	5.1	:	:	:	1.9	:	:	:	:
1982	9.5	5.8	:	:	:	2.0	:	:	:	:
1983	9.9	7.8	:	:	:	2.5	:	:	:	:
1984	10.1	9.3	:	:	:	2.6	:	:	:	:
1985	11.1	9.6	:	:	:	2.8	:	:	:	:
1986	11.4	8.5	:	:	:	2.8	:	:	:	:
1987	10.6	8.0	:	:	:	2.7	:	:	:	6.2
1988	10.2	7.6	:	:	:	2.6	:	:	:	6.2
1989	11.2	7.2	:	:	:	2.7	:	:	:	5.8
1990	11.8	7.3	:	:	:	2.9	7.9	10.5	0.4	5.9
1991	11.3	7.3	2.8	:	:	3.0	7.6	11.9	0.4	6.1
1992	11.1	6.6	3.3	:	:	3.2	7.1	12.6	0.3	6.3
1993	11.1	7.3	3.4	:	:	3.5	6.7	13.0	0.3	6.2
1994	9.6	6.7	3.3	:	:	3.6	6.1	11.4	0.4	5.8
1995	9.2	6.4	3.7	11.1	5.2	3.8	5.4	11.5	0.4	5.9
1996	8.8	6.1	3.7	10.5	5.3	3.9	4.6	11.5	0.4	5.6
1997	8.0	5.7	3.6	8.3	4.8	3.7	4.2	9.4	0.3	5.2
1998	7.5	5.3	3.6	7.8	4.3	3.6	3.4	8.0	0.4	4.8
1999	7.0	4.6	3.5	7.6	3.5	3.3	2.4	6.7	0.3	4.5
2000	6.8	4.1	3.4	7.2	3.3	3.3	2.1	6.5	0.3	3.9
2001	6.5	3.7	3.2	6.6	3.2	3.2	1.8	6.2	0.2	3.3
2002	6.1	3.5	3.2	5.8	3.1	3.2	1.6	5.8	0.2	2.9
2003	5.8	3.2	3.2	5.2	3.0	3.1	1.4	5.6	0.2	2.6

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	4.1	:	:	2.3	:
1971	:	:	:	:	3.8	:	:	2.2	:
1972	:	:	:	:	3.7	:	:	2.1	:
1973	:	:	:	:	3.8	:	:	2.3	:
1974	:	:	:	:	4.4	:	:	2.4	:
1975	:	:	0.6	:	4.1	:	:	2.5	:
1976	1.6	:	0.6	:	4.5	:	:	2.6	:
1977	1.8	:	0.8	:	4.5	:	:	2.5	:
1978	2.2	:	0.8	:	4.4	:	:	2.6	:
1979	2.3	:	0.9	:	4.6	:	:	2.9	:
1980	2.4	:	1.0	:	4.9	:	:	3.2	:
1981	2.7	:	1.1	:	5.3	:	:	3.8	:
1982	3.1	:	1.2	:	5.3	:	:	4.3	:
1983	3.0	:	1.5	:	5.0	:	:	4.5	:
1984	3.3	:	1.6	:	5.2	:	:	4.8	:
1985	3.5	:	1.8	:	5.2	:	:	5.1	:
1986	3.6	:	1.7	:	4.8	:	:	5.1	:
1987	3.9	:	1.6	:	4.6	:	:	5.0	:
1988	4.0	:	1.6	:	4.2	:	:	5.0	:
1989	4.0	:	1.4	:	4.1	:	:	5.1	:
1990	4.1	:	1.4	:	3.8	:	:	5.2	3.6
1991	4.2	:	1.9	:	3.2	:	:	5.3	3.5
1992	4.3	:	2.6	:	3.1	:	:	5.1	3.5
1993	4.3	:	4.5	6.0	3.1	:	:	4.8	3.4
1994	4.1	:	4.2	6.6	3.4	:	:	4.7	3.4
1995	4.4	6.3	4.0	6.9	3.7	5.6	5.4	4.9	3.5
1996	4.2	5.3	4.3	6.8	3.7	5.7	5.5	4.7	3.4
1997	3.9	4.2	4.3	6.5	3.7	5.1	5.0	4.5	3.4
1998	3.8	3.4	3.6	5.7	3.6	4.7	4.6	4.3	3.4
1999	3.5	3.2	3.1	5.0	2.9	4.3	4.1	3.9	3.4
2000	3.5	3.1	2.8	4.2	2.9	4.1	3.9	3.7	3.6
2001	3.4	3.1	2.3	3.5	2.5	3.9	3.6	3.4	4.0
2002	3.3	3.0	2.2	3.2	2.2	3.7	3.5	3.2	4.2
2003	3.2	3.0	2.1	2.9	1.9	3.6	3.3	3.0	4.4

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 66a

Subsidies; general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	2.7	2.8	2.0	0.8	0.8	2.0	4.3	1.7	1.1	1.6
1971	2.6	2.7	1.9	1.2	1.0	1.9	4.1	2.0	1.3	1.2
1972	2.9	2.8	2.1	1.2	1.0	1.9	3.8	2.1	1.4	1.4
1973	3.3	3.0	2.2	1.7	0.9	2.1	2.9	1.9	1.7	1.7
1974	2.9	3.4	2.1	2.5	0.9	2.0	4.8	1.7	1.7	1.7
1975	3.1	2.7	2.2	2.4	1.1	2.3	6.2	3.2	2.7	1.7
1976	3.6	2.9	2.2	2.6	1.2	2.4	5.9	2.9	3.3	2.3
1977	3.9	3.1	2.3	2.7	1.4	2.5	7.8	3.1	3.9	2.8
1978	3.9	3.2	2.6	2.7	1.8	2.4	8.6	3.1	4.2	2.9
1979	4.2	3.1	2.5	2.1	1.6	2.5	8.1	3.3	3.8	3.0
1980	3.6	3.1	2.3	2.2	2.0	2.5	7.2	3.5	2.9	3.0
1981	3.7	2.9	2.1	3.9	1.9	2.8	6.1	3.4	3.7	2.8
1982	3.6	3.1	2.1	4.3	2.4	2.7	5.8	3.7	3.7	3.0
1983	4.0	3.2	2.1	4.3	2.5	2.8	6.3	3.6	4.1	3.2
1984	3.8	3.2	2.3	3.9	2.7	3.0	6.9	3.8	3.2	3.4
1985	3.7	2.9	2.3	5.2	2.4	3.0	7.4	3.4	3.1	3.5
1986	3.5	2.9	2.3	5.9	2.0	3.1	7.2	3.6	2.9	3.5
1987	3.2	3.1	2.5	5.4	2.1	3.1	6.2	3.2	3.0	4.2
1988	3.1	3.3	2.5	4.3	2.7	2.5	6.8	2.9	3.1	4.0
1989	2.5	3.3	2.3	4.1	2.5	2.2	4.4	2.9	2.7	3.3
1990	2.8	3.3	2.2	4.0	2.4	2.1	5.6	2.5	3.0	2.9
1991	2.9	3.2	1.9	3.5	2.5	2.2	5.5	2.6	3.1	3.1
1991	2.9	3.2	2.4	3.5	2.5	2.2	5.5	2.6	3.1	3.1
1992	2.6	3.8	2.1	3.6	2.5	2.2	4.7	2.3	3.0	3.1
1993	2.6	3.9	2.1	3.9	3.1	2.4	4.9	2.7	2.9	2.9
1994	2.4	3.7	2.1	3.6	2.9	2.3	4.4	2.4	2.8	2.5
1995	2.4	3.6	2.1	3.3	3.0	2.3	4.1	1.9	2.1	1.8

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	1.7	1.3	2.7	1.6	1.7	1.8	1.8	0.5	1.1
1971	1.7	1.2	2.7	1.8	1.6	1.9	1.8	0.4	1.1
1972	1.6	0.9	2.6	1.8	1.8	2.0	1.9	0.5	1.1
1973	1.6	0.8	2.2	1.8	2.0	2.0	2.0	0.4	1.0
1974	2.0	1.9	3.0	2.3	3.7	2.0	2.3	0.2	1.6
1975	2.8	1.7	3.7	2.9	3.6	2.4	2.6	0.3	1.5
1976	2.8	3.1	3.7	3.8	2.9	2.4	2.6	0.3	1.3
1977	2.8	3.2	3.6	3.9	2.3	2.6	2.6	0.3	1.3
1978	3.0	4.0	3.3	4.0	2.2	2.7	2.7	0.4	1.3
1979	2.8	3.9	3.4	4.1	2.4	2.7	2.8	0.3	1.3
1980	2.9	6.0	3.2	4.2	2.5	2.7	2.8	0.4	1.5
1981	2.9	7.7	3.3	4.5	2.5	2.8	2.8	0.4	1.4
1982	2.9	5.1	3.1	4.8	2.1	2.8	2.8	0.4	1.4
1983	2.8	5.8	3.2	5.0	2.1	2.9	2.8	0.6	1.4
1984	2.7	8.6	3.2	4.8	2.3	3.1	3.0	0.5	1.2
1985	2.8	6.8	3.1	4.9	2.0	3.0	2.9	0.5	1.1
1986	3.2	3.1	3.1	4.8	1.7	3.0	2.9	0.6	1.1
1987	3.1	2.3	3.0	4.6	1.5	3.0	2.8	0.7	1.0
1988	2.8	1.7	2.5	4.3	1.3	2.8	2.6	0.6	0.9
1989	2.7	1.4	2.8	4.4	1.1	2.5	2.4	0.5	0.8
1990	2.8	1.4	2.8	4.6	1.1	2.4	2.3	0.5	1.1
1991	3.1	1.3	3.4	4.9	1.0	2.4	2.3	0.5	0.8
1991	3.1	1.3	3.4	4.9	1.0	2.5	2.4	0.5	0.8
1992	3.0	1.2	3.5	5.3	1.1	2.4	2.3	0.5	0.7
1993	3.1	1.3	3.3	5.7	1.1	2.5	2.4	0.6	0.7
1994	2.5	1.2	3.0	5.1	1.1	2.4	2.3	0.5	0.7
1995	2.9	1.1	3.2	4.9	1.1	2.3	2.2	0.5	0.7

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 66b

Subsidies; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	2.3	:	:	:	:	:	:	:	:	:
1971	2.2	3.3	:	:	:	:	:	:	:	:
1972	2.4	3.7	:	:	:	:	:	:	:	:
1973	2.5	1.8	:	:	:	:	:	:	:	:
1974	2.3	2.2	:	:	:	:	:	:	:	:
1975	2.6	1.5	:	:	:	:	:	:	:	:
1976	2.7	1.6	:	:	:	:	:	:	:	:
1977	2.9	1.3	:	:	:	:	:	:	:	:
1978	2.9	1.3	:	:	:	2.2	:	:	:	:
1979	3.0	1.4	:	:	:	2.2	:	:	:	:
1980	2.8	1.6	:	:	:	2.1	:	:	:	:
1981	2.9	1.7	:	:	:	2.3	:	:	:	:
1982	2.6	1.9	:	:	:	2.4	:	:	:	:
1983	2.8	1.9	:	:	:	2.4	:	:	:	:
1984	2.9	1.8	:	:	:	2.7	:	:	:	:
1985	2.4	1.6	:	:	:	2.6	:	:	:	:
1986	2.3	1.4	:	:	:	2.6	:	:	:	:
1987	2.0	1.4	:	:	:	2.5	:	:	:	2.4
1988	2.1	2.1	:	:	:	2.1	:	:	:	2.3
1989	1.7	2.2	:	:	:	2.0	:	:	:	2.3
1990	1.6	2.2	:	:	:	1.8	1.1	1.9	2.6	2.3
1991	1.7	2.1	2.2	:	:	1.7	1.1	1.9	2.8	2.3
1992	1.6	2.7	1.9	:	:	1.7	1.2	1.8	2.8	2.3
1993	1.6	2.6	1.9	:	:	1.7	1.3	2.0	2.6	2.1
1994	1.5	2.6	2.1	:	:	1.6	1.1	1.7	2.7	1.9
1995	1.5	2.5	2.1	0.4	1.1	1.5	1.0	1.5	1.8	1.1
1996	1.6	2.6	2.0	0.5	1.0	1.5	1.0	1.5	2.1	1.2
1997	1.4	2.4	1.8	0.2	0.9	1.5	1.0	1.2	1.8	1.5
1998	1.5	2.3	1.9	0.1	1.1	1.4	0.8	1.3	1.8	1.5
1999	1.5	2.3	1.8	0.2	1.2	1.3	0.7	1.2	1.5	1.6
2000	1.5	2.2	1.7	0.2	1.1	1.3	0.7	1.2	1.6	1.5
2001	1.5	2.0	1.7	0.2	1.1	1.3	0.7	1.1	1.6	1.4
2002	1.5	2.0	1.6	0.1	1.1	1.3	0.7	1.1	1.6	1.3
2003	1.5	2.0	1.6	0.1	1.1	1.3	0.7	1.1	1.5	1.3

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	1.8	:	:	0.5	:
1971	:	:	:	:	1.7	:	:	0.4	:
1972	:	:	:	:	1.8	:	:	0.5	:
1973	:	:	:	:	1.9	:	:	0.4	:
1974	:	:	:	:	3.5	:	:	0.2	:
1975	:	:	3.4	:	3.3	:	:	0.3	:
1976	3.0	:	3.4	:	2.7	:	:	0.3	:
1977	3.0	:	3.4	:	2.2	:	:	0.3	:
1978	3.3	:	3.2	:	2.1	:	:	0.4	:
1979	3.1	:	3.4	:	2.1	:	:	0.3	:
1980	3.2	:	3.2	:	2.2	:	:	0.4	:
1981	3.2	:	3.2	:	2.2	:	:	0.4	:
1982	3.2	:	3.1	:	1.8	:	:	0.4	:
1983	3.1	:	3.2	:	1.7	:	:	0.6	:
1984	3.0	:	3.1	:	1.9	:	:	0.5	:
1985	3.2	:	3.1	:	1.7	:	:	0.5	:
1986	3.6	:	3.1	:	1.3	:	:	0.6	:
1987	3.5	:	3.0	:	1.2	:	:	0.7	:
1988	3.3	:	2.9	:	1.0	:	:	0.6	:
1989	3.2	:	2.8	:	0.9	:	:	0.5	:
1990	3.1	:	2.9	:	0.9	:	:	0.5	1.1
1991	3.3	:	3.4	:	0.8	:	:	0.5	0.9
1992	3.3	:	3.5	:	0.9	:	:	0.5	0.8
1993	3.4	:	3.3	4.5	0.8	:	:	0.6	0.8
1994	2.9	:	3.2	4.1	0.8	:	:	0.5	0.8
1995	2.9	1.3	2.8	3.8	0.8	1.7	1.6	0.5	0.8
1996	2.6	1.5	2.1	3.3	0.9	1.6	1.6	0.4	0.8
1997	2.6	1.2	1.9	2.7	0.7	1.5	1.4	0.4	0.8
1998	2.8	1.5	1.7	2.2	0.6	1.5	1.4	0.4	0.7
1999	2.6	1.7	1.6	2.0	0.6	1.5	1.4	0.5	0.8
2000	2.6	0.9	1.5	1.9	0.5	1.4	1.3	0.4	1.7
2001	2.7	0.9	1.5	1.8	0.5	1.4	1.3	0.6	1.8
2002	2.5	0.9	1.5	1.7	0.5	1.3	1.2	0.8	1.9
2003	2.5	0.8	1.5	1.7	0.5	1.3	1.2	0.8	2.0

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 67

Other current expenditure; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	2.5	:	:	:	:	:	:	:	:	:
1971	2.2	0.7	:	:	:	:	:	:	:	:
1972	2.2	0.8	:	:	:	:	:	:	:	:
1973	2.2	0.9	:	:	:	:	:	:	:	:
1974	1.7	1.0	:	:	:	:	:	:	:	:
1975	1.9	1.1	:	:	:	:	:	:	:	:
1976	1.7	1.2	:	:	:	:	:	:	:	:
1977	1.8	1.4	:	:	:	:	:	:	:	:
1978	2.0	1.4	:	:	:	0.8	:	:	:	:
1979	1.7	1.7	:	:	:	0.8	:	:	:	:
1980	1.7	1.7	:	:	:	0.8	:	:	:	:
1981	1.8	1.7	:	:	:	0.9	:	:	:	:
1982	1.7	1.8	:	:	:	1.0	:	:	:	:
1983	1.8	1.8	:	:	:	1.1	:	:	:	:
1984	1.8	1.9	:	:	:	1.0	:	:	:	:
1985	2.0	1.9	:	:	:	1.2	:	:	:	:
1986	1.7	2.1	:	:	:	1.0	:	:	:	:
1987	1.7	2.1	:	:	:	1.1	:	:	:	0.8
1988	1.7	2.0	:	:	:	1.2	:	:	:	0.8
1989	1.8	2.0	:	:	:	1.2	:	:	:	0.9
1990	1.6	1.8	:	:	:	1.2	1.8	0.9	2.8	0.8
1991	1.9	2.1	1.8	:	:	1.4	2.0	1.1	3.3	0.9
1992	1.9	2.1	1.4	:	:	1.6	2.0	1.1	2.6	1.0
1993	2.0	2.3	1.5	:	:	1.7	2.2	1.4	3.2	1.1
1994	2.1	2.3	1.4	:	:	1.6	2.3	1.2	3.0	1.1
1995	2.0	2.2	1.2	1.3	0.9	1.6	2.1	1.1	3.1	1.1
1996	2.1	2.4	1.3	1.2	1.0	1.7	2.4	1.3	2.7	1.2
1997	2.2	2.4	1.4	1.1	1.1	1.6	2.2	1.3	2.9	1.2
1998	2.1	2.6	1.4	1.3	1.2	1.7	2.2	1.3	3.3	1.3
1999	2.2	2.5	1.6	1.2	1.2	1.7	2.1	1.4	3.4	1.4
2000	2.1	2.5	1.7	1.3	1.3	1.7	2.0	1.4	3.2	1.6
2001	2.2	2.5	1.8	1.3	1.3	1.7	1.9	1.5	3.3	1.7
2002	2.1	2.7	2.1	1.2	1.4	1.7	1.9	1.6	3.5	1.7
2003	2.1	2.8	2.1	1.2	1.4	1.6	1.9	1.5	3.7	1.7

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	0.9	:	:	0.2	:
1971	:	:	:	:	1.0	:	:	0.2	:
1972	:	:	:	:	1.1	:	:	0.2	:
1973	:	:	:	:	0.9	:	:	0.2	:
1974	:	:	:	:	1.0	:	:	0.2	:
1975	:	:	1.3	:	1.1	:	:	0.2	:
1976	2.0	:	1.3	:	1.2	:	:	0.2	:
1977	2.0	:	1.2	:	1.1	:	:	0.2	:
1978	2.2	:	1.1	:	1.5	:	:	0.2	:
1979	2.2	:	1.1	:	0.7	:	:	0.2	:
1980	2.2	:	1.1	:	0.9	:	:	0.2	:
1981	2.3	:	1.2	:	1.1	:	:	0.2	:
1982	2.2	:	1.3	:	1.1	:	:	0.2	:
1983	2.4	:	1.3	:	1.1	:	:	0.2	:
1984	2.2	:	1.3	:	1.1	:	:	0.2	:
1985	2.3	:	1.3	:	1.3	:	:	0.3	:
1986	2.3	:	1.4	:	1.1	:	:	0.3	:
1987	2.3	:	1.5	:	1.0	:	:	0.2	:
1988	2.5	:	1.5	:	1.3	:	:	0.2	:
1989	2.4	:	1.6	:	1.1	:	:	0.2	:
1990	2.3	:	1.7	:	1.1	:	:	0.2	0.7
1991	2.5	:	2.0	:	1.1	:	:	-0.5	1.0
1992	2.5	:	2.1	:	1.2	:	:	0.3	0.8
1993	2.7	:	2.3	1.8	1.7	:	:	0.3	0.8
1994	2.7	:	1.9	2.0	1.9	:	:	0.2	0.8
1995	2.5	1.6	1.9	2.1	1.8	1.4	1.5	0.1	0.9
1996	2.6	1.9	2.1	1.8	1.9	1.4	1.5	0.2	0.8
1997	2.5	2.0	2.3	1.8	2.0	1.5	1.6	0.1	0.9
1998	2.7	2.1	2.2	2.1	2.1	1.5	1.7	0.1	0.9
1999	2.6	2.2	2.3	1.9	2.1	1.6	1.7	0.1	1.1
2000	2.2	2.4	2.3	1.8	2.5	1.7	1.8	0.1	1.1
2001	2.3	2.3	2.3	1.1	2.4	1.7	1.8	0.1	1.1
2002	2.3	2.3	2.4	1.1	2.4	1.8	1.9	0.1	1.0
2003	2.3	2.3	2.3	1.1	2.2	1.8	1.9	0.1	1.0

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 68a

**Total current expenditure; general government
EU Member States: former definition**

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	36.1	35.1	32.4	20.8	17.4	32.9	28.7	28.8	24.9	35.0
1971	37.0	36.2	33.7	21.0	18.5	33.0	29.3	31.7	27.5	36.3
1972	38.2	36.5	34.9	20.0	18.5	33.2	28.6	33.3	27.8	37.4
1973	39.2	35.4	35.9	18.7	18.3	33.6	28.6	32.5	26.2	37.6
1974	39.6	38.8	38.6	22.8	18.7	34.4	34.8	31.8	26.0	39.9
1975	44.9	41.0	43.1	23.9	20.2	38.2	36.9	35.8	35.7	43.7
1976	45.7	40.5	42.4	24.0	21.7	38.3	37.3	35.3	36.5	44.4
1977	47.5	41.7	42.5	25.4	22.6	39.2	35.6	36.0	39.5	45.7
1978	48.9	43.2	42.2	25.9	24.9	40.6	35.7	38.5	38.8	47.3
1979	50.5	45.7	42.1	25.6	26.4	40.8	36.3	37.9	39.2	48.5
1980	51.3	49.2	42.7	26.2	28.4	41.7	39.4	39.0	40.6	49.4
1981	55.5	52.5	44.2	31.5	30.2	44.5	41.5	42.4	43.5	51.1
1982	56.3	54.2	44.9	32.3	31.0	46.2	44.2	44.1	42.2	53.5
1983	57.0	55.1	44.0	33.3	32.4	47.4	44.8	45.6	41.5	54.2
1984	56.1	54.4	43.6	34.6	33.0	48.1	44.4	45.7	39.9	52.9
1985	56.2	53.5	43.4	37.7	33.9	48.6	45.0	45.9	39.3	51.7
1986	56.2	50.6	42.8	37.4	35.1	48.2	45.1	46.8	38.6	51.3
1987	55.0	51.9	43.3	38.4	35.7	47.6	44.2	46.4	40.7	52.6
1988	52.5	55.1	42.9	38.7	34.7	46.4	42.2	46.2	:	51.5
1989	50.8	55.4	41.6	39.8	35.9	45.4	36.2	47.2	:	49.2
1990	50.7	54.9	42.0	41.9	36.7	45.7	36.7	48.5	:	49.6
1991	51.9	55.7	43.2	39.8	38.0	46.7	37.8	49.5	:	50.3
1991	51.9	55.7	42.3	39.8	38.0	46.7	37.8	49.5	:	50.3
1992	52.4	56.3	43.4	41.2	40.2	48.4	38.2	51.6	:	51.1
1993	53.4	58.9	44.8	43.4	42.6	50.7	38.0	53.1	:	51.3
1994	52.2	58.8	44.9	44.0	41.3	50.4	37.0	51.0	:	49.4
1995	50.8	57.4	45.6	45.1	40.3	50.4	34.8	49.1	:	47.7

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	31.8	17.5	26.1	35.6	31.9	30.6	31.1	28.2	13.9
1971	32.2	17.3	27.4	38.0	31.9	31.8	32.2	28.3	14.7
1972	31.7	18.1	27.6	38.9	33.0	32.6	33.0	28.2	15.3
1973	32.1	17.7	26.3	38.4	32.9	32.9	33.2	27.5	15.5
1974	33.3	20.3	27.5	41.8	37.6	34.1	35.0	28.7	17.9
1975	37.1	24.8	32.4	43.1	39.4	38.0	38.4	30.7	20.6
1976	38.7	28.2	34.3	45.8	39.5	38.1	38.7	29.8	21.3
1977	38.6	26.7	36.0	50.7	37.9	38.8	39.3	29.1	22.1
1978	41.5	27.7	35.9	52.1	38.0	40.0	40.3	28.1	22.8
1979	41.1	27.4	34.9	53.0	38.0	39.9	40.3	28.1	23.6
1980	41.3	31.3	34.6	54.9	40.2	40.8	41.4	29.9	24.7
1981	42.5	36.5	35.7	57.2	42.4	43.1	43.8	30.6	25.6
1982	43.6	34.2	36.9	59.1	42.8	44.3	44.8	32.8	26.2
1983	43.3	36.0	38.6	59.0	42.3	45.0	45.2	33.0	27.0
1984	43.8	39.6	38.7	57.6	42.6	45.0	45.3	32.1	26.6
1985	44.7	38.6	40.5	59.0	42.0	45.2	45.4	32.6	26.1
1986	45.6	34.4	41.4	57.7	40.9	45.2	45.2	33.0	26.4
1987	46.4	34.1	41.7	56.2	39.4	45.2	44.9	32.8	26.4
1988	45.3	32.8	39.7	55.2	37.0	44.4	43.8	32.0	25.5
1989	44.2	32.1	39.3	55.3	36.0	43.7	43.1	31.7	24.7
1990	44.9	35.3	42.2	56.3	35.8	44.4	43.8	32.3	25.2
1991	45.9	37.7	50.5	58.1	36.9	45.6	44.9	32.9	24.4
1991	45.9	37.7	50.5	58.1	36.9	45.2	44.6	32.9	24.4
1992	46.5	37.3	55.8	62.0	39.3	46.6	46.3	33.7	25.0
1993	49.1	38.8	57.7	65.1	40.0	48.2	47.7	33.1	25.8
1994	48.6	39.0	56.4	63.6	39.8	47.5	47.1	32.1	26.5
1995	49.6	39.5	54.3	61.4	39.7	47.2	46.8	32.0	27.6

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 68b

Total current expenditure; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	36.9	:	:	:	:	:	:	:	:	:
1971	37.9	38.5	:	:	:	:	:	:	:	:
1972	39.0	38.8	:	:	:	:	:	:	:	:
1973	40.0	36.6	:	:	:	:	:	:	:	:
1974	40.1	40.5	:	:	:	:	:	:	:	:
1975	45.5	42.3	:	:	:	:	:	:	:	:
1976	45.8	42.0	:	:	:	:	:	:	:	:
1977	47.9	42.7	:	:	:	:	:	:	:	:
1978	49.5	44.5	:	:	:	39.9	:	:	:	:
1979	50.8	47.0	:	:	:	40.4	:	:	:	:
1980	51.3	50.4	:	:	:	41.4	:	:	:	:
1981	55.8	54.0	:	:	:	44.0	:	:	:	:
1982	56.4	55.6	:	:	:	45.6	:	:	:	:
1983	57.4	56.3	:	:	:	46.6	:	:	:	:
1984	56.9	56.0	:	:	:	47.6	:	:	:	:
1985	56.7	54.9	:	:	:	48.0	:	:	:	:
1986	56.2	51.8	:	:	:	47.4	:	:	:	:
1987	54.5	53.1	:	:	:	46.6	:	:	:	52.9
1988	52.2	54.9	:	:	:	45.6	:	:	:	51.8
1989	51.3	55.1	:	:	:	44.8	:	:	:	50.1
1990	51.3	54.7	:	:	:	45.0	39.1	49.0	39.1	50.7
1991	52.2	55.6	41.6	:	:	46.0	40.7	50.7	40.8	50.9
1992	52.1	56.2	42.7	:	:	47.3	41.1	52.1	40.1	51.8
1993	53.1	58.8	44.1	:	:	49.8	40.6	53.4	41.0	51.8
1994	51.4	58.7	44.2	:	:	49.3	39.5	50.7	39.6	49.7
1995	50.7	57.3	44.9	43.3	39.2	49.2	36.7	48.6	40.2	47.4
1996	50.7	56.8	46.2	42.2	39.0	50.0	35.3	49.2	40.2	45.9
1997	48.9	54.9	45.6	40.3	37.6	49.8	33.2	47.4	38.2	44.7
1998	48.3	53.9	45.0	40.4	36.8	48.4	30.8	45.6	37.0	43.4
1999	47.6	52.5	45.1	40.4	35.8	48.1	28.2	44.7	37.2	42.9
2000	46.8	50.4	44.5	40.7	35.3	47.5	26.4	43.8	34.9	41.7
2001	47.1	50.0	44.7	40.5	34.9	47.4	26.3	43.6	35.2	40.8
2002	46.8	50.0	45.5	39.5	35.1	47.7	26.7	43.9	35.6	40.8
2003	46.4	49.2	44.7	38.8	34.9	47.0	26.3	43.2	35.2	40.0

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	33.6	:	:	28.5	:
1971	:	:	:	:	33.6	:	:	28.6	:
1972	:	:	:	:	34.7	:	:	28.6	:
1973	:	:	:	:	34.3	:	:	27.8	:
1974	:	:	:	:	39.0	:	:	29.1	:
1975	:	:	32.5	:	40.9	:	:	31.2	:
1976	40.1	:	34.4	:	41.1	:	:	30.3	:
1977	40.1	:	36.2	:	39.4	:	:	29.5	:
1978	43.1	:	36.2	:	39.6	:	:	28.6	:
1979	42.8	:	35.2	:	38.9	:	:	28.5	:
1980	43.0	:	34.9	:	41.5	:	:	30.4	:
1981	44.3	:	35.9	:	44.2	:	:	31.1	:
1982	45.5	:	37.1	:	44.5	:	:	33.3	:
1983	45.6	:	38.8	:	44.0	:	:	33.5	:
1984	45.9	:	38.9	:	44.1	:	:	32.6	:
1985	46.9	:	40.7	:	43.3	:	:	33.1	:
1986	47.8	:	41.6	:	42.4	:	:	33.5	:
1987	48.6	:	41.9	:	40.7	:	:	33.2	:
1988	48.0	:	40.3	:	38.7	:	:	32.4	:
1989	46.8	:	39.4	:	37.3	:	:	32.2	:
1990	46.2	:	42.5	:	37.5	:	:	32.8	26.2
1991	47.1	:	50.7	:	40.0	:	:	33.5	25.8
1992	47.7	:	56.1	:	41.9	:	:	34.2	26.1
1993	50.3	:	58.4	64.1	42.1	:	:	33.6	26.9
1994	49.7	:	56.4	62.8	41.7	:	:	32.6	27.6
1995	49.7	39.6	53.7	60.3	41.3	46.4	46.4	32.5	28.8
1996	49.3	39.5	53.0	59.3	40.6	47.0	46.7	32.0	29.0
1997	47.6	38.1	50.7	57.2	39.2	46.0	45.4	31.0	29.1
1998	47.5	37.6	47.6	56.0	37.9	44.9	44.2	30.1	30.1
1999	47.1	38.5	46.8	54.4	37.5	44.4	43.7	29.6	31.2
2000	46.5	38.6	43.9	52.4	37.6	43.6	42.9	29.2	33.0
2001	46.6	38.5	43.5	51.8	37.6	43.5	42.8	29.9	34.4
2002	46.2	38.2	43.8	51.7	37.7	43.8	43.0	31.2	35.3
2003	45.7	38.0	42.9	51.3	37.1	43.1	42.4	30.5	35.7

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 69a

Gross saving: general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	2.6	9.7	6.3	3.9	3.9	5.0	1.7	0.2	6.6	4.2
1971	2.4	9.2	6.1	3.4	3.1	4.5	1.9	-1.9	6.8	4.5
1972	1.2	8.6	5.2	3.9	3.5	4.6	1.4	-3.6	6.7	4.6
1973	1.2	9.3	6.6	3.6	4.1	4.3	0.9	-3.4	8.6	5.5
1974	1.9	7.7	4.5	1.7	3.3	4.2	-1.2	-3.3	9.8	4.1
1975	-0.1	3.2	-0.1	0.6	3.4	2.0	-5.4	-6.8	7.5	2.5
1976	-0.8	4.2	1.9	1.8	2.7	4.0	-2.6	-5.0	8.0	2.3
1977	-0.9	3.5	2.8	0.7	3.0	2.8	-2.0	-4.4	8.5	2.9
1978	-1.5	3.7	2.5	0.2	1.3	1.3	-3.6	-5.5	10.2	1.6
1979	-2.2	2.6	2.6	0.7	1.1	2.7	-4.7	-5.2	7.0	1.5
1980	-3.7	0.7	2.4	-0.1	0.5	3.7	-4.9	-4.6	7.1	1.3
1981	-7.5	-2.6	1.1	-5.9	0.1	1.7	-6.1	-7.0	4.8	0.3
1982	-6.2	-5.2	1.1	-3.7	-0.5	0.9	-7.0	-7.1	6.0	-1.2
1983	-7.4	-3.9	1.4	-3.8	0.0	0.3	-5.9	-6.8	9.0	-1.0
1984	-5.9	-1.4	2.0	-4.3	-0.7	0.6	-4.9	-7.1	9.0	-0.6
1985	-5.7	0.8	2.6	-7.4	0.3	0.5	-6.2	-6.9	11.1	0.9
1986	-6.5	5.5	2.4	-5.7	-0.3	0.6	-6.3	-6.8	8.7	-0.3
1987	-5.0	4.5	1.7	-5.9	0.9	1.4	-5.2	-6.2	7.6	-0.9
1988	-4.1	3.2	1.3	-7.6	1.8	1.9	-2.5	-5.7	:	-0.4
1989	-4.3	1.9	3.6	-10.1	2.2	2.4	-0.1	-5.1	:	-1.0
1990	-3.6	0.2	1.3	-9.4	1.7	2.4	-0.8	-5.7	:	-1.6
1991	-4.4	-1.0	1.1	-6.4	1.2	1.4	-1.2	-5.7	:	0.3
1991	-4.4	-1.0	1.2	-6.4	1.2	1.4	-1.2	-5.7	:	0.3
1992	-5.0	-0.4	1.4	-7.0	0.7	-0.4	-1.2	-7.1	:	-0.9
1993	-5.1	-1.0	0.5	-7.9	-1.7	-2.2	-1.0	-5.4	:	-0.3
1994	-3.0	-0.7	1.0	-7.1	-1.5	-2.1	0.6	-5.4	:	-1.0
1995	-2.0	-0.5	0.0	-7.1	-2.3	-1.4	-0.2	-3.8	:	-1.1

(1) 1970-91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970-95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	7.1	5.0	8.0	10.4	8.0	4.4	5.3	0.8	6.9
1971	7.6	4.5	8.3	10.7	6.3	3.8	4.6	0.0	7.1
1972	8.7	3.6	7.9	9.8	3.1	3.3	3.7	1.1	6.4
1973	9.0	4.0	9.7	8.6	2.6	4.0	4.1	2.0	7.1
1974	8.3	1.5	8.4	6.3	1.7	3.0	3.1	1.5	6.6
1975	4.9	-0.5	9.5	6.6	0.6	0.2	0.6	-2.3	3.6
1976	2.9	-1.4	11.1	8.3	-0.1	1.5	1.7	-0.8	2.4
1977	3.9	-0.2	9.8	6.3	0.6	1.6	1.8	0.1	2.7
1978	3.5	-1.9	7.3	4.5	-0.8	0.7	0.7	1.2	1.9
1979	3.5	-1.1	6.7	2.6	-0.2	1.0	0.9	1.5	2.9
1980	4.2	-3.5	7.4	0.7	-0.5	1.0	0.8	0.0	3.1
1981	4.3	-6.8	8.3	-0.4	-0.5	-0.7	-0.7	0.1	3.6
1982	2.2	-2.6	6.7	-1.7	-0.4	-1.0	-1.0	-2.6	3.4
1983	1.9	-1.8	5.1	-0.1	-0.7	-1.1	-1.1	-3.4	2.9
1984	3.1	-6.2	6.5	0.9	-1.1	-0.9	-0.9	-2.5	3.8
1985	3.1	-6.0	6.5	-0.1	-0.5	-0.6	-0.6	-2.6	4.8
1986	2.0	-1.7	7.0	2.1	-0.6	-0.7	-0.5	-2.7	4.7
1987	1.0	-2.0	4.9	5.2	0.0	-0.6	-0.2	-1.8	6.2
1988	2.0	0.0	8.5	5.7	1.9	-0.2	0.4	-1.3	7.3
1989	1.9	1.0	9.4	7.8	2.7	0.7	1.3	-0.8	8.2
1990	2.2	-1.4	9.1	6.3	2.4	-0.2	0.4	-1.7	8.6
1991	1.8	-2.5	2.6	1.4	0.5	-0.6	-0.4	-2.3	9.1
1991	1.8	-2.5	2.6	1.4	0.5	-0.5	-0.3	-2.3	9.1
1992	2.7	0.8	-2.1	-3.3	-3.2	-1.2	-1.6	-3.3	8.0
1993	0.8	-2.0	-5.0	-6.9	-4.9	-1.8	-2.4	-2.5	6.1
1994	0.0	-2.8	-2.9	-6.6	-4.1	-1.5	-2.0	-1.2	5.4
1995	-0.4	-2.3	-2.2	-4.5	-3.0	-1.5	-1.7	-0.7	4.1

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970-91: including D_90.⁽²⁾ EU-15 excluding L; 1970-91: including D_90.

Table 69b

Gross saving: general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	3.3	:	:	:	:	:	:	:	:	:
1971	2.8	9.5	:	:	:	:	:	:	:	:
1972	1.2	8.8	:	:	:	:	:	:	:	:
1973	1.4	8.6	:	:	:	:	:	:	:	:
1974	2.0	7.6	:	:	:	:	:	:	:	:
1975	-0.2	2.5	:	:	:	:	:	:	:	:
1976	-0.5	3.9	:	:	:	:	:	:	:	:
1977	-0.6	3.8	:	:	:	:	:	:	:	:
1978	-1.5	3.6	:	:	:	2.5	:	:	:	:
1979	-2.3	2.5	:	:	:	4.0	:	:	:	:
1980	-4.1	0.7	:	:	:	4.1	:	:	:	:
1981	-7.8	-2.7	:	:	:	1.9	:	:	:	:
1982	-7.0	-5.1	:	:	:	1.6	:	:	:	:
1983	-7.6	-3.7	:	:	:	1.2	:	:	:	:
1984	-6.5	-1.7	:	:	:	1.2	:	:	:	:
1985	-6.3	0.5	:	:	:	0.9	:	:	:	:
1986	-6.5	4.7	:	:	:	0.7	:	:	:	:
1987	-4.7	4.0	:	:	:	1.7	:	:	:	0.0
1988	-4.0	3.2	:	:	:	1.7	:	:	:	0.3
1989	-5.2	1.9	:	:	:	2.3	:	:	:	-1.0
1990	-4.6	0.2	:	:	:	2.5	-1.1	-6.6	11.1	-1.6
1991	-5.1	-1.0	1.4	:	:	1.7	-1.4	-7.2	8.2	0.7
1992	-5.5	-0.4	1.6	:	:	0.2	-1.4	-8.3	7.7	-1.0
1993	-4.5	-1.0	0.8	:	:	-1.9	-1.2	-6.9	8.7	0.1
1994	-2.4	-0.6	1.1	:	:	-1.2	0.5	-6.0	8.7	-0.7
1995	-2.0	-0.5	-0.1	-6.8	-1.8	-1.1	-0.1	-3.8	8.2	-1.1
1996	-1.5	0.9	-0.5	-5.2	-1.2	-0.3	1.7	-3.7	7.8	0.6
1997	0.5	2.2	-0.1	-1.5	0.4	-0.1	2.9	-0.2	8.5	1.3
1998	1.6	2.8	0.5	0.1	1.2	1.1	4.4	0.2	8.8	1.8
1999	1.9	4.6	1.2	2.0	2.9	2.1	6.7	1.6	9.0	3.3
2000	2.6	4.0	1.5	2.6	3.5	2.2	8.2	1.8	10.9	4.5
2001	2.1	3.7	0.1	3.0	4.0	2.0	6.5	2.1	9.5	4.3
2002	2.1	3.2	-0.2	3.8	3.9	1.6	6.3	1.8	8.0	3.5
2003	2.4	3.7	0.3	4.3	4.2	2.1	6.7	2.1	8.3	4.4

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	8.9	:	:	0.7	:
1971	:	:	:	:	7.1	:	:	-0.1	:
1972	:	:	:	:	4.0	:	:	1.0	:
1973	:	:	:	:	3.2	:	:	1.9	:
1974	:	:	:	:	2.8	:	:	1.4	:
1975	:	:	10.3	:	1.5	:	:	-2.4	:
1976	3.2	:	12.4	:	0.8	:	:	-0.9	:
1977	4.2	:	10.9	:	1.2	:	:	0.0	:
1978	3.9	:	8.0	:	-0.3	:	:	1.1	:
1979	3.8	:	7.3	:	0.0	:	:	1.4	:
1980	4.5	:	7.9	:	0.3	:	:	-0.2	:
1981	4.5	:	9.0	:	-0.2	:	:	-0.1	:
1982	2.4	:	7.5	:	0.4	:	:	-2.8	:
1983	1.7	:	5.8	:	-0.1	:	:	-3.6	:
1984	3.2	:	7.1	:	-0.3	:	:	-2.7	:
1985	3.2	:	7.2	:	0.1	:	:	-2.8	:
1986	1.9	:	7.7	:	0.0	:	:	-2.9	:
1987	0.9	:	5.6	:	0.5	:	:	-2.0	:
1988	1.5	:	9.5	:	2.6	:	:	-1.5	:
1989	1.7	:	10.3	:	3.4	:	:	-0.9	:
1990	2.4	:	9.4	:	2.6	:	:	-1.8	7.6
1991	2.0	:	3.3	:	0.4	:	:	-2.5	7.7
1992	2.9	:	-1.7	:	-3.2	:	:	-3.5	7.3
1993	0.9	:	-4.1	-6.2	-4.8	:	:	-2.7	5.1
1994	0.1	:	-2.0	-6.5	-3.9	:	:	-1.4	4.6
1995	-0.3	-1.2	-0.5	-3.9	-2.9	-1.3	-1.6	-0.8	3.2
1996	1.0	-0.1	0.4	-0.2	-2.3	-1.0	-1.1	0.0	2.9
1997	2.0	0.9	1.6	1.5	-0.6	0.2	0.1	1.3	2.9
1998	1.9	1.7	4.2	3.8	2.0	1.0	1.2	2.6	1.3
1999	1.7	1.8	4.7	4.4	2.6	2.0	2.2	3.3	0.0
2000	1.9	1.5	9.3	6.4	3.2	2.4	2.7	4.2	-0.8
2001	3.3	1.7	7.1	6.3	3.0	2.0	2.3	2.7	-0.3
2002	3.0	2.2	5.2	4.0	2.5	1.7	2.0	-0.5	-0.5
2003	3.5	2.6	4.5	4.2	2.7	2.2	2.3	-0.3	-0.6

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 70

Capital transfers received; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	0.4	:	:	:	:	:	:	:	:	:
1971	0.4	0.3	:	:	:	:	:	:	:	:
1972	0.3	0.3	:	:	:	:	:	:	:	:
1973	0.3	0.4	:	:	:	:	:	:	:	:
1974	0.3	0.4	:	:	:	:	:	:	:	:
1975	0.3	0.5	:	:	:	:	:	:	:	:
1976	0.3	0.5	:	:	:	:	:	:	:	:
1977	0.4	0.6	:	:	:	:	:	:	:	:
1978	0.4	0.6	:	:	:	-0.1	:	:	:	:
1979	0.4	0.6	:	:	:	-0.2	:	:	:	:
1980	0.4	0.6	:	:	:	-0.1	:	:	:	:
1981	0.4	0.6	:	:	:	0.0	:	:	:	:
1982	0.3	0.3	:	:	:	-0.3	:	:	:	:
1983	0.3	0.3	:	:	:	-0.1	:	:	:	:
1984	0.3	0.3	:	:	:	-0.3	:	:	:	:
1985	0.3	0.5	:	:	:	0.0	:	:	:	:
1986	0.3	0.3	:	:	:	0.1	:	:	:	:
1987	0.3	0.4	:	:	:	0.3	:	:	:	0.3
1988	0.3	0.4	:	:	:	0.2	:	:	:	0.3
1989	0.3	0.3	:	:	:	0.2	:	:	:	0.3
1990	0.3	0.6	:	:	:	0.0	1.5	0.2	0.2	0.3
1991	0.3	0.4	0.3	:	:	0.4	1.7	0.3	0.2	0.3
1992	0.3	0.4	0.3	:	:	0.2	1.6	2.2	0.2	0.3
1993	0.4	0.5	0.4	:	:	0.2	1.8	0.9	0.3	0.4
1994	0.4	0.4	0.4	:	:	0.2	1.4	0.4	0.2	0.4
1995	0.4	0.5	0.5	2.7	1.4	0.4	1.8	0.9	0.2	0.3
1996	0.4	0.4	0.4	0.0	1.4	0.3	1.7	0.4	0.2	0.6
1997	0.6	0.5	0.4	0.0	1.3	0.8	1.8	1.0	0.3	0.4
1998	0.4	0.5	0.5	0.0	1.4	0.3	1.6	0.7	0.2	0.4
1999	0.6	0.5	0.4	3.1	1.4	0.4	1.6	0.5	0.2	0.4
2000	0.5	0.5	0.4	3.4	1.1	0.4	1.3	0.4	0.2	0.4
2001	0.5	0.5	0.4	3.6	1.1	0.4	1.2	0.4	0.2	0.4
2002	0.5	0.4	0.4	3.6	1.1	0.5	1.2	0.6	0.2	0.4
2003	0.5	0.4	0.4	3.5	1.1	0.5	1.1	0.3	0.2	0.4

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	0.8	:	:	0.4	:
1971	:	:	:	:	0.7	:	:	0.5	:
1972	:	:	:	:	0.8	:	:	0.5	:
1973	:	:	:	:	0.6	:	:	0.5	:
1974	:	:	:	:	0.5	:	:	0.4	:
1975	:	:	0.1	:	0.3	:	:	0.4	:
1976	0.1	:	0.1	:	0.3	:	:	0.4	:
1977	0.1	:	0.1	:	0.3	:	:	0.5	:
1978	0.1	:	0.1	:	0.2	:	:	0.3	:
1979	0.1	:	0.1	:	0.2	:	:	0.3	:
1980	0.1	:	0.1	:	0.2	:	:	0.3	:
1981	0.1	:	0.1	:	0.3	:	:	0.3	:
1982	0.1	:	0.1	:	0.3	:	:	0.3	:
1983	0.2	:	0.1	:	0.2	:	:	0.2	:
1984	0.2	:	0.1	:	0.3	:	:	0.2	:
1985	0.2	:	0.3	:	0.3	:	:	0.2	:
1986	0.2	:	0.1	:	0.3	:	:	0.2	:
1987	0.2	:	0.1	:	0.3	:	:	0.2	:
1988	0.2	:	0.1	:	0.3	:	:	0.2	:
1989	0.2	:	0.1	:	0.3	:	:	0.2	:
1990	0.1	:	0.2	:	0.3	:	:	0.1	0.8
1991	0.2	:	0.2	:	0.3	:	:	0.2	0.7
1992	0.2	:	0.2	:	0.3	:	:	0.3	0.9
1993	0.1	:	0.3	0.2	0.2	:	:	0.3	0.9
1994	0.1	:	0.2	0.1	0.3	:	:	0.3	0.9
1995	0.2	1.9	0.2	0.2	0.3	0.7	0.6	0.3	0.8
1996	0.2	2.1	0.2	0.2	0.3	0.5	0.5	0.3	0.8
1997	0.3	2.3	0.3	0.2	0.3	0.7	0.6	0.3	0.7
1998	0.1	1.6	0.3	0.2	0.3	0.5	0.5	0.4	0.7
1999	0.1	1.8	0.4	0.2	0.3	0.6	0.5	0.4	0.7
2000	0.2	2.0	0.3	0.2	0.3	0.6	0.5	0.4	0.7
2001	0.2	2.0	0.3	0.2	0.5	0.6	0.5	:	0.7
2002	0.1	2.1	0.3	0.2	0.5	0.6	0.6	:	0.7
2003	0.1	2.1	0.3	0.2	0.5	0.6	0.5	:	0.7

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 71a

**Total revenue; general government
EU Member States: former definition**

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	38.7	44.8	38.7	24.5	21.3	37.9	30.3	29.0	31.6	39.2
1971	39.4	45.4	39.8	24.3	21.6	37.5	31.2	29.8	34.4	40.8
1972	39.4	45.0	40.1	23.9	22.0	37.8	30.1	29.7	34.5	41.9
1973	40.5	44.6	42.5	22.3	22.5	37.9	29.5	29.1	34.8	43.1
1974	41.5	46.5	43.1	24.4	22.0	38.6	33.7	28.5	35.7	44.0
1975	44.8	44.2	43.1	24.4	23.5	40.2	31.5	29.0	43.2	46.1
1976	44.9	44.7	44.3	25.7	24.4	42.3	34.8	30.3	44.5	46.7
1977	46.6	45.2	45.3	26.0	25.5	42.0	33.6	31.6	48.0	48.6
1978	47.4	46.9	44.8	26.0	26.2	41.9	32.1	33.0	49.0	48.8
1979	48.3	48.3	44.6	26.3	27.4	43.5	31.6	32.7	46.2	50.0
1980	47.6	49.9	45.1	26.2	29.0	45.3	34.5	34.4	47.7	50.7
1981	48.1	49.9	45.3	25.6	30.2	46.2	35.4	35.4	48.3	51.4
1982	50.1	49.0	46.0	28.5	30.5	47.1	37.2	37.0	48.2	52.3
1983	49.6	51.3	45.4	29.6	32.5	47.7	38.9	38.8	50.5	53.2
1984	50.1	53.0	45.6	30.3	32.3	48.7	39.4	38.6	48.8	52.4
1985	50.4	54.4	46.0	30.3	34.2	49.1	38.7	38.9	50.4	52.5
1986	49.7	56.1	45.2	31.6	34.9	48.8	38.8	40.1	47.3	51.0
1987	50.0	56.4	45.0	32.4	36.6	49.1	39.0	40.2	48.3	51.7
1988	48.4	58.2	44.2	31.0	36.6	48.3	39.7	40.5	:	51.2
1989	46.5	57.3	45.1	29.6	38.1	47.8	36.1	42.1	:	48.2
1990	47.1	55.1	43.3	32.5	38.4	48.2	35.9	42.8	:	48.1
1991	47.4	54.7	44.3	33.4	39.2	48.2	36.6	43.8	:	50.6
1991	47.4	54.7	43.5	33.4	39.2	48.2	36.6	43.8	:	50.6
1992	47.4	56.0	44.9	34.2	40.9	48.0	37.0	44.5	:	50.2
1993	48.3	57.9	45.3	35.4	40.9	48.4	36.9	47.7	:	50.9
1994	49.2	58.1	45.9	36.9	39.8	48.3	37.6	45.5	:	48.4
1995	48.8	56.9	45.6	38.0	38.0	49.0	34.6	45.3	:	46.6

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	38.9	22.5	34.1	45.9	39.9	35.0	36.5	29.0	20.8
1971	39.7	21.8	35.7	48.7	38.1	35.6	36.8	28.3	21.8
1972	40.3	21.7	35.5	48.7	36.1	35.9	36.7	29.3	21.7
1973	41.1	21.7	36.0	47.0	35.4	36.8	37.2	29.5	22.6
1974	41.6	21.8	35.9	48.1	39.3	37.1	38.1	30.2	24.6
1975	42.0	24.3	41.9	49.7	39.9	38.1	39.0	28.4	24.2
1976	41.6	26.7	45.4	54.2	39.4	39.6	40.4	29.0	23.7
1977	42.5	26.5	45.8	57.0	38.5	40.5	41.0	29.2	24.8
1978	45.0	25.8	43.1	56.6	37.1	40.6	40.9	29.4	24.7
1979	44.6	26.3	41.6	55.6	37.8	40.9	41.2	29.6	26.5
1980	45.6	27.8	42.0	55.6	39.8	41.9	42.2	29.9	27.8
1981	46.8	29.7	44.0	56.9	41.9	42.4	43.1	30.7	29.3
1982	45.8	31.7	43.6	57.3	42.4	43.3	43.7	30.2	29.6
1983	45.2	34.2	43.7	59.0	41.6	43.9	44.2	29.6	29.9
1984	46.8	33.4	45.2	58.5	41.5	44.1	44.4	29.6	30.4
1985	47.9	32.7	47.0	59.0	41.4	44.6	44.8	30.0	31.0
1986	47.6	32.7	48.5	59.7	40.3	44.5	44.7	30.3	31.1
1987	47.4	32.0	46.7	61.4	39.4	44.6	44.7	30.9	32.6
1988	47.3	32.8	48.2	60.9	38.9	44.1	44.2	30.7	32.8
1989	46.1	33.1	48.7	63.1	38.7	44.3	44.4	30.9	32.9
1990	47.1	33.9	51.4	62.7	38.3	44.2	44.2	30.7	33.8
1991	47.7	35.2	53.1	59.5	37.4	44.9	44.5	30.7	33.6
1991	47.7	35.2	53.1	59.5	37.4	44.7	44.3	30.7	33.6
1992	49.2	38.1	53.7	58.8	36.1	45.4	44.8	30.4	33.0
1993	49.9	36.7	52.7	58.2	35.1	46.4	45.4	30.6	31.9
1994	48.6	36.3	53.5	57.0	35.6	46.0	45.1	30.9	31.8
1995	49.2	37.1	52.0	56.9	36.7	45.7	45.1	31.3	31.7

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 71b

Total revenue; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	40.1	:	:	:	:	:	:	:	:	:
1971	40.4	47.9	:	:	:	:	:	:	:	:
1972	39.9	47.7	:	:	:	:	:	:	:	:
1973	41.0	45.2	:	:	:	:	:	:	:	:
1974	41.7	48.2	:	:	:	:	:	:	:	:
1975	44.9	44.9	:	:	:	:	:	:	:	:
1976	44.9	46.0	:	:	:	:	:	:	:	:
1977	46.8	46.9	:	:	:	:	:	:	:	:
1978	47.6	48.5	:	:	:	43.4	:	:	:	:
1979	48.1	49.8	:	:	:	45.2	:	:	:	:
1980	46.8	51.3	:	:	:	46.5	:	:	:	:
1981	47.4	51.4	:	:	:	47.1	:	:	:	:
1982	48.6	50.4	:	:	:	48.1	:	:	:	:
1983	49.0	52.6	:	:	:	49.0	:	:	:	:
1984	49.6	54.4	:	:	:	49.9	:	:	:	:
1985	49.5	55.4	:	:	:	50.4	:	:	:	:
1986	48.8	56.6	:	:	:	49.5	:	:	:	:
1987	49.0	57.5	:	:	:	49.9	:	:	:	53.4
1988	47.6	58.7	:	:	:	48.9	:	:	:	52.6
1989	45.4	57.6	:	:	:	48.6	:	:	:	49.6
1990	46.2	56.0	:	:	:	48.6	40.4	42.6	49.5	49.5
1991	46.7	55.4	44.1	:	:	49.1	42.0	43.8	48.3	52.2
1992	46.1	56.8	45.5	:	:	48.8	42.3	46.0	47.1	51.5
1993	48.3	58.9	46.1	:	:	49.3	42.3	47.4	49.2	53.0
1994	48.7	59.1	46.5	:	:	49.4	42.3	45.3	47.7	50.0
1995	48.5	58.0	46.1	40.3	38.4	49.7	39.4	45.8	47.8	47.3
1996	49.1	58.8	46.8	38.1	38.8	51.4	39.4	46.1	47.4	47.8
1997	49.4	58.3	46.6	40.0	39.0	51.9	38.6	48.4	46.3	47.1
1998	49.8	58.0	46.6	41.7	39.1	51.2	37.5	46.8	45.4	46.4
1999	49.7	58.4	47.4	46.9	39.7	51.9	37.2	47.1	45.7	47.5
2000	49.5	55.6	47.1	48.0	39.5	51.4	36.5	46.1	45.3	47.5
2001	49.0	54.8	46.0	48.1	39.6	51.2	34.6	46.3	43.8	45.9
2002	49.5	54.3	46.7	47.9	39.7	51.0	34.5	46.5	42.7	45.0
2003	49.3	54.0	46.4	47.5	39.7	50.7	34.5	45.9	42.6	45.2

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	:	:	:	29.7	:
1971	:	:	:	:	:	:	:	29.1	:
1972	:	:	:	:	:	:	:	30.1	:
1973	:	:	:	:	:	:	:	30.2	:
1974	:	:	:	:	:	:	:	30.9	:
1975	:	:	45.2	:	:	:	:	29.1	:
1976	45.2	:	49.3	:	:	:	:	29.7	:
1977	46.3	:	49.6	:	:	:	:	29.9	:
1978	49.0	:	46.8	:	:	:	:	30.0	:
1979	48.7	:	45.1	:	:	:	:	30.2	:
1980	49.6	:	45.4	:	:	:	:	30.5	:
1981	51.0	:	47.6	:	:	:	:	31.3	:
1982	50.0	:	47.4	:	:	:	:	30.9	:
1983	49.5	:	47.5	:	:	:	:	30.2	:
1984	51.2	:	48.8	:	:	:	:	30.1	:
1985	52.2	:	50.9	:	:	:	:	30.6	:
1986	51.9	:	52.2	:	:	:	:	30.8	:
1987	51.7	:	50.4	:	42.6	:	:	31.5	:
1988	51.7	:	52.7	:	42.4	:	:	31.2	:
1989	50.5	:	52.4	:	42.1	:	:	31.5	:
1990	50.6	:	54.6	:	41.7	:	:	31.1	34.6
1991	51.2	:	57.3	:	41.7	:	:	31.2	34.2
1992	52.9	:	58.2	:	40.2	:	:	31.0	34.2
1993	53.7	:	57.7	61.1	38.8	:	:	31.2	32.9
1994	52.4	:	57.8	59.9	39.2	:	:	31.5	33.0
1995	52.1	40.5	56.2	60.0	39.8	46.5	46.2	31.9	32.8
1996	52.8	41.6	56.8	62.2	39.4	47.2	46.9	32.3	32.6
1997	52.1	41.6	55.3	61.6	39.6	47.6	46.9	32.6	32.7
1998	51.9	41.3	54.5	62.9	40.8	47.1	46.7	33.0	32.1
1999	51.6	42.8	54.1	61.8	40.8	47.7	47.2	33.2	31.9
2000	51.1	42.7	55.6	61.7	41.5	47.3	46.9	33.8	32.9
2001	52.7	42.7	53.3	60.8	41.6	46.8	46.4	32.6	34.8
2002	51.7	42.9	51.4	58.4	41.3	46.9	46.3	30.6	35.5
2003	51.7	43.2	49.8	58.2	40.9	46.6	46.0	30.2	35.8

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 72a

Gross fixed capital formation; general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	4.7	4.8	4.6	2.7	2.6	3.9	3.9	2.9	3.1	4.5
1971	5.2	4.5	4.5	2.8	3.0	3.7	4.0	2.8	4.0	4.6
1972	5.0	4.1	4.1	3.3	2.6	3.8	4.0	2.9	4.3	4.1
1973	4.4	3.6	3.8	3.0	2.5	3.4	4.3	2.6	4.8	3.6
1974	4.0	4.0	4.1	2.5	2.4	3.5	5.5	2.8	4.6	3.5
1975	4.3	3.8	3.9	2.9	2.6	3.9	5.2	3.2	5.7	3.7
1976	4.3	3.6	3.5	2.9	2.3	3.8	4.3	3.1	5.4	3.6
1977	4.2	3.5	3.3	2.7	2.6	3.2	4.2	3.0	5.2	3.0
1978	4.0	3.4	3.3	2.6	2.0	3.0	4.3	2.8	5.2	2.9
1979	4.2	3.6	3.5	2.6	1.7	3.1	4.8	2.7	5.5	2.9
1980	4.4	3.3	3.6	2.1	1.8	3.3	5.4	3.2	6.4	3.2
1981	4.3	2.9	3.2	2.5	2.2	3.2	5.2	3.7	6.1	3.1
1982	3.9	2.7	2.9	2.3	2.9	3.3	4.8	3.7	5.8	2.8
1983	3.4	2.2	2.5	3.0	2.7	3.2	4.3	3.7	5.1	2.4
1984	2.9	1.9	2.4	3.5	2.9	3.0	3.7	3.6	4.3	2.5
1985	2.5	2.1	2.4	3.6	3.6	3.2	3.7	3.7	4.0	2.2
1986	2.3	1.6	2.5	3.4	3.5	3.2	3.3	3.5	3.7	2.0
1987	2.0	1.7	2.4	2.6	3.3	3.0	2.5	3.5	4.1	2.0
1988	2.0	1.8	2.3	2.9	3.7	3.3	1.7	3.4	:	2.0
1989	1.4	1.7	2.4	2.9	4.3	3.3	1.7	3.3	:	1.9
1990	1.3	1.6	2.3	2.8	4.9	3.5	2.0	3.3	4.5	2.0
1991	1.3	1.5	2.3	3.1	4.7	3.5	2.1	3.2	4.7	2.1
1991	1.3	1.5	2.6	3.1	4.7	3.5	2.1	3.2	4.7	2.1
1992	1.4	1.9	2.8	3.5	4.0	3.5	2.0	3.0	5.2	2.0
1993	1.5	1.8	2.7	3.3	4.1	3.1	2.2	2.6	5.1	2.0
1994	1.6	1.8	2.5	3.1	3.9	3.1	2.3	2.3	4.2	2.0
1995	1.4	1.8	2.3	3.3	3.7	3.2	2.4	2.2	4.5	1.9

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	5.0	2.3	3.7	6.3	4.8	3.9	4.2	3.3	4.4
1971	5.2	2.3	3.8	5.8	4.5	3.9	4.1	3.3	5.0
1972	5.4	2.2	4.2	5.6	4.3	3.8	3.9	3.0	5.4
1973	5.1	2.1	4.0	4.8	5.0	3.5	3.7	2.7	5.6
1974	5.3	2.0	3.8	4.6	5.3	3.5	3.8	2.9	5.2
1975	5.4	2.4	4.6	4.1	4.7	3.7	3.9	3.4	5.2
1976	4.9	2.8	4.0	3.9	4.3	3.5	3.6	2.9	5.1
1977	4.8	2.8	4.2	4.3	3.3	3.2	3.3	2.7	5.5
1978	4.8	3.1	4.0	4.3	2.8	3.1	3.1	2.8	6.0
1979	4.5	3.7	3.8	4.1	2.6	3.1	3.1	2.7	6.3
1980	4.3	4.2	3.8	4.1	2.5	3.3	3.2	2.9	6.0
1981	4.2	5.3	3.7	3.9	1.8	3.3	3.1	2.6	6.0
1982	3.8	4.4	3.9	3.7	1.7	3.3	3.0	2.6	5.7
1983	3.7	3.9	4.0	3.5	2.0	3.1	2.9	2.5	5.4
1984	3.6	3.5	3.6	3.2	2.2	3.0	2.8	2.4	5.0
1985	3.6	3.2	3.6	3.0	2.1	3.0	2.9	2.7	4.7
1986	3.7	3.0	3.6	2.6	1.9	3.0	2.8	2.8	4.7
1987	3.4	3.2	3.8	2.5	1.7	2.9	2.7	2.8	4.9
1988	3.2	3.4	3.8	2.3	1.3	2.9	2.6	2.6	4.9
1989	3.3	3.2	3.1	2.4	1.8	3.0	2.7	2.7	4.8
1990	3.2	3.2	3.7	2.3	2.3	3.0	2.9	2.9	4.9
1991	3.2	3.3	3.8	2.2	2.1	3.0	2.8	2.9	5.0
1991	3.2	3.3	3.8	2.2	2.1	3.1	2.9	2.9	5.0
1992	3.2	3.7	3.5	2.6	2.0	3.0	2.9	2.9	5.5
1993	3.2	3.9	2.8	1.0	1.8	2.9	2.6	2.8	6.3
1994	3.3	3.5	2.9	2.9	1.8	2.7	2.6	2.7	6.4
1995	2.8	3.6	2.7	2.8	1.7	2.6	2.5	2.7	6.2

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 72b

Gross fixed capital formation; general government
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	4.3	:	:	:	:	:	:	:	:	:
1971	5.0	4.3	:	:	:	:	:	:	:	:
1972	5.0	4.0	:	:	:	:	:	:	:	:
1973	4.3	3.4	:	:	:	:	:	:	:	:
1974	3.9	3.5	:	:	:	:	:	:	:	:
1975	4.4	3.5	:	:	:	:	:	:	:	:
1976	4.5	3.3	:	:	:	:	:	:	:	:
1977	4.4	3.3	:	:	:	:	:	:	:	:
1978	4.2	3.4	:	:	:	3.1	:	:	:	:
1979	4.4	3.5	:	:	:	3.1	:	:	:	:
1980	4.7	3.1	:	:	:	3.2	:	:	:	:
1981	4.7	2.8	:	:	:	3.3	:	:	:	:
1982	4.4	2.4	:	:	:	3.4	:	:	:	:
1983	3.9	2.0	:	:	:	3.1	:	:	:	:
1984	3.2	1.9	:	:	:	3.1	:	:	:	:
1985	3.0	2.1	:	:	:	3.2	:	:	:	:
1986	2.7	1.8	:	:	:	3.2	:	:	:	:
1987	2.4	2.2	:	:	:	3.2	:	:	:	3.0
1988	2.4	2.1	:	:	:	3.5	:	:	:	3.1
1989	1.8	1.9	:	:	:	3.5	:	:	:	3.0
1990	1.6	1.6	:	:	:	3.5	2.1	3.3	4.7	3.0
1991	1.7	1.5	2.7	:	:	3.6	2.2	3.2	5.1	3.0
1992	1.8	1.9	2.9	:	:	3.7	2.1	3.0	5.3	3.1
1993	2.0	1.8	2.8	:	:	3.5	2.3	2.6	5.4	3.0
1994	2.0	1.8	2.7	:	:	3.4	2.3	2.3	4.3	2.9
1995	1.8	1.8	2.3	3.2	3.7	3.3	2.3	2.1	4.6	3.0
1996	1.6	2.0	2.1	3.2	3.1	3.2	2.4	2.2	4.7	3.1
1997	1.6	1.9	1.9	3.4	3.1	3.0	2.5	2.2	4.2	2.9
1998	1.6	1.7	1.9	3.6	3.3	2.9	2.7	2.4	4.5	2.9
1999	1.8	1.6	1.9	4.0	3.3	2.9	3.1	2.5	4.2	3.0
2000	1.8	1.7	1.9	4.1	3.2	3.0	3.8	2.4	4.0	3.2
2001	1.5	1.8	1.8	4.2	3.3	3.0	4.2	2.3	4.3	3.3
2002	1.3	1.8	1.8	4.3	3.4	3.0	4.6	2.2	4.4	3.3
2003	1.3	1.8	1.7	4.4	3.5	3.1	4.9	2.0	4.3	3.3

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	4.8	:	:	3.2	:
1971	:	:	:	:	4.5	:	:	3.1	:
1972	:	:	:	:	4.3	:	:	2.9	:
1973	:	:	:	:	5.0	:	:	2.8	:
1974	:	:	:	:	5.2	:	:	3.0	:
1975	:	:	4.1	:	4.8	:	:	3.1	:
1976	4.8	:	3.8	:	4.4	:	:	2.8	:
1977	4.7	:	3.9	:	3.3	:	:	2.5	:
1978	5.0	:	3.8	:	2.9	:	:	2.6	:
1979	4.6	:	3.6	:	2.8	:	:	2.6	:
1980	4.3	:	3.7	:	2.6	:	:	2.7	:
1981	4.2	:	3.7	:	2.1	:	:	2.5	:
1982	3.9	:	3.8	:	1.9	:	:	2.4	:
1983	3.7	:	3.8	:	2.2	:	:	2.3	:
1984	3.6	:	3.5	:	2.4	:	:	2.3	:
1985	3.5	:	3.6	:	2.3	:	:	2.4	:
1986	3.7	:	3.5	:	2.4	:	:	2.5	:
1987	3.4	:	3.8	:	2.2	:	:	2.5	:
1988	3.2	:	3.8	:	1.8	:	:	2.5	:
1989	3.2	:	3.3	:	2.2	:	:	2.5	:
1990	3.1	:	3.7	:	2.6	:	:	2.6	4.8
1991	3.1	:	3.9	:	2.4	:	:	2.6	4.9
1992	3.1	:	3.6	:	2.3	:	:	2.6	5.4
1993	3.3	:	2.9	3.3	2.1	:	:	2.5	6.2
1994	3.3	:	3.0	3.5	2.1	:	:	2.5	6.2
1995	3.1	3.7	2.8	3.4	2.0	2.7	2.6	2.5	6.1
1996	2.8	4.2	2.9	3.0	1.5	2.6	2.4	2.5	6.3
1997	2.0	4.3	3.2	2.7	1.2	2.4	2.2	2.6	5.5
1998	1.9	3.9	2.9	2.7	1.2	2.5	2.2	2.6	5.5
1999	1.8	4.1	2.9	2.8	1.1	2.5	2.3	2.7	5.7
2000	1.7	3.8	2.6	2.5	1.2	2.5	2.3	2.7	5.6
2001	1.6	3.9	2.4	2.5	1.5	2.5	2.3	3.3	5.5
2002	1.6	4.0	2.5	2.5	1.8	2.5	2.4	3.4	5.3
2003	1.5	4.1	2.4	2.5	1.9	2.5	2.4	3.5	5.0

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 73

Other capital expenditure, including capital transfers; general government ⁽¹⁾
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	1.5	:	:	:	:	:	:	:	:	:
1971	1.3	0.4	:	:	:	:	:	:	:	:
1972	1.2	0.1	:	:	:	:	:	:	:	:
1973	1.3	0.5	:	:	:	:	:	:	:	:
1974	1.2	0.8	:	:	:	:	:	:	:	:
1975	1.1	0.7	:	:	:	:	:	:	:	:
1976	1.1	0.9	:	:	:	:	:	:	:	:
1977	1.1	0.7	:	:	:	:	:	:	:	:
1978	1.2	0.4	:	:	:	0.6	:	:	:	:
1979	2.2	0.3	:	:	:	0.8	:	:	:	:
1980	1.1	0.5	:	:	:	0.8	:	:	:	:
1981	3.6	1.0	:	:	:	0.9	:	:	:	:
1982	1.5	1.2	:	:	:	0.8	:	:	:	:
1983	3.6	1.0	:	:	:	0.7	:	:	:	:
1984	1.5	0.4	:	:	:	0.7	:	:	:	:
1985	1.3	0.4	:	:	:	0.7	:	:	:	:
1986	1.2	-0.1	:	:	:	0.8	:	:	:	:
1987	1.2	-0.2	:	:	:	0.8	:	:	:	2.5
1988	1.2	0.0	:	:	:	0.9	:	:	:	1.8
1989	0.8	0.1	:	:	:	0.9	:	:	:	1.3
1990	0.8	0.3	:	:	:	1.1	1.0	2.2	1.4	1.0
1991	0.9	0.3	1.9	:	:	0.8	1.0	1.7	1.8	0.7
1992	1.0	0.4	1.6	:	:	0.9	1.0	1.5	1.9	0.4
1993	1.2	0.4	1.5	:	:	0.8	1.1	1.7	1.5	0.3
1994	1.1	0.4	1.3	:	:	1.2	1.5	1.5	1.7	0.4
1995	1.0	0.5	1.6	2.8	2.5	1.5	1.6	2.5	1.5	0.4
1996	1.1	0.3	1.2	-0.6	2.0	0.9	1.2	1.6	1.3	-0.1
1997	1.4	0.4	1.2	-0.2	1.9	0.8	1.1	1.3	1.2	-0.2
1998	1.3	0.5	1.3	-0.4	1.8	1.1	1.0	1.4	1.1	0.0
1999	1.4	0.4	1.3	3.0	2.0	1.2	2.9	1.4	1.4	0.2
2000	1.3	0.4	-1.1	3.0	1.7	0.9	1.2	0.1	1.1	-0.4
2001	1.1	0.2	1.2	2.3	1.8	0.9	1.1	1.3	1.1	0.1
2002	1.4	0.3	1.2	2.8	1.8	1.0	1.1	1.4	1.1	0.1
2003	1.4	0.4	1.1	2.7	1.8	1.1	1.0	1.3	1.1	0.1

(¹) Including one-off proceeds (treated as negative expenditure) relative to the allocation of mobile phone licences (UMTS) as follows:
 — in 2000: A: ATS 11.5 bn, D: DEM 99.4 bn, E: ESP 86 bn, I: ITL 26 750 bn, NL: NLG 5.9 bn, P: PTE 80 bn, UK: GBP 22.5 bn;
 — in 2001: B: BEF 18 bn, DK: DKK 3.2 bn, EL: GRD 170 bn, F: FRF 8.1 bn.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	2.3	:	:	:	:
1971	:	:	:	:	1.8	:	:	:	:
1972	:	:	:	:	2.1	:	:	:	:
1973	:	:	:	:	2.4	:	:	:	:
1974	:	:	:	:	1.6	:	:	:	:
1975	:	:	1.4	:	1.6	:	:	:	:
1976	2.2	:	1.0	:	1.3	:	:	:	:
1977	1.8	:	0.9	:	1.5	:	:	:	:
1978	1.8	:	0.6	:	1.4	:	:	:	:
1979	1.6	:	0.6	:	1.1	:	:	:	:
1980	2.0	:	0.7	:	1.2	:	:	:	:
1981	2.3	:	0.6	:	2.4	:	:	:	:
1982	2.1	:	0.8	:	1.5	:	:	:	:
1983	2.5	:	0.7	:	1.3	:	:	:	:
1984	2.4	:	0.5	:	1.2	:	:	:	:
1985	2.6	:	0.5	:	1.0	:	:	:	:
1986	2.4	:	0.6	:	0.6	:	:	:	:
1987	2.2	:	0.5	:	0.5	:	:	:	:
1988	2.0	:	0.8	:	0.6	:	:	:	:
1989	1.8	:	0.4	:	0.7	:	:	:	:
1990	1.9	:	0.5	:	1.8	:	:	:	1.6
1991	2.0	:	0.7	:	1.4	:	:	:	1.7
1992	2.0	:	0.6	:	1.2	:	:	:	2.0
1993	2.0	:	0.6	2.7	1.2	:	:	:	2.2
1994	1.9	:	0.9	0.9	1.0	:	:	:	2.1
1995	2.0	1.4	0.6	0.6	1.2	1.7	1.6	:	2.2
1996	2.2	1.7	0.9	0.0	0.9	1.2	1.1	:	2.2
1997	2.1	1.6	0.3	0.6	0.7	1.1	1.0	:	1.9
1998	2.5	1.7	0.3	-0.7	0.6	1.2	1.1	:	7.3
1999	2.2	1.6	0.3	0.1	0.6	1.4	1.2	:	1.9
2000	1.4	1.2	0.2	0.1	-2.0	0.2	-0.2	:	1.9
2001	2.0	1.9	0.2	0.1	0.8	1.2	1.0	-0.4	1.8
2002	1.9	1.9	0.2	0.1	0.8	1.2	1.1	-0.4	1.8
2003	1.7	1.9	0.2	0.1	0.8	1.2	1.1	-0.3	1.7

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 74a

Total expenditure; general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾	EL	E	F	IRL	I	L	NL
1970	40.8	40.8	38.5	23.9	20.7	37.1	34.2	32.6	28.8	40.4
1971	42.6	41.6	39.9	24.3	22.1	36.9	35.0	34.9	32.2	41.8
1972	43.8	41.3	40.7	23.9	21.7	37.2	33.8	36.7	32.5	42.4
1973	44.2	39.6	41.3	22.4	21.4	37.3	33.7	35.6	31.5	42.3
1974	44.3	43.4	44.3	25.8	21.8	38.3	41.2	35.0	31.2	44.2
1975	49.7	45.5	48.6	27.4	23.5	42.6	42.9	40.3	42.2	48.8
1976	50.6	44.9	47.7	27.4	24.7	43.0	42.6	39.0	42.8	49.2
1977	52.3	45.8	47.7	28.6	26.1	42.8	40.6	39.5	45.1	49.4
1978	53.6	47.3	47.2	28.9	27.9	43.9	41.0	42.4	44.7	51.0
1979	55.2	49.9	47.2	28.7	29.0	44.3	42.1	41.9	45.6	52.9
1980	56.1	53.1	48.0	28.8	31.5	45.4	46.1	43.0	48.1	54.8
1981	60.6	56.6	48.9	34.5	34.0	48.1	47.6	46.9	51.4	56.5
1982	60.8	57.8	49.3	35.3	35.9	49.8	49.8	48.3	49.2	58.7
1983	61.0	58.2	48.0	37.1	37.0	50.8	49.6	49.4	48.5	58.7
1984	59.5	57.0	47.6	38.6	37.6	51.4	48.4	50.2	45.6	57.7
1985	59.3	56.3	47.2	41.9	40.4	52.0	49.0	51.5	44.1	56.0
1986	59.0	52.8	46.5	41.0	40.4	51.5	48.9	51.7	42.9	55.9
1987	57.6	54.1	46.9	41.5	40.3	50.9	47.0	51.1	45.5	57.5
1988	55.1	56.8	46.4	42.4	39.9	49.9	43.9	51.2	:	55.6
1989	52.6	57.0	45.0	43.9	41.7	49.0	37.8	51.9	:	52.8
1990	52.5	56.1	45.3	48.4	42.6	49.7	38.0	53.8	:	53.0
1991	53.6	57.1	47.7	44.7	43.5	50.1	38.9	53.8	:	53.4
1991	53.6	57.1	46.8	44.7	43.5	50.1	38.9	53.8	:	53.4
1992	54.3	58.2	47.6	46.8	44.9	51.8	39.4	54.0	:	54.0
1993	55.5	60.7	48.8	49.0	47.6	54.1	39.2	57.1	:	54.0
1994	54.0	60.7	48.4	46.8	45.9	54.0	39.2	54.6	:	52.0
1995	52.7	59.2	49.0	48.5	45.0	53.8	36.7	52.9	:	50.4

(1) 1970–91: D_90.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	37.8	19.7	29.9	41.7	36.9	35.3	36.0	31.0	18.5
1971	38.3	19.6	31.3	43.7	36.8	36.5	37.0	31.0	20.1
1972	38.4	20.7	31.7	44.5	37.4	37.2	37.6	30.7	21.4
1973	39.8	20.0	30.4	43.1	38.1	37.2	37.7	29.7	21.5
1974	40.4	22.8	31.4	46.3	43.1	38.6	39.6	31.1	23.5
1975	44.4	28.3	37.4	47.1	44.5	42.7	43.2	33.7	26.2
1976	45.2	32.1	38.5	49.8	44.3	42.7	43.3	32.4	26.8
1977	44.8	30.4	40.3	55.4	41.8	43.1	43.5	31.3	28.1
1978	47.7	31.8	40.0	57.0	41.5	44.1	44.3	30.6	29.3
1979	46.9	31.9	39.0	58.4	41.1	44.2	44.4	30.5	30.3
1980	47.2	36.1	38.6	59.5	43.2	45.3	45.6	32.5	31.2
1981	48.5	42.0	39.6	61.9	44.6	47.5	47.8	32.9	32.2
1982	49.1	40.0	41.1	64.1	44.8	48.6	48.7	35.1	32.6
1983	49.0	40.9	42.8	63.8	45.0	48.9	49.0	35.3	33.1
1984	49.3	43.6	42.5	61.3	45.4	49.0	49.1	34.3	32.4
1985	50.3	42.8	44.2	62.7	44.3	49.5	49.3	35.1	31.5
1986	51.2	38.4	45.1	61.0	42.8	49.3	48.8	35.6	31.9
1987	51.6	37.4	45.7	57.3	41.1	49.1	48.4	35.3	32.3
1988	50.3	36.2	44.2	57.5	38.2	48.3	47.2	34.3	31.6
1989	48.9	35.4	42.5	57.9	37.7	47.6	46.6	34.2	30.6
1990	49.6	38.8	46.1	58.6	39.2	48.6	47.7	35.0	31.1
1991	50.6	41.0	54.5	60.6	39.7	49.6	48.7	35.7	30.2
1991	50.6	41.0	54.5	60.6	39.7	49.3	48.4	35.7	30.2
1992	51.2	41.0	59.5	66.3	42.1	50.2	49.8	36.3	31.8
1993	54.1	42.7	60.6	70.1	42.8	52.0	51.4	35.7	33.4
1994	53.5	42.1	59.5	66.9	42.3	51.0	50.5	34.5	33.9
1995	54.2	42.7	57.1	64.4	42.1	50.7	50.1	34.4	34.8

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970–91: including D_90.⁽²⁾ EU-15 excluding L; 1970–91: including D_90.

Table 74b

Total expenditure; general government ⁽¹⁾
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D	EL	E	F	IRL	I	L	NL
1970	42.2	:	:	:	:	:	:	:	:	:
1971	43.5	42.9	:	:	:	:	:	:	:	:
1972	44.7	42.6	:	:	:	:	:	:	:	:
1973	44.9	40.2	:	:	:	:	:	:	:	:
1974	44.6	44.4	:	:	:	:	:	:	:	:
1975	50.3	46.1	:	:	:	:	:	:	:	:
1976	50.7	45.8	:	:	:	:	:	:	:	:
1977	52.6	46.5	:	:	:	:	:	:	:	:
1978	54.1	48.0	:	:	:	44.7	:	:	:	:
1979	56.5	50.5	:	:	:	45.3	:	:	:	:
1980	56.3	53.6	:	:	:	46.5	:	:	:	:
1981	63.1	57.3	:	:	:	49.3	:	:	:	:
1982	61.2	58.8	:	:	:	51.0	:	:	:	:
1983	63.8	59.0	:	:	:	51.7	:	:	:	:
1984	60.5	58.0	:	:	:	52.7	:	:	:	:
1985	59.8	56.8	:	:	:	53.4	:	:	:	:
1986	58.9	53.3	:	:	:	52.7	:	:	:	:
1987	56.9	55.0	:	:	:	51.9	:	:	:	58.6
1988	54.8	57.2	:	:	:	51.3	:	:	:	56.8
1989	53.0	57.3	:	:	:	50.4	:	:	:	54.6
1990	52.9	57.0	:	:	:	50.7	43.2	54.3	44.3	54.8
1991	54.0	57.8	47.1	:	:	51.6	44.8	55.5	46.8	54.8
1992	54.1	59.0	48.1	:	:	52.9	45.2	56.7	46.4	55.7
1993	55.6	61.7	49.3	:	:	55.2	45.1	57.7	47.1	55.8
1994	53.7	61.6	49.0	:	:	54.9	44.3	54.6	44.8	53.6
1995	52.8	60.3	49.6	50.5	45.0	55.2	41.5	53.4	45.5	51.4
1996	52.8	59.8	50.3	45.9	43.7	55.5	39.6	53.2	45.4	49.6
1997	51.4	58.0	49.3	44.7	42.2	55.0	37.4	51.1	42.9	48.2
1998	50.7	56.9	48.8	44.8	41.6	53.9	35.2	49.6	42.0	47.2
1999	50.3	55.3	48.9	48.7	40.8	53.5	34.8	48.9	42.1	47.1
2000	49.4	53.2	45.9	49.1	39.8	52.8	32.0	46.5	39.3	45.4
2001	49.1	52.6	48.6	48.1	39.5	52.7	32.1	47.5	39.5	44.5
2002	49.6	52.7	49.4	47.6	39.9	52.9	32.7	47.7	39.9	44.5
2003	49.1	52.0	48.6	46.7	39.7	52.2	32.7	46.8	39.5	43.8

(¹) Including one-off proceeds (treated as negative expenditure) relative to the allocation of mobile phone licences (UMTS) as follows:
 — in 2000: A: ATS 11.5 bn, D: DEM 99.4 bn, E: ESP 86 bn, I: ITL 26 750 bn, NL: NLG 5.9 bn, P: PTE 80 bn, UK: GBP 22.5 bn;
 — in 2001: B: BEF 18 bn, DK: DKK 3.2 bn, EL: GRD 170 bn, F: FRF 8.1 bn.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	:	:	:	31.7	:
1971	:	:	:	:	:	:	:	31.8	:
1972	:	:	:	:	:	:	:	31.5	:
1973	:	:	:	:	:	:	:	30.5	:
1974	:	:	:	:	:	:	:	31.8	:
1975	:	:	40.3	:	:	:	:	34.4	:
1976	48.9	:	41.7	:	:	:	:	33.1	:
1977	48.5	:	43.3	:	:	:	:	32.1	:
1978	51.7	:	43.1	:	:	:	:	31.2	:
1979	51.0	:	41.9	:	:	:	:	31.1	:
1980	51.3	:	41.9	:	:	:	:	33.1	:
1981	52.9	:	42.8	:	:	:	:	33.5	:
1982	53.4	:	44.5	:	:	:	:	35.7	:
1983	53.8	:	46.1	:	:	:	:	35.8	:
1984	53.9	:	45.6	:	:	:	:	34.9	:
1985	55.0	:	47.6	:	:	:	:	35.7	:
1986	55.9	:	48.5	:	:	:	:	36.1	:
1987	56.1	:	49.0	:	44.4	:	:	35.8	:
1988	55.2	:	47.6	:	41.9	:	:	34.9	:
1989	53.6	:	45.7	:	41.3	:	:	34.7	:
1990	53.1	:	49.3	:	43.2	:	:	35.5	32.6
1991	54.2	:	58.5	:	44.8	:	:	36.2	32.4
1992	54.9	:	63.8	:	46.6	:	:	36.9	33.4
1993	57.9	:	65.1	73.0	46.7	:	:	36.2	35.3
1994	57.4	:	63.4	70.7	46.0	:	:	35.1	35.9
1995	57.2	44.9	59.9	67.6	45.5	51.6	51.4	35.0	37.0
1996	56.6	45.5	59.9	65.3	43.8	51.5	51.1	34.6	37.5
1997	54.0	44.2	56.8	63.2	41.7	50.2	49.4	33.6	36.4
1998	54.3	43.7	53.2	60.8	40.4	49.3	48.3	32.7	42.9
1999	53.8	44.9	52.2	60.1	39.6	49.0	47.9	32.4	38.9
2000	52.2	44.2	48.7	57.7	37.3	47.1	45.7	32.0	40.5
2001	52.9	44.7	48.5	57.0	40.4	47.9	46.9	32.9	41.7
2002	52.0	44.6	48.5	56.8	40.9	48.2	47.2	34.2	42.3
2003	51.2	44.6	47.5	56.4	40.4	47.5	46.6	33.6	42.5

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 75a

Net lending (+) or net borrowing (–); general government
EU Member States: former definition

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾ (2)	EL	E	F	IRL	I	L	NL ⁽³⁾
1970	-2.2	4.0	0.2	0.7	0.6	0.9	-3.9	-3.3	2.8	-1.1
1971	-3.2	3.8	-0.2	0.1	-0.5	0.6	-3.8	-4.8	2.2	-1.0
1972	-4.5	3.8	-0.5	0.0	0.2	0.6	-3.8	-7.0	2.0	-0.4
1973	-3.7	5.1	1.2	-0.1	1.1	0.6	-4.2	-6.5	3.3	0.7
1974	-2.8	3.1	-1.3	-1.3	0.2	0.3	-7.5	-6.4	4.6	-0.2
1975	-5.0	-1.3	-5.6	-2.9	0.0	-2.3	-11.5	-10.5	1.0	-2.7
1976	-5.7	-0.2	-3.4	-1.6	-0.3	-0.7	-7.8	-8.0	1.8	-2.5
1977	-5.7	-0.6	-2.4	-2.5	-0.6	-0.8	-6.9	-7.1	2.9	-0.8
1978	-6.1	-0.3	-2.4	-2.9	-1.7	-2.0	-8.9	-8.7	4.3	-2.2
1979	-6.9	-1.6	-2.6	-2.4	-1.6	-0.8	-10.4	-8.4	0.6	-2.9
1980	-8.6	-3.2	-2.9	-2.6	-2.5	0.0	-11.6	-8.7	-0.4	-4.1
1981	-12.5	-6.7	-3.7	-9.0	-3.7	-1.9	-12.2	-11.5	-3.1	-5.2
1982	-10.7	-8.8	-3.3	-6.8	-5.4	-2.7	-12.6	-11.3	-1.0	-6.4
1983	-11.4	-6.9	-2.6	-7.5	-4.6	-3.1	-10.7	-10.6	2.0	-5.6
1984	-9.4	-4.0	-1.9	-8.3	-5.2	-2.7	-8.9	-11.6	3.2	-5.3
1985	-8.9	-2.0	-1.2	-11.6	-6.2	-2.8	-10.2	-12.5	6.2	-3.5
1986	-9.3	3.3	-1.3	-9.4	-5.5	-2.7	-10.1	-11.6	4.4	-4.9
1987	-7.6	2.3	-1.9	-9.1	-3.7	-1.9	-8.1	-11.0	2.7	-5.7
1988	-6.7	1.5	-2.2	-11.4	-3.3	-1.6	-4.2	-10.7	:	-4.4
1989	-6.0	0.3	0.1	-14.2	-3.5	-1.2	-1.7	-9.8	:	-4.6
1990	-5.4	-1.0	-2.1	-15.9	-4.2	-1.5	-2.2	-11.0	4.8	-4.9
1991	-6.2	-2.4	-3.4	-11.4	-4.3	-2.0	-2.3	-10.0	1.9	-2.8
1991	-6.2	-2.4	-3.2	-11.4	-4.3	-2.0	-2.3	-10.0	1.9	-2.8
1992	-6.9	-2.2	-2.8	-12.6	-4.0	-3.9	-2.4	-9.5	0.7	-3.8
1993	-7.2	-2.8	-3.5	-13.6	-6.7	-5.6	-2.3	-9.4	1.6	-3.1
1994	-4.8	-2.6	-2.6	-9.9	-6.1	-5.6	-1.6	-9.1	2.7	-3.6
1995	-3.9	-2.2	-3.4	-10.5	-7.0	-4.8	-2.1	-7.6	1.8	-3.8

(1) 1970–91: D₉₀.

(2) Not including unification-related debt and asset assumptions by the federal government in 1995 (Treuhand, eastern housing companies and Deutsche Kreditbank) equal to DEM 227.5 bn.

(3) Not including for 1995 a net amount of NLG 32.84 bn of exceptional expenditure related to the reform of the financing of the social housing societies.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	1.2	2.9	4.2	4.2	3.0	-0.3	0.5	-2.0	1.6
1971	1.4	2.1	4.4	5.0	1.3	-0.9	-0.2	-2.8	1.1
1972	2.0	1.0	3.8	4.2	-1.3	-1.3	-1.0	-1.3	-0.1
1973	1.2	1.7	5.6	3.9	-2.7	-0.4	-0.4	-0.2	0.5
1974	1.2	-1.0	4.5	1.9	-3.8	-1.4	-1.5	-1.0	0.4
1975	-2.4	-4.0	4.5	2.6	-4.5	-4.5	-4.1	-5.2	-2.7
1976	-3.6	-5.4	7.0	4.3	-4.9	-3.0	-2.8	-3.3	-3.6
1977	-2.3	-4.0	5.4	1.6	-3.2	-2.5	-2.4	-2.2	-3.8
1978	-2.7	-6.0	3.1	-0.4	-4.4	-3.4	-3.3	-1.3	-5.4
1979	-2.3	-5.6	2.6	-2.8	-3.3	-3.1	-3.1	-0.9	-4.7
1980	-1.7	-8.4	3.3	-3.9	-3.4	-3.4	-3.4	-2.6	-4.4
1981	-1.7	-12.4	4.4	-5.1	-2.7	-5.1	-4.7	-2.2	-3.8
1982	-3.3	-8.3	2.5	-6.7	-2.5	-5.3	-5.0	-4.9	-3.5
1983	-3.8	-6.7	0.9	-4.8	-3.4	-5.1	-4.8	-5.6	-3.6
1984	-2.5	-10.2	2.7	-2.8	-3.9	-4.9	-4.7	-4.8	-2.0
1985	-2.4	-10.1	2.8	-3.7	-2.9	-4.9	-4.5	-5.1	-0.8
1986	-3.6	-5.7	3.3	-1.2	-2.5	-4.8	-4.1	-5.3	-0.9
1987	-4.2	-5.3	1.0	4.1	-1.6	-4.5	-3.6	-4.4	0.5
1988	-3.0	-3.4	4.0	3.4	0.7	-4.2	-3.0	-3.7	1.5
1989	-2.8	-2.3	6.2	5.2	1.0	-3.3	-2.2	-3.3	2.4
1990	-2.4	-4.9	5.3	4.0	-0.9	-4.4	-3.5	-4.4	2.8
1991	-3.0	-5.8	-1.5	-1.1	-2.3	-4.7	-4.2	-5.0	2.8
1991	-3.0	-5.8	-1.5	-1.1	-2.3	-4.6	-4.1	-5.0	2.8
1992	-1.9	-2.9	-5.7	-7.5	-6.1	-4.8	-5.0	-5.9	1.4
1993	-4.2	-5.9	-7.9	-11.9	-7.7	-5.6	-6.0	-5.0	-1.6
1994	-4.9	-5.9	-6.0	-9.9	-6.7	-5.1	-5.4	-3.7	-2.3
1995	-5.0	-5.6	-5.0	-7.5	-5.4	-4.9	-5.0	-3.1	-3.5

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970-91: including D_90.⁽²⁾ EU-15 excluding L; 1970-91: including D_90.

Table 75b

Net lending (+) or net borrowing (–); general government ⁽¹⁾
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	L	NL ⁽³⁾
1970	-2.1	:	:	:	:	:	:	:	:	:
1971	-3.1	5.0	:	:	:	:	:	:	:	:
1972	-4.7	5.1	:	:	:	:	:	:	:	:
1973	-3.9	5.1	:	:	:	:	:	:	:	:
1974	-2.9	3.8	:	:	:	:	:	:	:	:
1975	-5.4	-1.3	:	:	:	:	:	:	:	:
1976	-5.8	0.2	:	:	:	:	:	:	:	:
1977	-5.8	0.4	:	:	:	:	:	:	:	:
1978	-6.5	0.4	:	:	:	-1.3	:	:	:	:
1979	-8.4	-0.7	:	:	:	-0.1	:	:	:	:
1980	-9.5	-2.4	:	:	:	0.0	:	:	:	:
1981	-15.7	-5.9	:	:	:	-2.2	:	:	:	:
1982	-12.5	-8.4	:	:	:	-2.9	:	:	:	:
1983	-14.8	-6.4	:	:	:	-2.8	:	:	:	:
1984	-10.9	-3.7	:	:	:	-2.8	:	:	:	:
1985	-10.2	-1.4	:	:	:	-3.0	:	:	:	:
1986	-10.1	3.3	:	:	:	-3.2	:	:	:	:
1987	-7.9	2.5	:	:	:	-2.0	:	:	:	-5.3
1988	-7.3	1.5	:	:	:	-2.5	:	:	:	-4.2
1989	-7.6	0.3	:	:	:	-1.8	:	:	:	-5.0
1990	-6.7	-1.0	:	:	:	-2.1	-2.8	-11.8	5.3	-5.3
1991	-7.3	-2.4	-3.0	:	:	-2.4	-2.9	-11.7	1.5	-2.7
1992	-7.9	-2.2	-2.5	:	:	-4.2	-3.0	-10.7	0.7	-4.2
1993	-7.3	-2.9	-3.1	:	:	-6.0	-2.7	-10.3	2.1	-2.8
1994	-5.0	-2.4	-2.4	:	:	-5.5	-2.0	-9.3	2.9	-3.6
1995	-4.4	-2.3	-3.5	-10.2	-6.6	-5.5	-2.2	-7.6	2.3	-4.2
1996	-3.7	-1.0	-3.4	-7.8	-4.9	-4.1	-0.2	-7.1	2.0	-1.8
1997	-2.0	0.4	-2.7	-4.7	-3.2	-3.0	1.2	-2.7	3.4	-1.1
1998	-0.8	1.1	-2.2	-3.1	-2.6	-2.7	2.3	-2.8	3.4	-0.8
1999	-0.6	3.1	-1.6	-1.8	-1.1	-1.6	2.3	-1.8	3.6	0.4
2000	0.1	2.5	1.2	-1.1	-0.3	-1.4	4.5	-0.3	6.0	2.2
2001	-0.1	2.2	-2.5	0.0	0.1	-1.5	2.4	-1.2	4.3	1.3
2002	-0.1	1.6	-2.7	0.3	-0.2	-2.0	1.8	-1.2	2.7	0.5
2003	0.2	2.0	-2.2	0.8	0.0	-1.6	1.8	-0.9	3.1	1.4

⁽¹⁾ Including one-off proceeds relative to the allocation of mobile phone licences (UMTS) as follows:

— in 2000: A: ATS 11.5 bn, D: DEM 99.4 bn, E: ESP 86 bn, I: ITL 26 750 bn, NL: NLG 5.9 bn, P: PTE 80 bn, UK: GBP 22.5 bn;
 — in 2001: B: BEF 18 bn, DK: DKK 3.2 bn, EL: GRD 170 bn, F: FRF 8.1 bn.

⁽²⁾ Not including unification-related debt and asset assumptions by the federal government in 1995 (Treuhand, eastern housing companies and Deutsche Kreditbank) equal to DEM 227.5 bn.

⁽³⁾ Not including for 1995 a net amount of NLG 32.84 bn of exceptional expenditure related to the reform of the financing of the social housing societies.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970 B, UK
 1971 DK
 1975 FIN
 1978 F
 1987 NL
 1988 A
 1990 I, IRL, L
 1991 D
 1993 S
 1995 GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	2.6	:	:	-2.0	:
1971	:	:	:	:	1.5	:	:	-2.8	:
1972	:	:	:	:	-1.7	:	:	-1.3	:
1973	:	:	:	:	-3.6	:	:	-0.2	:
1974	:	:	:	:	-3.6	:	:	-1.0	:
1975	:	:	4.9	:	-4.5	:	:	-5.2	:
1976	-3.7	:	7.6	:	-4.6	:	:	-3.3	:
1977	-2.2	:	6.2	:	-3.3	:	:	-2.2	:
1978	-2.7	:	3.7	:	-4.3	:	:	-1.3	:
1979	-2.4	:	3.2	:	-3.6	:	:	-0.9	:
1980	-1.7	:	3.5	:	-3.2	:	:	-2.6	:
1981	-1.8	:	4.8	:	-4.4	:	:	-2.2	:
1982	-3.4	:	3.0	:	-2.7	:	:	-4.9	:
1983	-4.3	:	1.4	:	-3.4	:	:	-5.6	:
1984	-2.7	:	3.2	:	-3.6	:	:	-4.8	:
1985	-2.8	:	3.3	:	-2.9	:	:	-5.1	:
1986	-4.0	:	3.8	:	-2.6	:	:	-5.3	:
1987	-4.5	:	1.4	:	-1.8	:	:	-4.4	:
1988	-3.5	:	5.1	:	0.5	:	:	-3.7	:
1989	-3.1	:	6.7	:	0.8	:	:	-3.3	:
1990	-2.4	:	5.3	:	-1.6	:	:	-4.4	1.9
1991	-3.0	:	-1.1	:	-3.1	:	:	-5.0	1.8
1992	-2.0	:	-5.6	:	-6.4	:	:	-5.9	0.8
1993	-4.2	:	-7.3	-11.9	-7.9	:	:	-5.0	-2.4
1994	-5.0	:	-5.7	-10.8	-6.7	:	:	-3.7	-2.8
1995	-5.2	-4.5	-3.7	-7.7	-5.8	-5.1	-5.2	-3.1	-4.2
1996	-3.8	-3.9	-3.2	-3.1	-4.4	-4.3	-4.2	-2.2	-4.9
1997	-1.9	-2.7	-1.5	-1.6	-2.2	-2.6	-2.5	-1.0	-3.7
1998	-2.4	-2.4	1.3	2.1	0.4	-2.2	-1.6	0.3	-10.7
1999	-2.2	-2.1	1.9	1.7	1.1	-1.3	-0.7	0.9	-7.0
2000	-1.1	-1.5	6.9	4.0	4.3	0.3	1.1	1.7	-7.6
2001	-0.2	-2.0	4.8	3.8	1.2	-1.1	-0.5	-0.3	-6.9
2002	-0.4	-1.6	2.9	1.6	0.4	-1.4	-0.9	-3.6	-6.8
2003	0.4	-1.4	2.3	1.9	0.5	-1.0	-0.6	-3.5	-6.6

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 76a

**Net lending (+) or net borrowing (–) excluding interest; general government
EU Member States: former definition**

(percentage of gross domestic product at market prices)

	B	DK	D ⁽¹⁾ ⁽²⁾	EL	E	F	IRL	I	L	NL ⁽³⁾
1970	1.0	5.3	1.2	1.5	1.2	1.9	– 0.3	– 1.6	3.8	1.6
1971	– 0.1	5.1	0.8	1.0	0.0	1.5	– 0.4	– 2.9	3.2	1.8
1972	– 1.4	5.1	0.5	0.8	0.8	1.4	– 0.5	– 4.8	2.9	2.2
1973	– 0.6	6.3	2.3	0.8	1.6	1.3	– 0.9	– 4.1	4.1	3.3
1974	0.5	4.2	– 0.1	– 0.3	0.6	1.1	– 3.9	– 3.6	5.2	2.6
1975	– 1.6	– 0.1	– 4.2	– 1.7	0.5	– 1.2	– 7.4	– 6.9	1.7	0.2
1976	– 2.1	1.1	– 1.9	– 0.3	0.1	0.3	– 3.1	– 4.0	2.5	0.4
1977	– 1.8	1.2	– 0.7	– 1.3	– 0.1	0.3	– 2.0	– 2.7	3.6	2.2
1978	– 1.8	1.8	– 0.8	– 1.5	– 1.1	– 0.7	– 3.5	– 3.4	5.2	1.0
1979	– 1.9	1.8	– 0.8	– 0.6	– 1.0	0.6	– 4.8	– 3.3	1.3	0.5
1980	– 2.7	0.7	– 1.0	– 0.6	– 1.8	1.4	– 5.6	– 3.2	0.7	– 0.3
1981	– 4.9	– 1.6	– 1.4	– 6.4	– 3.0	0.1	– 5.5	– 5.3	– 1.9	– 0.7
1982	– 1.7	– 3.0	– 0.5	– 4.0	– 4.4	– 0.7	– 4.4	– 4.2	0.4	– 1.3
1983	– 2.3	0.8	0.4	– 3.9	– 3.3	– 0.6	– 2.3	– 3.2	3.4	0.0
1984	0.1	5.3	1.1	– 4.0	– 3.3	– 0.1	– 0.4	– 3.6	4.7	0.6
1985	1.4	7.6	1.9	– 6.7	– 4.2	0.0	– 0.9	– 4.5	7.2	2.6
1986	1.6	11.9	1.7	– 4.1	– 1.8	0.1	– 1.3	– 3.1	5.3	1.3
1987	2.8	10.4	1.0	– 2.5	0.5	0.9	0.7	– 3.0	3.7	0.4
1988	3.2	9.1	0.7	– 4.0	0.0	1.0	4.0	– 2.8	:	1.7
1989	4.0	7.5	2.8	– 6.8	0.4	1.5	5.7	– 1.1	:	1.2
1990	5.0	6.3	0.6	– 5.9	– 0.3	1.4	5.3	– 1.6	5.2	0.8
1991	3.8	4.9	– 0.6	– 2.1	– 0.6	0.9	5.0	0.1	2.2	3.1
1991	3.8	4.9	– 0.6	– 2.1	– 0.6	0.9	5.0	0.1	2.2	3.1
1992	3.7	4.4	0.4	– 1.1	0.3	– 0.7	4.3	1.9	1.1	2.3
1993	3.5	4.5	– 0.2	– 1.0	– 1.7	– 2.3	4.0	2.6	1.9	2.9
1994	5.1	4.1	0.7	4.0	– 1.4	– 2.2	4.0	1.8	3.0	2.0
1995	4.9	4.2	0.3	2.3	– 1.7	– 1.1	2.9	3.6	2.1	1.9

⁽¹⁾ 1970–91: D₉₀.⁽²⁾ Not including unification-related debt and asset assumptions by the federal government in 1995 (Treuhand, eastern housing companies and Deutsche Kreditbank) equal to DEM 227.5 bn.⁽³⁾ Not including for 1995 a net amount of NLG 32.84 bn of exceptional expenditure related to the reform of the financing of the social housing societies.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EU-11 ⁽¹⁾	EU-14 ⁽²⁾	US	JP
1970	2.2	3.3	5.2	6.0	6.9	1.0	2.3	0.2	2.2
1971	2.5	2.6	5.3	6.9	5.0	0.4	1.6	-0.6	1.8
1972	2.9	1.6	4.6	6.1	2.2	0.0	0.7	0.8	0.6
1973	2.2	2.1	6.3	5.7	0.9	0.9	1.3	2.0	1.4
1974	2.2	-0.6	5.1	3.8	0.4	0.1	0.3	1.4	1.3
1975	-1.1	-3.3	5.1	4.7	-0.6	-2.7	-2.1	-2.8	-1.6
1976	-2.0	-4.4	7.6	6.3	-0.7	-1.1	-0.7	-0.8	-2.2
1977	-0.5	-2.6	6.2	4.0	1.1	-0.4	0.0	0.4	-1.9
1978	-0.5	-3.7	4.0	2.1	-0.2	-1.1	-0.8	1.4	-3.2
1979	-0.1	-3.2	3.6	0.1	1.1	-0.8	-0.4	2.0	-2.1
1980	0.8	-5.8	4.3	0.1	1.3	-0.8	-0.4	0.6	-1.3
1981	1.0	-7.8	5.5	0.0	2.4	-1.9	-1.1	1.5	-0.3
1982	-0.3	-3.3	3.7	-0.1	2.6	-1.7	-0.9	-0.6	0.2
1983	-0.9	-0.8	2.5	2.1	1.3	-1.0	-0.5	-1.2	0.6
1984	0.8	-3.6	4.4	4.5	1.0	-0.6	-0.1	0.1	2.3
1985	1.0	-2.7	4.7	4.4	2.1	-0.5	0.3	0.0	3.6
1986	0.0	1.9	5.0	5.9	2.1	0.0	0.7	-0.2	3.4
1987	-0.3	2.1	2.7	10.3	2.7	0.1	1.1	0.7	4.7
1988	0.9	3.3	5.6	8.8	4.6	0.3	1.4	1.3	5.5
1989	1.2	3.7	7.6	10.4	4.7	1.4	2.4	1.8	6.3
1990	1.6	2.9	6.7	8.9	2.2	0.5	1.2	0.8	6.6
1991	1.2	1.8	0.4	3.9	0.4	0.4	0.6	0.3	6.5
1991	1.2	1.8	0.4	3.9	0.4	0.3	0.6	0.3	6.5
1992	2.2	4.1	-3.1	-2.3	-3.4	0.7	0.1	-0.9	5.1
1993	0.1	0.1	-3.3	-5.9	-4.9	0.0	-0.8	-0.2	2.0
1994	-0.9	0.2	-1.0	-3.4	-3.5	0.3	-0.2	1.0	1.4
1995	-0.7	0.6	0.1	-0.7	-2.0	0.7	0.3	1.8	0.1

⁽¹⁾ EU-15 excluding DK, L, S and UK; 1970-91: including D_90.⁽²⁾ EU-15 excluding L; 1970-91: including D_90.

Table 76b

Net lending (+) or net borrowing (–) excluding interest; general government ⁽¹⁾
EU Member States: ESA 95

(percentage of gross domestic product at market prices)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	L	NL ⁽³⁾
1970	1.4	:	:	:	:	:	:	:	:	:
1971	0.6	6.4	:	:	:	:	:	:	:	:
1972	– 1.0	6.4	:	:	:	:	:	:	:	:
1973	– 0.1	6.3	:	:	:	:	:	:	:	:
1974	1.0	5.0	:	:	:	:	:	:	:	:
1975	– 1.3	– 0.1	:	:	:	:	:	:	:	:
1976	– 1.6	1.5	:	:	:	:	:	:	:	:
1977	– 1.0	2.2	:	:	:	:	:	:	:	:
1978	– 1.5	2.5	:	:	:	0.0	:	:	:	:
1979	– 2.7	2.7	:	:	:	1.2	:	:	:	:
1980	– 2.9	1.5	:	:	:	1.4	:	:	:	:
1981	– 7.4	– 0.9	:	:	:	– 0.3	:	:	:	:
1982	– 3.1	– 2.6	:	:	:	– 0.9	:	:	:	:
1983	– 4.9	1.4	:	:	:	– 0.3	:	:	:	:
1984	– 0.8	5.6	:	:	:	– 0.2	:	:	:	:
1985	0.8	8.1	:	:	:	– 0.2	:	:	:	:
1986	1.3	11.8	:	:	:	– 0.3	:	:	:	:
1987	2.7	10.5	:	:	:	0.8	:	:	:	0.9
1988	3.0	9.1	:	:	:	0.1	:	:	:	2.0
1989	3.6	7.5	:	:	:	0.9	:	:	:	0.8
1990	5.1	6.3	:	:	:	0.8	5.1	– 1.3	5.7	0.5
1991	3.9	4.9	– 0.1	:	:	0.6	4.8	0.2	1.9	3.4
1992	3.2	4.4	0.7	:	:	– 0.9	4.2	2.0	1.0	2.1
1993	3.8	4.4	0.2	:	:	– 2.5	3.9	2.8	2.5	3.4
1994	4.6	4.2	0.9	:	:	– 2.0	4.1	2.1	3.3	2.2
1995	4.9	4.1	0.2	1.0	– 1.4	– 1.8	3.2	3.9	2.7	1.7
1996	5.1	5.1	0.3	2.8	0.4	– 0.1	4.4	4.4	2.3	3.8
1997	6.0	6.1	0.9	3.6	1.6	0.7	5.3	6.7	3.7	4.1
1998	6.7	6.4	1.4	4.7	1.7	0.9	5.7	5.2	3.7	4.1
1999	6.4	7.7	2.0	5.7	2.5	1.7	4.7	5.0	3.9	4.9
2000	6.8	6.6	4.5	6.1	2.9	1.9	6.6	6.1	6.2	6.1
2001	6.4	6.0	0.7	6.6	3.3	1.7	4.3	5.0	4.6	4.6
2002	6.0	5.1	0.5	6.1	2.9	1.2	3.4	4.6	2.9	3.4
2003	6.0	5.3	1.0	6.0	3.0	1.5	3.2	4.7	3.3	4.0

(1) Including one-off proceeds relative to the allocation of mobile phone licences (UMTS) as follows:

— in 2000: A: ATS 11.5 bn, D: DEM 99.4 bn, E: ESP 86 bn, I: ITL 26 750 bn, NL: NLG 5.9 bn, P: PTE 80 bn, UK: GBP 22.5 bn;

— in 2001: B: BEF 18 bn, DK: DKK 3.2 bn, EL: GRD 170 bn, F: FRF 8.1 bn.

(2) Not including unification-related debt and asset assumptions by the federal government in 1995 (Treuhand, eastern housing companies and Deutsche Kreditbank) equal to DEM 227.5 bn.

(3) Not including for 1995 a net amount of NLG 32.84 bn of exceptional expenditure related to the reform of the financing of the social housing societies.

Member States have provided figures for the last statistical period according to ESA 95 specifications starting from the years mentioned below:

1970	B, UK
1971	DK
1975	FIN
1978	F
1987	NL
1988	A
1990	I, IRL, L
1991	D
1993	S
1995	GR, E, P

Tables are presented both according to the former specifications (Tables A, period 1970–95) and to the ESA 95 specifications (Tables B) depending on data availability.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15	US	JP
1970	:	:	:	:	6.7	:	:	0.2	:
1971	:	:	:	:	5.3	:	:	-0.6	:
1972	:	:	:	:	2.1	:	:	0.8	:
1973	:	:	:	:	0.2	:	:	2.1	:
1974	:	:	:	:	0.8	:	:	1.4	:
1975	:	:	5.5	:	-0.4	:	:	-2.8	:
1976	-2.0	:	8.3	:	-0.2	:	:	-0.8	:
1977	-0.3	:	7.0	:	1.3	:	:	0.4	:
1978	-0.6	:	4.5	:	0.1	:	:	1.4	:
1979	-0.1	:	4.1	:	1.1	:	:	2.0	:
1980	0.8	:	4.5	:	1.7	:	:	0.6	:
1981	0.9	:	5.9	:	0.9	:	:	1.5	:
1982	-0.3	:	4.2	:	2.7	:	:	-0.6	:
1983	-1.4	:	2.9	:	1.6	:	:	-1.2	:
1984	0.6	:	4.8	:	1.6	:	:	0.1	:
1985	0.7	:	5.1	:	2.3	:	:	0.0	:
1986	-0.3	:	5.4	:	2.2	:	:	-0.2	:
1987	-0.5	:	3.1	:	2.8	:	:	0.7	:
1988	0.5	:	6.7	:	4.7	:	:	1.3	:
1989	0.9	:	8.1	:	4.9	:	:	1.8	:
1990	1.6	:	6.7	:	2.2	:	:	0.8	5.6
1991	1.2	:	0.8	:	0.1	:	:	0.3	5.3
1992	2.3	:	-3.1	:	-3.3	:	:	-0.9	4.3
1993	0.1	:	-2.8	-5.9	-4.8	:	:	-0.2	1.0
1994	-0.9	:	-1.5	-4.3	-3.4	:	:	1.0	0.5
1995	-0.8	1.8	0.3	-0.8	-2.1	0.5	0.2	1.8	-0.8
1996	0.4	1.4	1.1	3.7	-0.7	1.4	1.3	2.5	-1.5
1997	2.0	1.5	2.7	4.9	1.5	2.5	2.5	3.5	-0.4
1998	1.4	1.1	4.9	7.7	4.0	2.5	3.0	4.5	-7.3
1999	1.3	1.1	5.0	6.6	4.1	3.0	3.4	4.8	-3.6
2000	2.4	1.7	9.7	8.3	7.1	4.3	5.0	5.4	-4.0
2001	3.2	1.1	7.0	7.3	3.8	2.8	3.2	3.1	-3.0
2002	2.9	1.4	5.1	4.8	2.7	2.4	2.5	-0.4	-2.6
2003	3.6	1.7	4.4	4.8	2.3	2.7	2.7	-0.4	-2.3

⁽¹⁾ EU-15 excluding DK, S and UK.

Table 77

General government consolidated gross debt ⁽¹⁾
EU Member States: ESA 95, Maastricht and former definition (linked series)

(percentage of gross domestic product at market prices)

	B	DK	D ⁽²⁾	EL	E	F	IRL	I	L	NL
1970	65.0	:	18.6	21.9	15.1	:	51.5	38.0	18.9	:
1971	64.2	12.0	18.6	22.4	15.8	:	49.3	42.7	19.0	:
1972	63.9	10.6	18.8	23.4	14.4	:	46.3	49.0	16.9	:
1973	61.7	8.3	18.3	19.3	12.7	:	43.3	51.3	13.8	:
1974	57.6	5.8	19.4	25.8	12.2	:	54.2	51.5	11.2	:
1975	59.3	6.5	24.8	22.4	12.4	:	61.1	57.3	12.2	41.0
1976	59.9	10.5	26.3	21.8	12.2	:	66.2	56.3	11.1	40.7
1977	63.4	14.1	27.3	22.0	13.3	20.8	62.9	56.4	11.2	40.2
1978	67.0	23.6	28.7	28.5	13.4	21.9	64.9	61.7	10.3	41.5
1979	70.1	29.4	29.7	27.9	15.1	21.9	70.7	61.1	9.6	43.5
1980	78.3	36.4	31.7	27.7	17.0	20.4	72.3	58.3	9.3	46.3
1981	91.6	48.1	35.4	33.0	20.8	22.6	78.0	60.3	9.7	50.2
1982	101.9	60.0	38.7	37.3	25.9	26.3	87.7	65.1	9.6	55.6
1983	112.8	69.0	40.2	42.9	31.3	27.7	98.0	70.0	10.2	61.8
1984	116.9	72.7	41.0	51.2	37.5	30.0	102.3	75.3	10.1	65.9
1985	121.8	69.8	41.7	59.8	42.7	31.8	105.3	82.0	9.6	70.5
1986	127.2	61.9	41.6	62.2	44.1	32.3	117.1	86.3	9.3	72.4
1987	131.6	57.9	42.6	69.9	44.4	34.5	118.2	90.5	8.2	75.0
1988	131.6	60.0	43.1	76.4	40.7	34.5	113.8	92.6	6.5	77.9
1989	127.6	57.8	41.8	80.4	42.1	35.2	103.9	95.4	5.4	77.7
1990	127.7	57.7	43.5	89.0	44.0	36.3	97.5	97.3	4.5	77.4
1991	129.8	62.3	44.4	91.1	44.7	36.7	97.3	100.6	4.0	77.2
1991	129.8	62.3	40.4	91.1	44.7	36.7	97.3	100.6	4.0	77.2
1992	131.2	66.3	43.1	97.5	47.1	40.6	94.7	107.7	4.8	78.1
1993	138.0	78.0	47.2	110.2	58.7	46.1	98.8	118.2	5.8	79.3
1994	136.4	73.5	49.4	107.9	61.2	49.6	92.6	123.9	5.4	76.1
1995	133.4	69.3	57.1	108.7	64.0	54.0	84.3	123.3	5.6	77.0
1996	130.1	65.1	59.8	111.3	68.1	57.1	74.2	122.1	6.2	75.2
1997	124.7	61.2	61.0	108.3	66.6	59.3	65.1	120.2	6.0	69.9
1998	119.3	55.6	60.9	105.5	64.5	59.5	54.8	116.4	6.2	66.8
1999	115.0	52.0	61.3	104.6	63.1	58.5	49.3	114.6	5.9	63.1
2000	109.3	46.1	60.3	103.3	60.4	57.6	38.6	110.5	5.2	56.1
2001	107.0	43.2	60.0	100.4	58.0	57.1	34.4	108.2	5.1	51.8
2002	103.9	42.5	61.0	99.1	57.3	57.3	30.8	106.9	5.1	48.9
2003	99.4	40.0	60.6	95.7	55.6	56.6	27.2	103.4	4.8	45.3

⁽¹⁾ ESA 95 as from 1996.⁽²⁾ 1970–91: D_90.

General government gross debt is defined by Article 1(5) of Council Regulation (EC) No 3605/93 (Article 1(5)), as amended by Council Regulation (EC) No 475/2000. According to the said regulation:

‘Government debt means the total gross debt at nominal value outstanding at the end of the year of the sector of “general government” (S.13), with the exception of those liabilities the corresponding financial assets of which are held by the sector of “general government” (S.13).

Government debt is constituted by the liabilities of general government in the following categories: currency and deposits (AF.2), securities other than shares, excluding financial derivatives (AF.33) and loans (AF.4), as defined in ESA 95.

The nominal value of a liability outstanding at the end of the year is the face value.

The nominal value of an index-linked liability corresponds to its face value adjusted by the index-related change in the value of the principal accrued to the end of the year.

Liabilities denominated in a foreign currency, or exchanged from one foreign currency through contractual agreements to one or more other foreign currencies shall be converted into the other foreign currencies at the rate agreed upon in those contracts and shall be converted into the national currency on the basis of the representative market exchange rate prevailing on the last working day of each year.

Liabilities denominated in the national currency and exchanged through contractual agreements to a foreign currency shall be converted into the foreign currency at the rate agreed upon in those contracts and shall be converted into the national currency on the basis of the representative market exchange rate prevailing on the last working day of each year.

Liabilities denominated in a foreign currency and exchanged through contractual agreements to the national currency shall be converted into the national currency at the rate agreed upon in those contracts’.

(percentage of gross domestic product at market prices)

	A	P	FIN	S	UK	EUR-12 ⁽¹⁾	EU-15 ⁽²⁾
1970	18.9	:	11.9	27.0	81.2	:	:
1971	17.8	:	10.7	27.3	77.3	:	:
1972	17.0	:	9.7	27.2	71.8	:	:
1973	17.1	16.6	7.9	26.6	66.9	:	:
1974	17.2	16.2	6.3	26.9	67.0	:	:
1975	23.3	24.0	6.7	26.1	63.1	:	:
1976	26.8	29.5	6.3	24.4	62.4	:	:
1977	29.1	31.2	8.0	26.5	61.3	31.4	34.6
1978	32.8	34.1	11.4	30.6	58.8	33.6	36.5
1979	34.9	38.5	11.5	35.0	55.5	34.2	37.1
1980	36.4	34.9	11.6	39.6	54.9	35.1	38.4
1981	38.1	44.4	11.9	47.6	55.2	38.6	41.9
1982	40.6	47.7	14.3	56.8	54.1	42.8	45.5
1983	44.9	53.2	15.9	60.6	54.3	46.5	48.8
1984	47.5	58.6	15.7	62.1	56.3	49.6	51.6
1985	49.5	66.6	16.4	61.6	54.4	52.8	53.8
1986	54.0	65.3	17.1	61.3	52.8	54.5	54.7
1987	57.9	62.9	18.3	54.3	50.2	56.9	55.8
1988	59.2	62.4	17.1	48.8	43.6	57.3	54.9
1989	58.3	61.0	14.8	43.9	37.8	57.7	54.1
1990	57.5	63.0	14.5	42.1	35.1	59.1	54.9
1991	57.7	64.9	22.9	51.2	35.0	60.8	56.6
1991	57.7	64.9	22.9	51.2	35.0	59.0	55.3
1992	57.5	57.8	41.0	64.8	41.0	62.4	59.6
1993	62.0	61.1	57.3	75.1	47.6	67.5	65.2
1994	64.7	62.0	58.8	77.7	49.6	69.8	67.3
1995	68.5	64.1	57.1	76.6	51.8	72.9	70.2
1996	69.2	62.7	57.1	76.0	52.3	75.4	72.1
1997	64.7	58.9	54.1	73.1	50.8	75.3	71.0
1998	63.9	54.8	48.8	70.5	47.6	73.7	68.9
1999	64.9	54.5	47.3	65.0	45.2	72.6	67.3
2000	63.5	53.6	44.0	55.3	42.4	70.2	64.2
2001	62.3	53.5	42.7	52.3	39.3	68.8	62.5
2002	61.2	53.5	42.0	50.2	37.2	68.4	61.8
2003	58.7	53.3	41.7	47.8	34.8	66.7	59.9

⁽¹⁾ EU-15 excluding DK, S and UK; 1970–91: including D_90.⁽²⁾ 1970–91: including D_90.

Table 78

Main economic indicators 1961–2003
EU-15

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real) ⁽¹⁾					
1.1. Private consumption	4.9	2.1	3.6	1.4	1.7
1.2. Government consumption	4.0	2.7	2.1	1.6	1.1
1.3. Gross fixed capital formation	5.7	0.1	5.8	- 0.2	2.6
1.4. — of which equipment	:	1.9	:	:	:
1.5. — of which construction	:	:	:	:	:
1.6. Exports of goods and services	8.1	4.3	5.0	5.6	9.3
1.7. Imports of goods and services	8.8	2.7	7.5	4.0	8.1
1.8. GDP	4.8	2.0	3.3	1.6	2.8
2. Demand components: contribution to changes in GDP (%) ⁽²⁾					
2.1. Consumption	3.6	1.7	2.6	1.1	1.3
2.2. Investment	1.3	0.0	1.1	0.0	0.5
2.3. Stockbuilding	0.1	- 0.1	0.1	0.0	0.7
2.4. Domestic demand	4.9	1.7	3.8	1.1	2.4
2.5. Exports	:	0.4	0.1	0.7	0.8
2.6. Final demand	:	2.1	3.9	1.8	3.2
2.7. Imports	:	- 0.1	- 0.6	- 0.3	- 0.4
2.8. Net exports	- 0.1	0.4	- 0.5	0.4	0.4
3. Gross savings and investment in % of GDP at current prices ⁽²⁾					
3.1. Private sector savings	:	21.1	21.0	21.5	21.8
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	:	0.4	0.3	- 1.6	- 2.0
3.4. National savings	24.9	21.5	21.3	20.0	19.8
3.5. Gross capital formation	25.3	22.7	21.8	20.6	20.0
3.6. Current account	0.5	- 0.5	- 0.1	- 0.4	0.1
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽²⁾ ⁽³⁾	:	79.3	83.1	80.7	79.8
4.2. Trend GDP gap ⁽²⁾	0.2	- 0.3	0.6	0.2	- 0.7
4.3. Potential GDP gap ⁽²⁾	:	:	0.6	- 0.5	- 1.3
4.4. Profitability index (1961–73 = 100) ⁽¹⁾	100.0	73.4	90.5	96.7	100.1
5. Growth potential					
5.1. Growth of net capital stock (real) ⁽¹⁾	4.6	2.8	2.4	2.1	1.8
5.2. Net capital/output ratio (real) ⁽²⁾	2.9	3.1	3.1	3.2	3.2
5.3. Growth of capital intensity ⁽¹⁾	4.2	2.8	1.1	2.6	2.0
5.4. Labour productivity growth ⁽¹⁾	4.4	2.0	1.9	2.1	2.9
5.5. Total factor productivity growth ⁽¹⁾	3.0	1.1	1.5	1.1	2.1
6. Employment and unemployment					
6.1. Employment ⁽¹⁾	0.3	0.1	1.5	- 0.5	0.0
6.2. Activity rate ⁽²⁾	65.9	65.4	65.9	67.5	67.2
6.3. Employment rate ⁽²⁾ (benchmark)	64.4	61.2	60.1	60.8	59.8
6.4. Employment rate ⁽²⁾ (full-time equivalent)	:	:	:	:	:
6.5. Unemployment rate ⁽²⁾ (Eurostat definition)	:	:	:	10.0	11.1
7. Prices and wages ⁽¹⁾					
7.1. Nominal wages per head	9.9	12.5	6.2	5.1	3.1
7.2. Real wages per head ⁽⁴⁾	5.0	1.4	1.7	0.8	- 0.1
7.3. Nominal unit labour costs	5.2	10.2	4.2	2.9	0.2
7.4. Real unit labour costs	0.0	- 0.3	- 0.7	- 0.8	- 2.4
7.5. GDP deflator	5.2	10.6	5.0	3.8	2.6
7.6. Private consumption deflator	4.6	10.9	4.4	4.2	3.2
8. General government budget, % of GDP ⁽²⁾					
8.1. Expenditure ⁽⁵⁾	:	45.7	47.7	50.1	50.5
8.2. Current revenues ⁽⁵⁾	:	42.0	44.5	45.0	45.1
8.3. Net borrowing (-) or lending (+) ⁽⁵⁾	:	- 3.7	- 3.3	- 5.1	- 5.4
8.4. Net borrowing cyclically adjusted ⁽⁵⁾	:	- 3.5	- 3.6	- 5.2	- 5.0
8.5. Debt (end of period) ⁽⁶⁾	:	53.8	55.0	72.2	67.4
9. Monetary conditions					
9.1. Long-term interest rate ⁽²⁾	7.1	11.9	9.8	8.9	8.2
9.2. Short-term interest rate ⁽²⁾	5.6	11.2	9.8	8.9	6.7
9.3. Yield curve (9.1–9.2) ⁽²⁾	1.3	0.7	0.0	0.1	1.5
9.4. Real long-term interest rate ⁽²⁾ ⁽⁷⁾	1.8	1.2	4.6	5.0	5.4
9.5. Nominal effective exchange rate ⁽¹⁾	0.3	- 3.9	6.3	- 2.3	- 2.1
9.6. Real effective exchange rate ⁽¹⁾ (1991 = 100; ULC in total economy)	88.6	92.1	93.4	96.3	89.9

⁽¹⁾ 1961–91: including West Germany.⁽²⁾ 1961–90: including West Germany.⁽³⁾ Manufacturing industry.⁽⁴⁾ Private consumption deflator.⁽⁵⁾ Break in 1995 (ESA 95 data), 1991–95 average according to the former definition.⁽⁶⁾ Break in 1996 (ESA 95 data).⁽⁷⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
1.8	2.0	2.1	3.2	3.4	2.9	2.3	1.7	2.5
0.7	1.6	1.0	1.4	2.2	1.8	1.8	1.9	1.6
3.2	2.2	3.3	6.7	4.9	4.7	0.9	1.4	3.9
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
8.3	5.0	10.1	6.6	5.2	11.5	3.5	2.0	6.4
7.5	4.3	9.4	10.0	7.2	10.7	2.9	2.8	6.4
2.5	1.7	2.6	2.9	2.6	3.3	1.7	1.4	2.9
1.2	1.5	1.5	2.2	2.4	2.1	1.7	1.4	1.8
0.6	0.4	0.7	1.3	1.0	1.0	0.2	0.3	0.8
0.3	-0.5	0.1	0.4	-0.2	-0.1	-0.3	0.0	0.2
2.2	1.4	2.2	3.9	3.2	3.0	1.6	1.7	2.8
0.8	0.8	1.4	0.7	0.5	2.1	0.5	0.1	1.0
3.0	2.2	3.6	4.5	3.7	5.1	2.1	1.8	3.8
-0.5	-0.5	-1.0	-1.6	-1.1	-1.7	-0.3	-0.4	-1.0
0.3	0.3	0.3	-0.9	-0.6	0.4	0.2	-0.3	0.0
22.4	21.7	20.9	19.9	18.6	18.2	18.3	18.4	18.4
:	:	:	:	:	:	:	:	:
-1.6	-1.1	0.1	1.2	2.2	2.7	2.3	2.0	2.3
20.8	20.5	21.0	21.2	20.8	20.9	20.6	20.3	20.8
20.4	19.7	19.7	20.4	20.6	21.1	20.5	20.4	20.8
0.5	0.9	1.3	0.7	0.2	-0.2	0.1	-0.1	-0.1
82.8	81.0	81.8	83.3	81.6	83.4	:	:	:
-0.5	-1.1	-0.8	-0.2	0.1	1.1	0.4	-0.5	0.0
-1.0	-1.4	-1.0	-0.4	-0.1	0.8	0.1	-0.9	-0.4
103.7	107.8	112.9	118.0	118.2	117.6	116.3	115.7	118.1
1.9	1.9	1.9	2.1	2.3	2.3	2.2	2.1	2.3
3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1
1.2	1.7	1.0	0.5	0.8	0.6	1.1	1.9	1.2
1.7	1.4	1.5	1.3	1.1	1.6	0.5	1.1	1.8
1.2	0.8	1.2	1.1	0.8	1.3	0.1	0.4	1.3
0.8	0.7	1.0	1.5	1.8	1.9	1.1	0.2	1.1
67.2	67.6	67.9	68.3	68.8	69.3	69.4	69.6	70.0
60.1	60.3	60.7	61.6	62.6	63.6	64.2	64.1	64.7
55.4	55.3	55.5	56.1	57.1	57.9	:	:	:
10.7	10.8	10.6	9.9	9.1	8.2	7.7	8.0	7.6
3.5	3.2	2.7	2.2	2.8	3.0	3.3	3.2	3.1
0.2	0.4	0.5	0.5	1.5	1.1	1.0	1.3	1.3
1.7	1.7	1.0	0.9	1.7	1.4	2.7	1.9	1.3
-1.3	-0.8	-0.8	-1.1	0.2	-0.1	0.3	-0.1	-0.5
3.0	2.5	1.9	2.0	1.5	1.5	2.4	2.1	1.8
3.2	2.8	2.2	1.8	1.3	1.9	2.3	1.8	1.8
51.4	51.1	49.4	48.3	47.9	45.7	46.9	47.2	46.6
46.2	46.9	46.9	46.7	47.2	46.9	46.4	46.3	46.0
-5.2	-4.2	-2.5	-1.6	-0.7	1.1	-0.5	-0.9	-0.6
-4.9	-3.7	-2.1	-1.5	-0.8	-0.6	-0.7	-0.7	-0.6
70.3	72.2	71.2	69.0	67.5	64.4	62.7	61.9	60.0
8.6	7.3	6.2	4.9	4.7	5.4	5.0	:	:
7.0	5.4	4.9	4.7	3.5	4.7	4.5	:	:
1.6	2.0	1.3	0.2	1.2	0.7	0.5	:	:
5.4	4.7	4.2	2.9	3.2	3.8	2.6	:	:
5.2	2.6	-4.8	2.3	-6.2	-11.2	-0.1	0.3	-0.6
94.6	98.3	93.2	94.2	88.7	78.4	77.8	78.7	78.7

Table 79

Main economic indicators 1961–2003
EUR-12 ⁽¹⁾
(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real) ⁽²⁾					
1.1. Private consumption	5.5	2.2	3.5	1.4	1.3
1.2. Government consumption	4.3	3.0	2.4	1.7	1.1
1.3. Gross fixed capital formation	5.9	0.0	5.9	0.0	2.2
1.4. — of which equipment	:	1.8	:	:	:
1.5. — of which construction	:	:	:	:	:
1.6. Exports of goods and services	9.0	4.5	5.3	5.6	9.2
1.7. Imports of goods and services	10.1	2.9	7.8	4.3	8.4
1.8. GDP	5.2	2.1	3.3	1.5	2.3
2. Demand components: contribution to changes in GDP (%) ⁽³⁾					
2.1. Consumption	3.9	1.9	2.5	1.2	1.0
2.2. Investment	1.4	0.0	1.2	0.0	0.4
2.3. Stockbuilding	0.1	– 0.1	0.1	0.0	0.6
2.4. Domestic demand	5.4	1.8	3.8	1.1	2.0
2.8. Net exports	– 0.2	0.4	– 0.5	0.4	0.3
3. Gross savings and investment in % of GDP at current prices ⁽³⁾					
3.1. Private sector savings	:	21.9	22.5	22.3	22.2
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	:	0.4	– 0.2	– 1.3	– 1.5
3.4. National savings	26.1	22.3	22.3	21.0	20.6
3.5. Gross capital formation	26.5	23.4	22.0	21.5	20.8
3.6. Current account	0.6	– 0.6	0.6	– 0.3	0.2
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽³⁾ ⁽⁴⁾	:	79.3	82.8	80.8	78.5
4.2. Trend GDP gap ⁽³⁾	0.2	– 0.2	0.1	0.6	– 0.6
4.3. Potential GDP gap ⁽³⁾	:	:	0.1	– 0.2	– 1.4
4.4. Profitability index (1961–73 = 100) ⁽²⁾	100.0	71.0	90.3	95.9	97.6
5. Growth potential					
5.1. Growth of net capital stock (real) ⁽²⁾	4.9	3.0	2.5	2.3	2.0
5.2. Net capital/output ratio (real) ⁽³⁾	2.9	3.1	3.2	3.2	3.2
5.3. Growth of capital intensity ⁽²⁾	4.6	3.0	1.2	2.7	2.4
5.4. Labour productivity growth ⁽²⁾	4.8	2.1	2.0	1.9	2.7
5.5. Total factor productivity growth ⁽²⁾	3.3	1.1	1.6	0.9	1.8
6. Employment and unemployment					
6.1. Employment ⁽²⁾	0.3	0.1	1.4	– 0.3	– 0.1
6.2. Activity rate ⁽³⁾	64.3	63.2	63.3	65.4	65.3
6.3. Employment rate ⁽³⁾ (benchmark)	62.7	59.1	57.5	58.9	57.9
6.4. Employment rate ⁽³⁾ (full-time equivalent)	:	:	:	:	:
6.5. Unemployment rate ⁽³⁾ (Eurostat definition)	:	:	:	10.2	11.5
7. Prices and wages ⁽²⁾					
7.1. Nominal wages per head	10.5	12.2	5.6	5.1	3.1
7.2. Real wages per head ⁽⁵⁾	5.7	1.4	1.4	0.8	– 0.4
7.3. Nominal unit labour costs	5.3	9.8	3.5	3.1	0.4
7.4. Real unit labour costs	0.1	– 0.4	– 1.2	– 0.7	– 2.4
7.5. GDP deflator	5.2	10.2	4.7	3.9	2.9
7.6. Private consumption deflator	4.5	10.7	4.1	4.2	3.6
8. General government budget, % of GDP ⁽³⁾					
8.1. Expenditure ⁽⁶⁾	:	45.4	48.6	50.7	51.0
8.2. Current revenues ⁽⁶⁾	:	41.5	44.4	45.7	46.0
8.3. Net borrowing (–) or lending (+) ⁽⁶⁾	:	– 3.9	– 4.2	– 5.0	– 5.1
8.4. Net borrowing cyclically adjusted ⁽⁶⁾	:	– 3.8	– 4.3	– 5.3	– 4.8
8.5. Debt (end of period) ⁽⁷⁾	:	52.9	59.2	73.1	70.0
9. Monetary conditions					
9.1. Long-term interest rate ⁽³⁾	6.9	11.6	9.7	9.0	8.2
9.2. Short-term interest rate ⁽³⁾	5.2	11.0	9.3	9.0	6.9
9.3. Yield curve (9.1–9.2) ⁽³⁾	1.7	0.6	0.4	0.0	1.3
9.4. Real long-term interest rate ⁽³⁾ ⁽⁸⁾	1.6	1.5	4.8	5.0	5.1
9.5. Nominal effective exchange rate ⁽²⁾	1.4	– 1.9	6.0	– 0.2	– 1.7
9.6. Real effective exchange rate ⁽²⁾ (1991 = 100; ULC in total economy)	94.5	102.2	100.5	103.0	100.5

⁽¹⁾ EU-15 excluding DK, S and UK.⁽²⁾ 1961–91: including West Germany.⁽³⁾ 1961–90: including West Germany.⁽⁴⁾ Manufacturing industry.⁽⁵⁾ Private consumption deflator.⁽⁶⁾ Break in 1995 (ESA 95 data), 1991–95 average according to the former definition.⁽⁷⁾ Break in 1996 (ESA 95 data).⁽⁸⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
1.8	1.6	1.8	3.1	3.2	2.7	2.0	1.6	2.5
0.6	1.6	1.3	1.3	2.2	1.9	1.7	1.7	1.4
3.0	1.7	2.7	5.6	5.5	4.6	0.7	1.3	3.9
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
8.2	4.4	10.4	7.2	5.0	11.8	3.8	2.1	6.4
7.9	3.3	9.2	10.1	7.1	10.6	2.9	2.8	6.4
2.3	1.5	2.4	2.9	2.7	3.4	1.6	1.3	2.8
1.2	1.3	1.3	2.0	2.3	1.9	1.5	1.2	1.7
0.6	0.3	0.5	1.1	1.2	1.0	0.1	0.3	0.8
0.3	-0.5	0.1	0.4	-0.2	-0.1	-0.3	0.0	0.2
2.2	1.1	1.9	3.6	3.3	2.8	1.3	1.5	2.7
0.2	0.4	0.5	-0.7	-0.6	0.5	0.4	-0.2	0.1
23.0	22.4	21.7	21.0	19.9	19.6	19.7	19.8	19.7
:	:	:	:	:	:	:	:	:
-1.3	-1.0	0.2	1.0	2.0	2.4	2.0	1.7	2.2
21.7	21.4	21.9	21.9	21.8	22.1	21.7	21.5	21.9
21.0	20.3	20.3	21.0	21.3	22.1	21.2	21.1	21.5
0.7	1.1	1.5	0.9	0.5	0.0	0.4	0.3	0.3
82.5	80.6	81.0	82.9	81.8	83.8	:	:	:
-0.5	-1.2	-1.0	-0.4	0.0	1.1	0.4	-0.6	-0.1
-1.2	-1.7	-1.5	-0.7	-0.3	0.7	0.1	-0.9	-0.4
100.9	104.9	109.5	115.3	115.8	115.7	114.7	114.4	116.9
2.0	2.0	2.0	2.1	2.3	2.4	2.2	2.1	2.3
3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
1.5	2.0	1.2	0.5	0.7	0.5	1.0	1.9	1.0
1.7	1.4	1.5	1.2	1.1	1.5	0.3	1.0	1.6
1.1	0.7	1.1	1.0	0.8	1.3	-0.1	0.3	1.2
0.6	0.6	0.8	1.7	1.8	2.1	1.2	0.3	1.2
65.4	65.8	66.1	66.7	67.2	67.7	68.0	68.2	68.6
58.1	58.3	58.6	59.6	60.6	61.8	62.4	62.4	63.1
54.3	54.1	54.2	54.9	55.9	56.8	:	:	:
11.2	11.5	11.5	10.8	9.9	8.9	8.3	8.6	8.2
3.6	3.0	2.3	1.5	2.3	2.5	3.0	3.0	2.8
0.2	0.3	0.2	0.0	1.0	0.3	0.5	1.1	1.0
1.7	1.5	0.6	0.3	1.2	1.0	2.6	1.9	1.2
-1.3	-0.9	-1.0	-1.5	-0.1	-0.4	0.2	-0.1	-0.5
3.1	2.4	1.7	1.8	1.2	1.5	2.4	2.0	1.7
3.3	2.7	2.1	1.6	1.2	2.2	2.5	1.8	1.8
51.6	51.5	50.2	49.3	49.0	47.1	47.9	48.2	47.5
46.5	47.2	47.6	47.1	47.7	47.3	46.8	46.9	46.6
-5.1	-4.3	-2.6	-2.2	-1.3	0.3	-1.1	-1.4	-1.0
-4.8	-3.7	-2.2	-2.0	-1.3	-1.3	-1.3	-1.1	-0.9
73.1	75.6	75.5	73.9	72.8	70.4	69.1	68.6	67.0
8.6	7.2	6.0	4.8	4.7	5.5	5.0	:	:
7.0	5.2	4.5	4.2	3.1	4.5	4.4	:	:
1.7	2.0	1.4	0.6	1.5	1.0	0.6	:	:
5.4	4.7	4.2	2.9	3.4	3.9	2.6	:	:
5.9	0.3	-8.7	0.5	-4.6	-10.1	1.6	0.7	-0.1
106.4	107.0	96.4	95.0	90.0	79.9	80.9	81.8	81.7

Table 80

Main economic indicators 1961–2003 Belgium

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	4.3	2.0	3.1	1.4	2.0
1.2. Government consumption	5.5	2.5	0.8	1.5	1.4
1.3. Gross fixed capital formation	5.1	-0.2	9.2	-0.1	-0.1
1.4. — of which equipment	:	:	:	:	:
1.5. — of which construction	:	:	:	:	:
1.6. Exports of goods and services	9.3	2.8	6.0	4.1	8.4
1.7. Imports of goods and services	8.9	2.0	7.2	3.7	7.3
1.8. GDP	4.9	2.0	3.2	1.4	2.8
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.5	1.7	1.9	1.1	1.4
2.2. Investment	1.1	0.0	1.7	0.0	0.0
2.3. Stockbuilding	0.2	-0.1	0.0	0.0	0.4
2.4. Domestic demand	4.8	1.7	3.5	1.1	1.8
2.5. Exports	4.1	1.5	3.4	2.6	5.3
2.6. Final demand	8.9	3.2	6.9	3.7	7.1
2.7. Imports	-3.9	-1.2	-3.7	-2.3	-4.4
2.8. Net exports	0.2	0.3	-0.4	0.3	0.9
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	22.4	23.3	26.6	28.1	27.3
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	1.7	-3.5	-5.0	-3.9	-2.4
3.4. National savings	24.1	19.8	21.6	24.2	24.9
3.5. Gross capital formation	25.5	22.6	20.4	20.5	19.5
3.6. Current account	1.4	-1.4	1.2	3.7	5.4
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	75.6	78.7	78.0	77.6
4.2. Trend GDP gap	0.0	0.0	0.2	0.1	-1.2
4.3. Potential GDP gap	:	:	0.2	0.0	-1.1
4.4. Profitability index (1961–73 = 100)	100.0	71.0	91.3	88.8	88.6
5. Growth potential					
5.1. Growth of net capital stock (real)	3.8	3.0	2.3	2.4	2.1
5.2. Net capital/output ratio (real)	2.8	2.8	2.9	2.9	2.9
5.3. Growth of capital intensity	3.3	3.3	1.3	2.5	2.5
5.4. Labour productivity growth	4.4	2.3	2.2	1.6	3.2
5.5. Total factor productivity growth	3.2	1.1	1.7	0.7	2.3
6. Employment and unemployment					
6.1. Employment	0.5	-0.3	1.2	-0.1	-0.3
6.2. Activity rate	59.9	60.6	59.4	60.7	61.2
6.3. Employment rate (benchmark)	58.7	56.0	54.3	55.5	55.0
6.4. Employment rate (full-time equivalent)	:	:	:	53.6	53.2
6.5. Unemployment rate (Eurostat definition)	1.9	7.7	8.7	8.5	10.0
7. Prices and wages					
7.1. Nominal wages per head	9.1	9.5	3.9	4.7	4.1
7.2. Real wages per head ⁽²⁾	5.2	1.9	1.9	2.1	1.2
7.3. Nominal unit labour costs	4.5	7.0	1.7	3.1	0.9
7.4. Real unit labour costs	0.4	0.3	-1.2	0.3	-0.9
7.5. GDP deflator	4.1	6.7	2.9	2.7	1.8
7.6. Private consumption deflator	3.7	7.4	1.9	2.5	2.9
7.7. Terms of trade	0.1	-0.9	1.3	0.3	-0.6
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	38.5	56.1	55.3	54.0	53.7
8.2. Current revenues ⁽³⁾	36.0	47.1	47.4	47.6	48.7
8.3. Net borrowing (-) or lending (+) ⁽³⁾	-2.5	-9.0	-7.9	-6.4	-5.0
8.4. Net borrowing cyclically adjusted ⁽³⁾	-2.5	-9.0	-8.0	-6.4	-4.3
8.5. Debt (end of period) ⁽⁴⁾	61.7	121.8	127.7	133.4	136.4
9. Monetary conditions					
9.1. Long-term interest rate	6.5	10.6	8.5	8.1	7.8
9.2. Short-term interest rate	5.3	10.7	8.1	7.5	5.7
9.3. Yield curve (9.1–9.2)	1.3	-0.1	0.4	0.6	2.1
9.4. Real long-term interest rate ⁽⁵⁾	2.3	3.7	5.4	5.2	5.8
9.5. Nominal effective exchange rate	0.4	-0.2	2.8	1.9	1.8
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	103.0	108.8	97.4	105.1	107.4

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ From 1974 (ESA 95 data), 1961–73 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
0.7	1.2	2.0	2.9	2.1	3.8	2.0	1.6	2.6
1.3	2.4	0.3	1.5	3.2	2.5	2.4	1.1	1.6
5.6	1.3	6.8	4.3	3.3	2.6	-0.6	1.6	3.8
:	:	:	:	:	:	:	:	:
5.7	2.9	6.1	5.8	5.0	9.7	0.7	1.9	5.6
4.9	2.5	5.1	7.5	4.1	9.7	1.0	2.0	5.6
2.6	1.2	3.6	2.2	3.0	4.0	1.3	1.3	2.8
0.7	1.2	1.1	1.9	1.8	2.6	1.6	1.1	1.7
1.1	0.3	1.4	0.9	0.7	0.5	-0.1	0.3	0.8
0.1	-0.6	0.1	0.3	-0.4	0.5	0.1	-0.2	0.0
1.9	0.9	2.6	3.1	2.1	3.6	1.5	1.2	2.5
3.8	2.0	4.3	4.2	3.7	7.4	0.5	1.5	4.4
5.7	2.8	6.9	7.2	5.9	10.9	2.1	2.7	6.9
-3.1	-1.6	-3.4	-5.0	-2.8	-6.9	-0.7	-1.5	-4.2
0.7	0.3	0.9	-0.8	0.9	0.5	-0.2	0.1	0.3
27.4	25.8	25.0	23.9	24.1	23.6	23.2	23.1	22.8
9.5	7.9	7.1	6.5	6.7	5.7	:	:	:
-2.0	-1.5	0.5	1.6	1.9	2.6	2.1	2.1	2.4
25.4	24.3	25.4	25.5	26.0	26.2	25.3	25.1	25.2
20.1	19.5	20.3	20.4	20.7	21.5	20.9	20.6	20.7
5.3	4.8	5.1	5.0	5.3	4.7	4.4	4.6	4.5
80.8	79.5	81.4	82.7	80.9	84.0	:	:	:
-0.7	-1.7	-0.5	-0.5	0.1	1.7	0.7	-0.3	0.1
-0.9	-1.8	-0.5	-0.5	0.2	1.8	0.8	-0.3	0.3
92.7	90.5	94.9	97.2	95.6	90.0	88.5	88.3	92.2
2.2	2.0	2.2	2.2	2.2	1.7	1.6	1.6	1.7
2.9	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.8
1.5	1.6	1.4	1.0	0.8	0.1	0.3	1.2	0.5
1.8	0.8	2.8	1.0	1.6	2.4	0.1	0.9	1.5
1.3	0.3	2.3	0.7	1.3	2.3	0.0	0.5	1.3
0.8	0.6	0.7	1.3	1.2	1.6	1.3	0.4	1.3
61.6	61.9	62.0	62.9	63.2	62.8	63.3	63.4	64.0
55.4	55.8	56.1	56.8	57.5	58.2	58.7	58.7	59.3
53.4	53.3	53.8	53.9	55.6	57.5	:	:	:
9.9	9.7	9.4	9.5	8.8	7.0	6.9	7.0	6.9
2.6	1.6	2.9	1.8	3.2	3.2	3.2	3.1	2.3
0.0	-0.5	1.1	0.6	2.1	0.9	0.8	1.7	0.9
0.7	0.8	0.1	0.8	1.6	0.8	3.1	2.1	0.8
-1.0	-0.4	-1.2	-0.8	0.4	-0.6	1.0	0.2	-0.8
1.8	1.2	1.3	1.6	1.2	1.4	2.1	1.9	1.5
2.6	2.1	1.8	1.2	1.0	2.2	2.4	1.4	1.4
-0.9	-0.8	-0.8	1.2	-0.8	-1.9	0.0	0.5	0.0
52.8	52.8	51.4	50.7	50.3	49.4	49.1	49.6	49.1
48.5	49.1	49.4	49.8	49.7	49.5	49.0	49.5	49.3
-4.4	-3.7	-2.0	-0.8	-0.6	0.1	-0.1	-0.1	0.2
-3.9	-2.7	-1.7	-0.5	-0.7	-1.0	-0.7	0.1	0.1
133.4	130.1	124.7	119.3	115.0	109.3	107.0	103.9	99.4
7.5	6.5	5.8	4.7	4.8	5.6	5.1	:	:
4.7	3.2	3.4	3.5	3.0	4.4	4.4	:	:
2.8	3.3	2.3	1.2	1.8	1.2	0.7	:	:
5.6	5.3	4.4	3.1	3.5	4.2	3.0	:	:
4.6	-2.0	-4.3	0.3	-1.4	-3.6	0.7	0.2	0.0
111.4	108.6	103.0	103.0	101.6	97.3	98.3	98.9	98.4

Table 81

Main economic indicators 1961–2003 Denmark

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	3.7	1.2	0.3	2.3	6.5
1.2. Government consumption	5.7	2.7	0.3	2.1	3.0
1.3. Gross fixed capital formation	6.7	-1.0	1.7	1.8	7.7
1.4. — of which equipment	:	2.5	1.8	2.5	15.0
1.5. — of which construction	:	-3.0	0.6	-0.6	0.6
1.6. Exports of goods and services	6.5	4.3	5.2	2.7	7.0
1.7. Imports of goods and services	7.1	2.3	3.9	3.8	12.3
1.8. GDP	4.4	1.5	1.3	2.0	5.5
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.4	1.4	0.3	1.7	4.1
2.2. Investment	1.5	-0.2	0.3	0.3	1.3
2.3. Stockbuilding	-0.1	0.0	-0.1	0.1	1.1
2.4. Domestic demand	4.8	1.1	0.8	2.2	6.5
2.5. Exports	1.3	1.0	1.6	0.9	2.4
2.6. Final demand	6.2	2.1	2.3	3.1	8.9
2.7. Imports	-1.7	-0.6	-1.0	-1.1	-3.5
2.8. Net exports	-0.4	0.5	0.5	-0.2	-1.0
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	17.6	17.1	16.5	20.5	19.7
3.2. Net savings of households	:	:	-0.9	0.3	-1.6
3.3. General government savings	6.2	1.0	2.8	-0.7	-0.6
3.4. National savings	23.8	18.1	19.3	19.8	19.1
3.5. Gross capital formation	26.0	21.6	21.4	18.2	17.6
3.6. Current account	-1.9	-3.5	-2.2	1.6	1.5
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	64.8	80.2	81.5
4.2. Trend GDP gap	0.6	-0.7	1.4	-1.5	-0.7
4.3. Potential GDP gap	:	:	2.0	-0.8	0.2
4.4. Profitability index (1961–73 = 100)	100.0	76.9	85.2	97.6	109.4
5. Growth potential					
5.1. Growth of net capital stock (real)	4.3	1.9	1.8	0.8	0.7
5.2. Net capital/output ratio (real)	2.9	3.2	3.1	3.1	3.0
5.3. Growth of capital intensity	3.1	1.6	1.7	1.0	-0.7
5.4. Labour productivity growth	3.3	1.2	1.2	2.2	4.0
5.5. Total factor productivity growth	2.1	0.6	0.5	1.8	4.3
6. Employment and unemployment					
6.1. Employment	1.3	0.5	0.9	-0.6	-1.7
6.2. Activity rate	72.1	77.1	81.9	80.5	78.0
6.3. Employment rate (benchmark)	71.4	72.2	76.7	73.4	71.5
6.4. Employment rate (full-time equivalent)	:	:	:	66.0	65.6
6.5. Unemployment rate (Eurostat definition)	1.0	6.4	6.4	8.6	8.2
7. Prices and wages					
7.1. Nominal wages per head	10.8	10.6	5.4	3.1	1.5
7.2. Real wages per head ⁽²⁾	4.0	0.8	1.4	0.8	-1.5
7.3. Nominal unit labour costs	7.3	9.3	4.2	0.9	-2.4
7.4. Real unit labour costs	0.3	-0.2	0.1	-1.2	-4.1
7.5. GDP deflator	7.0	9.5	4.1	2.1	1.7
7.6. Private consumption deflator	6.6	9.7	4.0	2.3	3.0
7.7. Terms of trade	0.4	-1.3	1.7	0.5	-0.1
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	34.7	52.1	56.0	60.1	61.6
8.2. Current revenues ⁽³⁾	38.4	50.0	57.3	57.6	59.1
8.3. Net borrowing (-) or lending (+) ⁽³⁾	2.1	-2.1	1.3	-2.4	-2.4
8.4. Net borrowing cyclically adjusted ⁽³⁾	:	-1.6	0.2	-1.2	-1.9
8.5. Debt (end of period) ⁽⁴⁾	8.3	69.8	57.7	69.3	73.5
9. Monetary conditions					
9.1. Long-term interest rate	9.0	16.0	10.8	8.7	7.9
9.2. Short-term interest rate	7.0	12.6	9.6	8.7	6.2
9.3. Yield curve (9.1–9.2)	2.0	3.4	1.3	0.0	1.7
9.4. Real long-term interest rate ⁽⁵⁾	1.8	5.9	6.5	6.5	6.1
9.5. Nominal effective exchange rate	0.1	-1.1	3.0	1.8	0.1
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	80.4	95.5	101.8	102.2	100.7

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ From 1974 (ESA 95 data), 1961–73 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
1.2	2.5	2.9	3.6	0.5	-0.1	1.2	1.7	2.0
2.1	3.4	0.8	3.1	1.4	1.0	1.7	1.4	1.2
11.6	3.9	10.9	7.8	1.6	9.9	-2.3	3.3	4.1
11.7	-2.5	15.4	7.9	3.5	12.7	-3.1	0.9	5.1
8.3	10.0	5.1	4.9	-2.7	7.0	-7.6	3.0	2.7
2.9	4.3	4.1	2.4	9.7	11.6	4.1	1.8	5.6
7.3	3.5	10.0	7.4	2.2	10.8	2.5	2.8	5.5
2.8	2.5	3.0	2.8	2.1	3.2	1.3	1.6	2.5
1.2	2.1	1.7	2.6	0.6	0.2	1.0	1.2	1.2
2.0	0.7	2.1	1.6	0.3	2.1	-0.5	0.7	0.9
0.8	-0.7	0.9	0.2	-1.6	0.2	0.1	0.0	0.1
3.9	2.1	4.6	4.4	-0.6	2.5	0.5	1.9	2.2
1.0	1.5	1.5	0.9	3.5	4.5	1.7	0.8	2.4
5.0	3.6	6.1	5.3	2.9	7.0	2.2	2.7	4.6
-2.2	-1.1	-3.2	-2.5	-0.8	-3.8	-0.9	-1.1	-2.1
-1.2	0.4	-1.7	-1.7	2.8	0.7	0.8	-0.3	0.3
20.9	19.5	19.0	18.1	17.8	19.7	20.2	20.3	20.4
-0.2	-1.2	-1.9	-2.0	-3.2	:	:	:	:
-0.5	0.9	2.2	2.8	4.6	4.0	3.7	3.2	3.7
20.4	20.4	21.2	20.9	22.4	23.7	23.9	23.5	24.1
19.7	18.9	20.8	21.7	20.2	21.6	20.6	21.0	21.4
0.7	1.5	0.4	-0.8	2.2	2.1	3.2	2.5	2.7
82.9	81.2	83.2	85.5	82.2	82.5	:	:	:
-0.2	0.1	0.6	1.0	0.7	1.5	0.5	-0.2	0.0
0.7	0.8	1.3	1.6	1.4	2.2	1.1	0.4	0.7
113.0	117.3	122.3	118.6	119.3	125.8	127.4	126.6	128.8
1.2	1.2	1.7	1.7	1.5	2.0	1.7	1.8	2.0
3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.9	2.8
0.7	0.6	0.5	0.5	0.4	1.3	1.3	1.6	1.5
2.3	1.9	1.8	1.5	1.0	2.5	0.9	1.5	2.0
2.0	1.6	1.6	1.3	0.8	2.0	0.4	0.8	1.4
2.3	1.1	2.1	0.4	0.5	0.7	0.4	0.2	0.5
78.6	78.7	79.1	79.0	79.3	79.4	79.5	79.7	79.9
72.8	73.2	74.6	74.8	75.2	75.7	75.8	75.9	76.2
66.8	67.0	68.1	67.8	69.7	69.3	:	:	:
7.2	6.8	5.6	5.2	5.2	4.7	4.6	4.7	4.6
3.8	4.1	3.7	3.8	4.0	3.9	3.8	3.7	3.7
1.8	2.0	1.4	2.0	1.4	0.7	1.3	1.9	1.7
1.5	2.2	1.9	2.3	2.9	1.3	2.9	2.2	1.6
-0.3	-0.3	-0.3	0.4	-0.1	-2.2	-0.1	0.4	-0.6
1.8	2.5	2.2	1.9	3.0	3.7	2.9	1.8	2.3
1.9	2.1	2.2	1.8	2.6	3.1	2.5	1.8	2.0
0.2	1.8	0.8	0.4	0.8	0.4	0.9	-0.1	-0.1
60.3	59.8	58.0	56.9	55.3	53.2	52.6	52.7	52.0
58.0	58.8	58.3	58.0	58.4	55.6	54.8	54.3	54.0
-2.3	-1.0	0.4	1.1	3.1	2.5	2.2	1.6	2.0
-2.1	-1.0	-0.1	0.4	2.5	1.3	1.6	1.8	2.0
69.3	65.1	61.2	55.6	52.0	46.1	43.2	42.5	40.0
8.3	7.2	6.2	4.9	4.9	5.6	5.1	:	:
6.1	3.9	3.7	4.1	3.3	5.0	4.9	:	:
2.2	3.3	2.6	0.8	1.6	0.7	0.2	:	:
6.4	4.6	4.0	3.0	1.9	1.9	2.1	:	:
4.9	-0.8	-3.3	1.0	-1.6	-4.5	1.4	0.4	-0.1
105.5	105.6	103.1	105.1	105.0	99.8	101.2	102.2	102.6

Table 82

Main economic indicators 1961–2003 Federal Republic of Germany

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real) ⁽¹⁾					
1.1. Private consumption	4.9	1.9	3.6	2.3	1.0
1.2. Government consumption	4.5	2.2	1.4	1.9	2.4
1.3. Gross fixed capital formation	3.9	– 0.3	4.8	1.8	4.0
1.4. — of which equipment	4.9	1.6	7.2	– 2.4	– 1.9
1.5. — of which construction	3.4	– 1.4	3.1	4.0	6.9
1.6. Exports of goods and services	7.6	4.7	5.2	3.7	7.6
1.7. Imports of goods and services	9.1	3.3	6.1	4.2	7.4
1.8. GDP	4.3	1.7	3.4	2.0	2.3
2. Demand components: contribution to changes in GDP (%) ⁽²⁾					
2.1. Consumption	3.4	1.5	2.2	1.7	1.1
2.2. Investment	1.0	– 0.1	1.0	0.4	0.9
2.3. Stockbuilding	0.0	– 0.1	0.1	0.0	0.3
2.4. Domestic demand	4.4	1.3	3.3	2.0	2.3
2.5. Exports	1.2	1.1	1.5	1.1	1.7
2.6. Final demand	5.6	2.5	4.8	3.1	4.0
2.7. Imports	– 1.3	– 0.7	– 1.5	– 1.1	– 1.6
2.8. Net exports	0.0	0.4	0.1	0.0	0.1
3. Gross savings and investment in % of GDP at current prices ⁽²⁾					
3.1. Private sector savings	21.0	19.8	22.4	21.5	20.9
3.2. Net savings of households	:	:	:	7.9	7.5
3.3. General government savings	6.0	2.1	2.0	1.0	1.1
3.4. National savings	27.1	21.9	24.4	22.4	22.0
3.5. Gross capital formation	26.4	21.0	20.2	23.3	23.2
3.6. Current account	0.7	0.8	4.2	– 0.9	– 1.2
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽²⁾ ⁽³⁾	:	80.4	86.0	83.6	81.1
4.2. Trend GDP gap ⁽²⁾	0.3	– 0.4	– 0.9	2.1	0.8
4.3. Potential GDP gap ⁽²⁾	:	:	– 0.6	1.6	0.4
4.4. Profitability index (1961–73 = 100) ⁽¹⁾	100.0	73.7	81.1	86.9	87.7
5. Growth potential					
5.1. Growth of net capital stock (real) ⁽¹⁾	5.1	2.6	2.1	2.5	2.4
5.2. Net capital/output ratio (real) ⁽²⁾	3.2	3.5	3.6	3.4	3.5
5.3. Growth of capital intensity ⁽¹⁾	4.8	2.8	0.6	2.6	2.6
5.4. Labour productivity growth ⁽¹⁾	4.0	1.9	1.9	2.1	2.5
5.5. Total factor productivity growth ⁽¹⁾	2.3	0.9	1.7	1.1	1.5
6. Employment and unemployment					
6.1. Employment ⁽¹⁾	0.2	– 0.2	1.4	– 0.2	– 0.1
6.2. Activity rate ⁽²⁾	68.6	66.3	66.6	72.2	72.1
6.3. Employment rate ⁽²⁾ (benchmark)	68.1	63.5	62.6	67.1	66.2
6.4. Employment rate ⁽²⁾ (full-time equivalent)	:	:	:	61.0	59.8
6.5. Unemployment rate ⁽²⁾ (Eurostat definition)	0.7	4.2	5.9	7.3	8.4
7. Prices and wages ⁽¹⁾					
7.1. Nominal wages per head	9.1	5.8	3.5	5.4	3.0
7.2. Real wages per head ⁽⁴⁾	5.5	1.4	2.1	2.0	0.4
7.3. Nominal unit labour costs	4.9	3.8	1.6	3.2	0.5
7.4. Real unit labour costs	0.5	– 0.3	– 0.8	– 0.2	– 2.0
7.5. GDP deflator	4.4	4.1	2.4	3.4	2.5
7.6. Private consumption deflator	3.4	4.3	1.4	3.3	2.6
7.7. Terms of trade	1.5	– 1.6	2.6	0.9	0.4
8. General government budget, % of GDP ⁽²⁾					
8.1. Expenditure ⁽⁵⁾	37.9	47.6	46.0	48.6	49.0
8.2. Current revenues ⁽⁵⁾	38.2	44.9	44.5	45.7	46.5
8.3. Net borrowing (–) or lending (+) ⁽⁵⁾	0.4	– 2.8	– 1.5	– 2.9	– 2.4
8.4. Net borrowing cyclically adjusted ⁽⁵⁾	0.2	– 2.6	– 1.0	– 3.9	– 2.8
8.5. Debt (end of period) ⁽⁶⁾	18.3	41.7	43.5	57.1	49.4
9. Monetary conditions					
9.1. Long-term interest rate ⁽²⁾	7.2	8.0	6.8	7.3	6.9
9.2. Short-term interest rate ⁽²⁾	5.8	6.8	5.7	7.1	5.3
9.3. Yield curve (9.1–9.2) ⁽²⁾	1.4	1.2	1.1	0.2	1.5
9.4. Real long-term interest rate ⁽²⁾ ⁽⁷⁾	2.7	3.8	4.2	3.8	4.3
9.5. Nominal effective exchange rate ⁽¹⁾	2.6	3.2	4.5	2.4	0.2
9.6. Real effective exchange rate ⁽¹⁾ (1991 = 100; ULC in total economy)	97.4	105.8	104.7	110.1	112.3

⁽¹⁾ 1961–91: West Germany.⁽²⁾ 1961–90: West Germany.⁽³⁾ Manufacturing industry.⁽⁴⁾ Private consumption deflator.⁽⁵⁾ Break in 1991 (ESA 95 data).⁽⁶⁾ Break in 1996 (ESA 95 data).⁽⁷⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
2.0	1.0	0.6	1.8	3.1	1.5	1.5	0.6	1.7
1.5	1.8	0.4	1.2	1.6	1.2	1.4	1.3	1.3
-0.7	-0.8	0.6	3.0	4.2	2.3	-2.7	-0.3	3.7
1.1	1.7	3.7	9.2	7.2	8.7	-0.5	-0.2	7.0
-1.8	-2.8	-1.5	-1.0	1.5	-2.5	-5.1	-1.0	0.5
5.7	5.1	11.2	6.8	5.6	13.2	4.8	1.2	6.6
5.6	3.1	8.3	8.9	8.5	10.0	2.0	2.1	6.3
1.7	0.8	1.4	2.0	1.8	3.0	0.7	0.7	2.8
1.5	0.9	0.4	1.2	2.1	1.1	1.1	0.6	1.2
-0.2	-0.2	0.1	0.7	0.9	0.5	-0.6	-0.1	0.8
0.3	-0.5	0.0	0.5	-0.4	0.4	-0.8	0.4	0.5
1.7	0.3	0.5	2.4	2.5	2.0	-0.3	0.9	2.5
1.3	1.2	2.9	1.9	1.7	4.0	1.6	0.4	2.3
3.0	1.5	3.4	4.3	4.2	6.0	1.3	1.4	4.8
-1.3	-0.7	-2.0	-2.3	-2.4	-3.0	-0.6	-0.7	-2.1
0.1	0.5	0.9	-0.4	-0.7	1.1	1.0	-0.3	0.2
22.0	21.9	21.5	21.0	19.8	19.8	20.3	20.4	20.5
7.2	7.0	6.7	6.6	6.4	6.3	:	:	:
-0.1	-0.5	-0.1	0.5	1.2	1.5	0.1	-0.2	0.3
21.9	21.3	21.4	21.5	21.0	21.3	20.4	20.3	20.7
22.7	21.6	21.5	21.8	21.8	22.2	20.5	20.5	20.8
-0.8	-0.3	-0.1	-0.3	-0.8	-1.0	-0.1	-0.2	-0.1
84.6	82.2	83.2	85.5	84.0	85.9	:	:	:
0.6	-0.5	-0.9	-0.7	-0.6	0.6	-0.4	-1.5	-0.6
0.1	-0.9	-1.2	-0.9	-0.8	0.4	-0.5	-1.5	-0.5
87.8	89.7	92.9	96.4	97.3	96.3	96.6	97.7	100.7
2.2	2.0	1.9	1.9	2.0	2.0	1.7	1.6	1.7
3.5	3.6	3.6	3.6	3.6	3.5	3.6	3.6	3.6
2.0	2.3	2.1	1.0	1.0	0.5	1.7	1.9	0.9
1.5	1.1	1.6	1.0	0.8	1.4	0.6	1.0	2.0
0.7	0.2	0.8	0.6	0.4	1.3	0.0	0.3	1.6
0.2	-0.3	-0.2	0.9	1.1	1.6	0.1	-0.3	0.8
71.9	72.1	72.5	72.8	73.1	73.6	73.6	73.7	74.1
66.2	65.9	65.6	66.3	67.0	68.0	68.1	67.9	68.6
59.7	58.7	57.9	57.7	58.3	58.6	:	:	:
8.2	8.9	9.9	9.3	8.6	7.9	7.8	8.2	7.8
3.6	1.3	0.9	1.2	1.4	1.2	2.0	2.2	2.4
1.7	-0.4	-1.1	0.1	1.0	-0.2	0.1	0.7	0.9
2.1	0.2	-0.7	0.2	0.6	-0.2	1.3	1.2	0.4
0.1	-0.8	-1.4	-0.9	0.1	0.2	0.0	-0.1	-0.3
2.0	1.0	0.7	1.1	0.5	-0.4	1.3	1.3	0.8
1.9	1.7	2.0	1.1	0.4	1.4	1.8	1.6	1.5
1.2	-0.4	-1.8	2.0	0.4	-4.5	-0.2	0.5	-0.1
49.6	50.3	49.3	48.8	48.9	45.9	48.6	49.4	48.6
46.1	46.8	46.6	46.6	47.4	47.1	46.0	46.7	46.4
-3.5	-3.4	-2.7	-2.2	-1.6	1.2	-2.5	-2.7	-2.2
-3.7	-3.2	-2.3	-1.9	-1.3	-1.6	-2.3	-2.0	-1.9
57.1	59.8	61.0	60.9	61.3	60.3	60.0	61.0	60.6
6.8	6.2	5.7	4.6	4.5	5.3	4.8	:	:
4.5	3.3	3.3	3.5	3.0	4.4	4.4	:	:
2.3	2.9	2.4	1.1	1.5	0.9	0.4	:	:
4.7	5.1	5.0	3.4	4.0	5.7	3.4	:	:
6.1	-2.5	-5.2	0.6	-2.1	-5.0	0.7	0.3	-0.1
119.8	115.2	106.9	106.5	103.2	96.0	94.9	94.7	93.9

Table 83

Main economic indicators 1961–2003 Greece

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	6.8	3.4	3.1	1.8	2.0
1.2. Government consumption	6.2	5.0	– 0.1	0.5	– 1.1
1.3. Gross fixed capital formation	9.6	– 2.2	2.3	– 0.2	– 2.8
1.4. — of which equipment	12.8	0.7	5.4	4.6	– 0.3
1.5. — of which construction	8.9	– 3.3	0.8	– 2.8	– 4.3
1.6. Exports of goods and services	11.4	5.8	3.9	3.5	6.6
1.7. Imports of goods and services	12.9	2.9	8.5	3.6	1.3
1.8. GDP	8.5	1.7	1.2	1.2	2.0
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	5.1	2.8	2.2	1.4	1.4
2.2. Investment	3.0	– 0.6	0.5	0.0	– 0.6
2.3. Stockbuilding	1.4	– 0.5	0.0	0.3	0.4
2.4. Domestic demand	9.5	1.6	2.7	1.7	1.1
2.5. Exports	0.8	0.7	0.7	0.7	1.3
2.6. Final demand	10.4	2.3	3.4	2.4	2.4
2.7. Imports	– 1.8	– 0.5	– 2.1	– 1.1	– 0.4
2.8. Net exports	– 1.0	0.2	– 1.4	– 0.5	0.9
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	22.4	28.0	27.2	25.5	25.3
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	3.6	– 1.6	– 7.8	– 7.1	– 7.1
3.4. National savings	26.0	26.4	19.4	18.4	18.2
3.5. Gross capital formation	28.4	27.6	22.8	20.6	18.9
3.6. Current account	– 2.0	– 0.9	– 3.0	– 2.0	– 0.5
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	76.4	76.5	74.5
4.2. Trend GDP gap	0.6	– 0.1	– 0.6	– 0.3	– 1.7
4.3. Potential GDP gap	:	:	– 0.4	– 0.9	– 2.4
4.4. Profitability index (1961–73 = 100)	100.0	81.7	61.8	82.2	85.5
5. Growth potential					
5.1. Growth of net capital stock (real)	8.0	4.7	2.7	2.5	2.1
5.2. Net capital/output ratio (real)	2.8	3.5	4.2	4.5	4.5
5.3. Growth of capital intensity	8.5	3.7	2.0	1.9	0.3
5.4. Labour productivity growth	9.0	0.7	0.5	0.7	0.1
5.5. Total factor productivity growth	6.1	– 0.5	– 0.1	0.1	0.0
6. Employment and unemployment					
6.1. Employment	– 0.5	1.0	0.7	0.6	1.9
6.2. Activity rate	60.1	57.3	58.7	58.3	59.1
6.3. Employment rate (benchmark)	57.4	55.1	54.8	53.4	53.9
6.4. Employment rate (full-time equivalent)	:	:	:	53.4	53.8
6.5. Unemployment rate (Eurostat definition)	4.4	3.8	6.6	8.3	8.9
7. Prices and wages					
7.1. Nominal wages per head	10.1	21.5	16.8	12.1	10.9
7.2. Real wages per head ⁽²⁾	6.4	2.7	– 0.7	– 1.5	– 0.2
7.3. Nominal unit labour costs	1.0	20.6	16.2	11.4	10.7
7.4. Real unit labour costs	– 3.2	1.3	– 0.8	– 2.3	– 0.5
7.5. GDP deflator	4.4	19.0	17.1	14.0	11.2
7.6. Private consumption deflator	3.6	18.2	17.6	13.8	11.1
7.7. Terms of trade	0.1	– 1.5	1.4	1.2	3.2
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	23.0	31.9	43.4	47.2	46.8
8.2. Current revenues ⁽³⁾	23.4	26.9	31.4	35.6	36.9
8.3. Net borrowing (–) or lending (+) ⁽³⁾	0.5	– 4.9	– 12.0	– 11.6	– 9.9
8.4. Net borrowing cyclically adjusted ⁽³⁾	0.4	– 4.9	– 11.8	– 11.4	– 9.3
8.5. Debt (end of period) ⁽⁴⁾	19.3	59.8	89.0	108.7	107.9
9. Monetary conditions					
9.1. Long-term interest rate	:	13.6	:	:	:
9.2. Short-term interest rate	:	:	17.8	22.1	24.6
9.3. Yield curve (9.1–9.2)	:	:	:	:	:
9.4. Real long-term interest rate ⁽⁵⁾	:	– 4.5	:	:	:
9.5. Nominal effective exchange rate	– 1.3	– 9.3	– 10.8	– 7.2	– 6.7
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	134.3	104.0	98.9	103.7	104.7

⁽¹⁾ Manufacturing industry 2000.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1995 (ESA 95 data), 1991–95 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
2.7	2.4	2.8	3.1	2.9	3.2	3.1	2.7	2.9
5.6	0.9	3.0	1.7	-0.1	2.3	1.8	0.5	0.6
4.2	8.4	7.8	11.8	7.3	7.8	9.1	9.2	10.4
8.5	23.1	8.2	24.4	1.9	16.2	8.3	7.0	8.5
1.7	1.8	7.4	6.6	9.0	2.9	10.2	11.2	12.1
0.5	3.5	18.2	5.9	6.5	18.9	5.7	2.6	7.4
9.2	7.0	13.9	11.3	3.9	15.0	5.6	4.1	6.8
2.1	2.4	3.5	3.1	3.4	4.3	4.1	3.5	4.2
2.8	1.9	2.5	2.5	2.1	2.6	2.5	2.0	2.1
0.9	1.6	1.5	2.4	1.6	1.7	2.1	2.2	2.6
1.2	0.0	-0.1	0.2	-0.6	0.4	0.0	0.0	-0.1
4.9	3.5	3.9	5.0	3.3	4.7	4.6	4.2	4.7
0.1	0.6	3.2	1.2	1.4	4.1	1.4	0.7	1.9
5.0	4.1	7.1	6.3	4.6	8.9	6.0	4.9	6.5
-2.9	-1.7	-3.6	-3.3	-1.2	-4.6	-1.9	-1.4	-2.3
-2.8	-1.1	-0.4	-2.0	0.2	-0.4	-0.5	-0.7	-0.5
24.8	22.7	19.3	17.9	17.0	15.6	15.9	16.0	16.7
:	:	:	:	:	:	:	:	:
-6.8	-5.2	-1.5	0.1	2.0	2.6	3.0	3.8	4.3
18.0	17.4	17.8	18.0	19.1	18.2	18.9	19.8	21.1
18.9	19.8	20.2	21.9	22.3	23.6	24.1	25.2	26.7
-0.9	-2.4	-2.3	-3.9	-3.2	-4.5	-4.3	-4.5	-4.7
76.6	75.6	74.4	75.8	75.7	78.1	:	:	:
-1.7	-1.8	-1.0	-0.9	-0.7	0.2	0.8	0.8	1.4
-2.3	-2.2	-1.3	-1.0	-0.5	1.2	2.0	2.2	3.0
84.5	87.6	86.4	84.7	89.0	92.2	95.1	97.0	99.6
2.1	2.4	2.6	3.0	3.2	3.5	3.8	4.1	4.5
4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.5	4.5
1.2	2.8	2.9	-0.4	4.0	3.8	2.6	3.5	3.2
1.2	2.8	3.9	-0.3	4.1	4.6	3.0	2.9	3.0
0.8	1.8	2.9	-0.2	2.8	3.3	2.1	1.7	1.9
0.9	1.3	-0.5	2.9	-0.7	-0.3	1.1	0.6	1.2
59.6	60.4	60.1	62.5	62.6	62.5	62.7	62.6	62.9
54.1	54.6	54.2	55.7	55.3	55.5	56.0	56.3	56.8
54.2	54.6	54.4	55.0	54.5	55.3	:	:	:
9.2	9.6	9.8	10.9	11.6	11.1	10.6	10.1	9.6
12.9	8.8	13.6	6.0	4.8	6.1	5.5	5.7	5.5
3.7	0.6	7.7	1.5	2.4	3.0	2.3	2.6	2.6
11.5	5.9	9.3	6.4	0.6	1.4	2.5	2.8	2.4
1.6	-1.4	2.3	1.2	-2.2	-1.9	-0.8	-0.7	-0.9
9.8	7.4	6.8	5.2	2.9	3.4	3.3	3.5	3.4
8.9	8.2	5.5	4.5	2.4	3.1	3.1	3.0	2.8
1.6	0.5	1.0	0.3	0.1	-0.3	0.3	0.9	0.1
50.5	45.9	44.7	44.8	48.7	49.1	48.1	47.6	46.7
40.3	38.1	40.0	41.7	46.9	48.0	48.1	47.9	47.5
-10.2	-7.8	-4.7	-3.1	-1.8	-1.1	0.0	0.3	0.8
-9.5	-7.1	-4.3	-2.7	-1.5	-1.2	-0.8	-0.1	0.2
108.7	111.3	108.3	105.5	104.6	103.3	100.4	99.1	95.7
:	:	:	8.5	6.5	6.5	6.3	:	:
16.3	13.8	12.8	14.0	10.4	7.8	4.4	:	:
:	:	:	-5.5	-3.9	-1.3	1.9	:	:
:	:	:	3.2	3.5	3.0	2.9	:	:
-2.5	-1.8	-2.6	-5.9	-0.5	-6.6	-0.7	0.3	0.0
112.1	114.7	121.0	120.4	118.9	111.2	110.2	111.6	113.1

Table 84

Main economic indicators 1961–2003 Spain

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	7.2	1.5	4.6	1.2	1.1
1.2. Government consumption	4.5	4.8	6.4	3.0	0.5
1.3. Gross fixed capital formation	10.5	– 0.6	10.9	– 0.5	1.9
1.4. — of which equipment	:	– 0.2	11.9	– 2.5	5.9
1.5. — of which construction	:	– 1.0	11.0	0.1	1.9
1.6. Exports of goods and services	11.9	6.0	3.1	9.9	16.7
1.7. Imports of goods and services	17.3	2.5	17.0	6.7	11.4
1.8. GDP	7.2	1.8	4.5	1.5	2.4
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	5.4	1.6	3.8	1.2	0.8
2.2. Investment	2.2	– 0.1	2.2	– 0.1	0.4
2.3. Stockbuilding	0.2	– 0.1	0.2	– 0.1	0.3
2.4. Domestic demand	7.8	1.4	6.2	1.1	1.5
2.5. Exports	1.2	0.8	0.5	1.8	3.1
2.6. Final demand	9.1	2.2	6.7	2.8	4.6
2.7. Imports	– 1.8	– 0.4	– 2.2	– 1.3	– 2.2
2.8. Net exports	– 0.6	0.5	– 1.7	0.5	0.9
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	:	19.4	18.3	18.5	17.3
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	:	1.2	1.3	– 0.7	– 1.5
3.4. National savings	25.4	20.6	19.6	17.8	15.8
3.5. Gross capital formation	27.5	24.5	24.5	22.9	21.5
3.6. Current account	– 0.7	– 1.4	– 1.2	– 1.8	– 1.3
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	59.7	76.0	74.5
4.2. Trend GDP gap	0.2	– 0.2	1.1	0.1	– 2.0
4.3. Potential GDP gap	:	:	0.4	– 2.0	– 3.8
4.4. Profitability index (1961–73 = 100)	100.0	83.1	117.4	109.7	109.0
5. Growth potential					
5.1. Growth of net capital stock (real)	4.9	3.7	3.8	3.4	2.8
5.2. Net capital/output ratio (real)	2.4	2.6	2.7	2.9	3.0
5.3. Growth of capital intensity	4.2	5.2	0.5	3.9	3.3
5.4. Labour productivity growth	6.5	3.3	1.2	2.0	2.9
5.5. Total factor productivity growth	5.0	1.5	1.0	0.6	1.7
6. Employment and unemployment					
6.1. Employment	0.7	– 1.4	3.3	– 0.5	– 0.5
6.2. Activity rate	66.1	62.0	61.7	63.8	64.2
6.3. Employment rate (benchmark)	64.5	55.7	50.9	51.6	50.1
6.4. Employment rate (full-time equivalent)	:	:	:	:	:
6.5. Unemployment rate (Eurostat definition)	2.6	11.3	18.9	20.9	24.1
7. Prices and wages					
7.1. Nominal wages per head	14.6	18.0	8.5	7.2	3.7
7.2. Real wages per head ⁽²⁾	7.6	2.4	1.7	1.5	– 1.1
7.3. Nominal unit labour costs	7.6	14.3	7.2	5.1	0.8
7.4. Real unit labour costs	0.5	– 0.6	– 0.2	– 0.2	– 3.0
7.5. GDP deflator	7.2	15.0	7.4	5.4	3.9
7.6. Private consumption deflator	6.5	15.3	6.6	5.6	4.9
7.7. Terms of trade	3.0	– 2.2	7.4	0.8	– 1.2
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	:	31.0	41.0	45.4	45.9
8.2. Current revenues ⁽³⁾	:	28.6	36.9	39.7	39.8
8.3. Net borrowing (–) or lending (+) ⁽³⁾	:	– 2.6	– 4.1	– 5.6	– 6.1
8.4. Net borrowing cyclically adjusted ⁽³⁾	:	– 2.5	– 4.5	– 5.6	– 5.3
8.5. Debt (end of period) ⁽⁴⁾	12.7	42.7	44.0	64.0	61.2
9. Monetary conditions					
9.1. Long-term interest rate	:	:	12.9	11.2	10.1
9.2. Short-term interest rate	:	:	13.9	11.1	8.0
9.3. Yield curve (9.1–9.2)	:	:	– 1.0	0.1	2.1
9.4. Real long-term interest rate ⁽⁵⁾	:	:	5.1	5.5	6.0
9.5. Nominal effective exchange rate	– 0.8	– 4.9	2.8	– 3.9	– 6.1
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	67.4	80.2	84.7	93.8	86.8

⁽¹⁾ Manufacturing industry 2000.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1995 (ESA 95 data), 1991–95 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
1.7	2.2	3.2	4.5	4.7	4.0	2.6	1.6	3.1
2.4	1.3	2.9	3.7	4.2	4.0	2.0	2.4	2.2
7.7	2.1	5.0	9.7	8.8	5.7	3.8	2.6	4.2
11.2	8.1	10.8	13.3	7.7	4.8	1.2	1.1	4.1
6.6	-1.9	2.3	8.1	9.0	6.2	5.8	3.6	4.6
9.4	10.4	15.3	8.2	7.6	9.6	4.9	3.9	7.6
11.1	8.0	13.2	13.3	12.8	9.8	5.0	3.8	7.4
2.8	2.4	4.0	4.3	4.1	4.1	2.7	2.0	3.2
1.5	1.5	2.4	3.3	3.5	3.1	1.9	1.4	2.2
1.6	0.5	1.1	2.1	2.0	1.4	0.9	0.6	1.1
0.0	-0.1	0.0	0.2	0.1	-0.1	0.0	0.0	0.0
3.1	1.9	3.5	5.6	5.7	4.3	2.8	2.0	3.3
2.0	2.3	3.7	2.2	2.1	2.8	1.5	1.2	2.4
5.1	4.3	7.2	7.8	7.8	7.1	4.3	3.2	5.7
-2.3	-1.8	-3.2	-3.5	-3.6	-3.0	-1.6	-1.3	-2.5
-0.3	0.5	0.6	-1.3	-1.5	-0.2	-0.1	0.0	-0.1
24.1	23.3	22.2	21.4	19.4	18.8	18.9	19.3	19.4
6.6	6.4	5.6	4.6	4.4	:	:	:	:
-1.8	-1.2	0.4	1.2	2.9	3.5	4.0	3.9	4.2
22.3	22.1	22.6	22.6	22.2	22.3	22.9	23.1	23.5
22.3	21.9	22.1	23.2	24.5	25.6	26.0	26.0	26.2
0.0	0.2	0.5	-0.6	-2.3	-3.4	-3.1	-2.9	-2.7
78.4	77.1	78.3	80.3	79.7	80.6	:	:	:
-2.0	-2.4	-1.5	-0.2	0.7	1.7	1.3	0.2	0.4
-4.1	-4.1	-2.9	-1.4	-0.4	0.9	0.2	-0.9	-0.4
115.9	117.5	120.3	123.2	123.4	119.1	117.2	115.4	116.2
3.1	3.0	3.1	3.6	3.9	4.0	4.0	3.9	3.9
3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0
1.3	1.8	0.0	-0.3	0.3	0.9	1.7	2.9	1.8
0.9	1.2	0.9	0.5	0.5	1.0	0.4	1.0	1.1
0.5	0.6	0.9	0.6	0.4	0.6	-0.2	0.0	0.5
1.8	1.3	2.9	3.6	3.5	3.1	2.3	1.0	2.1
64.3	64.5	65.2	65.9	66.1	66.9	67.1	67.3	67.7
50.8	51.3	52.7	54.5	56.4	58.1	58.9	59.1	60.0
48.8	49.2	50.6	52.5	54.4	56.1	56.9	57.1	57.9
22.9	22.2	20.8	18.8	15.9	14.1	13.0	13.0	12.1
3.6	4.5	2.3	2.7	2.7	3.4	3.9	3.5	2.8
-1.1	1.0	-0.3	0.6	0.3	0.2	0.6	1.0	0.6
2.7	3.3	1.4	2.2	2.3	2.4	3.5	2.4	1.6
-2.1	-0.2	-0.9	-0.2	-0.6	-1.0	-0.3	-0.3	-0.7
4.9	3.5	2.3	2.4	2.9	3.4	3.8	2.7	2.4
4.8	3.5	2.6	2.2	2.4	3.2	3.3	2.4	2.1
1.4	0.8	-0.1	0.9	0.0	-2.4	1.0	0.6	0.2
45.0	43.7	42.2	41.6	40.8	39.8	39.5	39.9	39.7
38.4	38.8	39.0	39.1	39.7	39.5	39.6	39.7	39.7
-6.6	-4.9	-3.2	-2.6	-1.1	-0.3	0.1	-0.2	0.0
-5.9	-4.0	-2.6	-2.5	-1.4	-1.1	-0.4	-0.3	-0.1
64.0	68.1	66.6	64.5	63.1	60.4	58.0	57.3	55.6
11.3	8.7	6.4	4.8	4.7	5.5	5.1	:	:
9.4	7.5	5.4	4.3	3.0	4.4	4.4	:	:
1.9	1.2	1.0	0.6	1.8	1.1	0.7	:	:
6.0	5.0	4.0	2.4	1.8	2.0	1.3	:	:
0.9	0.9	-4.8	-0.1	-1.6	-3.5	0.5	0.3	0.0
88.2	90.7	86.6	87.6	86.8	84.4	85.2	85.8	86.2

Table 85

Main economic indicators 1961–2003

France

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	5.3	2.2	3.0	0.7	1.2
1.2. Government consumption	4.0	3.2	2.4	2.3	0.7
1.3. Gross fixed capital formation	7.7	0.5	6.4	-1.2	1.5
1.4. — of which equipment	:	2.9	9.0	-0.1	4.8
1.5. — of which construction	:	-1.2	4.1	-2.1	-0.6
1.6. Exports of goods and services	9.1	4.6	5.2	5.3	7.7
1.7. Imports of goods and services	10.4	2.4	7.3	3.4	8.2
1.8. GDP	5.4	2.2	3.3	1.1	2.1
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.8	1.9	2.3	0.9	0.8
2.2. Investment	1.7	0.1	1.2	-0.2	0.3
2.3. Stockbuilding	0.1	-0.1	0.1	0.0	0.9
2.4. Domestic demand	5.6	1.9	3.6	0.7	2.1
2.5. Exports	1.3	0.8	0.9	1.1	1.5
2.6. Final demand	6.9	2.7	4.5	1.7	3.6
2.7. Imports	-1.5	-0.4	-1.2	-0.7	-1.5
2.8. Net exports	-0.2	0.4	-0.4	0.4	0.0
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	22.0	19.8	18.8	20.3	20.4
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	4.2	2.0	1.8	-0.5	-1.2
3.4. National savings	26.2	21.9	20.6	19.8	19.2
3.5. Gross capital formation	26.5	23.7	22.2	20.0	19.0
3.6. Current account	0.6	-1.7	-1.6	-0.1	0.2
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	82.8	85.9	83.4	83.0
4.2. Trend GDP gap	0.2	-0.2	0.5	0.2	-0.8
4.3. Potential GDP gap	:	:	0.3	-0.3	-1.1
4.4. Profitability index (1961–73 = 100)	100.0	75.3	100.5	107.5	111.1
5. Growth potential					
5.1. Growth of net capital stock (real)	4.4	3.0	2.6	1.9	1.6
5.2. Net capital/output ratio (real)	2.7	2.8	2.8	2.9	2.9
5.3. Growth of capital intensity	3.7	2.9	1.8	2.4	2.0
5.4. Labour productivity growth	4.7	2.2	2.4	1.5	2.4
5.5. Total factor productivity growth	3.3	1.1	1.7	0.7	1.7
6. Employment and unemployment					
6.1. Employment	0.7	0.1	0.9	-0.2	0.0
6.2. Activity rate	68.2	68.3	67.2	67.8	68.0
6.3. Employment rate (benchmark)	66.8	63.9	60.5	60.1	59.4
6.4. Employment rate (full-time equivalent)	:	:	58.6	57.7	56.8
6.5. Unemployment rate (Eurostat definition)	2.0	6.4	9.8	11.1	12.3
7. Prices and wages					
7.1. Nominal wages per head	9.9	12.9	4.3	3.2	2.1
7.2. Real wages per head ⁽²⁾	5.0	2.2	1.2	0.7	0.0
7.3. Nominal unit labour costs	5.0	10.5	1.8	1.7	-0.3
7.4. Real unit labour costs	-0.1	0.4	-1.5	-0.5	-2.0
7.5. GDP deflator	5.1	10.0	3.4	2.1	1.7
7.6. Private consumption deflator	4.7	10.5	3.1	2.5	2.1
7.7. Terms of trade	0.3	-2.4	1.9	0.3	-0.6
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	36.7	46.0	51.4	54.0	54.9
8.2. Current revenues ⁽³⁾	37.2	44.4	49.1	49.2	49.4
8.3. Net borrowing (-) or lending (+) ⁽³⁾	0.4	-1.6	-2.3	-4.7	-5.5
8.4. Net borrowing cyclically adjusted ⁽³⁾	:	-1.5	-2.5	-4.8	-5.2
8.5. Debt (end of period) ⁽⁴⁾	:	31.8	36.3	54.0	49.6
9. Monetary conditions					
9.1. Long-term interest rate	6.9	12.2	9.1	7.8	7.3
9.2. Short-term interest rate	5.7	11.0	8.7	8.2	5.9
9.3. Yield curve (9.1–9.2)	1.2	1.2	0.4	-0.4	1.4
9.4. Real long-term interest rate ⁽⁵⁾	1.8	2.0	5.5	5.6	5.5
9.5. Nominal effective exchange rate	-0.7	-2.5	2.0	1.8	0.8
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	122.0	113.7	105.9	103.2	103.5

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1978 (ESA 95 data), 1974–85 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
1.2	1.3	0.2	3.4	2.8	2.5	2.7	1.9	2.6
-0.1	2.3	2.1	-0.1	2.0	2.2	1.9	2.0	1.5
2.0	0.0	-0.1	7.0	6.2	6.1	2.8	0.9	3.7
6.0	2.4	2.8	12.5	6.6	8.5	3.8	0.8	4.7
-0.2	-3.0	-3.4	1.9	5.6	5.6	1.6	0.2	2.6
7.7	3.5	11.8	8.3	4.0	12.6	3.0	2.5	6.3
8.0	1.6	6.9	11.6	4.7	14.2	2.3	3.2	6.8
1.7	1.1	1.9	3.4	2.9	3.1	2.0	1.5	2.6
0.7	1.3	0.6	1.8	2.0	1.9	1.9	1.5	1.8
0.4	0.0	0.0	1.3	1.2	1.2	0.6	0.2	0.7
0.6	-0.6	0.1	0.8	-0.2	0.1	-0.7	-0.1	0.1
1.6	0.7	0.6	3.9	3.0	3.2	1.7	1.6	2.6
1.6	0.8	2.7	2.1	1.1	3.4	0.9	0.7	1.9
3.3	1.4	3.4	6.0	4.1	6.6	2.6	2.3	4.5
-1.6	-0.3	-1.5	-2.6	-1.1	-3.5	-0.6	-0.9	-1.9
0.0	0.4	1.3	-0.5	-0.1	-0.1	0.2	-0.1	0.0
20.6	19.5	20.4	20.4	19.7	19.8	19.7	19.8	19.6
:	:	:	:	:	:	:	:	:
-1.1	-0.3	-0.1	1.1	2.1	2.2	2.0	1.6	2.1
19.5	19.2	20.4	21.4	21.8	22.0	21.7	21.4	21.7
19.2	18.3	17.8	19.1	19.4	20.6	19.6	19.2	19.5
0.3	0.9	2.5	2.4	2.3	1.4	1.7	1.8	1.5
85.5	83.6	83.5	85.0	85.3	87.5	:	:	:
-1.0	-1.8	-1.9	-0.6	0.1	1.0	0.7	-0.1	0.1
-1.3	-1.9	-2.0	-0.5	0.2	0.8	0.3	-0.6	-0.4
114.5	114.7	118.7	125.3	124.7	124.7	122.0	122.0	124.2
1.6	1.4	1.3	1.6	1.8	2.1	2.1	2.0	2.1
2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8
1.1	1.7	1.1	0.6	0.2	-0.2	0.0	1.5	0.7
1.2	1.3	1.6	2.4	1.3	0.9	-0.2	1.0	1.2
0.8	0.7	1.3	2.2	1.2	0.9	-0.2	0.4	0.9
0.8	0.3	0.5	1.3	1.8	2.2	1.6	0.4	1.2
67.9	68.3	68.2	68.6	69.1	69.0	69.2	69.5	69.6
59.7	59.6	59.5	60.2	61.1	62.1	62.8	62.8	63.2
56.9	56.6	56.4	56.9	57.6	58.6	59.6	59.6	60.1
11.7	12.4	12.3	11.8	11.2	9.5	8.7	9.2	8.7
2.6	2.7	2.3	2.3	2.4	1.9	2.2	2.6	2.4
0.6	0.8	0.8	1.6	2.0	0.4	0.7	1.2	1.1
1.4	1.3	0.6	-0.1	1.1	1.0	2.4	1.7	1.3
-0.3	-0.1	-0.7	-1.0	0.6	0.1	0.9	-0.1	-0.3
1.7	1.4	1.3	0.9	0.5	0.9	1.5	1.7	1.6
2.0	1.9	1.4	0.7	0.4	1.5	1.5	1.4	1.4
0.2	-0.6	0.5	1.2	-0.2	-3.2	0.2	1.2	-0.4
55.2	55.5	55.0	53.9	53.5	52.8	52.7	52.9	52.2
49.7	51.4	51.9	51.2	51.9	51.4	51.2	51.0	50.7
-5.5	-4.1	-3.0	-2.7	-1.6	-1.4	-1.5	-2.0	-1.6
-5.1	-3.3	-2.2	-2.4	-1.6	-1.8	-1.9	-1.9	-1.6
54.0	57.1	59.3	59.5	58.5	57.6	57.1	57.3	56.6
7.5	6.3	5.6	4.6	4.6	5.4	5.0	:	:
6.6	3.9	3.5	3.6	3.0	4.4	4.4	:	:
1.0	2.4	2.1	1.1	1.6	1.0	0.6	:	:
5.8	4.8	4.2	3.7	4.1	4.5	3.4	:	:
4.2	0.2	-4.0	1.0	-2.0	-4.6	0.6	0.3	-0.1
107.5	107.6	102.7	102.4	99.8	94.8	94.9	95.0	95.1

Table 86

Main economic indicators 1961–2003 Ireland

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	3.8	2.2	3.4	3.2	4.3
1.2. Government consumption	5.2	3.7	– 0.7	2.7	4.1
1.3. Gross fixed capital formation	9.9	0.7	4.5	2.3	11.8
1.4. — of which equipment	:	1.6	6.0	1.8	10.9
1.5. — of which construction	:	0.6	3.3	3.3	13.4
1.6. Exports of goods and services	8.7	8.0	8.9	12.8	15.1
1.7. Imports of goods and services	9.7	4.4	7.1	9.9	15.5
1.8. GDP	4.4	3.8	4.6	4.7	5.8
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.7	2.3	2.0	2.4	3.2
2.2. Investment	1.9	0.2	0.8	0.4	1.9
2.3. Stockbuilding	0.1	0.0	0.4	– 0.2	0.0
2.4. Domestic demand	5.7	2.5	3.2	2.4	4.7
2.5. Exports	2.5	3.0	4.8	8.0	9.7
2.6. Final demand	8.2	5.7	8.2	10.4	14.5
2.7. Imports	– 3.8	– 1.9	– 3.6	– 5.6	– 8.7
2.8. Net exports	– 1.3	1.1	1.2	2.4	1.0
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	19.0	22.9	19.5	18.7	17.6
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	0.9	– 4.5	– 3.0	– 0.7	0.5
3.4. National savings	19.9	18.4	16.5	17.9	18.1
3.5. Gross capital formation	21.5	25.4	17.8	17.0	16.1
3.6. Current account	– 2.5	– 7.9	– 1.2	1.9	2.9
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	73.5	76.2	74.9
4.2. Trend GDP gap	– 0.3	1.0	– 0.7	– 3.2	– 5.8
4.3. Potential GDP gap	:	:	– 2.2	– 3.7	– 5.8
4.4. Profitability index (1961–73 = 100)	100.0	81.6	107.7	117.6	117.4
5. Growth potential					
5.1. Growth of net capital stock (real)	4.9	4.8	2.5	2.2	2.1
5.2. Net capital/output ratio (real)	3.1	3.4	3.5	3.1	3.1
5.3. Growth of capital intensity	4.8	4.7	1.4	0.3	– 1.0
5.4. Labour productivity growth	4.3	3.7	3.5	2.7	2.6
5.5. Total factor productivity growth	2.5	2.0	2.9	2.6	2.9
6. Employment and unemployment					
6.1. Employment	0.1	0.3	1.0	2.0	3.3
6.2. Activity rate	66.4	62.3	61.2	61.9	62.2
6.3. Employment rate (benchmark)	62.7	55.8	51.7	53.0	53.2
6.4. Employment rate (full-time equivalent)	:	:	:	49.2	49.6
6.5. Unemployment rate (Eurostat definition)	5.6	10.6	15.5	14.5	14.3
7. Prices and wages					
7.1. Nominal wages per head	11.3	16.7	5.6	4.5	2.5
7.2. Real wages per head ⁽²⁾	4.7	2.6	2.3	1.8	– 0.3
7.3. Nominal unit labour costs	6.8	12.5	2.1	1.7	– 0.1
7.4. Real unit labour costs	– 0.4	– 0.2	– 1.1	– 1.1	– 1.8
7.5. GDP deflator	7.2	12.8	3.2	2.9	1.7
7.6. Private consumption deflator	6.3	13.8	3.2	2.6	2.8
7.7. Terms of trade	0.8	– 1.7	– 0.2	– 1.0	– 2.2
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	30.5	45.1	43.2	44.2	44.3
8.2. Current revenues ⁽³⁾	26.5	35.2	37.9	41.7	42.3
8.3. Net borrowing (–) or lending (+) ⁽³⁾	– 3.5	– 9.9	– 5.3	– 2.5	– 2.0
8.4. Net borrowing cyclically adjusted ⁽³⁾	:	– 10.2	– 5.0	– 1.3	0.3
8.5. Debt (end of period) ⁽⁴⁾	43.3	105.3	97.5	84.3	92.6
9. Monetary conditions					
9.1. Long-term interest rate	:	14.6	10.2	8.5	8.1
9.2. Short-term interest rate	:	13.4	10.5	8.8	5.9
9.3. Yield curve (9.1–9.2)	:	1.1	– 0.4	– 0.4	2.2
9.4. Real long-term interest rate ⁽⁵⁾	:	1.6	6.8	5.4	6.3
9.5. Nominal effective exchange rate	– 0.8	– 2.8	1.5	– 0.6	– 0.4
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	103.6	105.2	109.2	100.8	100.9

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1990 (ESA 95 data).⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
4.2	6.4	7.4	7.3	8.3	10.0	6.2	4.2	5.6
3.9	3.3	5.3	5.7	6.3	5.4	6.0	3.8	2.7
13.4	16.6	17.8	15.7	13.5	7.3	3.4	2.7	4.2
15.3	12.0	15.6	24.9	17.9	6.3	4.5	2.7	4.5
12.7	18.5	17.7	11.6	11.3	7.4	2.4	2.7	3.9
20.0	12.2	17.4	21.4	15.7	17.8	9.1	5.3	8.1
16.4	12.5	16.8	25.8	11.9	16.6	8.5	6.0	8.1
10.0	7.8	10.8	8.6	10.8	11.5	6.5	3.3	5.5
3.1	4.0	4.8	4.7	5.2	5.8	3.9	2.6	3.2
2.2	2.8	3.3	3.1	2.8	1.6	0.7	0.5	0.8
1.4	0.0	0.6	0.5	-1.8	0.5	-0.2	-0.1	0.0
6.1	6.5	8.3	8.9	5.9	7.8	4.4	3.0	4.0
14.0	9.3	13.9	18.1	14.8	17.5	9.4	5.6	8.8
20.0	15.9	22.2	27.0	20.7	25.3	14.0	8.7	12.8
-10.1	-8.1	-11.4	-18.4	-9.8	-13.9	-7.5	-5.3	-7.4
3.9	1.2	2.5	-0.3	5.0	3.7	2.0	0.3	1.4
20.6	20.4	20.9	21.0	17.6	15.8	16.0	15.6	15.2
:	:	:	:	:	:	:	:	:
-0.1	1.7	2.9	4.4	6.7	8.2	6.5	6.3	6.7
20.6	22.1	23.8	25.3	24.3	24.0	22.5	21.9	21.8
18.1	19.5	21.5	23.6	23.5	23.9	23.6	23.6	23.7
2.8	3.3	3.1	0.9	0.4	-0.6	-1.5	-2.0	-2.2
79.9	77.6	75.9	76.6	75.9	79.8	:	:	:
-3.2	-2.9	0.0	0.7	3.5	7.2	6.4	2.7	1.5
-3.0	-2.4	0.3	0.4	2.6	5.6	4.0	0.2	-1.8
138.4	149.4	168.8	179.4	188.1	193.4	189.6	181.2	179.6
2.6	3.2	4.1	5.0	5.6	5.7	5.5	5.2	5.1
2.9	2.8	2.6	2.5	2.4	2.3	2.2	2.3	2.3
-2.4	-0.3	-1.4	-2.0	-0.6	0.7	3.1	4.4	3.2
4.7	4.0	5.0	1.3	4.3	6.3	4.1	2.5	3.6
5.6	4.2	5.5	2.1	4.5	6.0	2.9	0.9	2.4
4.9	3.7	4.0	8.4	6.5	5.1	2.3	0.8	1.8
62.7	63.5	63.5	65.7	67.3	68.4	68.4	68.3	68.5
55.0	56.1	57.2	60.7	63.5	65.5	65.8	65.2	65.4
50.8	51.5	53.2	55.5	58.6	60.6	:	:	:
12.3	11.7	9.9	7.5	5.6	4.2	3.8	4.5	4.5
2.4	3.5	4.1	4.5	5.3	8.7	9.5	8.0	6.9
-0.4	0.9	1.3	1.0	1.9	3.8	4.7	4.1	3.6
-2.2	-0.5	-0.9	3.1	1.0	2.3	5.2	5.3	3.2
-5.1	-2.7	-4.8	-2.6	-3.1	-1.9	0.4	0.6	-0.7
3.0	2.2	4.1	5.9	4.2	4.3	4.8	4.6	3.9
2.8	2.6	2.7	3.5	3.4	4.7	4.6	3.7	3.2
-1.8	0.2	0.5	0.3	-0.4	-1.9	0.0	0.7	0.2
41.5	39.6	37.4	35.2	34.8	32.0	32.1	32.7	32.7
39.4	39.4	38.6	37.5	37.2	36.5	34.6	34.5	34.5
-2.2	-0.2	1.2	2.3	2.3	4.5	2.4	1.8	1.8
-1.0	0.8	1.2	2.1	1.2	2.3	0.5	1.0	1.3
84.3	74.2	65.1	54.8	49.3	38.6	34.4	30.8	27.2
8.3	7.3	6.3	4.8	4.6	5.4	4.9	:	:
6.3	5.4	6.0	5.5	3.0	4.4	4.4	:	:
2.0	1.9	0.3	-0.7	1.7	1.0	0.6	:	:
5.1	4.9	2.1	-1.1	0.5	1.1	0.2	:	:
0.3	2.5	1.8	-4.6	-3.1	-5.8	0.8	0.4	0.0
97.3	97.9	97.5	94.5	90.8	86.1	88.7	92.2	94.1

Table 87

Main economic indicators 1961–2003

Italy

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	5.9	3.0	3.5	0.9	1.5
1.2. Government consumption	4.1	3.0	2.8	-0.2	-0.9
1.3. Gross fixed capital formation	4.5	0.6	4.3	-1.2	0.1
1.4. — of which equipment	:	1.8	6.3	-0.1	7.9
1.5. — of which construction	:	-0.3	2.4	-2.4	-6.3
1.6. Exports of goods and services	10.2	4.9	5.1	7.4	9.8
1.7. Imports of goods and services	10.3	3.2	8.5	3.0	8.1
1.8. GDP	5.3	2.7	2.9	1.3	2.2
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	4.2	2.3	2.6	0.5	0.8
2.2. Investment	1.0	0.1	0.8	-0.2	0.0
2.3. Stockbuilding	0.0	0.0	-0.1	0.0	0.8
2.4. Domestic demand	5.2	2.4	3.4	0.3	1.6
2.5. Exports	1.4	0.8	0.9	1.7	2.3
2.6. Final demand	6.7	3.2	4.4	1.9	3.9
2.7. Imports	-1.4	-0.5	-1.5	-0.7	-1.7
2.8. Net exports	0.0	0.3	-0.6	1.0	0.6
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	24.6	30.6	27.4	26.1	25.7
3.2. Net savings of households	:	:	:	15.1	14.0
3.3. General government savings	0.1	-5.8	-5.9	-6.4	-6.0
3.4. National savings	24.7	24.8	21.5	19.7	19.7
3.5. Gross capital formation	25.8	25.5	22.3	19.7	18.5
3.6. Current account	1.4	-0.8	-0.7	-0.1	1.2
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	77.8	76.3	75.2
4.2. Trend GDP gap	0.2	-0.2	0.8	-0.2	-1.3
4.3. Potential GDP gap	:	:	0.1	-1.3	-2.4
4.4. Profitability index (1961–73 = 100)	100.0	60.1	87.0	96.2	100.3
5. Growth potential					
5.1. Growth of net capital stock (real)	5.1	3.3	2.6	2.0	1.5
5.2. Net capital/output ratio (real)	2.9	3.0	3.1	3.2	3.2
5.3. Growth of capital intensity	5.3	2.3	1.9	2.8	2.5
5.4. Labour productivity growth	5.5	1.8	2.1	2.1	3.2
5.5. Total factor productivity growth	3.7	1.0	1.5	1.2	2.4
6. Employment and unemployment					
6.1. Employment	-0.3	0.6	0.9	-0.6	-1.5
6.2. Activity rate	59.1	60.9	62.3	62.6	61.7
6.3. Employment rate (benchmark)	58.5	57.8	57.3	57.5	56.2
6.4. Employment rate (full-time equivalent)	:	59.4	59.8	58.8	57.5
6.5. Unemployment rate (Eurostat definition)	5.0	7.0	9.5	10.1	11.1
7. Prices and wages					
7.1. Nominal wages per head	11.4	18.2	8.5	5.3	3.0
7.2. Real wages per head ⁽²⁾	6.3	2.0	2.2	-0.5	-1.8
7.3. Nominal unit labour costs	5.6	16.1	6.2	3.1	-0.2
7.4. Real unit labour costs	0.1	-0.1	-0.8	-1.7	-3.5
7.5. GDP deflator	5.4	16.3	7.1	4.9	3.5
7.6. Private consumption deflator	4.9	16.0	6.1	5.8	4.9
7.7. Terms of trade	-0.5	-0.9	3.7	-0.9	-1.5
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	32.3	43.9	52.0	55.6	54.6
8.2. Current revenues ⁽³⁾	28.9	34.0	41.1	45.7	45.3
8.3. Net borrowing (-) or lending (+) ⁽³⁾	-3.1	-9.6	-10.8	-9.9	-9.3
8.4. Net borrowing cyclically adjusted ⁽³⁾	:	-9.5	-11.2	-9.8	-8.7
8.5. Debt (end of period) ⁽⁴⁾	51.3	82.0	97.3	123.3	123.9
9. Monetary conditions					
9.1. Long-term interest rate	7.0	15.1	12.3	12.0	10.4
9.2. Short-term interest rate	4.2	15.5	12.1	11.0	8.5
9.3. Yield curve (9.1–9.2)	2.7	-0.3	0.2	1.0	2.0
9.4. Real long-term interest rate ⁽⁵⁾	1.5	-0.9	4.8	6.8	6.7
9.5. Nominal effective exchange rate	-0.9	-6.8	1.5	-6.9	-4.2
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	79.4	73.6	90.7	85.1	77.1

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1990 (ESA 95 data).⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
1.7	1.2	3.2	3.1	2.3	2.9	1.6	2.0	2.7
-2.2	1.0	0.2	0.3	1.5	1.6	1.2	1.6	0.9
6.0	3.6	2.1	4.3	4.6	6.1	1.6	2.7	3.8
12.4	3.7	6.3	7.8	6.0	8.0	0.2	3.1	4.4
0.9	3.6	-2.0	-0.2	2.8	3.6	2.8	2.1	2.6
12.6	0.6	6.4	3.6	0.0	10.2	3.8	1.8	6.8
9.7	-0.3	10.1	9.0	5.1	8.3	3.8	3.9	7.2
2.9	1.1	2.0	1.8	1.6	2.9	1.8	1.3	2.7
0.6	0.9	1.9	1.9	1.7	2.0	1.2	1.5	1.8
1.1	0.7	0.4	0.8	0.9	1.2	0.3	0.6	0.8
0.2	-0.7	0.3	0.3	0.4	-1.0	0.2	-0.2	0.2
1.9	0.8	2.6	3.0	2.9	2.3	1.7	1.8	2.7
3.1	0.2	1.7	1.0	0.0	2.9	1.1	0.6	2.1
5.0	1.0	4.3	4.0	2.9	5.1	2.8	2.4	4.8
-2.1	0.1	-2.3	-2.2	-1.3	-2.2	-1.1	-1.1	-2.1
1.0	0.2	-0.6	-1.2	-1.3	0.6	0.1	-0.6	0.0
25.4	25.6	21.8	20.9	19.1	18.8	18.3	18.1	18.3
12.9	13.6	10.7	8.0	6.1	:	:	:	:
-3.8	-3.7	-0.2	0.2	1.6	1.8	2.1	1.8	2.1
21.6	21.9	21.6	21.1	20.7	20.6	20.4	19.9	20.4
19.3	18.7	18.9	19.3	19.8	20.5	20.2	20.0	20.7
2.2	3.2	2.8	1.8	1.0	0.1	0.2	-0.1	-0.3
78.1	76.5	76.4	78.5	76.0	78.8	:	:	:
-0.1	-0.7	-0.4	-0.4	-0.7	0.3	0.2	-0.5	0.1
-1.1	-1.6	-1.2	-1.1	-1.2	-0.2	-0.3	-0.9	-0.2
113.5	116.3	117.4	132.2	131.8	134.2	134.2	132.1	135.3
1.7	1.8	1.7	1.9	2.0	2.2	2.2	2.2	2.3
3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
1.7	1.4	1.3	0.8	1.2	0.7	0.7	1.8	1.0
2.9	0.8	1.6	0.8	0.8	1.4	0.3	0.9	1.4
2.4	0.3	1.2	0.5	0.4	1.2	0.0	0.3	1.0
-0.1	0.6	0.4	1.0	1.1	1.6	1.5	0.4	1.3
61.8	62.4	62.6	63.3	63.7	64.3	64.7	65.1	65.7
56.2	56.6	56.8	57.5	58.1	59.1	60.1	60.4	61.4
57.6	57.8	58.0	58.7	59.2	60.2	61.1	61.5	62.4
11.6	11.7	11.7	11.8	11.3	10.5	9.5	9.6	8.9
4.2	6.1	4.0	-1.5	2.4	2.9	3.2	2.8	2.9
-1.7	1.7	1.7	-3.6	0.3	0.0	0.4	1.0	1.0
1.2	5.3	2.3	-2.3	1.6	1.5	2.9	2.0	1.5
-3.6	0.0	0.0	-4.8	0.0	-0.7	0.3	0.0	-0.7
5.0	5.3	2.4	2.7	1.6	2.2	2.6	1.9	2.2
6.0	4.4	2.2	2.1	2.1	2.9	2.8	1.8	1.9
-2.1	4.0	-1.1	2.3	-0.5	-6.0	0.3	0.8	-0.2
53.4	53.2	51.1	49.6	48.9	46.5	47.5	47.7	46.8
45.8	46.1	48.4	46.8	47.1	46.1	46.3	46.5	45.9
-7.6	-7.1	-2.7	-2.8	-1.8	-0.3	-1.2	-1.2	-0.9
-7.5	-6.8	-2.5	-2.6	-1.5	-1.7	-1.2	-1.0	-1.0
123.3	122.1	120.2	116.4	114.6	110.5	108.2	106.9	103.4
11.9	9.2	6.7	4.8	4.8	5.6	5.2	:	:
10.3	8.7	6.8	4.9	3.0	4.4	4.4	:	:
1.6	0.5	0.0	-0.1	1.8	1.2	0.8	:	:
6.5	3.7	4.2	2.1	3.1	3.3	2.5	:	:
-8.7	9.4	-0.2	0.1	-2.3	-4.5	0.5	0.3	-0.1
70.0	79.9	80.9	78.0	76.3	73.0	73.5	73.9	74.1

Table 88

Main economic indicators 1961–2003 Luxembourg

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	4.6	2.6	5.1	2.3	2.4
1.2. Government consumption	3.4	2.4	3.9	2.7	2.0
1.3. Gross fixed capital formation	4.9	-2.7	14.3	6.3	-14.9
1.6. Exports of goods and services	6.3	2.9	6.1	4.6	4.4
1.7. Imports of goods and services	6.4	2.7	6.1	2.9	-0.1
1.8. GDP	4.0	1.8	6.4	5.4	4.2
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	2.9	1.9	3.8	1.7	1.6
2.2. Investment	1.5	-0.7	3.0	1.7	-4.6
2.3. Stockbuilding	-0.4	0.3	-0.3	0.3	2.5
2.4. Domestic demand	4.0	1.5	6.5	3.8	-0.5
2.5. Exports	5.2	2.9	6.0	4.4	4.1
2.6. Final demand	9.2	4.4	12.4	8.2	4.1
2.7. Imports	-5.1	-2.6	-5.9	-2.7	0.1
2.8. Net exports	0.1	0.3	0.1	1.7	4.2
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	29.0	41.2	:	:	30.8
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	5.0	8.2	:	8.3	8.7
3.4. National savings	34.0	49.3	49.3	:	39.5
3.5. Gross capital formation	19.7	16.8	20.3	21.9	20.5
3.6. Current account	6.9	26.6	28.1	:	18.2
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	83.1	81.2	81.3
4.2. Trend GDP gap	0.1	-0.6	0.5	0.8	1.0
4.3. Potential GDP gap	:	:	1.2	0.5	0.8
4.4. Profitability index (1961–73 = 100)	100.0	81.3	136.3	172.6	196.8
5. Growth potential					
5.1. Growth of net capital stock (real)	1.0	1.4	3.3	4.6	3.7
5.2. Net capital/output ratio (real)	2.6	2.1	1.7	1.6	1.6
5.3. Growth of capital intensity	0.0	0.9	0.1	1.9	1.1
5.4. Labour productivity growth	3.0	1.3	3.2	2.7	1.6
5.5. Total factor productivity growth	3.0	0.9	3.1	1.9	1.2
6. Employment and unemployment					
6.1. Employment	1.1	0.5	3.2	2.7	2.5
6.2. Activity rate	61.0	62.2	61.8	62.3	62.3
6.3. Employment rate (benchmark)	63.1	64.3	67.4	75.3	76.3
6.4. Employment rate (full-time equivalent)	:	:	:	58.3	58.0
6.5. Unemployment rate (Eurostat definition)	0.0	1.7	2.1	2.5	3.2
7. Prices and wages					
7.1. Nominal wages per head	7.4	9.2	5.2	4.7	4.0
7.2. Real wages per head ⁽²⁾	4.2	1.7	2.7	1.7	1.6
7.3. Nominal unit labour costs	4.3	7.8	2.0	1.9	2.3
7.4. Real unit labour costs	-0.2	1.1	-0.3	-0.6	-2.9
7.5. GDP deflator	4.4	6.7	2.2	2.5	5.3
7.6. Private consumption deflator	3.0	7.4	2.4	3.0	2.3
7.7. Terms of trade	0.1	-1.1	-0.8	0.2	-0.3
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	29.4	44.9	:	46.1	44.8
8.2. Current revenues ⁽³⁾	31.4	46.7	:	48.0	47.7
8.3. Net borrowing (-) or lending (+) ⁽³⁾	1.8	1.8	:	1.9	2.9
8.4. Net borrowing cyclically adjusted ⁽³⁾	:	2.3	:	1.4	2.3
8.5. Debt (end of period) ⁽⁴⁾	13.8	9.6	4.5	5.6	5.4
9. Monetary conditions					
9.1. Long-term interest rate	:	8.1	8.0	7.5	7.2
9.4. Real long-term interest rate ⁽⁵⁾	:	1.5	5.6	4.9	1.7

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1990 (ESA 95 data).⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
2.4	3.7	3.6	4.0	2.1	3.4	3.7	3.5	4.0
2.2	5.5	3.0	1.4	7.7	4.8	3.4	3.0	4.0
3.5	1.7	14.3	2.8	19.6	-3.0	5.8	2.9	5.5
4.4	5.4	13.4	12.9	13.3	16.4	4.7	2.5	7.9
3.8	6.1	11.7	11.4	15.9	12.3	4.7	2.5	7.7
3.8	3.6	9.1	5.9	5.7	9.5	4.0	3.0	5.4
1.5	2.8	2.3	2.1	2.3	2.3	2.1	2.0	2.4
0.9	0.4	3.1	0.6	4.3	-0.7	1.3	0.7	1.2
0.5	0.4	0.6	-0.1	-0.4	0.2	-0.3	-0.1	0.2
2.9	3.6	5.9	2.6	6.3	2.3	3.1	2.6	3.8
4.1	5.9	14.8	14.9	16.4	21.6	5.8	3.1	9.6
7.0	9.5	20.7	17.5	22.7	23.9	8.8	5.7	13.4
-3.2	-5.9	-11.6	-11.6	-16.9	-14.4	-4.9	-2.7	-8.1
0.8	0.0	3.2	3.3	-0.6	7.2	0.9	0.4	1.5
:	:	:	:	:	:	31.6	32.4	32.1
:	:	:	:	:	:	:	:	:
8.2	7.8	8.5	8.8	9.0	10.9	9.5	8.0	8.3
:	:	:	:	:	:	41.1	40.4	40.4
21.8	21.8	23.2	22.0	24.2	21.4	21.5	21.1	21.2
:	:	:	:	:	:	20.1	19.7	19.7
82.9	79.0	82.4	88.0	84.9	87.8	:	:	:
-1.0	-3.1	-0.2	0.0	0.0	3.7	2.2	0.0	0.3
-0.9	-2.8	0.0	-0.1	-1.1	1.8	-0.3	-3.0	-3.6
187.2	191.6	232.7	246.3	245.6	268.2	251.1	246.2	252.1
4.0	3.7	5.5	5.1	7.1	5.6	5.6	5.2	5.3
1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.6	1.6
1.4	1.0	2.3	0.7	2.1	0.0	0.2	2.9	1.4
1.3	0.9	5.8	1.5	0.7	3.6	-1.4	0.7	1.5
0.7	0.5	4.8	1.2	-0.1	3.7	-1.5	-0.4	0.9
2.5	2.7	3.1	4.4	5.0	5.6	5.5	2.2	3.8
62.0	62.0	62.1	62.7	63.1	65.8	68.6	69.6	71.4
77.5	78.7	80.4	83.0	86.1	89.8	93.9	95.1	97.8
56.6	57.4	58.3	58.0	59.1	60.4	:	:	:
2.9	3.0	2.7	2.7	2.4	2.4	2.2	2.4	2.2
2.3	1.8	2.9	2.4	3.5	5.6	4.4	4.3	3.7
0.2	0.0	1.4	1.1	2.0	2.7	1.6	1.9	1.7
1.0	0.9	-2.7	0.9	2.7	1.9	5.9	3.5	2.2
0.3	-0.9	-5.4	-1.7	0.2	-1.7	2.8	0.1	-0.7
0.7	1.8	2.8	2.6	2.5	3.7	3.0	3.4	2.8
2.1	1.8	1.5	1.3	1.4	2.8	2.7	2.3	1.9
-2.8	-0.1	0.5	1.0	0.3	0.1	0.3	1.1	0.5
45.5	45.4	42.9	42.0	42.1	39.3	39.5	39.9	39.5
47.8	47.4	46.3	45.4	45.7	45.3	43.8	42.7	42.6
2.3	2.0	3.4	3.4	3.6	6.0	4.3	2.7	3.1
2.9	4.0	3.5	3.4	3.6	3.9	3.0	2.7	3.0
5.6	6.2	6.0	6.2	5.9	5.2	5.1	5.1	4.8
7.2	6.3	5.6	4.7	4.7	5.5	4.9	:	:
6.5	4.4	2.7	2.0	2.1	1.7	1.8	:	:

Table 89

Main economic indicators 1961–2003 Netherlands

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	5.6	1.8	2.7	1.6	0.9
1.2. Government consumption	2.9	2.8	2.3	2.1	1.5
1.3. Gross fixed capital formation	5.4	0.0	4.1	0.7	2.1
1.4. — of which equipment	:	2.8	3.6	1.3	0.5
1.5. — of which construction	:	-1.6	3.7	0.3	2.2
1.6. Exports of goods and services	9.0	3.1	5.5	6.4	9.7
1.7. Imports of goods and services	9.2	2.4	5.3	5.4	9.4
1.8. GDP	4.9	1.9	3.3	2.1	2.6
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.7	1.6	2.0	1.3	0.8
2.2. Investment	1.3	0.0	0.9	0.2	0.4
2.3. Stockbuilding	0.0	-0.1	0.1	-0.2	0.9
2.4. Domestic demand	5.0	1.7	3.0	1.4	1.9
2.5. Exports	3.3	1.2	2.4	3.2	4.9
2.6. Final demand	8.3	2.9	5.5	4.6	6.8
2.7. Imports	-3.5	-0.9	-2.2	-2.5	-4.2
2.8. Net exports	-0.2	0.3	0.2	0.7	0.7
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	23.2	19.2	25.5	26.0	26.9
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	4.0	1.2	-0.8	-0.4	-0.7
3.4. National savings	27.2	20.4	24.7	25.6	26.2
3.5. Gross capital formation	27.9	21.8	22.7	21.3	20.3
3.6. Current account	0.5	2.0	2.8	4.3	5.9
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	80.1	84.9	83.2	82.4
4.2. Trend GDP gap	-0.1	-0.1	0.0	-0.1	-1.3
4.3. Potential GDP gap	:	:	-1.1	-0.8	-1.7
4.4. Profitability index (1961–73 = 100)	100.0	78.8	90.5	95.3	97.2
5. Growth potential					
5.1. Growth of net capital stock (real)	5.3	2.6	2.2	1.7	1.5
5.2. Net capital/output ratio (real)	3.1	3.4	3.4	3.2	3.2
5.3. Growth of capital intensity	4.4	2.7	0.1	0.8	1.5
5.4. Labour productivity growth	4.0	2.0	1.1	1.2	2.6
5.5. Total factor productivity growth	2.3	1.0	1.1	0.9	2.0
6. Employment and unemployment					
6.1. Employment	1.5	0.4	2.3	1.1	0.7
6.2. Activity rate	69.1	67.7	67.8	71.2	71.7
6.3. Employment rate (benchmark)	68.5	63.6	63.2	66.8	66.8
6.4. Employment rate (full-time equivalent)	61.2	53.2	50.9	53.2	52.8
6.5. Unemployment rate (Eurostat definition)	1.1	7.1	7.4	6.4	7.1
7. Prices and wages					
7.1. Nominal wages per head	11.4	6.6	1.7	3.4	2.8
7.2. Real wages per head ⁽²⁾	6.1	0.6	0.7	0.7	-0.2
7.3. Nominal unit labour costs	7.2	4.5	0.5	2.1	0.1
7.4. Real unit labour costs	1.1	-0.9	-0.2	-0.1	-2.1
7.5. GDP deflator	6.0	5.4	0.7	2.3	2.3
7.6. Private consumption deflator	5.1	6.0	1.0	2.6	2.9
7.7. Terms of trade	0.5	-0.6	-0.2	-0.1	0.3
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	37.3	53.2	55.0	54.3	53.6
8.2. Current revenues ⁽³⁾	37.0	50.0	50.1	50.8	50.0
8.3. Net borrowing (-) or lending (+) ⁽³⁾	-0.7	-3.4	-4.9	-3.5	-3.6
8.4. Net borrowing cyclically adjusted ⁽³⁾	:	-3.4	-4.9	-3.4	-2.7
8.5. Debt (end of period) ⁽⁴⁾	:	70.5	77.4	77.0	76.1
9. Monetary conditions					
9.1. Long-term interest rate	5.9	9.4	7.1	7.4	6.9
9.2. Short-term interest rate	4.1	7.7	6.4	7.0	5.2
9.3. Yield curve (9.1–9.2)	1.8	1.7	0.7	0.4	1.7
9.4. Real long-term interest rate ⁽⁵⁾	-0.1	3.8	6.3	5.0	4.5
9.5. Nominal effective exchange rate	0.8	1.9	3.2	2.0	0.4
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	100.5	119.0	105.8	104.5	105.7

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1990 (ESA 95 data).⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
3.0	4.0	3.0	4.8	4.5	3.8	1.3	2.3	3.3
1.3	-0.4	3.2	3.6	2.8	1.9	3.4	2.5	1.7
3.9	6.3	6.6	4.2	7.8	3.8	-1.3	-0.8	2.5
10.4	9.4	9.3	2.3	8.9	5.5	-3.4	-2.2	2.9
1.0	2.2	2.4	3.6	6.1	3.4	0.4	0.1	2.2
8.8	4.6	8.8	7.4	5.4	9.5	2.3	1.1	4.8
10.6	4.4	9.5	8.5	6.3	9.4	2.2	1.0	4.8
2.9	3.0	3.8	4.3	3.7	3.5	1.5	1.5	3.1
1.8	1.9	2.2	3.2	2.8	2.3	1.4	1.7	2.0
0.8	1.3	1.4	0.9	1.7	0.8	-0.3	-0.2	0.5
0.0	-0.5	0.1	0.4	-0.6	-0.2	0.1	-0.1	0.3
3.2	2.7	3.7	4.5	3.9	2.9	1.2	1.4	2.8
4.8	2.6	5.1	4.5	3.4	6.1	1.6	0.7	3.3
8.0	5.3	8.8	9.0	7.3	9.0	2.8	2.1	6.1
-5.1	-2.2	-5.0	-4.7	-3.6	-5.5	-1.4	-0.6	-3.0
-0.3	0.4	0.2	-0.2	-0.2	0.6	0.2	0.1	0.3
28.5	26.1	26.6	23.4	23.4	23.1	23.4	23.9	23.1
8.6	7.9	8.1	7.6	5.9	:	:	:	:
-1.1	0.6	1.3	1.8	3.3	4.5	4.3	3.5	4.4
27.4	26.7	27.9	25.2	26.7	27.6	27.7	27.3	27.5
21.0	21.3	21.7	22.2	22.6	22.6	21.9	21.2	21.5
6.4	5.4	6.2	3.0	4.1	5.0	5.8	6.1	6.0
84.4	83.9	84.4	85.3	84.0	84.7	:	:	:
-1.3	-1.2	-0.4	0.8	1.6	2.1	0.8	-0.5	-0.1
-1.4	-1.3	-0.5	0.8	1.4	1.7	0.3	-1.1	-0.7
104.2	105.7	110.2	111.3	109.6	110.4	110.6	110.2	110.8
1.7	1.9	2.2	2.2	2.5	2.5	2.2	2.0	2.0
3.2	3.2	3.1	3.0	3.0	3.0	3.0	3.0	3.0
-0.1	-0.6	-1.0	-0.7	0.0	0.1	0.3	1.4	0.7
1.1	0.5	0.7	1.4	1.2	1.1	-0.4	1.0	1.8
1.2	0.7	1.0	1.7	1.2	1.0	-0.5	0.4	1.5
1.5	2.3	3.2	2.6	2.5	2.4	2.0	0.6	1.4
72.4	73.3	74.6	75.4	76.4	77.4	77.9	78.6	79.4
67.6	68.9	70.9	72.4	73.9	75.2	76.2	76.2	76.8
53.6	54.8	56.3	57.7	58.8	59.9	60.7	60.6	61.0
6.9	6.3	5.2	4.0	3.4	3.0	2.3	3.2	3.5
1.7	1.3	2.1	3.5	3.3	4.6	5.0	4.5	3.9
0.3	-0.6	0.1	1.7	1.4	1.7	0.4	2.0	2.0
0.6	0.8	1.4	2.0	2.1	3.5	5.5	3.5	2.1
-1.4	-0.4	-0.6	0.3	0.4	-0.3	-0.3	0.1	0.1
2.0	1.2	2.0	1.7	1.7	3.7	5.7	3.5	2.0
1.4	1.9	2.0	1.7	1.9	2.8	4.6	2.5	1.9
0.7	-0.7	0.4	0.2	-1.1	0.1	1.7	1.0	-0.3
51.4	49.6	48.2	47.2	47.1	45.4	44.5	44.5	43.8
47.3	47.8	47.1	46.4	47.5	47.5	45.9	45.0	45.2
-4.2	-1.8	-1.1	-0.8	0.4	2.2	1.3	0.5	1.4
-3.3	-1.0	-0.8	-1.3	-0.6	0.1	0.8	0.8	1.4
77.0	75.2	69.9	66.8	63.1	56.1	51.8	48.9	45.3
6.9	6.2	5.6	4.6	4.6	5.4	5.0	:	:
4.4	3.0	3.3	3.4	3.0	4.4	4.4	:	:
2.5	3.2	2.3	1.2	1.7	1.0	0.6	:	:
4.8	5.0	3.5	2.9	2.9	1.6	-0.7	:	:
4.4	-2.0	-4.4	0.1	-1.2	-3.3	0.7	0.2	0.0
109.1	106.3	102.4	103.6	103.0	101.8	105.5	107.7	108.8

Table 90

Main economic indicators 1961–2003

Austria

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	4.6	2.4	3.4	2.3	2.4
1.2. Government consumption	3.2	2.7	1.4	3.0	3.0
1.3. Gross fixed capital formation	6.5	0.9	4.8	2.4	4.6
1.4. — of which equipment	5.5	2.4	5.8	0.3	2.1
1.5. — of which construction	7.2	– 0.1	4.0	3.6	5.8
1.6. Exports of goods and services	8.6	6.0	5.6	2.7	5.6
1.7. Imports of goods and services	8.6	4.8	5.5	3.9	8.2
1.8. GDP	4.9	2.3	3.2	2.0	2.6
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.1	1.9	2.2	1.8	1.9
2.2. Investment	1.7	0.2	1.1	0.6	1.1
2.3. Stockbuilding	0.0	– 0.1	0.1	0.0	0.2
2.4. Domestic demand	4.9	2.0	3.2	2.5	3.4
2.5. Exports	2.3	1.9	2.0	1.0	2.0
2.6. Final demand	7.2	3.9	5.2	3.4	5.4
2.7. Imports	– 2.3	– 1.6	– 2.0	– 1.4	– 2.8
2.8. Net exports	0.0	0.3	0.0	– 0.4	– 0.8
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	21.2	21.3	22.3	21.9	22.2
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	7.3	3.8	1.7	1.1	0.1
3.4. National savings	28.5	25.1	24.0	23.0	22.3
3.5. Gross capital formation	27.5	25.1	23.7	23.9	23.6
3.6. Current account	0.1	– 1.0	0.1	– 1.1	– 1.6
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	:	:	:
4.2. Trend GDP gap	– 0.1	0.2	– 0.9	0.9	0.3
4.3. Potential GDP gap	:	:	– 0.6	0.4	– 0.5
4.4. Profitability index (1961–73 = 100)	100.0	93.7	94.9	101.4	102.8
5. Growth potential					
5.1. Growth of net capital stock (real)	4.1	3.5	2.8	3.1	3.1
5.2. Net capital/output ratio (real)	2.9	3.0	3.1	3.2	3.2
5.3. Growth of capital intensity	4.1	3.4	2.1	3.1	3.2
5.4. Labour productivity growth	4.9	2.2	2.5	2.1	2.8
5.5. Total factor productivity growth	3.3	0.9	1.7	0.9	1.6
6. Employment and unemployment					
6.1. Employment	0.0	0.1	0.7	0.2	– 0.1
6.2. Activity rate	81.2	79.6	76.2	76.2	75.3
6.3. Employment rate (benchmark)	79.7	77.9	74.1	73.5	72.6
6.4. Employment rate (full-time equivalent)	:	:	:	61.4	60.5
6.5. Unemployment rate (Eurostat definition)	2.3	2.6	3.0	3.6	3.8
7. Prices and wages					
7.1. Nominal wages per head	9.4	7.9	4.6	5.1	4.0
7.2. Real wages per head ⁽²⁾	5.1	2.0	2.6	1.9	1.2
7.3. Nominal unit labour costs	4.3	5.6	2.0	3.0	1.2
7.4. Real unit labour costs	– 0.3	0.2	– 0.5	– 0.1	– 1.5
7.5. GDP deflator	4.6	5.4	2.5	3.1	2.7
7.6. Private consumption deflator	4.1	5.8	2.0	3.1	2.8
7.7. Terms of trade	0.3	– 1.1	0.4	0.1	0.1
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	37.4	46.9	54.8	56.3	57.4
8.2. Current revenues ⁽³⁾	38.2	44.6	51.3	52.4	52.4
8.3. Net borrowing (–) or lending (+) ⁽³⁾	0.8	– 2.3	– 3.5	– 3.9	– 5.0
8.4. Net borrowing cyclically adjusted ⁽³⁾	0.8	– 2.3	– 3.2	– 4.1	– 5.1
8.5. Debt (end of period) ⁽⁴⁾	17.1	49.5	57.5	68.5	64.7
9. Monetary conditions					
9.1. Long-term interest rate	:	8.9	7.4	7.5	6.7
9.2. Short-term interest rate	:	7.1	6.1	7.0	5.0
9.3. Yield curve (9.1–9.2)	:	1.8	1.3	0.4	1.7
9.4. Real long-term interest rate ⁽⁵⁾	:	3.3	4.7	4.2	3.9
9.5. Nominal effective exchange rate	0.6	2.8	2.8	1.7	0.1
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	86.6	94.4	101.5	104.6	106.1

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1975 (ESA 95 data), 1974–85 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
2.6	3.2	1.7	2.8	2.7	2.5	1.4	1.6	2.3
1.3	1.2	-1.5	2.8	2.2	0.9	-0.2	-0.1	0.2
1.3	2.2	2.0	3.4	1.5	5.1	-0.2	0.8	3.5
2.4	4.7	5.8	5.2	4.0	11.7	2.3	3.0	6.7
0.5	0.3	-1.0	1.3	-0.7	0.3	-2.6	-1.3	0.4
3.0	5.2	12.4	7.9	8.7	12.2	5.3	4.0	7.5
5.6	4.9	12.0	5.9	8.8	11.1	4.4	3.3	7.6
1.6	2.0	1.6	3.5	2.8	3.0	1.1	1.2	2.4
1.7	2.0	0.6	2.1	2.0	1.6	0.8	0.9	1.4
0.3	0.5	0.5	0.8	0.3	1.2	-0.1	0.2	0.8
1.0	-0.6	0.3	0.1	0.2	-0.3	-0.1	-0.2	0.2
2.6	1.9	1.6	2.7	2.8	2.5	0.6	0.9	2.4
1.1	1.9	4.7	3.3	3.8	5.6	2.7	2.1	4.1
3.7	3.9	6.2	6.0	6.7	8.1	3.3	3.0	6.4
-2.0	-1.9	-4.7	-2.5	-3.9	-5.1	-2.2	-1.7	-4.0
-0.9	0.1	0.0	0.8	0.0	0.5	0.5	0.4	0.1
22.1	20.4	19.8	20.0	19.3	19.9	17.8	18.1	17.3
7.3	6.1	4.5	5.0	4.8	:	:	:	:
-0.3	1.0	2.0	1.9	1.7	1.9	3.3	3.0	3.5
21.8	21.5	21.7	21.9	21.0	21.8	21.1	21.0	20.9
24.3	23.7	24.3	23.9	24.1	24.5	23.8	23.4	23.6
-2.4	-2.2	-2.6	-2.0	-3.1	-2.7	-2.7	-2.4	-2.7
:	80.2	82.0	83.7	81.9	84.5	:	:	:
-0.4	-0.7	-1.3	-0.1	0.5	1.4	0.4	-0.4	0.1
-1.0	-1.1	-1.7	-0.5	-0.1	0.7	-0.3	-1.1	-0.6
103.1	107.9	106.6	108.2	108.2	110.1	108.3	108.4	109.5
2.9	2.9	2.9	2.9	2.8	2.9	2.7	2.5	2.6
3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4
3.3	3.1	2.4	2.1	1.8	1.6	2.7	2.8	2.3
2.0	2.2	1.1	2.7	1.8	1.6	1.1	1.5	2.1
0.8	1.0	0.2	1.9	1.1	1.0	0.1	0.5	1.2
0.0	-0.6	0.5	0.7	1.2	0.5	0.0	-0.3	0.3
75.3	75.0	75.2	75.6	75.9	76.0	76.1	76.1	76.2
72.5	71.9	72.1	72.5	73.1	73.4	73.3	73.1	73.2
60.2	60.0	60.1	60.5	60.9	61.7	61.6	61.4	61.5
3.9	4.4	4.4	4.5	3.9	3.7	3.9	4.3	4.2
4.2	1.1	1.5	2.8	2.4	2.1	2.4	2.4	2.6
2.1	-0.9	0.0	2.3	1.6	0.5	-0.2	0.5	0.6
2.1	-1.1	0.4	0.1	0.6	0.5	1.3	0.9	0.5
-0.4	-2.4	-0.5	-0.4	-0.2	-0.7	-0.1	-0.7	-0.6
2.5	1.3	0.9	0.5	0.7	1.2	1.4	1.5	1.0
2.0	1.9	1.5	0.5	0.7	1.5	2.6	1.9	1.9
1.4	-1.0	-1.0	0.4	-0.4	-1.0	-0.6	0.0	-0.7
57.2	56.6	54.0	54.3	53.8	52.2	52.9	52.0	51.2
52.1	52.8	52.1	51.9	51.6	51.1	52.7	51.7	51.7
-5.2	-3.8	-1.9	-2.4	-2.2	-1.1	-0.2	-0.4	0.4
-5.1	-3.6	-1.5	-2.4	-2.4	-1.9	-0.3	-0.2	0.4
68.5	69.2	64.7	63.9	64.9	63.5	62.3	61.2	58.7
7.2	6.3	5.7	4.7	4.7	5.6	5.1	:	:
4.5	3.3	3.5	3.6	3.0	4.4	4.4	:	:
2.6	3.0	2.2	1.1	1.7	1.2	0.7	:	:
4.5	4.9	4.8	4.2	3.9	4.3	3.7	:	:
3.9	-2.0	-3.1	0.4	-1.2	-2.9	0.4	0.1	-0.1
110.6	105.8	102.3	102.2	100.3	96.8	96.0	95.3	94.8

Table 91

Main economic indicators 1961–2003 Portugal

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	6.0	1.4	5.4	2.3	1.0
1.2. Government consumption	9.1	6.7	6.0	2.7	4.3
1.3. Gross fixed capital formation	7.9	- 1.3	10.9	2.2	2.7
1.4. — of which equipment	:	:	13.3	0.0	3.6
1.5. — of which construction	:	:	8.5	3.3	1.5
1.6. Exports of goods and services	12.0	3.4	9.6	3.6	8.4
1.7. Imports of goods and services	11.7	0.6	15.5	6.1	8.8
1.8. GDP	6.9	2.2	5.7	1.7	1.0
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	5.4	1.9	4.4	1.9	1.5
2.2. Investment	1.7	- 0.3	2.5	0.5	0.6
2.3. Stockbuilding	0.9	- 0.2	1.1	0.0	2.0
2.4. Domestic demand	8.0	1.4	8.0	2.7	1.6
2.5. Exports	2.4	1.1	2.7	1.0	2.3
2.6. Final demand	10.5	2.6	10.8	3.7	3.9
2.7. Imports	- 3.5	- 0.3	- 5.1	- 2.0	- 2.9
2.8. Net exports	- 1.1	0.8	- 2.3	- 0.9	- 0.6
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	18.4	22.9	28.1	23.2	22.0
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	3.5	- 2.5	- 0.8	- 1.8	- 2.8
3.4. National savings	21.9	20.3	27.3	21.4	19.2
3.5. Gross capital formation	25.6	28.9	27.5	24.1	23.0
3.6. Current account	0.4	- 6.6	- 0.2	- 2.7	- 3.8
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	:	77.5	77.3
4.2. Trend GDP gap	0.2	- 0.5	0.3	0.1	- 3.7
4.3. Potential GDP gap	:	:	0.2	0.4	- 3.5
4.4. Profitability index (1961–73 = 100)	100.0	33.7	115.5	116.7	126.0
5. Growth potential					
5.1. Growth of net capital stock (real)	2.7	4.7	3.7	3.5	3.1
5.2. Net capital/output ratio (real)	2.3	2.1	2.2	2.3	2.4
5.3. Growth of capital intensity	2.4	5.1	2.6	4.1	4.2
5.4. Labour productivity growth	6.6	2.6	4.6	2.3	2.0
5.5. Total factor productivity growth	5.8	1.0	3.7	1.0	0.7
6. Employment and unemployment					
6.1. Employment	0.0	0.7	1.8	- 0.4	- 0.2
6.2. Activity rate	69.8	69.2	69.6	70.8	70.5
6.3. Employment rate (benchmark)	68.0	64.3	65.2	66.8	65.6
6.4. Employment rate (full-time equivalent)	:	:	:	63.8	62.1
6.5. Unemployment rate (Eurostat definition)	2.5	7.0	6.4	5.7	6.9
7. Prices and wages					
7.1. Nominal wages per head	10.9	24.1	16.7	10.5	5.6
7.2. Real wages per head ⁽²⁾	6.7	1.6	4.2	2.8	0.0
7.3. Nominal unit labour costs	4.0	20.9	11.6	8.1	3.5
7.4. Real unit labour costs	0.1	0.1	- 1.3	0.2	- 3.5
7.5. GDP deflator	3.9	20.8	13.0	7.9	7.3
7.6. Private consumption deflator	3.9	22.2	11.9	7.5	5.6
7.7. Terms of trade	0.3	- 1.7	3.2	2.3	2.0
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	18.5	35.2	37.2	41.9	42.1
8.2. Current revenues ⁽³⁾	19.7	28.4	32.9	36.7	36.3
8.3. Net borrowing (-) or lending (+) ⁽³⁾	1.2	- 6.8	- 4.3	- 5.2	- 5.9
8.4. Net borrowing cyclically adjusted ⁽³⁾	1.1	- 6.7	- 4.4	- 5.2	- 4.6
8.5. Debt (end of period) ⁽⁴⁾	16.6	66.6	63.0	64.1	62.0
9. Monetary conditions					
9.1. Long-term interest rate	:	:	17.1	13.0	10.4
9.2. Short-term interest rate	:	14.7	14.9	13.6	11.1
9.3. Yield curve (9.1–9.2)	:	:	2.2	- 0.6	- 0.7
9.4. Real long-term interest rate ⁽⁵⁾	:	:	3.6	4.7	2.9
9.5. Nominal effective exchange rate	0.5	- 11.6	- 4.8	- 1.1	- 4.0
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	96.1	97.0	83.0	107.6	107.6

⁽¹⁾ Manufacturing industry 2000.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1995 (ESA 95 data), 1991–95 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
0.5	3.2	3.4	5.1	4.8	2.6	1.1	1.2	1.8
1.0	3.4	2.2	3.8	4.5	2.5	1.9	1.1	0.9
6.6	6.2	13.9	11.2	7.1	5.3	-1.0	2.2	3.6
3.8	7.7	16.4	17.2	10.8	7.6	-2.0	2.7	4.3
6.8	5.3	14.2	7.1	4.6	4.7	0.1	1.7	3.0
8.8	7.1	7.1	9.2	3.2	8.1	6.2	2.0	5.2
7.4	5.0	10.0	14.2	8.7	6.0	2.7	1.9	4.1
4.3	3.8	3.9	4.5	3.4	3.4	1.7	1.5	2.3
0.5	2.7	2.5	3.8	3.8	2.1	1.1	1.0	1.3
1.5	1.4	3.3	2.9	1.9	1.5	-0.3	0.6	1.0
0.0	-0.6	-0.3	0.3	0.2	-0.3	0.0	0.0	0.0
4.3	3.5	5.4	7.1	6.0	3.4	0.8	1.6	2.3
2.6	2.2	2.2	3.0	1.1	2.7	2.2	0.7	1.9
6.9	5.7	7.6	10.1	7.1	6.1	3.0	2.3	4.2
-2.6	-1.8	-3.7	-5.6	-3.7	-2.7	-1.2	-0.9	-1.9
-0.1	0.4	-1.5	-2.6	-2.6	0.0	0.9	-0.2	0.0
22.5	20.6	19.2	18.8	17.6	17.4	18.1	18.1	18.2
3.6	3.0	1.9	1.3	:	:	:	:	:
-1.2	-0.1	0.9	1.7	1.8	1.5	1.7	2.2	2.6
21.3	20.5	20.1	20.5	19.4	19.0	19.8	20.2	20.8
24.3	24.4	26.2	27.7	28.3	29.5	28.5	28.6	28.9
-3.0	-3.9	-6.2	-7.2	-8.9	-10.5	-8.7	-8.3	-8.2
79.7	78.8	80.9	81.4	80.8	81.2	:	:	:
-2.5	-1.7	-0.7	0.9	1.4	2.2	1.3	0.4	0.4
-2.0	-1.0	-0.1	1.0	1.2	1.2	0.0	-1.5	-2.0
127.9	148.8	157.7	168.4	170.4	156.3	141.5	133.0	127.2
3.0	3.4	4.4	5.1	5.3	5.6	4.9	4.6	4.5
2.4	2.3	2.4	2.4	2.4	2.5	2.5	2.6	2.7
3.8	9.9	2.7	2.4	3.4	3.8	3.3	3.8	3.6
5.0	10.4	2.2	1.8	1.5	1.7	0.2	0.8	1.5
3.8	7.1	1.4	1.0	0.4	0.4	-0.8	-0.5	0.3
-0.5	0.7	2.0	2.7	1.8	1.7	1.5	0.7	0.8
70.1	70.4	71.2	71.7	72.4	73.1	73.8	74.6	75.4
65.0	65.2	66.3	67.9	69.0	70.0	70.9	71.3	71.7
61.9	61.8	62.5	64.8	65.7	66.6	:	:	:
7.3	7.3	6.8	5.2	4.5	4.1	3.8	4.3	4.7
7.2	8.5	3.7	3.7	4.2	6.3	6.4	4.7	4.0
2.8	4.7	0.7	0.8	1.9	3.4	2.0	1.8	1.8
2.1	-1.7	1.5	1.9	2.6	4.6	6.2	3.9	2.5
-1.3	-4.6	-2.2	-1.9	-0.7	1.5	2.2	0.7	0.2
3.4	3.1	3.8	3.9	3.3	3.0	3.9	3.2	2.3
4.3	3.7	3.0	2.9	2.3	2.8	4.3	2.8	2.2
1.6	-3.2	-0.1	2.0	0.5	-2.8	-0.4	0.5	-0.1
44.9	45.5	44.2	43.7	44.9	44.2	44.7	44.6	44.6
40.5	41.6	41.6	41.3	42.8	42.7	42.7	42.9	43.2
-4.5	-3.9	-2.7	-2.4	-2.1	-1.5	-2.0	-1.6	-1.4
-3.6	-3.4	-2.4	-2.7	-2.6	-2.5	-2.5	-1.8	-1.5
64.1	62.7	58.9	54.8	54.5	53.6	53.5	53.5	53.3
11.5	8.6	6.4	5.0	4.8	5.6	5.2	:	:
9.8	7.4	5.7	4.3	3.0	4.4	4.4	:	:
1.7	1.2	0.6	0.7	1.8	1.2	0.8	:	:
7.8	5.4	2.5	1.1	1.4	2.5	1.2	:	:
1.3	0.5	-2.6	-1.1	-1.2	-2.9	0.5	0.2	0.0
109.4	106.5	104.3	103.8	103.5	103.5	107.5	109.9	111.4

Table 92

Main economic indicators 1961–2003 Finland

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	5.2	2.6	3.6	-0.9	2.6
1.2. Government consumption	5.4	3.9	3.2	-0.5	0.3
1.3. Gross fixed capital formation	4.8	1.0	4.9	-9.5	-2.7
1.4. — of which equipment	4.6	1.6	6.4	-9.3	1.5
1.5. — of which construction	5.1	0.4	3.7	-11.1	-6.4
1.6. Exports of goods and services	7.2	4.4	2.0	8.0	13.1
1.7. Imports of goods and services	7.3	3.2	5.9	1.4	12.8
1.8. GDP	5.0	2.8	3.3	-0.7	4.0
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.7	2.2	2.6	-0.6	1.4
2.2. Investment	1.4	0.2	1.2	-2.1	-0.4
2.3. Stockbuilding	0.1	0.0	0.1	0.2	2.4
2.4. Domestic demand	5.4	2.5	4.3	-2.6	3.0
2.5. Exports	1.3	1.1	0.5	2.5	4.3
2.6. Final demand	6.4	3.6	4.8	-0.1	7.3
2.7. Imports	-1.4	-0.7	-1.4	-0.5	-3.3
2.8. Net exports	0.0	0.3	-0.9	2.0	1.0
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	18.8	18.2	16.3	18.1	20.5
3.2. Net savings of households	:	:	1.1	3.7	1.3
3.3. General government savings	7.5	7.8	8.5	-1.0	-2.0
3.4. National savings	26.3	26.0	24.8	17.1	18.4
3.5. Gross capital formation	28.0	28.3	27.4	18.2	16.9
3.6. Current account	-1.5	-2.0	-3.1	-1.2	1.1
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	:	:	86.8
4.2. Trend GDP gap	0.2	-0.3	4.6	-4.9	-6.0
4.3. Potential GDP gap	:	:	4.4	-5.7	-6.2
4.4. Profitability index (1961–73 = 100)	100.0	78.6	85.2	78.7	93.4
5. Growth potential					
5.1. Growth of net capital stock (real)	5.3	3.4	3.0	-0.2	-1.0
5.2. Net capital/output ratio (real)	3.2	3.4	3.2	3.5	3.5
5.3. Growth of capital intensity	4.8	3.0	2.7	3.7	0.1
5.4. Labour productivity growth	4.5	2.4	3.0	3.2	5.1
5.5. Total factor productivity growth	2.8	1.3	2.0	1.9	5.1
6. Employment and unemployment					
6.1. Employment	0.2	1.0	0.5	-3.5	-0.8
6.2. Activity rate	72.6	74.7	76.3	73.1	72.1
6.3. Employment rate (benchmark)	70.9	70.9	73.1	63.4	60.1
6.4. Employment rate (full-time equivalent)	:	:	:	:	:
6.5. Unemployment rate (Eurostat definition)	2.3	4.9	4.1	13.3	16.6
7. Prices and wages					
7.1. Nominal wages per head	11.1	13.1	8.7	3.3	3.1
7.2. Real wages per head ⁽²⁾	5.1	2.1	4.2	0.2	2.1
7.3. Nominal unit labour costs	6.3	10.4	5.5	0.0	-2.0
7.4. Real unit labour costs	-0.4	-0.1	-0.1	-2.1	-3.9
7.5. GDP deflator	6.7	10.5	5.6	2.2	2.0
7.6. Private consumption deflator	5.7	10.7	4.3	3.0	0.9
7.7. Terms of trade	0.1	-0.6	1.8	0.0	1.8
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	30.0	39.6	48.0	62.1	63.4
8.2. Current revenues ⁽³⁾	32.9	43.3	52.4	57.4	57.8
8.3. Net borrowing (-) or lending (+) ⁽³⁾	2.9	3.7	4.5	-4.7	-5.7
8.4. Net borrowing cyclically adjusted ⁽³⁾	2.9	3.9	1.6	-1.1	-1.2
8.5. Debt (end of period) ⁽⁴⁾	7.9	16.4	14.5	57.1	58.8
9. Monetary conditions					
9.1. Long-term interest rate	8.0	11.2	11.7	9.8	8.4
9.2. Short-term interest rate	:	12.2	11.6	9.0	5.3
9.3. Yield curve (9.1–9.2)	:	-1.0	0.1	0.8	3.0
9.4. Real long-term interest rate ⁽⁵⁾	1.2	0.7	5.8	7.4	6.2
9.5. Nominal effective exchange rate	-2.4	-0.4	1.6	-2.7	7.7
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	84.6	82.1	93.9	80.0	70.9

⁽¹⁾ Manufacturing industry 2000.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1975 (ESA 95 data), 1974–85 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
4.4	4.2	3.5	5.1	4.0	3.0	1.5	1.9	1.9
2.0	2.5	4.1	1.7	1.9	0.7	1.7	1.6	1.1
10.6	8.4	11.9	9.3	3.0	5.5	1.8	0.5	2.9
24.4	10.8	12.2	8.0	-2.0	3.2	1.0	0.5	4.5
2.7	9.0	12.6	11.2	6.3	7.0	0.1	0.0	0.6
8.6	5.8	14.1	8.9	6.8	18.1	-2.6	2.2	5.6
7.8	6.4	11.3	8.5	4.0	15.7	-2.2	3.0	4.4
3.8	4.0	6.3	5.3	4.0	5.7	0.5	1.7	2.9
2.7	2.7	2.7	2.9	2.4	1.7	1.1	1.2	1.2
1.6	1.4	2.0	1.7	0.6	1.0	0.3	0.1	0.5
-0.3	-1.5	0.7	0.7	-1.2	0.9	-0.3	0.4	0.1
2.9	3.7	4.3	4.4	2.5	3.0	1.1	1.7	1.8
3.1	2.1	5.3	3.6	2.8	7.8	-1.3	1.0	2.6
6.0	5.9	9.7	8.0	5.3	10.7	-0.2	2.8	4.4
-2.2	-1.9	-3.4	-2.6	-1.3	-5.0	0.8	-1.0	-1.5
0.9	0.3	2.0	1.0	1.6	2.7	-0.5	0.0	1.1
22.1	20.3	22.5	20.7	20.5	18.3	19.5	20.6	21.9
3.1	1.1	2.5	1.6	2.2	1.1	:	:	:
-0.5	0.4	1.6	4.2	4.7	9.3	7.1	5.2	4.5
21.6	20.7	24.1	24.9	25.1	27.6	26.6	25.8	26.4
17.5	16.8	18.4	19.7	18.9	19.8	19.0	19.1	19.3
4.1	4.0	5.6	5.6	6.0	7.3	7.1	6.2	6.6
87.7	83.2	87.2	88.9	86.1	86.8	:	:	:
-4.6	-3.4	-0.3	1.8	2.5	4.9	2.1	0.7	0.4
-4.9	-3.2	-0.3	2.1	2.8	5.6	3.0	1.8	1.8
109.7	115.4	134.7	148.9	147.0	161.1	151.4	147.5	150.9
-0.5	-0.2	0.4	0.9	0.9	1.2	1.3	1.2	1.3
3.3	3.2	3.0	2.9	2.8	2.7	2.7	2.7	2.7
-2.1	-1.6	-2.8	-1.2	-1.7	-0.5	-0.1	1.2	0.9
2.2	2.6	2.9	3.2	1.2	3.9	-0.8	1.7	2.4
3.0	3.1	4.0	3.6	1.9	4.1	-0.8	1.3	2.1
2.2	1.4	2.0	2.4	3.3	1.7	1.4	0.0	0.5
72.5	72.6	72.3	72.6	73.6	74.4	74.7	74.8	75.0
61.3	62.0	63.1	64.3	66.1	67.1	67.8	67.8	68.0
56.5	57.5	59.5	60.6	64.2	64.9	:	:	:
15.4	14.6	12.7	11.4	10.2	9.8	9.2	9.4	9.3
3.9	2.7	1.7	4.1	2.1	3.9	4.4	3.5	3.4
3.5	1.3	0.4	2.3	1.0	0.4	1.8	1.7	1.4
1.7	0.1	-1.1	0.9	0.8	0.1	5.3	1.8	1.0
-2.3	0.4	-3.1	-2.0	0.9	-3.2	2.8	0.8	-0.6
4.1	-0.2	2.1	3.0	-0.1	3.4	2.4	0.9	1.6
0.4	1.4	1.3	1.7	1.1	3.5	2.6	1.8	2.0
4.9	-1.0	-1.6	2.0	-3.3	-2.2	0.8	-1.7	-1.0
59.9	59.9	56.8	53.2	52.2	48.7	48.5	48.5	47.5
56.2	56.8	55.3	54.5	54.1	55.6	53.3	51.4	49.8
-3.7	-3.2	-1.5	1.3	1.9	6.9	4.8	2.9	2.3
-0.4	-0.7	-1.3	0.1	0.3	3.7	3.4	2.4	2.0
57.1	57.1	54.1	48.8	47.3	44.0	42.7	42.0	41.7
8.8	7.1	6.0	4.8	4.7	5.5	5.0	:	:
5.8	3.6	3.2	3.6	3.0	4.4	4.4	:	:
3.0	3.4	2.7	1.2	1.8	1.1	0.7	:	:
4.4	7.3	3.8	1.7	4.8	2.0	2.6	:	:
11.1	-2.7	-3.4	-0.5	-2.1	-4.6	1.3	0.5	-0.1
78.9	75.7	71.6	70.9	69.0	64.6	67.0	67.4	67.2

Table 93

Main economic indicators 1961–2003 Sweden

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	3.4	1.1	2.4	-0.3	1.8
1.2. Government consumption	4.9	2.7	1.5	0.3	-0.9
1.3. Gross fixed capital formation	4.4	0.5	5.5	-4.8	6.1
1.4. — of which equipment	:	3.2	6.9	-0.6	25.2
1.5. — of which construction	:	-1.1	3.9	-8.3	-8.0
1.6. Exports of goods and services	7.7	3.3	3.0	6.4	14.1
1.7. Imports of goods and services	6.0	2.2	5.1	2.4	12.2
1.8. GDP	4.1	1.8	2.3	0.6	4.1
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.1	1.3	1.7	-0.1	0.7
2.2. Investment	0.9	0.1	1.0	-0.9	0.9
2.3. Stockbuilding	-0.1	0.1	0.0	0.2	1.4
2.4. Domestic demand	3.9	1.4	2.7	-0.8	3.0
2.5. Exports	1.3	0.8	0.8	2.3	4.8
2.6. Final demand	5.3	2.3	3.6	1.5	7.8
2.7. Imports	-1.2	-0.5	-1.3	-0.9	-3.7
2.8. Net exports	0.2	0.3	-0.4	1.4	1.2
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	:	15.5	13.0	20.0	23.7
3.2. Net savings of households	:	:	:	:	6.6
3.3. General government savings	:	2.8	5.4	-4.0	-6.5
3.4. National savings	24.7	18.4	18.4	16.0	17.1
3.5. Gross capital formation	27.1	22.2	22.2	17.1	15.9
3.6. Current account	0.2	-1.7	-1.6	-0.3	1.2
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	:	:	:
4.2. Trend GDP gap	0.2	-0.4	2.4	-1.8	-2.7
4.3. Potential GDP gap	:	:	2.4	-2.3	-2.5
4.4. Profitability index (1961–73 = 100)	100.0	86.2	100.9	107.2	115.2
5. Growth potential					
5.1. Growth of net capital stock (real)	3.9	2.2	2.2	0.6	0.2
5.2. Net capital/output ratio (real)	2.9	3.1	3.0	3.2	3.2
5.3. Growth of capital intensity	3.3	1.4	1.1	2.9	0.9
5.4. Labour productivity growth	3.5	1.0	1.2	2.8	4.9
5.5. Total factor productivity growth	2.3	0.5	0.8	1.7	4.6
6. Employment and unemployment					
6.1. Employment	0.6	0.9	0.8	-2.2	-0.9
6.2. Activity rate	73.9	80.2	82.3	79.2	77.6
6.3. Employment rate (benchmark)	72.5	78.2	80.6	73.5	70.2
6.4. Employment rate (full-time equivalent)	:	:	:	:	:
6.5. Unemployment rate (Eurostat definition)	1.9	2.4	2.0	7.2	9.4
7. Prices and wages					
7.1. Nominal wages per head	8.4	10.7	9.2	4.5	4.8
7.2. Real wages per head ⁽²⁾	3.5	0.4	2.3	-0.2	2.0
7.3. Nominal unit labour costs	4.7	9.6	7.8	1.7	-0.1
7.4. Real unit labour costs	-0.2	-0.1	0.8	-1.6	-2.4
7.5. GDP deflator	4.9	9.8	7.0	3.4	2.4
7.6. Private consumption deflator	4.8	10.3	6.7	4.7	2.8
7.7. Terms of trade	-0.5	-1.5	1.2	-0.5	-0.4
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	:	57.3	58.5	65.7	70.7
8.2. Current revenues ⁽³⁾	:	55.5	61.6	58.1	59.9
8.3. Net borrowing (-) or lending (+) ⁽³⁾	:	-1.7	3.1	-7.6	-10.8
8.4. Net borrowing cyclically adjusted ⁽³⁾	:	-1.3	1.5	-6.3	-9.1
8.5. Debt (end of period) ⁽⁴⁾	26.6	61.6	42.1	76.6	77.7
9. Monetary conditions					
9.1. Long-term interest rate	6.3	11.0	11.7	10.0	9.5
9.2. Short-term interest rate	:	:	11.0	10.1	7.6
9.3. Yield curve (9.1–9.2)	:	:	0.7	-0.1	1.9
9.4. Real long-term interest rate ⁽⁵⁾	1.4	1.1	4.4	6.4	7.0
9.5. Nominal effective exchange rate	0.3	-2.2	-0.1	-4.1	-1.1
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	100.4	94.0	90.4	87.0	78.8

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ Break in 1993 (ESA 95 data), 1991–95 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
0.6	1.4	2.0	2.7	3.9	4.6	0.9	1.7	2.3
-0.6	0.9	-1.2	3.2	1.7	-0.9	1.1	1.0	0.8
9.4	5.0	-1.1	8.5	9.6	5.0	3.2	3.1	4.0
21.8	9.3	1.8	10.9	8.3	3.9	2.7	2.7	3.5
-0.6	1.7	-8.0	2.7	3.8	4.4	3.9	3.7	4.8
11.3	3.5	13.7	8.4	6.5	10.3	-0.1	3.3	6.8
7.2	3.0	12.5	11.2	4.4	11.5	-1.1	3.7	6.5
3.7	1.1	2.1	3.6	4.5	3.6	1.4	1.6	2.6
0.1	0.9	0.7	2.2	2.4	2.1	0.8	1.1	1.4
1.4	0.8	-0.2	1.3	1.6	0.9	0.5	0.5	0.7
0.3	-1.0	0.4	0.4	-0.6	0.5	-0.3	-0.1	0.0
1.9	0.7	0.8	3.9	3.3	3.3	1.0	1.5	2.1
4.3	1.4	5.7	3.9	3.1	5.1	-0.1	1.6	3.3
6.0	2.1	6.4	7.8	6.3	8.3	0.9	3.1	5.3
-2.3	-1.0	-4.3	-4.2	-1.8	-4.7	0.5	-1.5	-2.7
1.9	0.4	1.4	-0.3	1.3	0.4	0.4	0.0	0.5
24.2	19.6	18.4	16.7	16.8	14.8	15.2	16.7	16.6
4.7	3.8	2.4	1.7	1.1	:	:	:	:
-3.9	-0.2	1.5	3.8	4.4	6.4	6.3	4.0	4.2
20.3	19.4	19.9	20.6	21.2	21.2	21.5	20.7	20.8
16.6	15.9	15.6	16.8	17.2	18.0	18.1	18.4	18.7
3.7	3.5	4.3	3.8	4.0	3.3	3.4	2.4	2.2
:	85.0	85.8	85.0	85.8	87.5	:	:	:
-0.9	-1.7	-1.9	-0.7	1.3	2.3	1.2	0.2	0.2
-1.5	-1.5	-0.8	0.0	1.8	3.0	1.7	0.7	0.8
134.2	127.9	133.9	135.8	141.7	123.2	114.1	112.8	114.9
0.6	0.7	0.6	0.8	1.1	1.1	1.2	1.3	1.5
3.1	3.1	3.0	2.9	2.8	2.8	2.8	2.8	2.7
-0.7	1.3	1.7	-0.4	-1.2	-1.1	-0.6	1.2	0.8
2.3	1.6	3.2	2.3	2.1	1.4	-0.4	1.5	1.9
2.6	1.2	2.6	2.5	2.6	1.8	-0.2	1.0	1.6
1.5	-0.6	-1.0	1.5	2.2	2.2	1.8	0.1	0.7
77.9	77.9	77.2	76.8	77.1	77.5	78.0	78.1	78.1
70.9	70.3	69.5	70.3	71.5	72.9	73.9	73.7	73.8
63.9	62.8	61.9	62.4	63.8	65.1	:	:	:
8.8	9.6	9.9	8.3	7.2	5.9	5.2	5.6	5.4
2.8	6.8	3.8	3.3	1.3	8.7	3.8	3.8	3.9
-0.1	5.3	1.5	2.2	0.3	7.8	1.5	1.6	2.0
0.5	5.1	0.6	0.9	-0.8	7.2	4.2	2.3	2.0
-2.9	3.6	-1.1	0.1	-1.5	6.1	2.3	0.1	-0.2
3.5	1.4	1.7	0.9	0.7	1.0	1.9	2.1	2.2
2.9	1.4	2.3	1.0	1.0	0.9	2.3	2.1	1.9
1.2	-0.4	-0.9	-0.8	-2.6	-1.6	-2.2	-1.4	-0.6
67.6	65.3	63.2	60.8	60.1	57.7	57.0	56.8	56.4
60.0	62.2	61.6	62.9	61.8	61.7	60.8	58.4	58.2
-7.7	-3.1	-1.6	2.1	1.7	4.0	3.8	1.6	1.9
-7.1	-1.9	-0.3	2.5	0.8	2.4	3.0	1.4	1.7
76.6	76.0	73.1	70.5	65.0	55.3	52.3	50.2	47.8
10.2	8.1	6.7	5.0	5.0	5.4	5.1	:	:
8.9	5.9	4.5	4.3	3.3	4.1	4.2	:	:
1.4	2.2	2.2	0.7	1.6	1.3	0.9	:	:
6.5	6.5	4.8	4.1	4.3	4.3	3.2	:	:
0.0	9.7	-4.1	-1.6	-1.7	-0.6	-8.6	-3.2	-0.3
77.9	88.8	84.7	82.8	79.3	83.2	77.0	75.0	75.4

Table 94

Main economic indicators 1961–2003 United Kingdom

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	3.0	1.6	4.7	1.5	3.3
1.2. Government consumption	2.6	1.4	0.9	1.2	1.0
1.3. Gross fixed capital formation	4.6	0.9	5.7	-0.3	4.7
1.4. — of which equipment	:	1.8	5.2	0.3	8.2
1.5. — of which construction	:	-0.7	7.4	-1.0	2.1
1.6. Exports of goods and services	5.4	3.3	4.2	5.3	9.2
1.7. Imports of goods and services	5.3	2.6	7.0	3.2	5.7
1.8. GDP	3.2	1.4	3.3	1.8	4.7
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	2.4	1.3	3.1	1.2	2.3
2.2. Investment	0.8	0.1	1.0	-0.1	0.8
2.3. Stockbuilding	0.1	-0.1	-0.1	0.2	0.7
2.4. Domestic demand	3.2	1.3	4.0	1.3	3.7
2.5. Exports	0.8	0.7	1.0	1.4	2.4
2.6. Final demand	4.1	2.0	5.0	2.7	6.2
2.7. Imports	-0.9	-0.5	-1.7	-0.9	-1.6
2.8. Net exports	0.0	0.1	-0.7	0.5	0.8
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	16.3	18.3	15.2	17.7	19.4
3.2. Net savings of households	:	:	:	4.7	3.9
3.3. General government savings	4.1	0.5	1.8	-2.9	-3.9
3.4. National savings	20.4	18.8	17.1	14.9	15.5
3.5. Gross capital formation	20.0	19.1	20.2	16.5	16.5
3.6. Current account	0.4	0.2	-3.2	-1.6	-1.0
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	79.1	84.6	81.0	82.8
4.2. Trend GDP gap	0.2	-0.8	2.7	-1.7	-0.8
4.3. Potential GDP gap	:	:	2.4	-1.6	-0.4
4.4. Profitability index (1961–73 = 100)	100.0	75.5	91.2	103.3	115.0
5. Growth potential					
5.1. Growth of net capital stock (real)	3.1	1.7	2.2	1.3	1.2
5.2. Net capital/output ratio (real)	3.0	3.1	2.9	2.9	2.9
5.3. Growth of capital intensity	2.8	1.8	0.4	2.3	0.5
5.4. Labour productivity growth	2.9	1.5	1.5	2.7	3.9
5.5. Total factor productivity growth	1.9	0.9	1.3	1.9	3.7
6. Employment and unemployment					
6.1. Employment	0.3	-0.1	1.9	-0.7	0.8
6.2. Activity rate	71.5	73.1	75.0	75.2	74.6
6.3. Employment rate (benchmark)	70.2	68.1	68.2	68.0	67.4
6.4. Employment rate (full-time equivalent)	:	:	:	59.2	58.7
6.5. Unemployment rate (Eurostat definition)	1.9	6.9	9.0	9.5	9.6
7. Prices and wages					
7.1. Nominal wages per head	8.2	13.9	8.4	4.9	2.9
7.2. Real wages per head ⁽²⁾	3.2	1.7	2.7	0.8	1.0
7.3. Nominal unit labour costs	5.1	12.1	6.8	2.2	-0.9
7.4. Real unit labour costs	0.1	-0.2	0.9	-1.2	-2.2
7.5. GDP deflator	5.1	12.4	5.9	3.4	1.4
7.6. Private consumption deflator	4.8	11.9	5.5	4.1	1.9
7.7. Terms of trade	-0.4	0.4	0.0	-0.3	-2.0
8. General government budget, % of GDP					
8.1. Expenditure ⁽³⁾	35.7	:	:	45.9	46.0
8.2. Current revenues ⁽³⁾	35.4	:	:	39.9	39.2
8.3. Net borrowing (-) or lending (+) ⁽³⁾	-0.3	-3.7	-0.9	-6.0	-6.7
8.4. Net borrowing cyclically adjusted ⁽³⁾	-0.3	-3.2	-2.2	-5.2	-6.3
8.5. Debt (end of period) ⁽⁴⁾	66.9	54.4	35.1	51.8	49.6
9. Monetary conditions					
9.1. Long-term interest rate	7.6	13.0	9.9	8.5	8.1
9.2. Short-term interest rate	6.8	11.9	11.9	7.9	5.5
9.3. Yield curve (9.1–9.2)	0.8	1.1	-2.0	0.7	2.5
9.4. Real long-term interest rate ⁽⁵⁾	2.4	0.6	3.7	4.9	6.6
9.5. Nominal effective exchange rate	-2.1	-2.2	-1.0	-3.0	0.5
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	86.8	82.1	88.3	89.2	84.5

⁽¹⁾ Manufacturing industry.⁽²⁾ Private consumption deflator.⁽³⁾ From 1974 (ESA 95 data), 1961–73 average according to the former definition.⁽⁴⁾ Break in 1996 (ESA 95 data).⁽⁵⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
1.9	3.8	3.8	3.8	4.2	4.0	3.8	2.2	2.6
1.7	1.2	0.1	1.5	2.8	1.6	2.4	3.4	3.2
3.1	4.7	7.1	13.2	0.9	4.9	2.0	1.1	4.3
11.0	9.3	8.2	24.3	0.1	7.0	0.3	-1.8	3.5
-3.4	-0.5	5.9	2.8	2.0	2.5	4.2	4.8	5.2
9.0	8.2	8.3	3.0	5.4	10.2	2.1	1.0	5.8
5.4	9.6	9.7	9.6	8.9	10.7	3.7	2.7	6.1
2.9	2.6	3.4	3.0	2.1	2.9	2.3	1.7	3.0
1.6	2.7	2.5	2.8	3.3	3.0	3.0	2.1	2.4
0.5	0.8	1.2	2.3	0.2	0.9	0.4	0.2	0.8
-0.1	-0.4	0.3	0.1	0.1	-0.3	-0.2	0.1	0.3
2.0	3.1	4.0	5.2	3.5	3.6	3.1	2.5	3.5
2.4	2.3	2.5	1.0	1.7	3.3	0.7	0.3	2.0
4.4	5.4	6.4	6.1	5.2	6.8	3.8	2.8	5.5
-1.5	-2.8	-3.0	-3.1	-3.1	-4.0	-1.5	-1.1	-2.5
0.9	-0.4	-0.5	-2.2	-1.4	-0.7	-0.7	-0.7	-0.5
18.6	17.9	17.5	15.7	13.1	12.5	12.5	12.3	13.0
4.4	3.8	4.0	1.2	0.4	0.5	:	:	:
-2.9	-2.3	-0.6	2.0	2.6	3.2	3.0	2.5	2.7
15.7	15.6	16.9	17.6	15.7	15.7	15.5	14.8	15.7
16.9	16.7	17.1	18.2	17.8	17.7	17.6	17.8	18.4
-1.3	-1.1	-0.2	-0.6	-2.1	-2.0	-1.9	-2.9	-2.6
84.4	82.5	83.8	83.7	79.4	81.3	:	:	:
-0.4	-0.4	0.5	0.8	0.4	0.7	0.5	-0.2	0.3
0.0	0.1	0.9	1.1	0.3	0.4	0.0	-1.0	-0.6
118.0	125.3	132.1	137.6	133.8	132.9	131.4	128.7	130.1
1.5	1.7	1.9	2.6	2.5	2.6	2.5	2.4	2.5
2.8	2.8	2.8	2.7	2.8	2.7	2.8	2.8	2.8
0.0	0.6	-0.1	1.2	1.4	1.5	1.8	2.4	2.1
1.4	1.5	1.4	1.6	1.1	1.8	1.6	1.7	2.6
1.4	1.3	1.4	1.2	0.6	1.3	1.0	0.9	1.8
1.2	1.1	1.9	1.0	1.9	1.0	0.7	0.0	0.4
74.4	74.4	74.5	74.4	75.1	75.1	75.0	74.9	75.0
67.9	68.3	69.2	69.6	70.5	70.9	71.1	70.8	70.9
59.2	59.4	60.2	60.7	61.2	61.7	:	:	:
8.7	8.2	7.0	6.3	6.1	5.5	5.1	5.4	5.4
3.1	3.6	4.3	5.0	5.3	4.1	4.3	3.9	4.4
0.0	0.5	1.9	2.2	3.7	3.4	2.7	2.1	2.4
1.7	2.0	2.9	3.4	4.2	2.2	2.6	2.1	1.8
-0.9	-1.2	0.0	0.4	1.5	0.4	0.2	-0.4	-0.7
2.6	3.3	2.9	2.9	2.6	1.7	2.3	2.5	2.5
3.1	3.1	2.3	2.7	1.5	0.6	1.5	1.8	2.0
-2.5	1.2	3.3	2.2	0.7	1.2	-0.3	0.1	0.1
45.5	43.8	41.7	40.4	39.6	37.3	40.4	40.9	40.4
39.8	39.4	39.6	40.8	40.8	41.5	41.6	41.3	40.9
-5.8	-4.4	-2.2	0.4	1.1	4.3	1.2	0.4	0.5
-5.6	-4.2	-2.4	0.0	1.0	1.5	1.0	0.5	0.3
51.8	52.3	50.8	47.6	45.2	42.4	39.3	37.2	34.8
8.2	7.8	7.0	5.5	5.0	5.3	4.9	:	:
6.7	6.0	6.8	7.3	5.5	6.2	5.2	:	:
1.5	1.8	0.2	-1.8	-0.5	-0.9	-0.3	:	:
5.4	4.4	4.0	2.5	2.3	3.5	2.5	:	:
-4.0	1.6	15.9	3.9	-0.5	2.5	-1.7	-0.1	-0.7
81.3	83.4	98.6	104.7	107.2	110.4	108.0	108.4	108.3

Table 95

Main economic indicators 1961–2003 United States

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	4.5	3.0	3.2	2.6	3.8
1.2. Government consumption	2.5	2.4	2.8	-0.1	-0.1
1.3. Gross fixed capital formation	5.3	2.7	1.5	4.1	8.0
1.4. — of which equipment	8.0	4.7	3.7	7.7	11.3
1.5. — of which construction	3.9	1.4	-0.3	0.7	4.6
1.6. Exports of goods and services	7.0	4.1	11.0	7.0	8.9
1.7. Imports of goods and services	7.4	5.0	5.2	7.0	12.0
1.8. GDP	4.4	2.8	3.2	2.4	4.1
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	3.5	2.5	2.7	1.7	2.5
2.2. Investment	0.8	0.4	0.3	0.7	1.3
2.3. Stockbuilding	0.1	0.0	-0.1	0.1	0.7
2.4. Domestic demand	4.4	2.9	2.9	2.4	4.5
2.5. Exports	0.3	0.2	0.8	0.7	0.9
2.6. Final demand	4.8	3.2	3.7	3.1	5.3
2.7. Imports	-0.4	-0.4	-0.5	-0.7	-1.3
2.8. Net exports	-0.1	-0.1	0.3	-0.1	-0.4
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	18.0	20.6	18.2	18.5	18.0
3.2. Net savings of households	:	:	:	:	:
3.3. General government savings	1.7	-1.0	-1.8	-2.2	-1.4
3.4. National savings	19.7	19.7	16.4	16.3	16.6
3.5. Gross capital formation	19.2	20.0	18.7	17.2	18.1
3.6. Current account	0.5	-0.3	-2.3	-0.9	-1.5
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	:	:	:
4.2. Trend GDP gap	:	:	:	:	:
4.3. Potential GDP gap	:	:	:	:	:
4.4. Profitability index (1961–73 = 100)	100.0	87.3	98.5	109.4	113.7
5. Growth potential					
5.1. Growth of net capital stock (real)	3.3	2.7	2.5	2.1	2.3
5.2. Net capital/output ratio (real)	2.8	2.7	2.5	2.5	2.5
5.3. Growth of capital intensity	1.3	0.9	0.3	0.9	-0.3
5.4. Labour productivity growth	2.4	1.0	1.0	1.2	1.5
5.5. Total factor productivity growth	1.9	0.6	0.9	0.9	1.6
6. Employment and unemployment					
6.1. Employment	2.0	1.8	2.2	1.1	2.3
6.2. Activity rate	67.0	71.7	76.4	77.7	78.0
6.3. Employment rate (benchmark)	67.3	69.8	75.9	77.3	78.0
6.4. Employment rate (full-time equivalent)	60.9	62.6	68.1	69.2	69.9
6.5. Unemployment rate (Eurostat definition)	4.9	7.5	5.9	6.6	6.1
7. Prices and wages					
7.1. Nominal wages per head	5.6	7.7	4.3	3.4	2.4
7.2. Real wages per head ⁽²⁾	2.7	0.7	0.5	0.7	0.4
7.3. Nominal unit labour costs	3.2	6.6	3.3	2.1	1.0
7.4. Real unit labour costs	-0.1	-0.1	0.0	-0.4	-1.1
7.5. GDP deflator	3.2	6.8	3.3	2.5	2.1
7.6. Private consumption deflator	2.9	6.9	3.8	2.7	2.0
7.7. Terms of trade	-0.4	-1.8	-1.4	0.4	0.2
8. General government budget, % of GDP					
8.1. Expenditure	30.0	33.5	35.4	35.9	35.1
8.2. Current revenues	28.7	30.3	31.2	31.4	31.5
8.3. Net borrowing (-) or lending (+)	-1.3	-3.3	-4.2	-4.5	-3.7
8.4. Net borrowing cyclically adjusted	:	:	:	:	:
8.5. Debt (end of period)	45.9	59.6	67.3	75.1	75.6
9. Monetary conditions					
9.1. Long-term interest rate	5.0	9.5	8.6	7.1	7.1
9.2. Short-term interest rate	4.5	8.6	7.0	4.6	4.7
9.3. Yield curve (9.1–9.2)	0.5	0.9	1.6	2.5	2.5
9.4. Real long-term interest rate ⁽³⁾	1.7	2.6	5.1	4.4	5.0
9.5. Nominal effective exchange rate	-1.0	4.4	-4.2	0.4	-0.9
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	150.6	114.6	111.1	98.8	99.0

⁽¹⁾ Manufacturing industry 2000.⁽²⁾ Private consumption deflator.⁽³⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
3.0	3.2	3.6	4.8	5.0	4.8	2.5	-0.5	2.9
-0.2	0.7	1.3	1.5	2.4	2.7	3.4	6.3	2.4
5.9	8.6	9.5	10.5	7.9	6.8	-1.6	-2.6	6.0
11.3	11.0	13.2	14.5	12.0	10.8	-4.3	-2.4	7.4
0.4	6.0	5.6	6.0	3.6	2.4	2.7	-2.9	4.0
10.3	8.2	12.3	2.1	3.2	9.5	-4.2	-4.9	2.5
8.2	8.6	13.7	11.8	10.5	13.4	-3.0	-3.0	5.0
2.7	3.6	4.5	4.3	4.1	4.2	0.9	0.5	3.4
2.0	2.3	2.6	3.4	3.7	3.7	2.2	0.5	2.3
1.0	1.5	1.7	2.0	1.6	1.4	-0.3	-0.6	1.3
-0.5	0.0	0.4	0.2	-0.2	-0.1	-0.9	0.6	0.3
2.5	3.8	4.8	5.6	5.1	5.0	0.9	0.6	3.9
1.0	0.9	1.4	0.3	0.4	1.1	-0.5	-0.6	0.3
3.6	4.6	6.2	5.9	5.6	6.2	0.4	0.0	4.2
-0.9	-1.0	-1.7	-1.6	-1.5	-2.1	0.5	0.5	-0.8
0.1	-0.1	-0.3	-1.3	-1.1	-0.9	0.0	-0.1	-0.5
17.6	17.1	16.6	15.4	13.9	12.2	13.2	16.6	16.9
:	:	:	:	:	:	:	:	:
-0.8	0.0	1.3	2.6	3.3	4.2	2.7	-0.5	-0.3
16.8	17.1	18.0	18.0	17.2	16.3	15.8	16.1	16.5
18.1	18.6	19.5	20.3	20.5	20.7	19.1	19.0	19.7
-1.3	-1.4	-1.5	-2.3	-3.3	-4.4	-3.7	-3.3	-3.6
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
116.6	123.2	129.6	129.2	128.7	127.1	119.6	118.8	123.0
2.5	2.8	3.2	3.6	3.7	3.9	3.4	2.8	3.1
2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.5	2.5
0.0	1.0	0.7	1.2	1.8	1.8	3.5	3.5	2.2
0.2	1.7	2.0	2.0	2.2	2.1	1.0	1.1	2.5
0.2	1.4	1.7	1.5	1.5	1.4	-0.2	-0.1	1.7
2.2	1.7	2.3	2.2	1.9	1.9	-0.1	-0.6	0.9
77.9	78.0	78.3	78.2	78.3	78.2	78.1	77.9	77.6
78.9	79.4	80.3	81.1	81.7	82.3	81.6	80.4	80.3
70.9	71.5	72.3	73.2	73.7	74.4	73.8	72.6	72.6
5.6	5.4	4.9	4.5	4.2	4.0	4.7	5.9	5.7
1.8	2.5	3.1	4.5	4.1	5.1	5.3	2.2	3.1
-0.5	0.4	1.2	3.4	2.4	2.4	3.4	0.7	1.3
1.6	0.8	1.1	2.4	1.9	3.0	4.3	1.0	0.7
-0.6	-1.1	-0.9	1.2	0.5	0.7	1.8	-0.8	-1.0
2.2	1.9	2.0	1.2	1.4	2.3	2.4	1.8	1.6
2.3	2.1	1.9	1.1	1.6	2.7	1.9	1.5	1.8
-0.4	0.5	2.1	3.3	-1.2	-2.4	3.7	3.4	-0.1
35.0	34.6	33.6	32.7	32.4	32.0	32.7	34.0	33.4
31.9	32.3	32.6	33.0	33.2	33.8	32.6	30.6	30.2
-3.1	-2.2	-1.0	0.3	0.9	1.7	-0.3	-3.6	-3.5
:	:	:	:	:	:	:	:	:
75.1	74.5	72.0	69.0	65.9	60.7	:	:	:
6.6	6.4	6.3	5.3	5.6	6.0	5.0	:	:
6.0	5.5	5.7	5.5	5.4	6.5	4.0	:	:
0.6	1.0	0.7	-0.2	0.2	-0.5	1.0	:	:
4.3	4.4	4.3	4.0	4.2	3.7	2.5	:	:
1.0	5.7	7.9	6.1	-0.5	4.6	4.8	0.1	0.2
98.8	102.9	109.1	115.5	114.2	120.5	127.5	126.0	125.3

Table 96

Main economic indicators 1961–2003 Japan

(annual percentage change, unless otherwise stated)

	1961–73	1974–85	1986–90	1991–95	1994
1. Growth of GDP and its components (real)					
1.1. Private consumption	8.7	3.2	4.3	2.2	2.6
1.2. Government consumption	4.9	4.3	3.4	3.2	2.9
1.3. Gross fixed capital formation	14.0	1.6	8.7	-0.9	-1.4
1.4. — of which equipment	:	3.2	9.0	0.3	-2.6
1.5. — of which construction	:	0.6	8.6	-1.9	-0.6
1.6. Exports of goods and services	14.1	8.9	3.0	3.1	3.5
1.7. Imports of goods and services	14.3	1.4	11.2	3.3	7.7
1.8. GDP	9.4	3.3	4.9	1.4	1.0
2. Demand components: contribution to changes in GDP (%)					
2.1. Consumption	6.0	2.4	2.9	1.6	1.8
2.2. Investment	3.6	0.4	2.5	-0.3	-0.4
2.3. Stockbuilding	0.1	0.0	0.0	0.0	-0.2
2.4. Domestic demand	9.7	2.8	5.3	1.4	1.2
2.5. Exports	0.7	0.7	0.2	0.3	0.3
2.6. Final demand	10.3	3.5	5.6	1.6	1.5
2.7. Imports	-0.9	-0.1	-0.7	-0.2	-0.5
2.8. Net exports	-0.3	0.6	-0.4	0.0	-0.2
3. Gross savings and investment in % of GDP at current prices					
3.1. Private sector savings	:	:	:	26.7	26.2
3.2. Net savings of households	:	13.7	9.0	8.9	9.0
3.3. General government savings	:	:	:	5.6	4.6
3.4. National savings	36.1	32.1	33.1	32.3	30.8
3.5. Gross capital formation	35.7	31.3	30.4	29.7	28.1
3.6. Current account	0.6	0.9	2.7	2.5	2.7
4. Determinants of investment					
4.1. Capacity utilisation (survey) ⁽¹⁾	:	:	:	:	:
4.2. Trend GDP gap	:	:	:	:	:
4.3. Potential GDP gap	:	:	:	:	:
4.4. Profitability index (1961–73 = 100)	100.0	68.1	94.6	85.4	81.9
5. Growth potential					
5.1. Growth of net capital stock (real)	7.2	6.0	5.2	4.3	3.7
5.2. Net capital/output ratio (real)	2.4	2.9	3.2	3.5	3.6
5.3. Growth of capital intensity	5.8	5.3	4.1	3.5	3.6
5.4. Labour productivity growth	7.9	2.7	3.8	0.6	0.9
5.5. Total factor productivity growth	6.1	1.0	2.5	-0.4	-0.2
6. Employment and unemployment					
6.1. Employment	1.3	0.7	1.0	0.8	0.1
6.2. Activity rate	77.1	75.9	75.5	78.3	78.8
6.3. Employment rate (benchmark)	76.2	74.3	73.7	76.4	76.6
6.4. Employment rate (full-time equivalent)	:	:	:	:	:
6.5. Unemployment rate (Eurostat definition)	1.2	2.2	2.5	2.6	2.9
7. Prices and wages					
7.1. Nominal wages per head	14.2	8.3	4.1	2.0	1.4
7.2. Real wages per head ⁽²⁾	7.6	1.7	2.8	0.9	0.8
7.3. Nominal unit labour costs	5.8	5.5	0.3	1.3	0.5
7.4. Real unit labour costs	-0.4	-0.1	-1.0	0.3	0.4
7.5. GDP deflator	6.2	5.6	1.3	1.0	0.1
7.6. Private consumption deflator	6.1	6.5	1.3	1.1	0.5
7.7. Terms of trade	-0.1	-4.8	4.1	1.7	1.3
8. General government budget, % of GDP					
8.1. Expenditure	:	:	:	34.8	35.9
8.2. Current revenues	:	:	:	33.4	33.0
8.3. Net borrowing (-) or lending (+)	:	:	:	-1.4	-2.8
8.4. Net borrowing cyclically adjusted	:	:	:	:	:
8.5. Debt (end of period)	16.1	67.7	64.6	80.4	73.9
9. Monetary conditions					
9.1. Long-term interest rate	:	7.8	5.5	4.7	4.2
9.2. Short-term interest rate	:	7.8	5.2	3.6	2.3
9.3. Yield curve (9.1–9.2)	:	0.0	0.3	1.1	2.0
9.4. Real long-term interest rate ⁽³⁾	:	2.2	4.1	3.7	4.1
9.5. Nominal effective exchange rate	1.6	3.8	6.6	9.4	7.9
9.6. Real effective exchange rate (1991 = 100; ULC in total economy)	53.3	80.0	104.7	119.4	132.6

⁽¹⁾ Manufacturing industry 2000.⁽²⁾ Private consumption deflator.⁽³⁾ GDP deflator.

(annual percentage change, unless otherwise stated)

1995	1996	1997	1998	1999	2000	2001	2002	2003
1.4	2.4	0.8	0.1	1.2	0.5	0.5	0.1	0.4
4.3	2.8	1.3	1.9	4.0	3.6	2.1	1.2	0.3
0.3	6.8	1.0	-4.0	-0.9	0.6	-2.4	-4.5	0.1
9.9	13.2	3.4	-3.8	-0.8	2.6	-3.1	-5.5	1.0
-6.3	1.6	-1.2	-4.2	-1.1	-1.2	-1.8	-3.5	-0.7
4.1	6.5	11.2	-2.3	1.4	12.1	-5.8	-1.1	5.0
12.8	13.2	1.2	-6.8	3.0	9.9	-0.6	-2.1	4.3
1.6	3.5	1.8	-1.1	0.8	1.5	-0.6	-0.9	0.5
1.4	1.7	0.6	0.3	1.3	0.8	0.6	0.2	0.3
0.1	1.9	0.3	-1.1	-0.3	0.2	-0.7	-1.2	0.0
0.6	0.3	0.0	-0.6	-0.2	0.1	0.0	0.0	0.0
2.1	3.9	0.9	-1.4	0.9	1.1	0.0	-1.0	0.3
0.4	0.6	1.1	-0.2	0.1	1.2	-0.7	-0.1	0.5
2.5	4.5	1.9	-1.7	1.0	2.3	-0.7	-1.1	0.9
-0.9	-1.0	-0.1	0.6	-0.2	-0.8	0.1	0.2	-0.4
-0.5	-0.4	0.9	0.3	-0.1	0.4	-0.6	0.1	0.2
27.1	27.7	28.1	28.6	28.6	29.2	28.0	27.2	27.1
9.4	9.1	8.5	:	:	:	:	:	:
3.2	2.9	2.9	1.3	0.0	-0.8	-0.3	-0.5	-0.6
30.3	30.5	30.9	29.9	28.6	28.4	27.7	26.7	26.6
28.2	29.1	28.7	26.9	26.0	25.9	25.5	24.5	24.5
2.1	1.4	2.2	3.0	2.5	2.5	2.3	2.3	2.1
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
78.6	82.6	80.3	77.3	79.4	77.1	67.4	66.3	65.9
3.5	3.7	3.5	3.1	2.8	2.7	2.4	2.0	1.8
3.6	3.6	3.7	3.9	3.9	4.0	4.1	4.2	4.3
3.3	3.2	2.5	3.8	3.7	3.0	2.7	2.3	2.2
1.4	3.0	0.8	-0.4	1.6	1.8	-0.3	-0.5	0.8
0.4	2.0	0.0	-1.6	0.5	0.8	-1.2	-1.3	0.1
0.1	0.4	1.0	-0.7	-0.8	-0.2	-0.3	-0.3	-0.3
79.0	79.5	80.4	80.6	80.5	81.0	80.8	81.2	81.4
76.6	76.9	77.8	77.4	76.9	77.2	76.7	76.1	75.6
:	:	:	:	:	:	:	:	:
3.1	3.4	3.4	4.1	4.7	4.7	5.2	6.5	7.3
1.6	0.6	1.6	-0.2	-0.9	0.6	0.8	-1.5	-0.1
1.9	0.7	0.5	0.0	-0.2	1.7	1.8	-1.4	-0.2
0.2	-2.3	0.8	0.3	-2.5	-1.2	1.2	-1.0	-0.9
0.5	-1.5	0.5	0.3	-1.1	0.5	1.9	-1.1	-0.7
-0.4	-0.8	0.4	-0.1	-1.4	-1.6	-0.7	0.1	-0.1
-0.3	-0.1	1.0	-0.1	-0.7	-1.1	-1.0	-0.1	0.1
-0.6	-5.2	-3.8	3.3	-0.5	-4.4	-0.6	1.7	-2.3
37.0	37.5	36.4	42.9	38.9	40.5	41.7	42.3	42.5
32.8	32.6	32.7	32.1	31.9	32.9	34.8	35.5	35.8
-4.2	-4.9	-3.7	-10.7	-7.0	-7.6	-6.9	-6.8	-6.6
:	:	:	:	:	:	:	:	:
80.4	86.5	92.0	103.0	115.3	:	:	:	:
3.3	3.0	2.2	1.3	1.8	1.8	1.3	:	:
1.2	0.6	0.6	0.8	0.3	0.3	0.2	:	:
2.1	2.4	1.5	0.6	1.5	1.5	1.2	:	:
3.7	3.9	1.8	1.4	3.2	3.5	2.0	:	:
5.4	-12.8	-5.6	-5.7	16.8	12.2	-8.9	1.0	2.0
137.4	115.4	108.5	100.7	112.5	121.8	108.2	106.5	106.5

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