FINANSMINISTERIET

CONVERGENCE PROGRAMME FOR DENMARK

Updated programme for the period 2003-2010

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Updated convergence programme for Denmark

1. Introduction

The Danish economy is currently affected by weak global activity, yet economic fundamentals remain healthy. The budget balance is in surplus, inflation is low, and large external surpluses persist. Employment has declined and unemployment risen since early 2002, yet unemployment remains low by historical and international standards. Unemployment is still expected to decline during 2004 owing, notably, to low interest rates, an improving external environment, and the agreed fiscal policy for 2004.

Against this background, the key challenge for fiscal policy is to secure sustainable public finances in the light of future spending pressures related to, in particular, population ageing. Meeting that challenge requires tight control and prioritisation of public expenditures and continued structural reforms in coming years to achieve sustainable increases in employment. A Welfare Commission has been established with a mandate to propose reforms that contribute to higher employment and labour force participation over the medium term.

The 2003 Convergence Programme (CP03) sets out the broad fiscal policy objectives towards 2010[1]. Compared to CP02, the medium-term requirements for employment and fiscal policy have been reassessed in the light of, *inter alia*, the 2003 agreement on lower taxation of earned income, and the recently agreed changes to the taxation of North Sea oil and gas activities. Overall, the projection implies that the targets and assumptions for taxation, public services, and employment towards 2010 are consistent with public finance sustainability.

[1] The convergence programme is prepared in accordance with Council Regulation (EU) on the Stability and Growth Pact (No. 1466/97). According to this regulation, euro-area member states are required to prepare stability programmes, whereas the other countries are required to prepare convergence programmes. This updated convergence programme follows the guidelines endorsed by the ECOFIN Council meeting on July 10, 2001. The update is transmitted to the Danish parliament.

The projection is based on the latest short-term forecast for 2003-04 (finalized in August), which incorporates the proposed fiscal bill for 2004. A new assessment of the short-term outlook, which incorporates the politically agreed fiscal bill for 2004, is scheduled for publication by mid-December, cf. section 3. Growth and employment are likely to be revised downwards for 2003, but the future prospects and requirements for fiscal policy are unlikely to be altered significantly.

2. Policy framework and 2010 objectives

2.1. Objectives of economic policy

The overarching objective of economic policy is to achieve high and stable employment, fiscal policy sustainability, and favourable conditions for growth. More specifically, the objectives of individual macro and structural policies are:

- *Monetary and exchange rate policy*: Continued price and exchange rate stability through a credible commitment to a stable exchange rate against the euro.

- *Fiscal sustainability*. The operational target consistent with fiscal sustainability is to maintain a budget surplus of 1½-2½ percent of GDP on average until 2010. The target provides room to let the automatic stabilizers play, thus helping to dampen business cycle fluctuations. Moreover, the government aims to halve the general government debt as a share of GDP by 2010.

- *Tax and expenditure policies*: Reducing the tax burden through the existing “tax freeze” and lower tax on earned income. At the same time, delivering better public services especially in core areas while maintaining strict control of public expenditure. The latter requires sharper prioritisation and heightened efficiency in the supply of public services, in part by expanding citizens’ “free choice” between public and private providers of services.

- *Labour and product markets*: Strengthening work opportunities and incentives, thus fulfilling the ambitious employment objectives for 2010. In addition, strengthening productivity growth through stronger competition, higher openness, more favourable conditions for private initiative and risk-taking, and improved regulatory efficiency.

This framework is consistent with the objectives of the EU Treaty and meets the requirements of the Stability and Growth Pact. Moreover, it is in line with the recommendations of the Broad Economic Policy Guidelines (BEPG).

2.2. Monetary and exchange rate policy

Monetary policy is governed by the need to keep the krone within its narrow fluctuation band against the euro of ±2¼ per cent as stipulated in the ERM2 agreement. In practice, the deviations in the exchange rate from the central parity have been much smaller than the bandwidth.

The Danish parliament firmly supports the fixed exchange rate policy, and the government regards the commitment and the credibility of the fixed exchange rate policy as paramount. Fiscal policy supports the monetary objectives by emphasizing stability and sustainability.

Denmark's long-standing commitment to a fixed exchange rate policy has ensured low and stable inflation. Under the strategy, the low level of inflation in the euro area works as an anchor for Danish inflation and inflation expectations. Danish inflation has broadly matched euro-area inflation since the euro's inception.

Monetary policy interest rates tend to follow those of the ECB with a positive premium, which has largely fluctuated in a range of 15-50 basis points since 1999. The premium over euro-area rates, which is also reflected in longer-term interest rates, is a cost Denmark incurs by not having joined the euro.

Denmark safely meets the Maastricht convergence criteria (table 2.1).

Table 2.1. Convergence indicators in 2002

	Consumer price inflation	Long-term interest rates	General government balance	General government debt
	Per cent	Per cent	-------- Per cent of GDP	--------
Denmark.................	2.4	5.1	1.7[1]	45.5
Euro area.................	2.3	4.9	-2.2	69.0
Convergence criteria.	2.9	6.8	-3.0	60.0

1) Compiled in accordance with the Excessive Deficit Procedure (cf. annex table A.3). The national accounts measure otherwise used in this CP shows 1.6 percent of GDP.
Source: The European Commission, Statistics Denmark, and own calculations.

2.3. Fiscal sustainability

A cornerstone of the medium-term strategy is that fiscal policy must be sustainable. Fiscal sustainability implies that the tax and expenditure assumptions towards 2010 can be sustained subsequently, with no need for further policy adjustment to prevent public debt from rising beyond bounds.

According to the projection, sustainability requires an *average* government surplus of close to 2 percent of GDP from 2003-10 (1.9 percent of GDP in exact terms, see Section 5)[2]. This implies that public debt and the associated interest burden declines markedly, thus contributing to create fiscal room for the projected future expenditure pressures.

Against this background, the operational objective for fiscal policy is to maintain a surplus of 1½-2½ percent of GDP on average until 2010. Specifying the required surplus as an interval reflects the inevitable uncertainty in determining medium and long-term sustainability requirements.

The actual surplus may deviate from the target range in individual years as a result of cyclical conditions or transitory equity price movements that affect public revenues. Hence, the target specification for the *average* surplus on the road to 2010 allows room for letting the automatic stabilizers play, thus helping to dampen business cycle fluctuations. The target requires prudent fiscal policies when unemployment is low and cyclical conditions favourable, and ensures fiscal room for manoeuvre in case of severe downturns.

Fiscal policy in 2003 and 2004 is considered to be on track according to the stated criteria. In this vein, the *structural* budget balance (which adjusts for cyclical and other temporary factors) is estimated at 2.0 percent of GDP in 2003, which is in the middle of the announced target range.

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[2] In technical terms, fiscal policy sustainability implies that the government's intertemporal budget constraint must be satisfied based on a "policy scenario" to 2010, and a "policy-neutral" scenario thereafter, in which revenue and expenditure shares of GDP are mainly affected by demographic changes.

In 2004, the structural budget balance is estimated at 1.7 percent of GDP. The decline in the structural surplus reflects the phasing-in of tax reductions in accordance with the 2003 Tax Agreement, of which the 2004 instalment is the largest (see below).

The government's fiscal targets are well in line with the Stability and Growth Pact rules. The target for the medium-term budgetary position is more ambitious than the "close to balance or in surplus" rule in order to "take into account the need to cater for the costs associated with population ageing" as called for in the Code of Conduct for stability and convergence programmes. Moreover, the target takes account of the "possible need to deal with adverse cyclical developments and other unforeseen risks whilst respecting the government deficit reference value [of 3 percent of GDP]".

2.4. Tax and expenditure policies

The central plank of the government's tax policy is the tax freeze introduced in November 2001.

The tax freeze implies that no direct or indirect tax rate, whether expressed as a percentage or as an amount in Danish kroner, is allowed to rise. The nominal caps on excise duties and the property value tax implied by the tax freeze – technically assumed to remain in force until 2010 – reduce the total amount of taxes paid by ¾ percent of GDP in the year 2010, relative to a scenario in which taxes expressed in Danish krone value terms are raised in line with prices.

In addition to putting an effective end to the historical tendency towards higher taxes (especially at the local and regional levels of government), the tax freeze will in itself contribute to tighter expenditure control, see also Section 4.4.

With the Tax Agreement of 2003 now starting to be implemented in the budget for 2004, taxes on earned income are reduced. In a key middle-income range, marginal tax rates are lowered by approx. 6 percentage points, phased-in from 2004 to 2007. Moreover, the balance between after-tax earnings and social transfer incomes will shift with the introduction in 2004 of an earned income tax credit (EITC), see Section 4.3.

The total amount set aside for lower tax and better public services toward 2010 (that is, real growth in public consumption in excess of the estimated demographically-induced increase in real expenditures) corresponds to the amount set aside in the original *Denmark 2010* roadmap issued under the previous government (*A sustainable future – Denmark 2010, January 2001).* But the allocation between public expenditure and taxation – and hence private consumption – has changed. Targeted real public consumption growth is now 0.7 percent in 2004 and ½ percent per year in 2005-2010, against 1 percent per year in 2004-05 and ½ percent per year in 2006-10 in the original 2010 plan.

The envisaged spending growth exceeds the demographically-induced increase in the demand for public services, which is estimated on the basis of demographic projections and the age-dependent profile of public expenditure. Hence, the demographic component grows at roughly ¼ percent per year from 2003 to 2010. The targeted spending growth thus allows some increase in the average *real standards* of public services. Higher-than-targeted real growth in some areas will need to be balanced by lower-than-average real growth in other areas.

The targeted real spending growth is modest in a historical perspective and priority will be given to core areas such as health care, elderly care, and education.

The government aims to boost the efficiency of public service provision and administration, notably by reforming the regional structures and the division of tasks between different levels of government; furthering the digitalisation of public administration ("e-government"); making greater use of public-private partnerships; and continuing the process of privatisation. Moreover, the freedom of choice between private and public service providers will be strengthened and extended, including in childcare, school choice, and the health sector.

These tax and expenditure policies are in line with the BEPG recommendation to "ensure expenditure control at all levels of government."

2.5. Labour and product market policies

A key target for the medium term is to raise structural employment by almost 2 percent (some 52,000 persons) between 2003 and 2010. The target is set so as to be consistent with the requirement of fiscal sustainability, subject to the tax and expenditure policies described above and other economic assumptions underlying the projections.

In the absence of further structural reforms (the "no additional reform" scenario), sustainable employment is estimated to remain roughly unchanged from 2003 to 2010 (declining by 1,000 persons). This estimate includes, among other things, the effects of the 2003 agreement on lower tax on labour income and the labour market initiatives in the *More people in Work*-programme. Such a scenario would, seen in isolation, entail a weakening of the public sector balance by 0.9 percent of GDP compared to the central 2010-projection.

Table 2.2. Structural employment, 2003-2010, and fiscal sustainability

	Structural employment	Fiscal adjustment
Scenario:	Change, 1,000 persons	Per cent of GDP
No additional reforms.............	-1	0.9
2010-projection	52	0.0

Source: Own calculations.

Hence, in the absence of further structural reform, sustainability would require a fiscal adjustment on the order of 0.9 percent of GDP (or correspondingly higher employment after 2010) in order to maintain a stable debt-to-GDP ratio in the long term (see table 2.2).

The public finance implications of the tax freeze, the lower tax on earned income, and growth in real service standards from 2003 to 2010 correspond to 1.7 percent of GDP, see Section 5.2. Hence, only about half of these require financing through higher structural employment by 2010.

The 2010 scenario requires structural reforms, in addition to those already implemented, that can raise structural employment by some 53,000 persons or almost 2 percent by 2010. To this end, the government plans actions on several fronts:

- Better integration of immigrants in the labour market;
- Speeding up the flow through the education system;
- Facilitating more flexible retirement from the labour market[3];
- Making the labour market more inclusive;
- Increasing effective labour supply by reducing sick leave.

Moreover, the tax freeze gradually lowers the real value of excise duties, which can strengthen the incentive to work longer hours on average. Potentially, this could lower the required employment increase, perhaps by up to 5,000 persons, as the tax freeze is financed within the medium-term fiscal framework.

A Welfare Commission has been established with a remit to analyse and propose reforms of the Danish welfare system, among other things with a view to raise labour supply and employment. The proposed reforms must be consistent with and underpin fiscal sustainability in such a way that the expenditures can be financed without raising taxes. The Welfare Commission has been asked to initiate a wide-ranging public debate of the central issues and is due to issue its final report by the end of 2005.

The Danish Growth Strategy has recently been updated. The strategy includes surveillance and benchmarking in key areas that shape growth prospects. As part of the strategy, concrete initiatives have been launched, e.g., to promote the entrepreneurial culture, boost competition, and improve regulatory efficiency. The government is following-up and adjusting the strategy on an ongoing basis (cf. the Danish Cardiff report).

The strategies for employment and productivity are consistent with the Lisbon strategy and with the BEPG recommendations “to ensure an adequate labour supply in view of ageing”. Denmark already fulfils the Lisbon employment objectives.

[3] As a step in the direction of flexible senior policies, the 2004 budget allows seniors that want to work longer to postpone the pay-out of their pension till they retire. However, estimates show that this measure does not contribute to more leeway for fiscal policy.

3. Near-term economic outlook and projections to 2010

3.1. International assumptions and interest rates[4]

More promising signs of a global upturn have emerged in the second half of 2003, even if the strengthening still appears tentative in the euro area. Activity among Denmark's trading partners is expected to accelerate into 2004, when average growth abroad should be slightly above its potential rate. Led by the United States, the global recovery is supported by record-low monetary policy rates, fiscal stimulus especially in the United States, and the fading effects of the earlier stock market correction.

The cyclical recovery is assumed to cause the average output gap abroad to gradually narrow and close by 2006. Foreign real GDP growth is assumed to proceed in line with potential growth thereafter – estimated at 2¼ percent using Danish export weights.

Owing to the growing international division of labour, world trade tends to grow faster than national outputs. The growth of partner countries' imports (and of Danish imports) is assumed to exceed GDP growth in line with historical experience (by a factor close to 2), see table 3.1.

Table 3.1 Main international assumptions

	2002	2003	2004	2005	2006	2007-10
	Annual growth (percent)					
Real GDP abroad[1)]	1.5	1.5	2.5	2.4	2.2	2.2
Real market growth (manufactured products)[1)]	1.4	4.0	7.5	5.3	4.6	4.6
	percent, end-year level					
Germany, 10-year euro yield	4.8	4.0	4.5	4.9	5.2	5.6

1) Trade-weighted using Danish export weights for manufactured goods.
Source: European Commission forecasts, OECD and own calculations.

[4] The present convergence programme is based on the ministry's latest economic forecast of August 2003. The external assumptions underlying that forecast were based on the Commission's spring forecasts, updated to take account of economic data releases and financial developments. The Commission's autumn projections show lower growth for the euro area and higher growth for the United States than what underlies this programme. However, trading partners' weighted import growth is estimated to change only marginally as a consequence (implying an upward adjustment by 0.2 percent in 2003 and 0.1 percent in 2004). Similarly, the interest and exchange rate assumptions are also close to those underlying the Commission's autumn projection (see table B.8).

Since hitting record-lows in mid-2003, the yield on euro-area government bonds has rebounded in line with better recovery prospects. The yield on the benchmark 10-year German government bond has risen from 3.7 percent in mid-July to 4.3 percent by late-October. The programme assumes a further increase as activity picks up to around 5 percent in 2005.

The yield spread between Danish and German 10-year government bonds has averaged around 0.30 percentage points since early 1999. Presently, the low level of international interest rates and healthy public finances in Denmark have helped to achieve a narrow yield spread.

Based on an analysis of historical relations between the yield spread, inflation differences and other relevant factors (see *Medium-Term Survey* 2002), the yield spread to Germany is assumed to widen to about 0.5 percentage points in 2006, corresponding to an additional yield of about 0.35 percentage points compared with the estimated level, if Denmark had participated in the single currency.

3.2. Near-term outlook

The short-term forecast of August, which incorporates national accounts data up until the first quarter of 2003, foresees a moderate recovery in the last part of 2003 that gradually gathers force in the course of 2004. The improvement in business confidence since the middle of the year and international developments continue to support this expectation (the August forecast saw GDP growth of 1.4 per cent in 2003 and 2.3 per cent in 2004, see table 3.2).

However, output and employment developments were weaker in the second quarter than assumed in August. A revised forecast incorporating the latest available information is due in mid-December 2003. The revisions may entail a reduction in estimated GDP growth for 2003, yet they are unlikely to alter the basic scenario of a gradual but moderate recovery, which will gain momentum during 2004. The potential revisions to, *inter alia,* the public finances are within the bounds described by the sensitivity analysis in Section 6.2.

In addition to better global activity prospects, the expectation of a moderate recovery is supported by domestic factors. *First*, the income tax reductions from January 2004 – which are introduced to strengthen work incentives – will contribute to higher activity through increased disposable incomes and consumer spending. *Second*, the government's initiative to bring forward investments in social housing and railways will help to stem the decline in employment in the construction sector. *Third*, interest rates are still very low, and the accumulated interest rate reductions since 2001 are likely to add substantially to activity into 2004. *Finally*, private sector savings are high, and households have substantial leeway for raising their spending.

Table 3.2. Real economy indicators of the convergence programme.

	ESA	2002	2003	2004	2005	2006	2007-10
		------- Per cent -------					
Real GDP growth	B1g	2.1	1.4	2.3	2.2	1.9	1.7
GDP deflator		0.9	2.1	1.8	2.2	2.1	2.1
Growth components		---- Real growth, per cent ----					
Private consumption expenditure .	P3	1.9	1.3	3.0	2.4	2.5	2.3
Public consumption expenditure ..	P3	2.1	-0.2	0.7	0.5	0.5	0.5
Gross fixed capital formation........	P51	0.3	1.1	3.2	2.9	2.6	2.4
Changes in inventories, etc.[1]	P52/3	-0.3	0.3	0.1	0.0	0.0	0.0
Exports of goods and services........	P6	5.8	2.9	4.5	4.4	3.5	3.5
Imports of goods and services	P7	4.2	2.8	5.4	4.3	4.1	4.1
Growth contributions		---- Real growth, per cent ----					
Final domestic demand		1.5	0.8	2.3	1.9	1.9	1.8
Change in inventories..................	P52/3	-0.3	0.3	0.1	0.0	0.0	0.0
Net exports	B11	0.9	0.2	-0.1	0.3	-0.0	-0.1
Labour market		------- Per cent -------					
Employment growth		-0.4	-0.6	0.5	0.5	0.4	0.2
Unemployment (per cent of labour force)...............................		5.0	5.9	5.6	5.3	5.1	4.5
Do, EU definition		4.2	5.1	4.9	4.6	4.4	3.9
Hourly productivity in the business sector		1.6	2.5	1.7	2.0	2.0	2.0
Productivity (GDP per employ.) ..		2.4	2.0	1.7	1.7	1.5	1.6

1) Contribution to GDP growth.
Source: Statistics Denmark and own calculations.

Against this background, unemployment – which has risen over the last 1½ years – is expected to peak around the turn of the year, and show a gradual decline thereafter, trailing the expected growth path with some delay[5].

The current unemployment rate is slightly above its estimated structural level, indicating a modest negative output gap. With growth projected to exceed potential in 2004, the output gap is set to narrow next year and close fully by 2005. Real GDP is technically assumed to grow in line with potential from 2006 onwards[6].

3.3 Employment and production potential towards 2010

Production potential is assumed to grow at an average rate of 1.8 percent per year from 2004-10 (see table 3.3). The lower growth in potential compared to the 1993-2000 period owes especially to the fact that the sharp decline in unemployment during that period cannot be repeated.

Table 3.3. Contributions to potential output growth

	1980-00	1993-00	2001-10	2004-10
	Annual real growth (%)			
Growth in production potential	*1.5*	*2.5*	*1.9*	*1.8*
Of which contribution from:				
- hourly productivity	1.8	2.3	1.9	1.8
- structural unemployment	-0.3	0.6	0.1	0.1
- labour force	0.3	-0.0	0.1	0.1
- working hours	-0.3	-0.4	-0.2	-0.2
Gross value-added	1.9	2.8	1.9	1.9
GDP growth	1.8	2.7	1.8	1.9

Source: ADAM data bank and own calculations.

Employment requirements

As mentioned, the projection assumes an increase in structural employment of about 52,000 persons (almost 2 percent) between 2003 and 2010. Actual employment needs to increase by roughly 65,000 persons from 2003 to 2010 to also eliminate the estimated cyclical part of current unemployment.

[5] Recent employment data are surrounded by larger-than-usual uncertainty, reflecting the use of new data sources. Moreover, about one third of the rise in unemployment reflects lower activation numbers. Unemployment has risen less than many other advanced countries, and remains low by international standards.

[6] An assumed significant scaling back of North Sea oil and gas activities is estimated to reduce average GDP growth to 1.7 percent in 2006-2010.

In the absence of further structural reforms, sustainable employment is projected to decrease marginally by 1,000 persons by 2010, see table 3.4 ("no additional reform"). The roughly unchanged level reflects two opposing factors:

On the one hand, purely demographic factors would contribute a decline in employment, if structural unemployment and participation rates for each population group by age, gender, and country of origin remained at their 2003 level (by -42,000 persons).

On the other hand, the reduced inflow to early retirement schemes observed especially over the period 1996-2001 and the estimated effect of already-implemented reforms will contribute over time to higher participation rates, and thus to raise sustainable employment between 2003 and 2010 (by an estimated 41.000 persons or 1½ percent).

The estimate of the impact of already-enacted reforms is based among other things on the reforms of the pre-early retirement scheme (where entry has not been available since 1996), the disability pension scheme (introducing flex-jobs for people with reduced work ability), and the early retirement scheme (altered eligibility requirements etc.). Moreover, the initiatives in the *More People in Employment*-action plan are estimated to boost structural employment by some 10,000 persons (1/3 percent).

Table 3.4. Contributions to higher sustainable employment

	Change from 2003 to 2010
	1,000 persons
Demographic baseline (constant participation rates etc.) ...	-42
Reduced inflow to early retirement schemes and estimated contribution from (other) reforms etc.	41
- *of which:* More People in Employment	10
- *of which:* Earned Income Tax Credit	3½
No additional reform - scenario	-1
Non-implemented rise in sustainable employment	53
Total required rise in sustainable employment..................	52

Source: Own calculations.

The 2003 *Tax Agreement* also contributes to higher employment and labour supply. First, the introduction of the earned income tax credit (EITC) strengthens the incentive to take a job and is estimated to increase employment by some 3,500 persons. Second, the higher income threshold for the middle-bracket tax is expected to increase labour supply through longer average hours worked. The total estimated effect of the two measures is to raise employment by 10-12,000 persons in full-time equivalents. Because longer working time has proportionately less impact on public finances than higher employment numbers, the effect on public finance sustainability is equivalent to an employment increase of 9,000 persons, and hence the need for other structural initiatives is reduced correspondingly[7].

In order to reach the 2010 objective for employment, an additional increase in sustainable employment levels of some 53,000 persons (approximately 2 percent) is required compared to the no-reform scenario. In the projection, additional structural improvements in the labour market are technically assumed to increase the labour force by 32,000 persons and reduce structural unemployment by 21,000 persons, in part through better integration of immigrants in the labour market and a faster flow through the education system (see Section 2.5).

In this vein, the structural unemployment rate is assumed to fall from its current level of 5½ per cent to 4½ per cent of the labour force by 2010 (national definition). Hence, unemployment must predominantly be short term and related to job turnover and institutional features such as daily cash benefits during holidays, supplementary benefits, etc.

Productivity and working time

Hourly productivity is assumed to rise by about 2 per cent a year on average from 2004 to 2010 in the private business sector and slightly more in the private sector as a whole, corresponding to historical trends since 1980. As the national accounts do not measure productivity increases in the public sector, representing approximately 30 per cent of total employment, the rise in hourly productivity for the economy as a whole is estimated at about 1¾ per cent a year (see table 3.3). The initiatives outlined in *The Danish Growth Strategy* will help to achieve the stipulated growth rates, if not to exceed them[8].

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[7] As mentioned, the direct revenue loss due to the tax agreement is already financed within the medium-term fiscal framework.

[8] While productivity growth is the engine of sustained improvements in living standards, stronger productivity growth does not materially affect the sustainability of general

Average working hours are set to fall by more than 1 per cent between 2003 and 2010, even though the Tax Agreement (especially the lower marginal tax rates in the middle income range) is estimated to raise average working hours by some ¼ percent. Reduced average working hours reflect already agreed provisions for additional paid vacation days and in particular a growing number of senior workers in the labour force, as seniors tend to work fewer hours than the average. The projection does not assume any further changes to annual working hours (see section 6.2 for sensitivity analysis to working time assumptions).

3.4. Prices and Wages

For a number of years, wage increases have been faster in Denmark than in the euro area. To a considerable extent, however, the higher wage growth has been offset by higher productivity growth. Hence, the higher wage growth has not significantly affected consumer price inflation, which has proceeded at roughly the same pace as in the euro area since 2000.

Table 3.5. Prices and wages

	2002	2003	2004	2005	2006	2007-10
	-------------------- Annual rise (%) -----------------					
GDP deflator	0.9	2.1	1.8	2.2	2.1	2.1
Private consumption deflator	2.4	2.1	1.7	1.8	1.7	1.7
Consumer price index	2.5	2.3	1.9	1.8	1.7	1.7
Do, HICP..................................	2.4	2.3	1.8	1.7	1.7	1.7
Index of net retail prices.............	2.6	2.5	2.2	1.9	1.8	1.8
Hourly wages	4.2	3.9	3.7	3.8	3.8	3.8
Wages per head[1]	3.6	3.7	3.4	3.6	3.6	3.7
Euro area (HICP)	2.3	2.1	1.7	-	-	-
Euro area (wages per head[1]).........	2.9	2.8	2.8	-	-	-

1) Nominal compensation per employee.
Source: Statistics Denmark and own calculations.

government finances. Although tax receipts rise when productivity and incomes go up, expenditure tends to increase more or less commensurately because most government expenditures (notably public wages and social transfers) are tied to wage increases, and hence productivity growth, in the private sector. By the same token, the public finance projection is robust to deviations in the rate of productivity from the central assumption. If transfer incomes were assumed to be adjusted by less than wages, productivity growth could have a positive effect on public finances.

The rate of wage increases is projected to decline to 3¾ percent in 2004, while inflation is projected to fall below 2 percent. As already mentioned, unemployment is currently slightly above its estimated structural level and import prices are set to fall as a result of effective exchange rate appreciation, in the wake of the euro's appreciation against the US dollar.

The medium-term projection implies a sustainable rate of wage increases of 3.8 per cent toward 2010 and net price increases of about 1.8 per cent. The nominal principle of the tax freeze reduces the rate of increase in consumer prices to some 1.7 per cent a year (see table 3.5).

3.5. External balance and foreign debt

Continued large surpluses on the balance of goods and services and falling net interest payments are projected to result in a current account surplus of some 3-4 percent of GDP towards 2010. The sustained surplus contributes to a continued reduction in foreign debt. Hence, the net foreign asset position is projected to turn positive by the end of the projection period barring potentially significant revaluations of assets and liabilities (Table 3.6).

Table 3.6. Current account and net foreign assets

	2002	2003	2004	2005	2006	2010
	------------------------------Percentage of GDP----------------					
Current account balance..	2.9	3.1	3.1	3.5	3.5	3.6
Net foreign assets	-18.2	-14.6	-10.9	-7.0	-3.2	11.0

Source: Statistics Denmark and own calculations.

4. Prospects for general government finances

4.1. Overview of public finances

In the August 2003 forecast, the general government surplus for 2002 was estimated at 1.7 percent of GDP. That estimate was lower than the official release from Statistics Denmark at the time (2.0 percent of GDP) owing to more recent information on revenues from personal taxes and social contributions. Statistics Denmark has recently revised its figure to 1.6 percent of GDP. The convergence programme is based on the latest official data for 2002 and August 2003 forecasts for 2003-2004[9].

Based on the August 2003 forecast, the budget surplus is estimated to have fallen to an estimated 1.2 percent of GDP in 2003 as a result of adverse cyclical factors. With the expected strengthening in activity, the surplus is expected to edge up to 1.3 percent of GDP in 2004 (see table 4.1), despite the scheduled first phase of income tax reductions.

Over the medium term, the average surplus on general government finances from 2003 to 2010 is projected at 1.9 per cent of GDP. This is close to the centre of the target range of 1½ to 2½ per cent of GDP.

Table 4.1. General government finances

	ESA	2002	2003	2004	2005	2006	2010
Revenue	ESA	55.9	55.2	54.5	54.4	54.2	53.9
- of which tax		48.8	48.5	48.1	47.9	47.6	47.4
Expenditure	ESA	54.4	54.0	53.2	52.6	52.3	51.8
Budget balance.................	B9	1.6	1.2	1.3	1.8	1.9	2.1
- Net interest income		-1.4	-1.1	-1.0	-0.9	-0.8	-0.2
- Primary budget balance ..		2.9	2.3	2.3	2.7	2.6	2.3
Consolidated gross debt (EMU definition)		45.5	42.7	41.2	38.7	36.4	27.5

Source: Statistics Denmark and own calculations.

The maintained fiscal surplus implies that general government gross debt (EMU definition) is projected to decrease from 42.7 per cent of GDP in 2003 to some 27½ per cent of GDP in 2010. The projection does not include potential sales of government assets or other political initiatives

[9] Note also that the treatment of UMTS license revenues differs between Statistics Denmark (which distributes the revenue over 20 years) and Eurostat (which captures the license revenue fully in 2001).

that might contribute to a faster debt reduction and hence contribute to reaching the government's objective of halving public debt as a share of GDP by 2010.

4.2. The fiscal stance

The structural budget balance is estimated to improve from 1.6 percent of GDP in 2002 to 2.0 percent of GDP in 2003 (on the definition and calculation of the structural balance, see Box 4.1). The structural improvement mainly reflects lower trend interest payments and, to a lesser extent, discretionary fiscal policy, notably the assumption of largely unchanged real public consumption (see Section 4.4).

Table 4.2. General government structural budget balance, 2002-2010

	2002	2003	2004	2005	2006	2010
	-------------------- % of GDP, end-year level --------------------					
Actual balance (1)	1.6	1.2	1.3	1.8	1.9	2.1
Cyclical contribution (2)	0.2	-0.5	-0.2	-0.1	0.0	0.0
Special items (3)	-0.2	-0.4	-0.3	-0.0	0.0	0.0
Structural budget balance (1)-(2)-(3)	1.6	2.0	1.7	1.8	1.9	2.1
Memo items						
Potential GDP growth in %	2.4	2.4	1.8	2.1	1.8	1.7
Real GDP growth in %	2.1	1.4	2.3	2.2	1.9	1.7
Output gap	0.3	-0.7	-0.2	-0.1	0.0	0.0

Note: The special items are described in box 4.2.
Source: Statistics Denmark and own calculations.

In 2004, the budget surplus is projected to reach 1.3 percent of GDP. The positive effects of the projected cyclical improvement are offset by a deterioration in the structural budget balance. The lower structural surplus should be seen in the light of the proposed budget's phasing-in of tax cuts in 2004. The tax cuts are financed in the medium-term framework by the built-in reserves in the original *DK2010* plan and by slower growth in public consumption. Hence, the short-term deterioration in the structural balance is of a temporary nature, since the assumptions regarding employment and fiscal policy in the subsequent years will gradually improve the structural balance.

Box 4.1. Methodology for estimating the structural budget balance.

Business cycle movements have a pronounced impact on public finances, particularly in a country such as Denmark where tax rates and unemployment benefits are comparatively high. Hence, when employment and income falls relative to trend during an economic slowdown, the government suffers a loss in tax revenue combined with higher social spending, notably on unemployment benefits. During economic upturns, the opposite occurs.

Consequently, the budget balance in a given year does not necessarily give a reliable picture of whether fiscal policy is in line with medium-term objectives. To better judge the underlying budget position, a *structural* balance measure can be calculated by correcting the actual balance for estimated cyclical influences and special items that do not influence medium-term budgetary prospects.

Estimation of the structural balance requires three main elements: (1) an estimate of the extent to which economic conditions deviate from normal, typically summarized in the so-called output gap; (2) an estimate of the cyclical sensitivity of public finances; and (3) corrections for special items.

First, in line with the agreed common methodology within the EU, an advanced statistical method (unobserved components model) is used to estimate the structural level of unemployment (or the Non-Accelerating Inflation Rate of Unemployment, NAIRU). Potential output and the output gap are estimated within the same framework.

Second, to best estimate the sensitivity of the budget balance to cyclical fluctuations, a fairly detailed breakdown of revenues and expenditures is used (10 revenue and 2 expenditure categories). The resulting sensitivity of the overall budget balance to a 1 percentage point change in the output gap is about 0.7 percent of GDP.

Third, correction is made for special items that are not closely linked to the GDP cycle but may have significant and highly fluctuating budgetary effects from year to year. This applies, notably, to the tax on pension investment returns (which is determined by past equity and bond price movements, and may yield highly fluctuating revenue), corporation taxes (excluding the revenue from oil gas extraction in the North Sea, which is considered structural), and deviations in net interest payments from trend.

The added detail in individual revenue and expenditure categories and the correction for special items can affect the assessment of the underlying budget balance relative to estimates by international economic institutions such as the EU, OECD, and IMF.

The proposed fiscal bill for 2004 and the financial agreement with local and regional governments are estimated to give a first-year growth effect (the so-called fiscal effect[10]) of about 0.4 per cent of GDP (see table 4.3). This is the result principally of the planned income tax reductions, the tax freeze, and reductions in excise duties on spirits etc.

Table 4.3. Policy impacts on GDP growth, 2000-2004

	2000	2001	2002	2003	2004
GDP growth	2.9	1.4	2.1	1.4	2.3
One-year fiscal effects	-0.1	0.5	0.3	-0.1	0.4
Interest-rate changes[1)]	0.8	-0.1	0.3	0.5	1.0
Other factors	2.2	1.0	1.5	1.0	0.9

1) Calculated as the isolated impact on real GDP from interest rate changes since 1993.
Source: ADAM data bank and own calculations.

Moreover, the fall in interest rates in recent years is estimated to provide a substantial impetus to growth (table 4.3). The combined monetary-fiscal policy mix is thus clearly expansionary for 2004, while the appreciation of the euro pulls in the opposite direction.

While unemployment has risen since early 2002, it is still low in a historical perspective and not much above its estimated structural level. Given the prospects for stronger activity in 2004, capacity utilization is expected to rise, and the output gap to gradually close.

In this light, the fiscal policy stance appears sensibly adapted to the economic situation and prospects for 2004. That would be the case even if unemployment should rise somewhat more than projected.

Based on the proposed fiscal bill, the government concluded on November 8 a comprehensive political agreement on the fiscal bill for 2004 (Box 4.2 summarizes the key measures). The agreement implies that:

[10] Such "fiscal effects" have been calculated for a number of years using the macroeconomic model ADAM. Discretionary fiscal policy is evaluated relative to defined neutral paths for fiscal variables, and the overall activity impact is calculated from model-based multipliers for fairly disaggregated revenue and expenditure categories (see *Medium-Term Survey, 2000*). In 2004, the "fiscal effect" and the change in the structural balance yield almost identical estimates of the fiscal impulse.

- The fiscal effect – that is, fiscal policy's impact on output – remains unchanged at 0.4 percent of GDP in 2004.
- Real public consumption growth remains unchanged at 0.7 percent.
- Compared to the proposed fiscal bill, the surplus on public finances is slightly reduced by about ½ bill. DKK in 2004.

Box 4.2. Key measures in the agreement on the fiscal bill for 2004.

- New multi-year agreements to strengthen the police and crime prevention
- Increased financial allocation of about 9 bill. DKK through 2005-14 for better train connections and 3.4 bill. DKK for investment in road infrastructure
- Pensioners with low incomes will continue to receive special benefit for seniors
- R&D support levels have been pre-specified for 2004-07
- Action plan for improved interaction between private business and knowledge institutions
- Reduced business subsidies
- Benefits for families with children and housing support for pensioners to be indexed to prices rather than wages
- Reform of inner city renewal with greater emphasis on private contributions

4.3. Revenues

Total revenues are expected to fall from 56.3 percent of GDP in 2002 to 54.5 percent of GDP in 2004 and further to 54 percent of GDP in 2010, mainly due to a reduction in the tax to GDP-ratio of 1.8 percentage points. The planned reduction in income taxes accounts for about one-third of this decline.

The tax agreement consists of two elements. First, the income level above which the 6 percent middle-bracket tax is levied will be raised by 12,000 DKK (about 1600 euro) each year from 2004 to 2007. Second, an earned income tax credit (EITC) of 2.5 percent of income up to the middle-tax bracket is introduced as of 2004. The EITC raises the reward from work by up to 2,400 DKK per year (about 325 euro). The changes are estimated to result in a loss of revenue of 5.7 bill. DKK in 2004 (0.4 percent of GDP) rising to 9.6 bill. DKK in 2007 (0.7 percent of GDP).

The nominal principle of the tax freeze – assumed to remain in force to 2010 – reduces the measured tax-to-GDP ratio by about 0.45 per cent of GDP[11].

Table 4.4. Composition of general government finances

	ESA	2002	2003	2004	2005	2006	2010
		% of GDP					
Budget balance	B9	1.6	1.2	1.3	1.8	1.9	2.1
Government expenditure	ESA	54.4	54.0	53.2	52.6	52.3	51.8
- Primary expenditure		50.7	50.7	50.1	49.6	49.3	49.4
- Public consumption	P32	26.3	26.1	26.0	25.8	25.7	25.5
- General government invest.	P51	1.5	1.4	1.4	1.3	1.3	1.2
- Transfer payments		17.5	17.8	17.5	17.2	17.0	17.2
- Interest payments		3.7	3.3	3.1	3.1	3.0	2.4
Government revenue	ESA	55.9	55.2	54.5	54.4	54.2	53.9
- Tax (tax burden)		48.8	48.5	48.1	47.9	47.6	47.4
- Personal tax and labour market contributions		25.3	25.4	24.9	24.6	24.4	24.4
- *of which* property value tax		0.7	0.7	0.7	0.7	0.7	0.7
- Land tax		1.1	1.2	1.2	1.1	1.1	1.1
- Tax on pens. invest. returns		0.1	0.2	0.6	0.8	0.9	1.1
- Corporation tax		2.8	2.7	2.6	2.6	2.6	2.5
- Compulsory contributions		1.2	1.2	1.2	1.1	1.1	1.1
- Indirect tax		14.8	14.5	14.5	14.3	14.2	13.9
- Interest income	D41	2.3	2.2	2.1	2.2	2.3	2.3
- Other revenue		4.2	3.8	3.7	3.6	3.6	3.6

Source: Statistics Denmark and own calculations.

The abolition of the EU's 24 hour rule for private imports of alcohol etc. is assumed to lead to a revenue loss of slightly more than 1 bill. DKK (less than 0.1 percent of GDP). The concomitant reduction in Danish excise duties on spirits is estimated to be broadly revenue-neutral or even slightly positive, since lower duties per unit are made up for mainly by reduced cross-border *net* imports.

The projected normalization of currently relatively high corporate tax revenues contributes 0.3 per cent of GDP to the lower tax revenue from

[11] Two opposing effects are involved in this respect. First, the isolated effect of the tax freeze will lead to a drop in the tax burden of 0.75 per cent of GDP in 2002 terms. Second, the smaller increases in excise taxes (which are included in GDP in market prices) will dampen GDP growth, thus (in technical terms) increasing the measured tax burden by about 0.3 per cent of GDP. For the same reason, this effect increases the measured share of expenditures in GDP by about 0.3 percentage points.

2002 to 2010. The assumed normalization of the return on pension assets combined with the accumulation of such assets will lift revenues from the tax on pension investment returns to 1.1 per cent of GDP in 2010 from 0.1 percent of GDP in 2002. The unusually low revenue in the most recent years owes to the plunge in share prices in 2001 and 2002, which led to losses being carried forward also into 2003.

4.4. Expenditures

The share of public expenditures in GDP is estimated to fall from 54.4 percent of GDP in 2002 to 53.2 percent of GDP in 2004. About half the reduction stems from lower interest payments and the rest from lower shares of public consumption, public investment and subsidies in GDP.

The August forecast assumes that public consumption is roughly unchanged in 2003 (–0.2 percent). This estimate is based on the fiscal bill for 2003 and local and regional government budgets. In this vein, the higher than expected growth in real public consumption in 2002 (2.1 percent) signifies that the combined expected real consumption growth for 2002 and 2003 was implemented in 2002. For the two years as a whole, real public consumption is thus set to grow by about 1 percent a year on average, in line with the announced targets.

However, preliminary national accounts data for the first half of 2003 indicate some risk that real public consumption growth in 2003 may be larger than assumed. In nominal terms, the national accounts data are closer to the estimates based on the local and central government budgets. The national accounts data are preliminary, uncertain, and may be subject to significant revisions.

Budgetary slippage and failure to live up to the agreements with the central government has been a recurrent feature of local government finances for many years. In response, the government has introduced mechanisms to strengthen spending discipline. In particular, the tax freeze implies that local governments cannot raise taxes on average. The government has announced that revenue from any potential increase in average taxes will be deducted from the state's transfers to local governments, and state taxes reduced correspondingly. Since local governments are obliged to roughly balance their budgets, the tax freeze helps to limit their potential spending growth. Local governments have complied with the tax freeze in 2003 and 2004.

On the basis of the proposed fiscal bill and the government's agreement with local governments, public consumption is estimated to rise by 0.7 percent for 2004. The increase in real spending is targeted towards local public services, including health, social spending, and education.

From 2005 to 2010 real public consumption growth is targeted to grow at an annual rate of ½ percent per year. That is somewhat faster than the demographically induced demand for public services, and so entails an increase in the average real standards of public services. The share of public consumption in GDP is expected to decline from 26 percent of GDP in 2003 to 25½ percent of GDP by 2010.

As a result of lower interest payments and fewer recipients of social transfers, total expenditure is projected to decline more significantly, from 54.4 percent of GDP in 2002 to 51.8 percent of GDP by 2010.

4.5. Net lending by government sub-sectors

The central government is projected to generate surpluses in the entire period to 2010 (table 4.5). Among other things, central government finances benefit from the expected cyclical recovery in 2004-05 and from declining net interest payments on government debt. (After 2005, the output gap is closed and the projected surplus corresponds to the structural surplus).

Table 4.5. General government finances

	ESA	2002	2003	2004	2005	2006	2010
Net lending		--------------------- % of GDP ----------------					
General government..........	S13	1.6	1.2	1.3	1.8	1.9	2.1
Of which:							
- Central government........	S1311	1.0	0.2	0.4	1.0	1.0	1.3
- Local government...........	S1313	-0.4	0.0	0.0	0.0	0.0	0.0
- Social security funds	S1314	1.0	1.0	0.9	0.8	0.8	0.8

Source: Statistics Denmark and own calculations.

In principle, local authorities must balance their current revenue and expenditures. In individual years, however, there may be positive or negative changes in their liquid funds.

The surplus in social security funds is projected to remain roughly unchanged in relation to GDP towards 2010.

4.6. General government debt

The general government consolidated gross debt ("EMU debt") is estimated to fall from 45½ percent of GDP in 2002 to slightly above 41 percent of GDP in 2004. In a longer perspective, the consolidated gross debt is projected to fall to 27½ percent of GDP by 2010, down from 47.3 percent of GDP in 2000.

The debt trajectory is influenced by the recent North Sea agreement between the government and A.P. Møller-Mærsk, which holds the rights to oil and gas extraction in the Danish North Sea. Subject to approval by the parliament, the agreement will increase tax revenues from the North Sea activities. The additional revenue will be used solely for faster debt reduction, resulting in a debt level in 2010, which is about 1 percentage point of GDP lower than otherwise. The agreement improves the sustainability of public finances by approx. 0.1 percent of GDP.

Table 4.6. General government net debt and consolidated gross debt

ESA	2002	2003	2004	2005	2006	2007-10
	---------------------- % of GDP ----------------------					
EMU debt, end-year level	45.5	42.7	41.2	38.7	36.4	27.5
Change in EMU debt	0.2	-2.8	-1.5	-2.5	-2.3	-8.9
Contribution to change:						
- Primary budget balance (central and local government)	-2.7	-2.1	-2.2	-2.7	-2.7	-12.9
- Interest payments	2.2	1.9	1.8	1.7	1.7	7.1
- Nominal GDP growth.......................	-1.4	-1.5	-1.7	-1.7	-1.5	-6.3
- Consolidation[1]	-0.5	-0.5	-0.2	-0.2	-0.2	-0.7
- Financial items, etc.[2]	3.0	-0.6	0.8	0.4	0.3	4.0

1) Consolidation of government bond holdings in social security funds.
2) Includes receipts from the sale of government assets (privatisation, etc.), shifts in timing of tax payments, capital losses on securities issues, relending, etc.
Source: ADAM data bank and own calculations.

General government consolidated gross debt ("EMU-debt") comprises essentially the outstanding central and local government bonds, consolidated for public funds' holdings of government bonds.

The EMU debt is a gross concept that may be influenced by financial transactions. Thus, items such as increased lending from the central government to entities guaranteed by the state (e.g., the bridge-building company A/S Øresundsforbindelsen), which amounts to a simultaneous change in the central government's assets and liabilities, leads to a corresponding increase in the EMU gross debt. Such lending affects neither the government budget balance nor fiscal sustainability.

In the projection to 2010 lending to public companies is assumed to continue. Corrected for such lending, however, gross debt falls from 47.1 percent of GDP in 2000 to 25.1 percent of GDP in 2010.

Table 4.7. Public debt measures

	2000	2003	2005	2010
	-------------- Percent of GDP ----------------			
Public gross debt (EMU-definition)	47.3	42.7	38.7	27.5
- excl. lending to public companies.........	47.1	41.5	37.0	25.1
Public net debt..	11.1	6.1	2.1	-8.9
- excl. public funds	30.3	25.1	21.7	12.4

Public sector financial assets are not included in the EMU debt measure. In Statistic Denmark's National Accounts-based measure of general government net debt, all financial assets and liabilities are included. In 2000, public net debt amounted to 11.1 percent of GDP. It is projected to turn into a net financial asset position of 8.9 percent of GDP in 2010.

In assessing the sustainability of public finances, however, what matters is the net public debt excluding net assets in public (pension) funds. This debt measure falls from 30.3 percent of GDP in 2000 to 12.4 percent of GDP in 2010, i.e. it is more than halved between 2000 and 2010.

The EMU-debt projection assumes that central government lending to state-guaranteed entities increases gross debt by 3 bill. DKK per year. The projection does not include potential sales of government assets or other political initiatives, which may lead to a faster-than-assumed reduction in debt, and thus contribute to reaching the target of halving debt as a share of GDP by 2010.

5. Long-term projections, ageing, and fiscal sustainability

5.1. Long-term budgetary implications of ageing

The long-term projections are based on the "policy scenario" until 2010, and a "policy-neutral" scenario for the years thereafter. It should be noted that – due to the long time span – no formal decisions have been made concerning economic policy and specific objectives for the period following 2010. Hence, the central aim is that the planned policies and structural reform requirements toward 2010 are set so that the potential (policy-neutral) expenditure pressure in subsequent years can be financed with no need for further fiscal policy tightening.

For the years after 2010, the projections are based on the following principles:

- nominal public consumption expenditures increase in line with private sector wages and the estimated demographically-induced changes in demand;
- social transfer levels are assumed to increase in line with wages;
- employment rates (and social transfer frequencies) broken down by gender, age and country of origin are assumed constant;
- tax revenues are assumed constant as a share of GDP, except for special items (notably, taxes on net pension payments and social transfer incomes, and revenue from North Sea oil and gas extraction).

Based on these principles, net public expenditures (excluding net interest payments) increase by some 3½-3¾ percent of GDP by 2035 and again in 2070 (figure 5.1a)[12]. The increase in net expenditures is dampened because of the previously mentioned assumed increase in employment by 2010. Thus, in the absence of structural reforms (so that employment is largely unchanged by 2010), net expenditures would increase by some 4¾ percent of GDP by 2035.

The estimated net impact on public expenditures (net of interest payments) largely mirrors the "corrected dependency ratio", which

[12] Appendix 1 outlines the main features of the long-term public finance projections.

measures the number of people not in employment compared to those in employment, see figure 5.1b.

5.2. Fiscal sustainability and the required public budget surplus

The projected increase in future net expenditures due to ageing and other factors can be converted into a fixed annual amount (annuity), corresponding to 2.1 per cent of GDP as of 2003 (the horizontal line in figure 5.1a).

Figure 5.1. Impact on central and local government primary budget balance, change relative to 2003

Figure 5.1a. Burden on primary budget balance

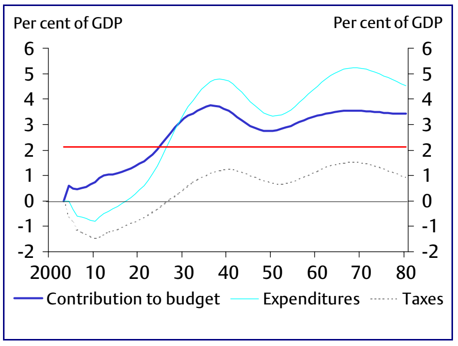
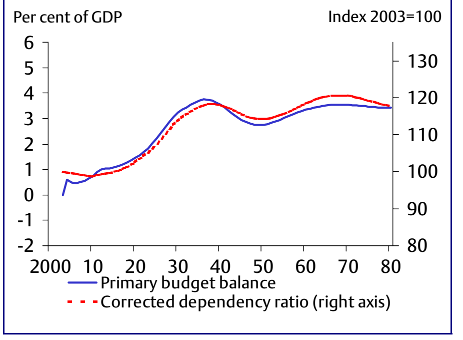


Figure 5.1b. Primary budget balance and corrected dependency ratio



Note: Horizontal lines show the impact as a per cent of GDP, converted into a fixed, annual amount relative to 2003 (based on net present value).
Source: Own calculations.

To attain fiscal sustainability, central and local governments need to run surpluses to cover this future obligation and the interest burden on central and local government net debt (this net debt stands at 25.2 per cent of GDP in 2003). The interest burden is the share of net interest payments that is not eroded by nominal GDP growth and therefore needs to be financed to prevent debt from rising as a share of GDP. The interest burden amounts to 1.0 per cent of GDP in 2003.

Consequently, the ageing of the population and other future net obligations require a structural primary surplus, excluding public funds, of 3.2 per cent of GDP in 2003.

In the present projection, this figure equals the observed central and local government structural primary budget balance in 2003 (i.e., 3.2 per cent of GDP). Hence, the assumed increase in employment rates implies that the sustainability criterion is met rather precisely in this projection, given the planned tax and expenditure policies between now and 2010.

Table 5.1. Long-term requirements for general government finances

	2003
	Per cent of GDP
1. Future net obligations, at constant annual rate:	2.1
of which:	
- Central government net expenditure	1.9
- Tax on private pension savings	-1.4
- Reduced revenue from extraction in the North Sea	0.5
- Tax freeze and lower tax on earned income	1.2
2. Interest burden of general government net debt[1)]	1.0
3. Required central and local government structural primary balance	3.2
4. Central and local government structural primary budget balance	3.2
5. Sustainability indicator (financing gap)	0.0

1) The interest burden on general government net debt is calculated on the basis of net interest payments adjusted for growth and inflation.
Source: Own calculations.

The required *central and local government primary* budget balance in 2003 can be converted into a required surplus on the *general government structural budget balance* of 2.0 per cent of GDP in 2003, by adding in interest payments and public funds (see table 5.2).

Table 5.2. Requirements for general government structural balance

		2003
		Per cent of GDP
	Requirements for central and local gov. structural primary budget balance	3.2
+	Central and local gov. structural net interest payments	-2.0
+	Structural balance (social funds)	0.8
=	*Requirements for general government structural budget balance*	*2.0*
	General government structural budget balance	*2.0*
	Sustainability indicator (financing gap)	*0.0*

Source: Own calculations.

The exact sustainability condition (2.0 percent in 2003) is liable to change over time. The *average* requirement for the general government structural surplus from 2003 to 2010 is estimated at 1.9 per cent of GDP. That requirement is close to the centre of the *operational* target for the surplus on total general government finances (1½-2½ per cent of GDP on average until 2010).

The total amount set aside for lower taxes and higher public expenditure from 2003 to 2010 is about 1.7 percent of GDP (in terms of the impact on the fiscal sustainability indicator). Within this number, the tax freeze takes up about 0.6 percent of GDP while lower tax on earned income takes up about 0.7 percent of GDP. The assumed improvement in real service standards (real public consumption expenditure per head) takes up 0.5 percent of GDP compared to a neutral assumption of unchanged real standards (see table 5.3).

This implies that slightly more than half of the amount set aside for lower taxes and better public services has its counterpart in the assumed contribution to public finances from the employment-enhancing initiatives required between now and 2010.

Table 5.3. Contributions to fiscal sustainability in 2003

	2003
	Per cent of GDP
Sustainability indicator, demographic scenario	0.0
Fiscal leeway due to implemented employment requirements	0.8
Tax freeze	-0.6
Lower tax on earned income etc.	-0.7
Real growth in public service standards	-0.5
Sustainability indicator, no additional reform-scenario	-0.9
Fiscal leeway due to non-implemented employment requirements	0.9
Sustainability indicator in 2010 scenario	0.0

Source: Own calculations.

6. Sensitivity Analysis

6.1. Short-term cyclical risks

The unexpectedly weak output and employment developments in the first half of 2003 primarily reflect weaker-than-expected domestic demand, notably lower private business investments. Meanwhile, the revised external assumptions in the Commission's Autumn 2003 economic forecast are closely in line with the assumptions used when finalising the August 2003 *Economic Survey*.

Still, uncertainties remain as to the timing and strength of the projected recovery, including in the euro area. The chances that activity in Denmark could be stronger than expected in the next couple of years, has not been reduced since August, however, despite the weaker numbers for 2003. In this vein, the agreed income tax reductions in 2004 might stimulate consumer spending more than assumed, especially in conjunction with continued low interest rates, relatively high housing prices, solid private sector savings, and new flexible borrowing opportunities.

To assess these uncertainties, two supplementary scenarios have been simulated using the macroeconomic model ADAM. They correspond to a low-growth and a high-growth scenario.

In the *low growth scenario*, weaker private investment is assumed to lower growth in 2003 and 2004 such that Danish GDP is reduced by 2 percent in 2004 compared with the central scenario. This is considered a quite large negative investment shock, which is assumed to gradually subside so that growth rates pick up again in 2005 and 2006.

The lower economic activity implies an increase in unemployment and a deterioration in public finances, with the surplus falling close to zero in 2004 (table 6.1). Public finances help to stabilize the economy by letting the automatic stabilizers play fully but no discretionary measures are assumed. With the subsequent pick-up in activity, public finances improve and unemployment decreases with a modest lag. Unemployment temporarily increases to just below 7 percent in this scenario and does not have implications for the short-term fiscal requirements.

Table 6.1. Alternative scenarios

	2003	2004	2005	2006
GDP growth, percent				
Central scenario	1.4	2.3	2.2	1.9
Low growth scenario	0.3	1.4	2.7	2.9
High growth scenario	1.4	3.3	1.8	1.3
Output gap, percent of GDP				
Central scenario	-0.7	0.2	0.1	0.0
Low growth scenario	-1.8	-1.8	-1.4	-0.5
High growth scenario	-0.7	1.2	0.7	0.0
Unemployment rate, percent				
Central scenario	5.9	5.6	5.3	5.1
Low growth scenario	6.5	7.0	6.9	6.1
High growth scenario	5.9	5.1	4.7	4.7
Net lending, percent of GDP				
Central scenario	1.2	1.3	1.8	1.9
Low growth scenario	0.6	0.1	0.7	1.5
High growth scenario	1.2	1.9	2.4	2.1

Source: Own calculations based on the ADAM model.

In the *high growth scenario*, the consumption-income ratio is raised by some 1½ percentage points compared with the central scenario. This should be seen in the light ofthe current high private sector savings ratio, which implies that households have substantial leeway for raising spending.

The rise in activity boosts the positive output gap by 1 percent in 2004 and leads to lower unemployment. Public finances are assumed to react by letting the automatic stabilizers play, thus stepping up the pace of debt reduction. Unemployment falls to about 4¾ percent, which is fairly low and with the current structures would entail some risk of overheating and bottlenecks in the labour market.

The two scenarios imply different paths for public finances, reflecting cyclical factors. The structural budget balance is assumed to remain unchanged.

Even in the low growth scenario, the distance between the simulated budget balance and the Treaty's 3 percent deficit limit is large enough so that any conflict with the Stability and Growth Pact rules presently seems not very likely.

The *interest rate sensitivity* of public finances is illustrated in table 6.2. A permanent increase in foreign and domestic interest rates along the yield curve is estimated to worsen the public budget balance by about 1 percent of GDP after four years, especially owing to lower economic activity. The direct impact on public sector net interest expenditures is limited, partly because public net debt amounts to only about 6 percent of GDP in 2003 (see Section 4.6). The combination of higher real interest rates and lower external growth seems, however, rather unlikely. Higher intersest rates would more likely reflect improved external growth prospects.

Table 6.2. Impact of 1 percent higher interest rates at home and abroad

	2003	2004	2005	2006
		Percent		
GDP level	-0.2	-1.0	-1.3	-1.4
		Percent of GDP		
Budget balance	0.0	-0.4	-0.7	-0.8
Primary budget balance	0.1	-0.3	-0.5	-0.6
EMU-debt	0.0	0.7	1.5	2.4
Public net debt	0.0	0.6	1.3	2.2

Source: Own calculations based on ADAM and NiGEM model simulations.

6.2. Longer-term uncertainties and fiscal sustainability

Any long-term projection of public finances is subject to considerable uncertainty. Table 6.3 summarizes the key sensitivities in terms of their impact on the fiscal sustainability indicator. The key points are:

- The *employment rate* is of central importance to fiscal sustainability. If no further reforms are implemented – implying that structural employment in 2010 is some 53,000 persons less than assumed in the central projection – the fiscal sustainability indicator deteriorates by 0.9 percent of GDP.
- Shorter *working time* has a sizable negative impact on public finances. A 2 percent decline in average working hours – equivalent to a reduction in employment of some 50,000 persons – weakens fiscal sustainability by some 0.6 percent. A similar fall in agreed annual working hours as well as average hours would have less impact, since it would also entail slower indexation of social transfers.
- *Productivity growth* has little impact on the sustainability indicator, based on current rules etc. While productivity growth raises standards of living and boosts the tax base, on net it is more or less neutral for

fiscal sustainability, since most public expenditures on current rules rise in tandem with private sector wages (public wages and transfers).

- Higher *life expectancy* can – for a given average effective retirement age and based on current rules – lead to a significant deterioration in the fiscal sustainability indicator, owing to the higher expenditures associated with ageing.

- Raising *the average retirement age* can have a positive impact on sustainability. For example, the negative impact of one year's increase in life expectancy can be offset by ½ year's later average retirement.

- Changes in *immigration* (equally divided between more and less developed countries of origin) are roughly neutral in terms of public finance sustainability. Immigration from less developed countries has a modest negative impact, based on current rules etc., since employment rates among such immigrants are comparatively low. However, the potential benefits from improving the integration of such immigrants in the Danish labour market are correspondingly greater.

- Higher *fertility* has a broadly neutral fiscal impact, based on current rules. Over the long run, changes in fertility affect the size of the population rather than its composition.

Table 6.3. Sensitivity analysis: impact on the sustainability indicator

Changes compared to the demographic baseline	Per cent of GDP
Active employment:	
Structural employment lower by 53,000 perons (absence of structural reforms before 2010)	-0.9
Average retirement age increases by half a year	0.25
Hours worked:	
Fall in average annual working hours of 2 percent	-0.6
Fall in average and agreed annual working hours by 2 percent	-0.4
Demography:	
Fertility increases by 4,000 children a year from 2004	-0.02
Average life expectancy increases by 1 year	-0.22
Immigration of 5,000 persons extra per year	
- from an average country	0.00
- from a less developed country	-0.12
- from a more developed country	0.12

Source: DREAM and own calculations

Appendices and annex tables

Appendix 1. Long-term projections of general government finances – some key features

The projected gradual ageing of the population implies a steep increase in the old age dependency ratio (i.e., the number of persons aged 65 or above compared to the number of persons in working age, 15-64 years) and an almost identical rise in the dependency ratio (the number of persons older than 64 or younger than 15 compared to the number of persons in working age), *see figure A1.1*.

Figure A1.1a. Dependency ratios

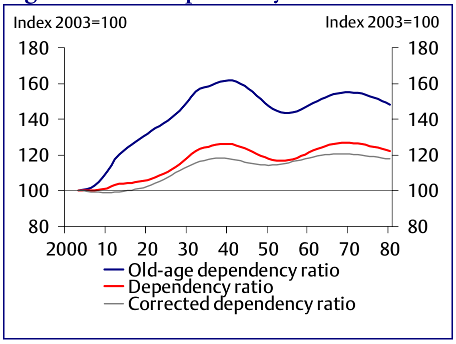
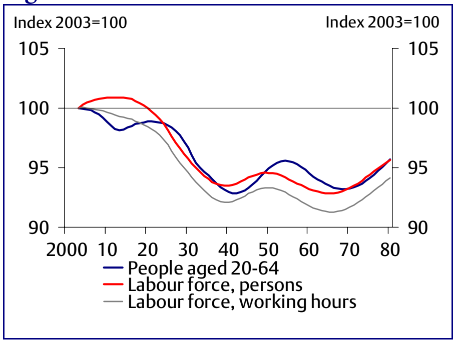


Figure A1.1b. Labour force



Note: The dependency ratio is defined as the ratio of people under 15 years and older than 64 compared to the rest. The old-age dependency ratio is defined as the ratio of people aged 65+ compared to the 15-64 year olds. The corrected dependency ratio is defined as the ratio of people not in employment compared to people in employment.

Source: Own calculations.

Public expenditure and revenue

The demand for public services tends to rise with ageing because average individual public consumption expenditure is markedly higher for older people than for children and young people, which again is higher than for persons of employable age (see figure A1.2b)[13]. On the basis of the

[13] Individual public consumption includes expenditure that is directly or indirectly attributable to users, such as health care, old-age care, childcare, education etc. Expenditure on administration, defence, legal systems, infrastructure and other areas is

expenditure rules applied, public consumption will peak in 2040 and again in 2070 when it is projected to be roughly 3 percentage points of GDP higher than in 2003[14].

Figure A1.2. Public consumption

Fig. A1.2a. Population trends by age groups

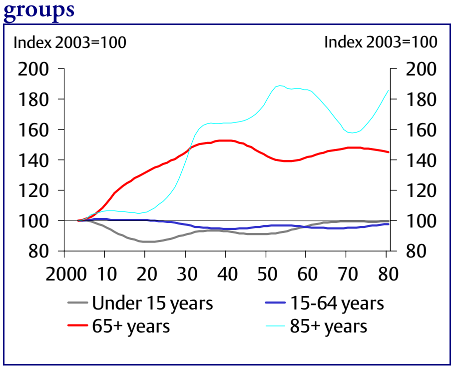


Fig. A1.2b. Individual public consumption by age in 1998

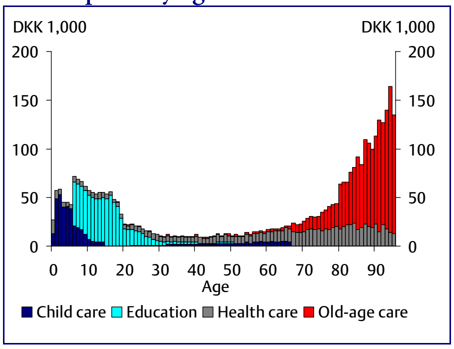


Fig. A1.2c. Public consumption categories, change relative to 2003

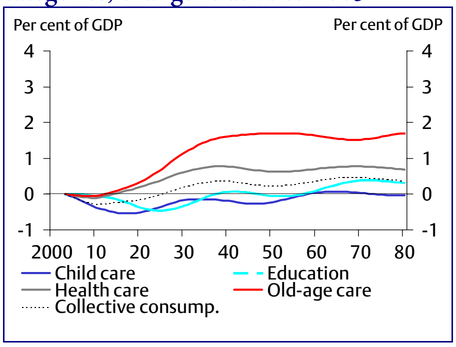
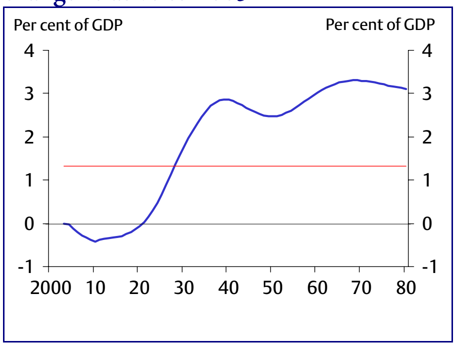


Fig. A1.2d. Total public consumption, change relative to 2003



Note: Horizontal line in figure A1.2d shows the change as a per cent of GDP, converted into a fixed, annual change relative to 2003 (annuity).
Source: Own calculations.

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considered non-age-dependent collective consumption. Individual public consumption accounts for the bulk (about two thirds) of total public consumption.

[14] The projection takes rough account of the likely reduction, over time, in the use of health services for persons in a given age group due to the generally better state of health that contributes to the assumed increase in life expectancy.

Transfer payments (net of tax) increase by an estimated 1.6 per cent of GDP by 2070. Among other things, this estimate takes account of the fact that increased second- and third-pillar pension payments will curb the rise in transfer payments by up to 0.6 per cent of GDP (net of tax) on the basis of current rules governing, notably, the means-testing of old-age-pension supplements and rent allowances.

Taxable pension payments are projected to grow in line with a shift from net pension contributions of about 2 per cent of GDP in 2003 to net pension payments of about 3½ per cent of GDP in 2040 (private-sector pension assets are set to increase from about 116 per cent of GDP in 2003 to about 220 per cent of GDP in 2040). Tax revenue from net pension payments is projected to go up by more than 2½ per cent of GDP by 2070.

The increase in net tax revenue from private-sector pension savings is partly offset by an assumed decrease in revenue from oil and gas extraction in the North Sea, where the revenue of about ¾ percent of GDP is technically set to be phased out by 2043.

Figure A1.3. Transfers and taxes, changes relative to 2003

Figure A1.3a. Net transfer payments[1),] including old-age pensions.

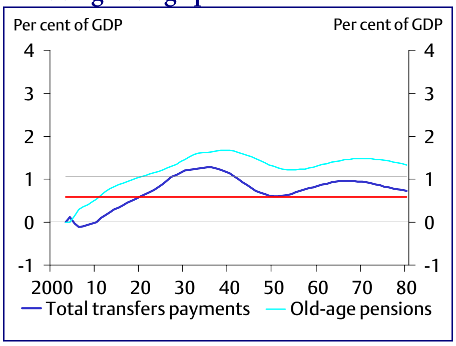
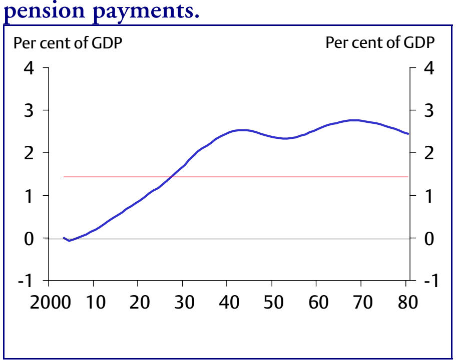


Figure A2.3b. Tax revenue from net pension payments.



Note: Horizontal lines show the change as a per cent of GDP, converted into a fixed, annual change relative to 2003 (net present value).
1) After direct taxes, indirect taxes and means testing
Source: Own calculations.

Appendix 2. Comparison with 2002 Update

A2.1. Overview of changes since the 2002 update

Output growth turned out better than expected in 2002. To a large extent, this was due to an unexpectedly strong increase in value-added in the shipping sector, which implies that the higher growth had comparatively little impact on employment and public finances.

In line with downward revisions to euro-area growth, GDP growth is now expected to be lower in 2003 than previously (with further downside risks, cf. Section 3). The projection subsequently assumes somewhat higher growth in 2004-2005 than in CP2002, in line with stronger external growth assumptions for 2005, greater monetary ease than expected, and some recuperation of the lower than expected activity in the first half of 2003.

The government budget balance has been adjusted downwards in all years, partly reflecting certain technical revisions related, e.g., to the treatment of swap-arrangements, which technically lowers the budget surplus by an estimated ¼ percent of GDP[15]. This technical adjustment has no implications for fiscal sustainability. The termination of the 24-hour rule entails a modest deterioration, and the new North Sea agreement a certain improvement of public finances from 2004 onwards (cf. Section 4).

Despite stronger growth, the government budget balance turned out worse than expected in 2002, partly because the higher growth contribution from shipping had a comparatively small impact on revenues, and partly because of lower-than-expected revenues from the tax on pension investment returns. In 2003, the budget balance is further affected by reduced activity and, in 2004, by the implemented tax reductions. The subsequent cyclical recovery, structural reforms and tight expenditure control are projected to lead the surplus back to roughly the same level in 2010 as in CP2002.

Consolidated gross debt turned out higher than expected in 2002, because of a smaller budget surplus, higher local government debt, and a

[15] For details, see *Statistiske Efterretninger*, Offentlige finanser 2002:29, Statistics Denmark.

lower share of government bonds in the holdings of social security funds. Moreover, a statistical revision to the GDP series technically lifted the debt/GDP ratio. Consolidated gross debt remains safely below the EU Treaty's reference value of 60 percent of GDP, and is projected to decline to 27.5 percent of GDP by 2010 (against 26 percent of GDP in CP2002).

Table A2.1. Divergence from previous update

	ESA	2002	2003	2004	2005	2006	2007-2010
		--------------- Percentage of GDP ---------------					
GDP growth	Blg						
2002 update		1.5	2.2	1.8	1.7	1.8	1.8
2003 update		2.1	1.4	2.3	2.2	1.9	1.7
Change................................		0.6	-0.8	0.5	0.5	0.1	-0.1
Actual budget balance	B9						
2002 update		2.1	2.2	2.5	2.4	2.2	2.2
2003 update		1.7	1.2	1.3	1.8	1.9	2.1
Change................................		-0.4	-1.0	-0.8	-0.6	-0.3	-0.1
Gross debt level							
2002 update		43.9	42.1	39.2	36.7	34.5	26.0
2003 update		45.5	42.7	41.2	38.7	36.4	27.5
Change................................		1.6	0.6	2.0	2.0	1.9	1.5

A2.2. Changes to medium-term assumptions to 2010

The medium-term assumptions for tax and expenditure policies have changed since CP2002, reflecting the introduction of the 2003 Tax Agreement, and the associated downward adjustment in targeted public consumption growth. As described earlier, the 2003 Tax Agreement lowers revenue by around 0.7 percent of GDP over the medium term. This loss in net revenue is financed within the framework of the original *DK2010* plan through the built-in reserves and a reduction in targeted public consumption growth of 0.3 percentage points in 2004 and 0.5 percentage points in 2005, relative to CP2002.

The medium-term projections for employment have changed relatively little since last year's convergence programme. The demographic baseline technically implies a slightly lower structural employment by 2010, but this is compensated by updated data for the observed inflow to early retirement schemes. If inflow rates to early retirement are held constant at recent levels, structural employment is projected to decline by 26,000 persons, as in CP2002 (table A2.2).

Changed assumptions on the future inflow to the early-retirement benefit scheme now contribute -7,500 persons to employment in 2010, compared to +3,000 persons in CP 2002.

This is partly made up for by the introduction of the earned income tax credit, which contributes +3,500 persons. Nonetheless, structural employment is estimated to decline by 1,000 persons in the absence of further reforms, against an increase of 5,000 persons in CP 2002.

Table A2.2. Contributions to the rise in structural employment between 2003 and 2010, 1,000 persons

	CP 2002	CP 2003
Demographic changes	-40	-42
Constant inflow rate to pre-early retirement scheme	+9.5	+10.5
Constant inflow rate to disability pension scheme	+7	+9.5
Constant inflow rate to early-retirement benefit scheme	-3	-3.5
Constant inflow	-26	-26
Changed inflow, reform of disability pension scheme	+19.5	+17
Changed inflow, reform of early-retirement benefit scheme	+3	-7.5
Adjustment of the Maternity leave	-2.5	-2
More People in Employment	+10	+10
The effect of the EITC in *the 2003 Tax Agreement*	-	+3.5
Other contributions (primarily due to the projection in 2004)	+1.5	+4
Implemented rise in sustainable employment	5	-1
Non-implemented requirement for participation rates	+41	+32
Non-implemented reduction in unemployment	+21	+21
Non-implemented rise in sustainable employment	+62	+53
Total rise in sustainable employment	66	52

Source: Own calculations.

On the other hand, the assumed increase in average working time due to the income tax reductions has a positive impact on public finances. That lowers the total required rise in sustainable employment by about 5,500 persons, and thus accounts for nearly half of the downward adjustment of this requirement (from 66,000 to 52,000 persons).

In sum, the requirement for additional structural reforms has been lowered from 62,000 persons in CP 2002 to a revised estimate of 53,000 persons.

Annex tables

Table A.1 Key figures for the Danish economy

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Real growth. per cent										
Private consumption	-1.9	0.4	1.9	1.3	3.0	2.4	2.5	2.6	2.2	2.3	2.3
Public consumption	1.1	2.1	2.1	-0.2	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Residential investments	9.9	-14.2	6.6	5.0	2.0	2.5	2.4	2.3	2.4	2.3	2.3
Business investments	8.5	4.8	-0.7	0.6	3.6	3.1	2.7	2.6	2.4	2.4	2.4
Public investments	5.6	13.3	-3.1	-2.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Stock investments [1)]	0.6	-0.3	-0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Domestic demand	1.9	0.9	1.2	1.2	2.5	2.0	2.0	2.0	1.8	1.9	1.9
Exports	13.0	3.0	5.8	2.9	4.5	4.4	3.5	3.6	3.5	3.4	3.5
of which industry	11.1	1.6	5.5	3.4	5.4	5.0	4.3	4.3	4.3	4.3	4.3
Imports	11.3	1.9	4.2	2.8	5.4	4.3	4.1	4.1	4.0	4.0	4.0
GDP	2.9	1.4	2.1	1.4	2.3	2.2	1.9	1.9	1.7	1.7	1.7
Gross factor income in business sector	4.9	2.8	0.7	1.5	2.4	2.5	2.4	2.4	2.3	2.3	2.3
	Growth. per cent										
Hourly wage costs	3.9	4.3	4.5	4.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Hourly wages	3.6	4.2	4.2	3.9	3.7	3.8	3.8	3.8	3.8	3.8	3.8
Hourly productivity, business sector	3.2	3.2	1.6	2.5	1.7	2.0	2.0	2.0	2.0	2.0	2.0
Private disposable incomes	2.2	1.0	2.3	2.0	2.6	2.2	2.5	2.6	2.2	2.3	2.3
Export prices	9.2	2.2	-2.9	0.3	0.9	1.9	1.7	1.7	1.6	1.6	1.6
Import prices	9.7	2.3	-0.2	-1.0	0.7	1.6	1.6	1.6	1.6	1.6	1.6
Consumer prices	2.9	2.4	2.5	2.3	1.9	1.8	1.7	1.7	1.7	1.7	1.7
Nominal house prices	6.5	6.0	2.7	3.5	1.5	2.0	1.9	2.1	2.3	2.4	2.5
	Per cent										
Effective yield gov't bonds	5.6	5.1	5.1	4.2	4.8	5.2	5.7	6.1	6.1	6.1	6.1
	Bn. DKK										
Current account	19.9	40.7	39.3	43.5	46.0	53.8	56.4	60.4	63.0	64.7	67.3
of which interest payments etc.	-32.1	-24.8	-21.2	-26.4	-24.9	-24.1	-23.1	-21.0	-20.2	-18.7	-16.8
Public finances	31.7	36.6	26.6	16.6	18.7	27.4	30.0	32.8	35.4	37.2	39.6
of which interest payments etc.	-23.3	-18.9	-18.4	-15.8	-14.8	-13.6	-12.1	-10.0	-7.7	-5.3	-2.9
	Per cent of GDP										
Current account	1.6	3.1	2.9	3.1	3.1	3.5	3.5	3.6	3.6	3.6	3.6
Public finances	2.5	2.8	1.6	1.2	1.3	1.8	1.9	2.0	2.0	2.1	2.1
Private financial savings	-0.9	0.3	0.9	1.9	1.9	1.7	1.7	1.7	1.6	1.5	1.5
Tax burden. per cent of GDP	49.5	49.8	48.8	48.5	48.1	47.9	47.6	47.5	47.4	47.4	47.4
Expenditure burden. per cent of GDP	53.8	54.2	54.4	54.0	53.2	52.6	52.3	52.2	52.0	51.9	51.8
	1.000 persons										
Total employment	2,734	2,750	2,740	2,723	2,738	2,751	2,762	2,770	2,776	2,783	2,789
of which public	821	829	840	840	843	845	848	849	851	853	855
of which private	1,913	1,921	1,900	1,883	1,895	1,906	1,914	1,920	1,925	1,929	1,934
Labour force	2,884	2,895	2,885	2,893	2,901	2,907	2,910	2,913	2,915	2,917	2,919
Registered unemployment	150	145	145	170	163	155	148	143	139	134	130
Per cent of the labour force	5.2	5.0	5.0	5.9	5.6	5.3	5.1	4.9	4.8	4.6	4.5
Do. EU-definition	4.4	4.3	4.2	5.1	4.9	4.6	4.4	4.2	4.1	4.0	3.9

1) Shows stock changes' contribution to GDP-growth.

Table A.2. Growth and associated factors.

	ESA	2002	2003	2004	2005	2006	2007-10
GDP growth at constant market prices	B1g	2.1	1.4	2.3	2.2	1.9	1.7
GDP level at current market prices	B1g	1,365	1,413	1,471	1,536	1,598	1,863
GDP deflator		0.9	2.1	1.8	2.2	2.1	2.1
HICP change		2.4	2.2	1.8	1.7	1.7	1.7
Employment growth		-0.4	-0.6	0.5	0.5	0.4	0.2
Labour productivity growth		2.4	2.0	1.7	1.7	1.5	1.6
Sources of growth:		----- Percentage changes at constant prices. -----					
Private consumption	P3	1.9	1.3	3.0	2.4	2.5	2.3
Government consumption	P3	2.1	-0.2	0.7	0.5	0.5	0.5
Gross fixed capital formation	P51	-1.2	2.4	3.5	2.9	2.6	2.4
Changes in inventories [1]	P52+53	-0.3	0.3	0.1	0.0	0.0	0.0
Exports of goods and services	P6	5.8	2.9	4.5	4.4	3.5	3.5
Imports of goods and services	P7	4.2	2.8	5.4	4.3	4.1	4.1
Contribution to GDP growth							
Final domestic demand		1.5	0.8	2.3	1.9	1.9	1.8
Changes in inventories [1]	P52+53	-0.3	0.3	0.1	0.0	0.0	0.0
External balance	B11	0.9	0.2	-0.1	0.3	0.0	-0.1

1) Changes in inventories and net acquisition of valuables as a % of GDP

Table A.3. General government budgetary developments

	ESA	2002	2003	2004	2005	2006	2010
Net lending (B9) by sub-sector		---------------- Percentage of GDP--------------					
General government.............	S13	1.6	1.2	1.3	1.8	1.9	2.1
Central government	S1311	1.0	0.2	0.4	1.0	1.0	1.3
Local government..................	S1313	-0.4	0.0	0.0	0.0	0.0	0.0
Social security funds.............	S1314	1.0	1.0	0.9	0.8	0.8	0.8
General government (S13)							
Total receipts	ESA	55.9	55.2	54.5	54.4	54.2	53.9
Total expenditures.................	ESA	54.4	54.0	53.2	52.6	52.3	51.8
Budget balance......................	B9	1.6	1.2	1.3	1.8	1.9	2.1
Budget balance, EDP[1]...........	B9EDP	1.7	1.4	1.5	2.0	2.0	2.3
Net interest payments...........		1.4	1.1	1.0	0.9	0.8	0.2
Primary balance.....................		2.9	2.3	2.3	2.7	2.6	2.3
Components of revenues							
Taxes....................................	D2+D5	48.8	48.5	48.1	47.9	47.6	47.4
Social contributions...............	D61	1.7	1.6	1.6	1.6	1.6	1.6
Interest income	D41	2.3	2.2	2.1	2.2	2.3	2.3
Other		3.2	2.8	2.6	2.8	2.8	2.7
Total receipts	ESA	55.9	55.2	54.5	54.4	54.2	53.9
Components of expenditures							
Public consumption		26.3	26.1	26.0	25.8	25.7	25.5
Transfers to households.........		17.5	17.8	17.5	17.2	17.0	17.2
Transfers to private insititutions and abroad.........		2.6	2.6	2.5	2.5	2.5	2.5
Interest payments	D41	3.7	3.3	3.1	3.1	3.0	2.4
Subsidies	D3	2.2	2.1	2.0	2.0	2.0	2.1
Gross fixed capital formation.	P51	1.8	1.7	1.7	1.7	1.7	1.7
Other		0.4	0.4	0.4	0.4	0.4	0.4
Total expenditures................	ESA	54.4	54.0	53.2	52.6	52.3	51.8

1) General government budget balance compiled in accordance with the definition applied in the EU under the Excessive Deficit Procedure (EDP). Compared to the national accounts (NA) measure, the EDP measure includes interest income from swaps. Further, the EDP measure books all of the revenue from the 2001 sale of UMTS licences in that same year, while Denmark's Statistics NA measure distributes the revenue over 20 years.

Table A.4. General government gross debt developments

	ESA	2002	2003	2004	2005	2006	2010
		---------------- Percentage of GDP --------------					
Gross debt level		45.5	42.7	41.2	38.7	36.4	27.5
Change in gross debt		0.2	-2.8	-1.5	-2.5	-2.3	-8.9
Contribution to change in gross debt							
Primary balance (excl. social security funds).........................		-2.7	-2.1	-2.2	-2.7	-2.7	-12.9
Interest payments	D41	2.2	1.9	1.8	1.7	1.7	7.1
Nominal GDP growth	B1g	-1.4	-1.5	-1.7	-1.7	-1.5	-6.3
Other factors influencing the debt ratio		2.5	-1.1	0.6	0.2	0.2	3.2
Of which: Privatisation receipts		0.0	0.0	0.0	0.0	0.0	0.0
p.m. implicit interest rate on debt..		6.9	6.5	6.3	6.3	6.4	6.1

Table A.5. Cyclical adjustments

	ESA	2002	2003	2004	2005	2006	2010
		---------------- Percentage of GDP --------------					
GDP growth at constant prices......................................	B1g	2.1	1.4	2.3	2.2	1.9	1.7
Actual balance	B9	1.6	1.2	1.3	1.8	1.9	2.1
Net interest payments..............		1.4	1.1	1.0	0.9	0.8	0.2
Potential GDP growth		2.4	2.4	1.8	2.1	1.8	1.7
Output gap		0.3	-0.7	-0.2	-0.1	0.0	0.0
Cyclically-adjusted balance.......		1.6	2.0	1.7	1.8	1.9	2.1
Cyclically-adjusted primary balance...................................		2.6	3.2	2.8	2.7	2.6	2.4

Table A.6. Divergence from previous update

	ESA	2002	2003	2004	2005	2006	2010
		--------------- Percentage of GDP --------------					
GDP growth	Blg						
Previous update....................		1.5	2.2	1.8	1.7	1.8	1.8
Latest update........................		2.1	1.4	2.3	2.2	1.9	1.7
Difference		0.6	-0.8	0.5	0.5	0.1	-0.1
Actual budget balance	B9						
Previous update....................		2.1	2.2	2.5	2.4	2.2	2.2
Latest update........................		1.7	1.2	1.3	1.8	1.9	2.1
Difference		-0.4	-1.0	-0.8	-0.6	-0.3	-0.1
Gross debt level							
Previous update....................		43.9	42.1	39.2	36.7	34.5	26.0
Latest update........................		45.5	42.7	41.2	38.7	36.4	27.5
Difference		1.6	0.6	2.0	2.0	1.9	1.5

Table A.7. Long-term sustainability of public finances

	2003	2005	2010	2020	2030	2040	2050	2060	2070
	Pct. of GDP	--------------- Change compared to 2003 ---------------							
Total expenditure excl. interest payments	50.7	-0.3	-0.8	0.4	3.4	4.7	3.3	4.5	5.2
- Public consumption	24.3	-0.1	-0.4	-0.1	1.8	2.9	2.5	3.0	3.3
- Health care	8.1	-0.1	-0.2	0.5	1.8	2.4	2.3	2.3	2.3
- Transfer payments [1]	17.2	-0.3	-0.4	0.7	1.8	1.7	0.8	1.2	1.4
- Old age pensions	4.4	0.2	1.0	1.9	2.7	3.2	2.5	2.6	2.9
Total revenue	55.2	-0.8	-1.5	-0.7	0.4	1.2	0.7	1.2	1.5
Of which:									
Tax on net pension payments	-	0.0	0.2	0.9	1.7	2.5	2.7	2.7	2.7
	--------------- Percentage of GDP ---------------								
Pension fund assets	117	124	144	180	209	220	217	226	227
Assumptions	--------------- Percentage change ---------------								
Nominal GDP per employee	4.1	3.9	3.6	3.9	3.8	3.8	3.8	3.7	3.8
Nominal GDP	3.5	4.4	3.9	3.6	3.3	3.8	3.8	3.6	4.0
Real GDP growth	1.4	2.2	1.7	1.9	1.6	2.0	2.1	1.8	2.2
Participation rate male (age 20 - 64)	86.2	86.2	85.8	85.3	84.2	84.5	84.3	83.4	83.8
Participation rate female (age 20 - 64)	76.3	76.3	76.6	75.8	74.3	75.0	74.7	73.5	74.3
Total participation rate (age 20 - 64)	81.3	81.3	81.2	80.5	79.2	79.7	79.5	78.5	79.1
Unemployment rate	5.9	5.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Structural Unemployment	5.4	5.2	4.5	4.5	4.5	4.5	4.5	4.5	4.5

Note: The projection implies unemployment and employment participation is held constant after 2010. The change in participation rate after 2010 is only due to changes in population composition on sex, age, and origin. Tax revenue follows the trend in GDP after 2010, but is subject to crucial assumptions among others pension savings. Expenditures on transfer payments are before tax (and hence not comparable with Figure A1.3, in which they are net of income tax and excise duties).

1) Transfers from social security funds (ATP etc.) are not included.

Table A.8. Basic assumptions

	ESA	2002	2003	2004	2005	2006	2007-2010
		----------------- Percentage of GDP ---------------					
Short-term interest rate (annual average)		3.5	2.4	2.4	3.3	4.1	4.9
Long-term interest rate (annual average)		5.1	4.2	4.8	5.2	5.7	6.1
USA: long term (10-year government bonds)		4.6	4.0	4.6	5.1	5.6	6.0
USD/EURO exchange rate (annual average)		0.94	1.12	1.13	1.13	1.13	1.13
Exchange rate vis-à-vis the EURO (annual average)		7.43	7.43	7.44	7.44	7.44	7.44
World excluding EU. GDP growth		3.2	3.5	4	4.5	4	3.5
US		2.4	2.1	2.5	3.3	3.2	3.0
Japan.....................................		0.1	1.2	1.3	1.5	2.2	2.3
EU-15 GDP growth.................		1.0	0.8	2.2	2.4	2.4	2.4
Growth of relevant foreign markets (imports of manuf.).....		1.4	4.0	7.5	5.3	4.6	4.6
World import volumes. excluding EU		4.1	6.3	7.1	7.4	7.0	7.6
Oil prices. (Brent. USD/barrel)............................		24.9	27.5	25.0	25.5	26.0	27.2
Non-oil commodity prices (in USD)......................................		3.5	10.3	2.5	1.6	-0.1	1.0