EUROPEAN COMMISSION
DIRECTORATE GENERAL
ECONOMIC AND FINANCIAL AFFAIRS

Brussels, 4 March 2009
ECFIN/50725/09-EN

UNITED KINGDOM: MACRO FISCAL ASSESSMENT

AN ANALYSIS OF THE DECEMBER 2008 UPDATE OF THE CONVERGENCE PROGRAMME

The Stability and Growth Pact requires each EU Member State to present an annual update of its medium-term budgetary programme, called "stability programme" for countries that have adopted the euro as their currency and "convergence programme" for those that have not.

The attached technical analysis of the programme, prepared by the staff of, and under the responsibility of, the Directorate-General for Economic and Financial Affairs (DG ECFIN) of the European Commission, was finalised on 18 February 2009. Comments should be sent to Karl Scerri, Robert Kuenzel and Birgitte Bjornbak who worked on the assessment in Dir G (karl.scerri@ec.europa.eu, robert.kuenzel@ec.europa.eu , birgitte.bjornbak@ec.europa.eu). The main aim of the analysis is to assess the realism of the budgetary strategy presented in the programme as well as its compliance with the requirements of the Stability and Growth Pact. However, the analysis also looks at the overall macro-economic performance of the country and highlights relevant policy challenges.

The analysis takes into account (i) the Commission services' January 2009 interim forecast, (ii) the code of conduct ("Specifications on the implementation of the Stability and Growth Pact and guidelines on the format and content of stability and convergence programmes", endorsed by the ECOFIN Council of 11 October 2005) and (iii) the commonly agreed methodology for the estimation of potential output and cyclically-adjusted balances. Technical issues are explained in an accompanying methodological paper prepared by DG ECFIN.

Based on this technical analysis, the European Commission adopted a recommendation for a Council opinion on the programme on 18 February 2009. The ECOFIN Council is expected to adopt its opinion on the programme on 10 March 2009.

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All these documents, as well as the provisions of the Stability and Growth Pact, can be found on the following website:

http://ec.europa.eu/economy_finance/about/activities/sgp/main_en.htm

1. INTRODUCTION

This document assesses the December 2008 update of the United Kingdom's convergence programme. It takes into account all currently available information, notably the Commission services' January 2009 interim forecast and the short-term fiscal stimulus measures adopted by the United Kingdom's authorities in response to the economic downturn. The programme, which was submitted on 18 December 2008, covers the years 2008 to 2011, with additional projections for public finances up to financial year 2013/14. The Programme builds on the 2008 Pre-Budget Report of 24 November 2008 and the 2007 Comprehensive Spending Review that sets spending plans for 2008/09, 2009/10 and 2010/11. It was approved by the government and is subject to UK Parliamentary scrutiny and approval under Section 5 of the European Communities (Amendment) Act 1993. This update of the United Kingdom's convergence programme takes into account a number of fiscal stimulus measures first presented in the United Kingdom's 2008 Pre-Budget Report, on which the UK convergence programme is substantially based.

2. MAIN CHALLENGES IN THE ECONOMIC DOWNTURN AND THE POLICY RESPONSE

The United Kingdom faces serious challenges in coping with the economic downturn brought on by developments in US mortgage markets which then spread throughout global financial markets from mid-2007 onwards. With both country-specific and systemic problems in financial markets having become more acute in 2008 and ultimately culminating in the collapse of Lehman Brothers in September 2008, the true extent of the financial crisis has become apparent only since the autumn of 2008.

In response to developments in the domestic banking sector, the United Kingdom's 'tripartite authorities' responsible for financial stability have adopted a series of policy measures starting in October 2008 aimed at increasing banks' capital bases, improving liquidity in interbank markets, facilitating corporate debt issuance and increasing the provision of credit to enterprises and households. While a full evaluation of the impact of these measures lies beyond the scope of this assessment, it is likely that in the absence of such timely and substantial policy intervention the UK's financial sector would have remained in a significantly more precarious position. The overall macroeconomic challenge the United Kingdom faces in the short to medium term lies in limiting the scale of the economic downturn to a minimum while ensuring fiscal sustainability. To this end, the UK government has taken a number of fiscal policy measures over the course of 2008 aimed at supporting domestic demand. These consist primarily of a temporary reduction in the standard rate of value-added tax (VAT) from 17.5% to 15%, effective from 1 December for 13 months, as well as a reallocation of public capital investment from 2010/11 to 2009/10. These and other fiscal stimulus measures principally have a deficit- and debt-increasing effect and will temporarily stimulate domestic demand growth. These measures are examined in more detail in section 4 of this assessment.

Box 1: Measures to help stabilise the financial system

In response to the financial crisis that has unfolded since mid-2007, the UK authorities adopted a series of policy measures aimed at stabilising the financial sector and supporting credit provision. The earlier measures consist of the nationalization of two financial institutions, Northern Rock in February 2008 and Bradford & Bingley in September 2008, and the injection of state capital equivalent to £37 billion (2½% of GDP) into a number of banks in October 2008. Furthermore, the Bank of England operated a Special Liquidity Scheme (SLS) between April 2008 and January 2009, which allowed participating banks to swap illiquid assets for UK treasury bills. Since October 2008 this scheme has been supplemented by the Bank of England's Discount Window Facility, which will continues to give banks access to long-term liquidity after the expiry of the SLS, but using a wider range of collateral. The government also launched its Credit Guarantee Scheme in October 2008, which provided sovereign guarantees on short- and medium-term commercial paper issued by banks to refinance their maturing wholesale debt. In January 2009 the government announced an Asset Protection Scheme that, in return for a fee, will offer banks protection against future credit losses on one or more portfolios of defined assets to the extent that credit losses exceed a "first loss" amount. Furthermore, the Financial Services Authority (FSA) clarified in a statement in January 2009 on the regulation of capital requirements that banks were able to draw down on capital buffers during economic downturns, thereby facilitating continued lending. From February 2009, the Bank of England will be authorised by the Treasury to purchase up to £50 billion (3½% of GDP) of investment-grade commercial paper denominated in sterling under its Asset Purchase Facility. In time, this facility will also be used to acquire corporate bonds, paper issued under the Credit Guarantee scheme, syndicated loans and asset-backed securities.

Having entered the financial crisis in 2007 against the background of strong economic growth marked by robust domestic demand, UK GDP growth slowed sharply over the course of 2008. Most cyclical indicators presented in Figure 1 of Annex 2 confirm that the UK economy was in good economic times in 2006 and 2007, and is estimated to have entered bad economic times in 2008, which will prevail until 2010.

Four characteristics of the UK economy should be taken into consideration when appraising overall economic policy goals and measures aimed at stimulating demand during the economic downturn. The following constitute country-specific vulnerabilities which have a direct bearing on the feasibility or desirability of such measures.

Firstly, the UK's residential property market is currently undergoing a sharp correction marked by falling sale prices and a pronounced weakening in the number of housing transactions. Since UK property prices peaked in autumn 2007, average prices have fallen by around 18%, with further falls throughout 2009 likely.[1] As the Special Topic in Annex 1 of this assessment highlights, the ongoing housing market correction is likely to have a dampening effect on both private consumption and fixed investment in 2009, mainly due to falling collateral values of housing for secured borrowing and falling returns on housing investment. The continued tightening of credit conditions since the third quarter of 2007, as surveyed by the Bank of England, is likely to have contributed to the recent fall in activity and

[1] House price data to December 2008, averaged from Halifax and Nationwide Building Society Indices.

prices, partly by significantly reducing new mortgage lending to borrowers seeking a high loan-to-value ratio, as well as by reducing lending income multiples and by curtailing most buy-to-let activity. However, based on the most common estimation approaches, UK average house prices have still not reached their equilibrium level.[2] Policy action targeted at reflating the housing market against the grain of a market correction poses the risk of increasing household debt beyond already high levels and preventing first-time buyers from entering a housing market they were previously priced out of.

Secondly, and in direct consequence of the aforementioned house price boom, UK households have accumulated gross debt at a rapid rate from the late 1990s onwards, due to a combination of historically low interest rates, ample credit supply and expectations of both continued asset price increases and a sound macroeconomic outlook. Expressed as a percentage of GDP, secured and unsecured household debt together rose from 63% in 1998 to 75% in 2002 and on to 100% in 2008.[3] This rapid growth in debt stocks, accompanied by rising interest rates between much of 2003 and 2007, increased the overall debt service burden on households. Increases in gross debt were accompanied by a fall in the household saving ratio from 7% of total household resources in 1998 to less than 1% in the first three quarters of 2008. While this household debt stock is not necessarily unsustainable, and the interest service burden has fallen recently reflecting interest rate cuts, the financing of a large household debt burden nevertheless becomes more difficult and can have an adverse impact on consumption during an economic downturn if disposable income falls by more than interest payments. Furthermore, the currently highly restrictive credit conditions can make the refinancing of household debt more difficult and costly, thus increasing the risk of households defaulting on debt repayments.

Thirdly, the UK continues to show external imbalances with regard to its net borrowing position from the rest of the world.[4] Between 2003 and 2007, the current account showed an average deficit of 2.5% of GDP. While relatively small compared to the US and a number of other EU Member States, the low balance masks a persistently large deficit in trade in goods (-6.4% GDP in 2007) and transfers (-1.0% GDP), which are partly offset by a surplus in services trade (+3.0% GDP) and net income (+1.5% GDP). The sharp depreciation of the pound sterling by around 25% in nominal effective terms since mid-2007 should in principle have a significant ameliorating effect on the trade deficit in goods and services due to the likely terms of trade deterioration resulting from higher import prices. However, in practice the positive impact on net exports is likely to be more limited due to a weak terms of trade response observed throughout most of 2008. Judging from simultaneous, large increases in official export and import prices of traded goods, exporters appear to have absorbed the change in the exchange rate in their profit margins. Furthermore, early indications of UK export market growth slowing rapidly, which is likely to particularly affect UK services exports, will make a sizeable stimulus to growth from net external demand unlikely in 2009.

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[2] For an assessment of the UK's recent house price boom and prospects for correction, see R. Kuenzel and B. Bjornbak (2008): *The UK Housing Market: Anatomy of a House Price Boom*, ECFIN Country Focus Vol. 5 Issue 11, European Commission, http://ec.europa.eu/economy_finance/publications/publication13282_en.pdf

[3] *Source:* Bank of England, 2008 figure estimated on January-November data.

[4] For simplicity this assessment will at times refer to the net foreign borrowing position as the current account deficit, in keeping with the United Kingdom's official nomenclature. Strictly speaking, net lending towards the rest of the world adds the net capital transfer balance to the current account balance, but the capital transfer item is typically small (<0.2% GDP) and relatively stable.

The UK has showed an income account surplus since 1996 which has been subject to a number of distinct shocks throughout 2008, largely linked to write-offs on UK foreign assets and liabilities as well as to changes in the sterling exchange rate. Because the UK has a positive net foreign asset position in direct investment, but a sizeable net liabilities position in portfolio investment and other investments (i.e. loans and deposits), changes in the relative returns on these asset classes can significantly affect the income balance. This effect is magnified by the very high gross stock of foreign assets and liabilities (each around 400% GDP), of which the UK banking sector accounts for around two thirds. While the exchange rate depreciation can be expected to increase the value of UK assets abroad and the income flows earned on them, the overall impact on the income surplus may not be large as there appears to be only a limited currency mismatch between UK assets and liabilities, at least in the predominant banking sector.[5] At the same time, the poor performance of equity markets in 2008 and the weak outlook for corporate earnings in 2009 raises the possibility that earnings on (equity-heavy) UK foreign assets may fall more sharply than those on (debt-heavy) UK liabilities.[6] Depending on the interplay of risk premia, valuation effects on the UK's international investment position, and relative returns on equity and debt instruments, a continuation of the income account surplus can not necessarily be taken for granted.

Finally, the sharp deterioration in growth prospects combined with the impact of discretionary policy measures aimed at supporting domestic demand in the near to medium term have led to a sharp increase in the expected net borrowing requirement of the general government to around 9½% of GDP in financial years 2009/10 and 2010/11, based on the Commission services' January 2009 interim forecast. Funding this large increase in government borrowing is likely to involve a combination of lower household sector net borrowing, higher corporate sector surpluses, and higher net borrowing from the rest of the world. The UK's limited fiscal space is to a large extent due to its relatively high medium-term primary balance gap, which is defined as the change to the current level of structural primary balance required to ensure that discounted future primary balances fully cover the current level of debt.

3. MACROECONOMIC SCENARIO

The programme presents two distinct sets of economic forecast figures: a fully-fledged central scenario in calendar years and a scenario underpinning the public finances projections, which is on a financial year basis and which assumes trend growth[7] one quarter of a percentage point lower than in the central scenario. The latter scenario is considered the reference scenario for the purpose of the assessment at hand. However, due to the lack of detailed information about macroeconomic aggregates other than GDP in the reference scenario, a full assessment of the plausibility of the macroeconomic scenario can only be made by also taking into account the additional information from the central scenario.

[5] Source: Bank for International Settlements, *BIS Quarterly Review*, December 2008

[6] This possibility is flagged as a major risk to the sustainability of the UK's current account position by Nickell (2005): see http://www.nuffield.ox.ac.uk/users/nickell/papers/TheUKCurrentAccountDeficitandAllThat.pdf

[7] The reference to "trend", rather than "potential" growth reflects the programme's reliance on the UK's domestic methodology for abstracting from cyclical factors, which is used instead of the common methodology agreed between the Member States and the Commission.

The Programme incorporates an economic forecast marked by a pronounced expected contraction in domestic demand in 2009, in particular by a continuation of the falls in fixed capital investment that have been prevalent throughout 2008. Overall, GDP growth is expected to turn negative in 2009, before recovering significantly in 2010 to eventually reach 3% per annum from 2011 onwards. General government consumption and net external demand act as the only positive contributors to growth in 2009, whilst from 2010 onwards growth once again becomes increasingly driven by domestic demand.

Compared to the Commission services' January 2009 interim forecast, the macroeconomic underpinnings of the Programme appear favourable in terms of their profile for GDP growth, both in relation to the depth and the length of the expected downturn. The Programme's expected growth rate in 2010 of around 1¾% is around estimated potential and the corresponding negative output gap - as recalculated by Commission services based on the information in the programme following the commonly agreed methodology - stabilises already in 2010, implying a relatively short downturn. From 2011 onwards, the programme's projections for real GDP growth of 3% per annum reflect a judgement that the negative output gap opening up in 2008 will close by 2013. While this recovery timeframe is not implausible, the UK programme's favourable path for GDP growth from 2010 onwards partly results from an original (i.e. before recalculation) trend growth assumption of 2½% per year from 2010 on, which is around ½% point above potential growth estimates as recalculated by Commission services for the corresponding years. This then sets a high benchmark for output growth rates to generate above-potential growth and close a negative output gap. By comparison, the January interim forecast notably projects output to contract by around 2¾% in 2009, with positive quarterly growth only setting in from 2010 onwards.[8] The January 2009 interim forecast expects growth in 2010 to be well below the Commission services' own estimate of potential growth and hence projects a further widening of the negative output gap in 2010. (See Box 2).

[8] In order to maintain consistency within this section, output gap and GDP growth data in this refer to calendar years. For corresponding figures relating to financial years, see Overview Table on page 3.

Box 2: The impact of the credit crisis on potential growth

Potential growth is defined as non-inflationary real output growth, and estimates of potential growth can thus provide an indication of the sustainable rate of GDP growth to be expected over the longer term. For the purpose of the assessment of stability and convergence programmes, the Commission services recalculate potential growth estimates on the basis of a production function approach according to the commonly agreed methodology, using information provided in the national programme updates. Since late 2007, credit conditions have successively tightened in the UK, as evidenced by quarterly credit conditions surveys by the Bank of England. Together with other financial lending data, the surveys show that all types of consumer and corporate lending has become increasingly restricted through both price and quantity. The change in cost and availability of capital helps explain the sharp falls of 7% in UK fixed investment levels in the third quarter 2008 from their peak in Q4 2007.

In a production function model, output growth depends on labour productivity and total labour input. Labour productivity changes can be due to changes in the amount of capital per worker (capital deepening) or growth in total factor productivity (TFP). As the cost of capital rises, growth in capital per worker should optimally be lower provided the marginal product of capital remains unchanged. To the extent that risk premia on bank lending were unsustainably low prior to the ongoing credit crisis, a permanent increase in the cost of capital might persist following the crisis period, which would be reflected in permanently lower potential output growth. The UK's National Institute of Economic and Social Research estimates that a permanent increase in risk premia would raise the user cost and lower the equilibrium level of capital and output. In their model simulation, this permanently lowers output growth relative to the baseline scenario.[9] Similarly, the OECD estimated in June 2008 that the shock to real capital costs would reduce annual potential growth by 0.1 percentage points in the United States and 0.2 percentage points in the euro area in the first years of adjustment towards new capital costs.[10]

The 'trend' output projections originally presented in the UK Programme (i.e. before recalculation by Commission services) capture the impact of the credit crunch as a phased reduction in trend productivity levels and, therefore, trend output levels from mid-2007 to mid-2009. This significantly lowers potential growth in these two years while from mid-2009 onwards potential growth is in line with its recent 5-year annual average of around 2¾%. As a result of this adjustment, the level of trend output is permanently lower at the end of the medium-term. This negative productivity shock is however not replicated when recalculating on the basis of the commonly agreed methodology. Instead, both the recalculated output gaps from the UK programme on the basis of a production function approach and the Commission services' own estimates from the January 2009 forecast show that, following a marked fall between 2007 and 2009, potential growth rates return only very gradually towards pre-crisis rates.

[9] Barrell. R. and Kirby, S. (2008): *The budgetary implications of global shocks to cycles and trends in output*, National Institute of Economic and Social Research (NIESR) , London, October 2008

[10] OECD (2008): *The implications of supply-side uncertainties for economic policy*, OECD Economic Outlook No.83, June 2008

It should be noted that, relative to the vintage of the Programme's forecast figures, the January 2009 interim forecast has benefited from two additional months of data readings, in which an acceleration of the downturn was evident. This clearly suggests the presence of significant downside risks to the Programme's growth outlook, stemming from the Programme's expectation that the UK will enter a cyclical upswing as early as 2010, following a relatively shallow recession in 2009.

Differences in expected labour market and inflation developments between the programme and the January 2009 interim forecast are comparatively minor, as both assume a significant increase over the forecast period in unemployment and a marked decline in annual inflation compared to 2008. The unemployment figures assumed in the programme show a somewhat less pronounced increase in unemployment and a higher inflation rate throughout the forecast period, a discrepancy that is consistent with the Programme's more favourable GDP growth forecast. The programme's projections incorporate the fiscal stimulus package that was presented by the UK government as part of the Pre-Budget Report in November 2008, which includes as its main measure a temporary reduction in the standard rate of value added tax (VAT) from 17.5% to 15%, effective from 1 December 2008 for 13 months. The programme's estimate of a positive impact on GDP growth from the fiscal stimulus package of around ½% point in 2009 is broadly in line with estimates made by the Commission services.

Table I: Comparison of macroeconomic developments and forecasts

	2008		2009		2010		2011
	COM	CP	COM	CP	COM	CP	CP
Real GDP (% change)	0.7	¾	-2.8	-1¼ to -¾	0.2	1½ to 2	2¾ to 3¼
Private consumption (% change)	1.8	1½	-2.1	-1½ to -1	-0.2	1¼ to 1¾	2¼ to 2¾
Gross fixed capital formation (% change)	-4.5	-4½	-12.3	-8¼ to -7¾	-1.7	2¼ to 2¾	6½ to 7
Exports of goods and services (% change)	1.2	¾	-1.5	¼ to ¾	1.5	3¼ to 3¾	5¼ to 5¾
Imports of goods and services (% change)	1.2	½	-3.2	-2½ to -2	0.3	2½ to 3	4 to 4½
Contributions to real GDP growth:							
- Final domestic demand	1.0	¾	-3.2	-2 to -1½	-0.2	1½ to 2	2½ to 3
- Change in inventories	-0.3	0	-0.1	-¼	0.0	0	0
- Net exports	0.0	0	0.6	¾	0.4	¼	¼
Output gap[1]	1.4	0.2	-2.2	-2.4	-3.0	-2.4	-1.4
Employment (% change)	0.5	n.a.	-2.8	n.a.	0.6	n.a.	n.a.
Unemployment rate (%)	5.7	n.a.	8.2	n.a.	8.1	n.a.	n.a.
Labour productivity (% change)	0.2	n.a.	0.1	n.a.	-0.4	n.a.	n.a.
HICP inflation (%)[2]	3.4	3¾	0.1	½	1.1	2¼	2
GDP deflator (% change)	2.4	3½	0.1	1¾	1.6	2½	2¾
Comp. of employees (per head, % change)	2.8	n.a.	1.7	n.a.	1.4	n.a.	n.a.
Net lending/borrowing vis-à-vis the rest of the world (% of GDP)	-2.0	n.a.	-5.5	n.a.	-5.7	n.a.	n.a.

Note:

[1] In percent of potential GDP, with potential GDP growth according to the programme as recalculated by Commission services. Figures refer to calendar years.

[2] Convergence Programme figures refer to fourth quarter-on-fourth quarter annual growth rate.

Source:

Commission services' January 2009 Interim economic forecasts (COM); Convergence programme (CP)

Regarding the challenges outlined in section 2 of this assessment, the UK programme makes reference to some of the issues. The effect of the global credit crisis on the UK housing market is acknowledged as one factor driving down housing investment, and the Pre-Budget Report 2008 indicates that property prices are expected to stabilise by the end of 2009. The VAT cut is expected to partly help households consolidate their finances by boosting real purchasing power, while at the same time supporting additional consumption. The household saving rate is expected to increase gradually to 3% of disposable income in 2010, well below the corresponding figure in the January 2009 interim forecast. The programme projections show the current account balance remaining broadly constant as a percentage of GDP, while private sector net lending rises sharply from 2009 onwards. Taking into account the Pre-Budget Report's expected path for household investment, it appears that much of the additional net public borrowing requirement will be funded by the corporate sector in the scenario implied in the programme. In view of the poor outlook for corporate earnings in 2009, as evidenced by the continuing weakness in UK equity markets, this outcome could be regarded as somewhat unlikely and might imply that a current account deterioration is to be expected, reflecting greater foreign capital inflows into the UK that are absorbed by the UK government. A (benign) scenario of foreign funding making up for potential shortfalls in the domestic private sector net lending would be partly contingent on perceptions of UK currency and credit risk remaining contained, which underlines that developments in both UK public finances and the domestic banking sector are integral to the external financing of the large general government borrowing requirement over the programme period.

4. BUDGETARY STRATEGY

4.1. Budgetary implementation in 2008

In the financial year 2007/08 the general government deficit, at 2.8% of GDP, was 0.2 percentage points less than had been projected in the November 2007 update of the convergence programme. The upward revision in GDP, following the adoption of a new approach to estimating financial intermediation services (FISIM), reduced both the revenue and expenditure ratios by ½ percentage point. The lower-than-expected deficit was entirely due to lower expenditure on goods and services by government departments.

The budgetary situation in the current financial year 2008/09 has seriously deteriorated. The update estimates a deficit of 5½% of GDP, slightly less than estimated in the Commission services' January 2009 interim forecast but 2.6 percentage points higher than projected in the previous update. The unexpected increase in the government deficit primarily reflects a significant downward revision in revenue growth projections. The revenue-to-GDP ratio had been expected to increase slightly from its level in the preceding year, but in the latest programme it is estimated to fall by 1¼ percentage points. Government expenditure is estimated to overshoot the projections in the 2007 update by 0.3 pp. of GDP.

Developments on the revenue side were driven by the dramatic worsening in the macroeconomic context. Revenue from onshore corporate taxation, which accounted for a quarter of tax revenue increases over the past five years, is expected to be around ½ percentage point less than forecast in the previous update, primarily reflecting the worsening in financial sector profitability. The increase in corporate taxation as a result of higher profits from oil and gas extraction is expected to be offset by lower profitability in the oil-consuming industries. Meanwhile, the sharp drop in property transactions and falling property prices should also lead to an undershoot in stamp duty revenue by another ½ percentage point. On the expenditure side, government capital spending is expected to be 0.2% of GDP higher than

planned, while interest payments are also set to exceed projections by 0.1% of GDP due to the effect of higher inflation on the debt servicing costs of index-linked gilts.

The discretionary measures announced by government since the 2007 update contributed to an increase in the deficit by 0.6 percentage points, including through a cut in income taxation in May 2008, a reduction in the standard VAT rate and additional payments to pensioners.

4.2. Near-term budgetary strategy

The latest update projects an increase in the general government deficit in 2009/10 by 2¾ percentage points, to 8.2% of GDP, reflecting a 2% drop in government revenue in nominal terms and continued strong growth in expenditure by almost 5% over the preceding year. Weak corporate profitability is expected to continue weighing down on tax revenue, with no significant improvement foreseen in the contribution of the financial sector. The fall in the international price of fuel oil is set to reduce corporate taxation on oil and gas extraction activity by 0.3 pp. of GDP. Personal income tax receipts are also expected to drop due to lower employment and a deceleration in earnings, including from financial sector bonuses. The continued weakness in the property market is expected to lower receipts from stamp duties by 0.1 pp. of GDP. The programme estimates that the fall in financial sector and housing market activity will reduce the government revenue ratio by a total of 1½ percentage points between 2007/08 and 2009/10. Meanwhile, sluggish growth in private consumption expenditure is set to depress indirect tax revenue. On the expenditure side, social transfers are forecast to continue growing at a high rate, in part due to weakening of the labour market.

The budgetary projections in 2009/10 also include the fiscal stimulus measures announced in November 2008, totalling around 1% of GDP, with the cost of foregone revenue and additional expenditure expected to be largely evenly spread throughout 2009. The main measures, which include the temporary reduction in the standard VAT rate, which accounts for half the stimulus package, and the frontloading of investment spending, are consistent with those referred to in the European Economic Recovery Plan (EERP). The stimulus package is planned to be temporary and is timely, as measures are targeted towards supporting domestic demand in 2009 when economic activity is expected to be at its weakest. Most of the measures are aimed at supporting household purchasing power (around 80% of the total value of the package). Other measures, including of a structural nature, are intended to support business and investment activities and increase the capacity of public employment services and training opportunities for the unemployed. Finally, building on the September 2008 Homeowners Support Package, further measures to support the adjustment process in the housing market have been announced. These measures correspond to the policy objective of short-term output stabilisation and are related to the UK Lisbon structural reform agenda.

Only some of the fiscal stimulus measures are directly targeted towards specific household groups or sectors. The reduction in the VAT rate is expected to have a greater effect on households with a relatively higher marginal propensity to consume. The changes in the personal allowance and basic rate limit as well as in the level of personal allowances (around 15% of the total package) are mainly targeted towards lower income households. Finally, the front-loading of capital spending (around 12%) is expected to provide some support to the construction sector.

Table II. Main budgetary measures for 2009

Revenue measures[1]	Expenditure measures[2]
• Measures in response to the downturn	
• VAT rate reduction (-0.6% of GDP) • Lower income tax cut (-0.3% of GDP) • Increase in duties on tobacco and alcohol (+0.1% of GDP)	• Front-loading of capital spending (+0.2% of GDP) • Pensions, child benefits and job centre funding (+0.1% of GDP) • Housing expenditure brought forward (+0.1% of GDP)
Note: [1]Estimated impact on general government revenue [2]Estimated impact on general government expenditure Source: Commission services and 2008 convergence programme	

The structural deficit in 2009/10, as re-calculated by the Commission services on the basis of the information in the programme according to the commonly agreed methodology, is estimated to deteriorate by about 2.0 percentage points. The latter reflecting in almost equal share the combined effects of the expansionary fiscal measures launched by government and an effect from tax elasticities due to the contraction in economic activities yielding high tax revenues. As shown in Table III, according to the programme, the increase in expenditure in 2009/10 is mitigated by a drop in interest payments by 0.3% of GDP. As a result, the primary balance is expected to decline by 3 pp. of GDP and the underlying fiscal loosening, as measured by the change in the structural primary balance, is estimated at around 1.9 percentage points.

Table III: Composition of the budgetary adjustment

(% of GDP)	2007/08	2008/09		2009/10		2010/11		2011/12	2012/13	2013/14	Change: 2008/09-2013/14
	COM	COM	CP	COM	CP	COM[1]	CP	CP	CP	CP	CP
Revenue[2]	**42.1**	**41.4**	**36.7**	**41.2**	**35.5**	**41.6**	**36.6**	**37.3**	**37.7**	**38.0**	**1.3**
of which:											
- Taxes on production and imports	12.4	12.0	11.9	11.8	11.5	11.9	12.2	n.a.	n.a.	n.a.	n.a.
- Current taxes on income, wealth, etc.	16.9	16.8	16.4	16.5	15.5	16.6	15.8	n.a.	n.a.	n.a.	n.a.
- Social contributions	8.3	8.5	6.7	8.5	6.8	8.6	6.8	n.a.	n.a.	n.a.	n.a.
- Other (residual)	4.5	4.1	1.7	4.4	1.7	4.5	1.8	n.a.	n.a.	n.a.	n.a.
Expenditure[2]	**44.9**	**47.2**	**42.2**	**50.8**	**43.7**	**50.8**	**43.7**	**42.9**	**42.1**	**41.4**	**-0.8**
of which:											
- Primary expenditure	42.7	45.0	40.1	48.4	41.9	48.0	41.1	39.9	39.1	38.3	-1.8
of which:											
Compensation of employees and intermediate consumption	23.3	24.2	21.9	25.8	22.6	25.8	22.4	n.a.	n.a.	n.a.	n.a.
Social payments	12.7	13.3	11.5	14.5	12.2	14.6	12.0	n.a.	n.a.	n.a.	n.a.
Subsidies	0.7	0.8	0.8	0.8	0.8	0.8	0.7	n.a.	n.a.	n.a.	n.a.
Gross fixed capital formation	1.9	2.3	2.2	2.4	2.4	2.3	2.2	n.a.	n.a.	n.a.	n.a.
Other (residual)	4.1	4.4	3.7	4.9	3.9	4.5	3.8	n.a.	n.a.	n.a.	n.a.
- Interest expenditure	2.2	2.2	2.1	2.4	1.8	2.8	2.6	3.0	3.0	3.1	1.0
General government balance (GGB)	**-2.8**	**-5.7**	**-5.5**	**-9.5**	**-8.2**	**-9.2**	**-7.1**	**-5.6**	**-4.4**	**-3.4**	**2.1**
Primary balance	**-0.6**	**-3.5**	**-3.4**	**-7.1**	**-6.4**	**-6.4**	**-4.5**	**-2.6**	**-1.4**	**-0.3**	**3.1**
One-off and other temporary measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GGB excl. one-offs[3]	**-2.8**	**-5.7**	**-5.5**	**-9.5**	**-8.2**	**-9.2**	**-7.1**	**-5.6**	**-4.4**	**-3.4**	**2.1**
Output gap[4]	2.0	0.5	-0.5	-2.4	-2.4	-2.8	-2.1	-1.2	-0.4	0.2	0.7
Cyclically-adjusted balance[4]	-3.7	-5.9	-5.3	-8.5	-7.2	-8.0	-6.2	-5.1	-4.2	-3.5	1.8
Structural balance[5]	**-3.7**	**-5.9**	**-5.3**	**-8.5**	**-7.2**	**-8.0**	**-6.2**	**-5.1**	**-4.2**	**-3.5**	**1.8**
Change in structural balance		*-2.2*	*-2.1*	*-2.6*	*-1.9*	*0.5*	*1.0*	*1.1*	*0.9*	*0.7*	
Structural primary balance[5]	-1.5	-3.7	-3.2	-6.1	-5.4	-5.2	-3.6	-2.1	-1.2	-0.4	2.8
Change in structural primary balance		*-2.2*	*-2.2*	*-2.4*	*-2.2*	*0.9*	*1.8*	*1.5*	*0.9*	*0.8*	

Notes:

[1]On a no-policy-change basis.

[2]Data for total revenues and expenditure are not presented by the UK on a harmonised ESA95 basis. Data illustrated are UK series drawn from Table 4.D of the programme update. Other data presented are aggregates derived by the Commission services on the basis of information provided by the UK authorities. Revenues are adjusted for the treatment of UMTS receipts. For 2012/13 and 2013/14, general government revenue and expenditure figures are extrapolated from public sector projections.

[3]One-off and other temporary measures

[4]Output gap (in % of potential GDP) and cyclically-adjusted balance according to the programme as recalculated by Commission services on the basis of the information in the programme.

[5]Structural (primary) balance = cyclically-adjusted (primary) balance excluding one-off and other temporary measures.

Source :

Convergence programme (CP); Commission services' January 2009 Interim economic forecasts (COM); Commission services' calculations

4.3. Medium-term budgetary strategy

The update does not present a medium-term objective (MTO) for the budgetary position. The latest update replaces the fiscal framework that used to define the budgetary objectives in previous programmes with a temporary operating rule: "*to set policies to improve the cyclically-adjusted current budget*[11] *each year once the economy emerges from the downturn, so it reaches balance and debt is falling as a proportion of GDP once the global shocks have worked their way through the economy in full*". The new rule is designed to accommodate higher government borrowing to support the economy in the short term[12]. The programme

[11] The current balance is derived by deducing current expenditure and depreciation from current revenue. As a result, changes in capital spending do not effect the current balance.

[12] See Section 6.

notes that the fiscal projection reported in the update "*imply, as the economy emerges from the downturn, an adjustment in the cyclically-adjusted current balance of over 0.5% of GDP each year from 2010/11*". The programme actually targets an improvement in the structural deficit, as recalculated by the Commission services using the commonly-agreed methodology, averaging about 1.0 percentage point each year between 2010/11 and 2013/14. During the latter period, with the programme expecting a gradual recovery in annual real GDP growth to 2% in 2010/11 and 3% thereafter, the update foresees an improvement in the nominal deficit by an annual average of 1¼ percentage points. However, the government deficit in 2013/14, at 3.4% of GDP, would continue to exceed the 3% of GDP Treaty reference value.

In 2010/11, the update projects a deficit of 7.1% of GDP, 1.1 percentage points less than in the preceding year. The forecast improvement entirely reflects the government's policy announcements that in 2010 the standard VAT rate would be restored to its pre-fiscal stimulus level, lower capital expenditure would compensate for the discretionary spending increase in 2008 and 2009, and expenditure savings of 0.3% of GDP would be made through efficiency gains. With interest payments as a percent of GDP increasing by 0.8 p.p., the primary deficit ratio in 2010/11 is expected to improve by almost 2 percentage points.

Table III shows that between 2011/12 and 2013/14, an increase in the revenue ratio and a drop in the expenditure ratio are expected to contribute to around two-fifths and three-fifths, respectively, of the target adjustment in the nominal balance. Revenue growth is expected to accelerate to an average of 7¼% per annum in the medium term. In 2011/12, the announced increase in income tax and social security contribution rates is expected to raise revenue by 0.3% of GDP. The annual rate of increase in expenditure is assumed to decelerate to 4% from an average of 5¼% in the preceding three-year period. In real terms, the spending projections, which are not backed by detailed plans, assume that total expenditure over the years 2011/12 to 2013/14 will grow by 1.1% each year, significantly lower than the real annual average growth of 2½% in 2011/12 and 2012/13 that was implied in the 2007 programme.

4.4. Risks to the budgetary targets

When compared to the updated convergence programme, the Commission services' January 2009 interim forecast estimates a similar budgetary position for 2008/09. By contrast, in 2009/10 and, to an even larger extent, in 2010/11, the Commission services' forecast projects a significantly worse fiscal position than foreseen in the programme.

In 2009/10, the Commission services forecast a deficit of 9½% of GDP, 1¼ higher than in the in the programme, primarily on account of the significantly worse macroeconomic economic context foreseen in the January 2009 interim forecast. In addition, in 2009/10, interest payments in the Commission services forecast are ½% of GDP higher then in the convergence programme. The update projects a sharp drop in the ratio of interest payments to GDP in 2009/10, followed by a surge in the ratio in 2010/11 to a level that is consistent with that in the January 2009 interim forecast. The Commission services' forecast factors in significant savings in interest payments in 2009/10 from lower inflation and interest rates, but those savings are more than offset by the additional cost of servicing the increase in government debt.

The drop in revenue from housing taxation in 2009/10 that is implied in the programme is consistent with estimates made by the Commission services (see Annex 1, section 4.1), but there are risks that the fall in government revenue on financial sector activity between 2007/08 and 2009/10 could be greater than the 1 pp. of GDP factored in the programme projections. The potential fiscal costs of banking sector asset writedowns reported to date in

the UK, including from losses on international mortgage-backed securities, is estimated at almost 1% of GDP (Annex 1, section 4.3.1), is twice the average in Europe as a whole. Commission estimates based on potential future bank write-offs on household lending (based on Bank of England stress-test calibrations) imply cumulative losses from corporate taxation over the next five years by 1.2% of annual average GDP (Annex 1, section 4.3.2).

In 2010/11, the Commission services forecast a deficit of 9.2% of GDP, around 2 percentage points higher than projected in the update, reflecting a part of the deficit overrun in 2009/10 feeding through into a higher deficit in 2010/11 and a weaker recovery in economic activity. Moreover, the programme also factors in a more tax-rich composition of aggregate demand in 2010, which contributes to a higher tax elasticity. Whereas the (modest) recovery in the January 2009 interim forecast is driven by net external demand, in the programme private consumption expenditure accounts for the greater part of GDP growth. Moreover, the likelihood that the economic activity in 2010 will be weaker than envisaged by the UK authorities carries a risk that the stimulus measures would be extended to 2010 and that other planned fiscal tightening measures would not be fully implemented, which could raise both the Commission services' and the update's deficit forecast for 2010/11 by around 1 pp. of GDP.

In the medium term, the carry-over of the deficit overshoot in 2010/11 to subsequent years is expected by the Commission services to contribute to worse budgetary outcomes than foreseen in the programme. The Commission services' estimates of the size of the output gap in 2010/11 and potential output growth in the medium term suggest that GDP growth, and hence government revenue, could also undershoot programme projections from 2011/12 onwards. The projections also imply a revenue elasticity with respect to GDP consistent with the OECD ex-ante elasticity, which in current circumstances appears optimistic. In fact, there is a clear risk that the contribution of the financial sector to economic activity in the medium-term will remain lower than in the pre-recession period as the programme recognises, and the composition of aggregate demand could even be less tax-rich than the programme acknowledges. The fall in house prices is expected to lead to a permanent fall in the share of private consumption in aggregate demand, compensated for by higher net exports. On the expenditure side, the sharp slowdown in medium-term spending growth that is targeted in the latest update implies considerable efficiency challenges for the public sector, which suggests a heightened risk of spending overruns relative to previous years.

Figure 4 in Annex 2 compares the UK's budgetary projections in successive convergence programmes with the actual deficit outturns. During the past five years, the deficit outturn exceeded the one-year ahead forecast on four occasions, by an annual average of around ½ percentage points.

An overall assessment of the balance of risks indicates that the budgetary projections are subject to downside risks.

5. DEBT DEVELOPMENTS AND LONG-TERM SUSTAINABILITY

5.1. Debt developments

In the financial year 2007/08, the UK government gross debt ratio was 43.2% of GDP. The debt ratio is projected to increase markedly over the programme period and to exceed the reference value of 60% of GDP from 2009/10 onwards, as shown in Table IV. The authorities' latest estimate for the current financial year 2008/09 is for general government gross debt to reach 52.9% of GDP, a large upward revision from the forecast outcome of

44.8% of GDP set out in the 2007 update. The debt ratio is projected to rise to around 60% of GDP by 2009/10, and further to 65% in 2010/11 and to approach 70% in 2012/13.

The rising debt ratio in 2008/09 is driven by stock-flow adjustments of around 5½% of GDP and an increasing primary deficit. For the rest of the programme period, debt developments are largely driven by the deficits on the primary balance. The stock-flow adjustments mainly reflect the UK authorities' recent financial sector interventions (including recapitalisation measures and schemes aimed at supporting bank lending) announced and implemented as part of the government's two bank rescue packages from October 2008 and January 2009.[13] The Commission services' January 2009 interim forecast projects a significantly more rapid increase in the debt ratio, exceeding 70% already in 2010/11, mainly due to differences in the primary deficit, but also as a result of the UK authorities' more optimistic economic growth scenario and the assumed relatively lower impact on the debt ratio of increasing interest expenditures. Both the Commission services and the authorities have so far assumed that around one fifth of the projected increase in the debt ratio from 2007/08 to 2010/11 (around £77 billion in total and 5% of GDP in 2008/09) is due to a number of financial transactions, including the financing of payments to retail deposits of distressed banks (Bradford and Bingley and subsidiaries of Icelandic Banks), the loan to Northern Rock and the government's acquisition of banking sector preference and ordinary shares.

As in other previous convergence programmes, the UK authorities also project public sector net debt (i.e. allowing for the accumulation of financial assets), which is the fiscal aggregate against which the "Sustainable Investment Rule" until recently was assessed in the domestic fiscal framework. Public sector net debt is projected to rise over the programme period from an estimated 41.2% of GDP in 2008/09 to 52.9% of GDP in 2010/11 and further to around 57% in 2012/13. The projections in the convergence programme thus imply a breach of the now suspended domestic 40% public sector net debt ceiling.

There are considerable risks to the government gross debt path outlined in the programme. Also, the assumption that the government's financial transactions are of a temporary nature may prove too optimistic. The main risks stem from higher-than-targeted deficits (see Section 4.2 and 4.3), and from lower-than-projected (nominal) growth (see Section 3) as well as from potential further debt-increasing stock-flow adjustments related to financial rescue operations. It thus cannot be excluded that more financial institutions will need to seek the authorities' support and that more of the existing contingent liabilities by the government eventually will be judged to have a significant impact on the government debt (additional to that already factored in the forecast). One example is the Special Liquidity Scheme (£150 billion, 13% of GDP), which until now has been treated as a contingent liability, and not as debt-increasing. It should be noted, however, that it remains uncertain to what extent the government guarantees will be actually called. Moreover, once the economy recovers and financial sector conditions stabilise, the UK authorities would be expected to unwind, at least in part, the increase in debt due to financial sector interventions through the proceeds from selling equity stakes in financial institutions back to the private sector and by calling in loans

Due to the importance of the UK financial sector and the large scale of contingent liabilities, risk premia (interest rate spreads) have risen markedly in the UK. This also poses a risk in terms of potentially increasing future financing needs and continued substantial fluctuations in the cost of debt.

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[13] For further information see http://www.hm-treasury.gov.uk/press_105_08.htm and http://www.hm-treasury.gov.uk/press_05_09.htm.

Table IV: Debt dynamics

(% of GDP)	average 2002-06	2007/08	2008/09		2009/10		2010/11		2011/12	2012/13	2013/14
			COM	CP	COM	CP	COM	CP	CP	CP	CP
Gross debt ratio[1]	**39.2**	**43.2**	**53.7**	**52.9**	**64.6**	**60.5**	**71.9**	**65.1**	**67.5**	**68.6**	**68.5**
Change in the ratio	1.3	0.5	10.5	9.7	10.8	7.6	7.3	4.6	2.4	1.1	-0.1
Contributions[2] *:*											
1. Primary balance	**1.2**	**0.6**	**3.5**	**3.4**	**7.1**	**6.4**	**6.3**	**4.5**	**2.6**	**1.4**	**0.3**
2. "Snow-ball" effect	**0.1**	**-0.1**	**1.6**	**0.8**	**3.8**	**1.2**	**1.0**	**-0.1**	**-0.5**	**-0.7**	**-0.6**
Of which:											
Interest expenditure	2.0	2.2	2.2	2.1	2.5	1.8	2.8	2.6	3.0	3.0	3.1
Growth effect	-1.4	-1.2	0.2	0.1	1.3	0.3	-0.5	-1.2	-1.8	-1.9	-1.9
Inflation effect	-0.5	-1.1	-0.9	-1.4	0.0	-0.9	-1.3	-1.5	-1.6	-1.8	-1.8
3. Stock-flow adjustment	**0.0**	**0.0**	**5.4**	**5.5**	**0.0**	**0.0**	**0.0**	**0.2**	**0.3**	**0.5**	**0.3**

Notes:

[1]End of period.

[2]The snow-ball effect captures the impact of interest expenditure on accumulated debt, as well as the impact of real GDP growth and inflation on the debt ratio (through the denominator). The stock-flow adjustment includes differences in cash and accrual accounting, accumulation of financial assets and valuation and other residual effects.

Source :

Convergence programme (CP); Commission services' January 2009 Interim economic forecasts (COM); Commission services' calculations

5.2. Long-term sustainability

This section presents sustainability indicators based on the long-term age-related government spending as projected by the Member States and the EPC in 2006 according to an agreed methodology.[14]

Table 3 in the Annex 2 shows that the age-related spending is projected to rise by 4.2% of GDP between 2010 and 2050, about the EU average. Sustainability indicators for two scenarios are presented in Table 4 in the Annex 2. Including the increase of age-related expenditure and assuming that the structural primary balance remained at its 2008 level, the sustainability gap (S2)[15] would amount to 7.6% of GDP; about 2.8 percentage points more than in last year's assessment, which is due to a lower estimated structural primary balance in the starting year. This starting budgetary position would not be sufficient to stabilize the debt ratio over the long-term and entails a risk of unsustainable public finances even before considering the long-term budgetary impact of ageing. If the 2009 budgetary position of the Commission services' January 2009 forecast was taken as the starting point, the sustainability gap would widen to almost 10% of GDP.

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[14] Economic Policy Committee and the European Commission (2006), 'The impact of aging on public expenditure: projections for the EU-25 Member States on pensions, health care, long-term care, education and unemployment transfers (2004-50)', *European Economy – Special Report* No. 1/2006. European Commission (2006), The long-term sustainability of public finances in the European Union, European Economy No. 4/2006. European Commission (2008), *Public finances in EMU – 2008*, *European Economy* No. 4/2008.

[15] The S2 indicator is defined as the change in the current level of the structural primary balance required to make sure that the discounted value of future structural primary balances (including the path of property income) covers the current level of debt.

While the "2008 scenario" already reflects the weakening of the budgetary position on account of the current economic crisis, the "programme scenario", which is based on the projected end-of-programme structural primary balance, shows a smaller gap. If the budgetary consolidation planned in the programme was achieved, risks to long-term sustainability of public finances would be somewhat mitigated.

Based on the assumptions used for the calculation of the sustainability indicators, Figure 4 in the Annex displays the projected debt/GDP ratio over the long-term. For an overall assessment of the sustainability of public finances, other relevant factors are taken into account.

Whereas the long-term budgetary impact of ageing is close to the EU average, the budgetary position in 2008 as estimated in the programme, which is significantly worse than the starting position of the previous programme, constitutes a severe risk to sustainable public finances even before the long-term budgetary impact of an ageing population is considered. The contingent liabilities established by state guarantees to the financial sector pose an additional risk due to their negative impact on the long-term sustainability of public finances if called. If the 2009 budgetary position as projected by the Commission services' January 2009 interim forecast was taken as the starting point, the sustainability gap would worsen substantially. Moreover, the gross debt ratio is projected to surpass the Treaty reference value before the end of the programme period. Reducing the primary deficit would contribute to reducing the high risks to the sustainability of public finances.

6. INSTITUTIONAL FEATURES OF PUBLIC FINANCES

The UK's domestic fiscal policy framework until recently included two *fiscal policy rules* for the public sector: 1) the "golden rule" that over the course of the economic cycle, the government would borrow only to finance *net* investment, and not to fund current expenditure and 2) the "sustainable investment rule" that public sector *net* debt (i.e. net of financial assets) should be held over the economic cycle at "a stable and prudent level" (interpreted as requiring net debt to remain below 40% of GDP in every financial year). Besides supporting a reduction in net debt and a strong fiscal consolidation in the late 1990s (the first few years of the cycle), the fiscal framework, which was originally introduced in 1997, increased transparency of fiscal policy and spending patterns and ensured an important improvement in public investment from previously low levels by making a clear distinction between capital and current spending. However, the fiscal rules suffered from several shortcomings (uncertainties related to the definition of "over the economic cycle" and insufficient independent assessment) and did not ensure that public spending was sufficiently contained. Between 2002/03 and 2007/08 total expenditure outturns deviated from the original ceilings by an annual average of 1.7%. Furthermore, the framework did not ensure deficits below 3% of GDP, as confirmed by the results in 2003/04, 2004/05 and 2005/06, and did not square with the quantitative medium-term objective (MTO) approach.

The recent marked deterioration of the UK's public finances has put the fiscal framework under intense pressure. With the 2008 Pre Budget Report the existing fiscal framework and the two fiscal rules were therefore put on hold. Instead a "temporary operating rule" was introduced: "to set policies to improve the cyclically-adjusted current budget each year, once the economy emerges from the downturn, so it reaches balance and debt is falling as a proportion of GDP once the global chocks have worked their way through the economy in full." The new operating rule is an interim holding operation designed to accommodate higher government borrowing to support the economy in the short term, although once the UK economy emerges from the current recession it would impose a weak and quantitatively

unspecified constraint in terms of minimum fiscal consolidation. A new fiscal framework has not been announced. The government has indicated that a new framework will be put in place before 2015/16. The establishment of an effective and credible revised fiscal framework will be crucial in order to deliver the needed consolidation in the medium term, while avoiding the pitfalls encountered in the recently suspended fiscal rules.

To support the departmental spending plans and enable the release of resources for priority areas, the government within the context of the 2007 Comprehensive Spending Review (CSR) introduced a range of initiatives to further enhance the efficiency and effectiveness of public spending, including a value for money programme and a performance management framework.[16] The former aimed at minimum 3% efficiency savings per year over the CSR period across central and local government, releasing £30 billion by 2010/11. Although intrinsically hard to evaluate, according to the government, previous targets set in the previous 2004 efficiency programme are considered to have been reached. The new efficiency programme, which was expanded in the 2008 Budget, demonstrates the authorities' intentions to keep up the momentum of the UK's focus on value for money issues in the public sector, including by setting a more ambitious efficiency savings target as well as introducing a new monitoring and reporting framework and programmes to examine further opportunities for efficiency savings in different areas. Subsequently, the 2008 Pre-Budget Report announced additional annual value for money savings of £5 billion a year in 2010/11 and 2011/12. The convergence programme outlined some supportive measures, but it remains unclear exactly how different departments and policy areas will be affected.

7. ASSESSMENT

This section assesses the budgetary strategy, taking into account risks, in the light of (i) the criteria for short-term action laid down in the Commission Communication of 26 November 2008 on the European Economic Recovery Plan (EERP) as endorsed by the European Council conclusions on the European Economic Recovery Plan (EERP) on 16 December 2008; (ii) the adequacy of the fiscal stimulus package and the overall fiscal stance (iii) the objectives of the Stability and Growth Pact.

The fiscal stimulus measures announced by government in November 2008, which are expected to reduce the contraction in GDP growth in 2009 by around ½ percentage points, are consistent with those referred to in the EERP. The stimulus package is planned to be temporary and is timely, as measures are targeted towards supporting domestic demand in 2009 when economic activity is expected to be at its weakest. Most of the measures are aimed at supporting household purchasing power. Only some of the fiscal stimulus measures are directly targeted towards specific household groups or sectors, although the reduction in the VAT rate is expected to have a greater effect on households with a relatively higher marginal propensity to consume. The measures correspond to the policy objective of short-term output stabilisation and are related to the UK Lisbon structural reform agenda.

The structural government deficit in 2009/10 is expected to increase by about 2.0 percentage points, reflecting in broadly equal measure the stimulus package and the contraction in

[16] For further information see Commission (2007): United Kingdom: Macro Fiscal Assessment. http://ec.europa.eu/economy_finance/publications/publication11832_en.pdf

economic activities, especially housing and financial market transactions, yielding high tax revenues. In nominal terms, the deficit in 2009/10 is expected to reach 8.2% of GDP, although the budgetary outcomes are subject to downside risks as a result of a deeper and more prolonged recession.

In 2010/11, the update projects a deficit of 7.1% of GDP, 1.1 percentage points less than in the preceding year. The forecast improvement primarily reflects the withdrawal of the stimulus measures and expenditure savings through efficiency gains. According to the programme, the headline deficit between 2010/11 and 2013/14 is forecast to improve by an average of around 1¼ percentage points of GDP per annum, although the deficit is forecast to remain above the 3% of GDP reference value by the end of the programme period. An increase in the revenue ratio and a drop in the expenditure ratio are expected to contribute to around two-fifths and three-fifths, respectively, of the target adjustment in the nominal balance between 2010/11 and 2013/14. In 2011/12, the announced increase in income tax and social security contribution rates is expected to raise revenue by 0.3% of GDP. The annual nominal rate of increase in expenditure between 2011/12 and 2013/14 is assumed to decelerate sharply, although the slowdown in spending growth is not yet backed by detailed departmental spending plans.

The UK authorities' fiscal targets imply an improvement in the structural deficit averaging around 1 pp. per annum between 2010/11 and 2013/14. However, the possibility that economic activity in 2010 will be weaker than envisaged by the UK authorities carries the risk that the stimulus measures would be extended to 2010. The medium-term consolidation envisaged in the programme also imply a revenue elasticity that appears optimistic, given that the contribution of the financial sector to economic activity in the medium-term could remain lower than in the pre-recession period and the composition of aggregate demand could even be permanently less tax-rich than the programme acknowledges. The medium-term projections also assume a significant deceleration in expenditure growth, although the detailed departmental spending limits cover only the period up to 2010/11.

The fiscal framework that used to define the medium-term budgetary objectives in previous programmes has been replaced with a temporary operating rule. The new rule is designed to accommodate higher government borrowing to support the economy in the short term, although once the UK economy emerges from the current recession it would impose a quantitatively unspecified constraint in terms of minimum fiscal consolidation.

The overall conclusion is that the programme confirms a rapid deterioration in the United Kingdom's budgetary position, which has strained the sustainability of UK public finances. The rapid deterioration in the government's primary balance, which was already in deficit in the period leading up to the crisis, has weakened the UK's capacity to pursue a looser fiscal stance without compromising its budgetary sustainability.

ANNEX 1. SPECIAL TOPIC: THE ECONOMIC AND FISCAL SIGNIFICANCE OF THE UK HOUSING MARKET

1. INTRODUCTION

Between the late 1990s and 2007 the United Kingdom's residential housing market recorded very strong annual house price increases, which placed UK property prices amongst the fastest-growing of all European countries over the past decade. Average nominal house prices tripled between 1998 and 2007. Compared to the UK's previous housing market booms of the late 1970s and late 1980s, which were marked by rapid cumulative price increases and, in the latter case, succeeded by a sharp and prolonged house price deflation lasting until the mid-1990s, the UK's latest episode of price rises surpassed its historic precedents in both its duration and scale.

Since mid-2007, the protracted crisis in global credit markets originating in the US sub-prime mortgage market in 2007 has taken its toll on the previously buoyant UK housing market. As at the end of the third quarter of 2008, average house prices had fallen by around 10% compared to their peak in the third quarter of 2007, and the number of property transactions fell sharply during the first half of 2008. Against this background a sound understanding of the drivers and the potential consequences of the historic surge in UK house prices, as well as of a downward adjustment, is valuable in a policymaking context. The required analysis may also yield useful insights into other policy-relevant issues such macroeconomic activity and household borrowing, as well as of structural issues such as the adequacy of the housing stock and new supply capacity. To this end, recent analysis by European Commission staff highlighted the most important drivers of UK housing market activity since the mid-1990s.[17] These include the rise in average incomes and falls in mortgage interest rates, coupled with relatively rapid population growth and falling average household size. Insufficient UK housing supply growth and homebuyers' expectations of continued house price appreciation further contributed to a boom that left UK house prices around 30% above their equilibrium in mid-2007. This estimate is confirmed by a number of valuation approaches.

This scene setter takes this estimated degree of overvaluation as well as the house price falls of over 10% between the third quarters of 2007 and 2008 as a point of departure in examining the economic and fiscal significance of the UK housing market in general as well as the likely ramifications of a significant downward price adjustment in particular. This chapter sets out with a brief overview of the UK housing market, followed by an examination of housing investment and the impact of house price growth on private consumption. The final section examines the importance of the UK housing market for public finances.

2. THE UK HOUSING MARKET – AN OVERVIEW

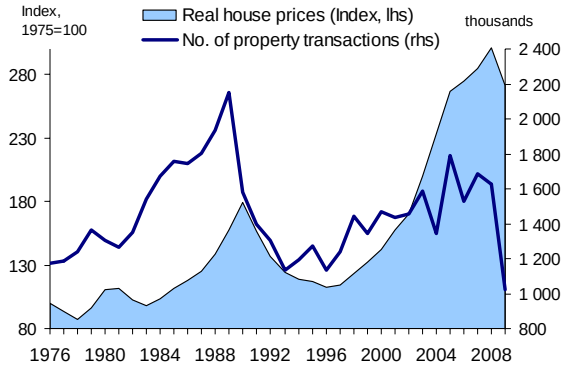
The UK's residential housing market has undergone important structural changes since the 1970s, of which the trend increase in owner-occupation and the liberalisation of mortgage lending in 1980 stand out most clearly. While in 1978 the share of owner-occupation in the

[17] R. Kuenzel and B. Bjornbak (2008): *"The UK Housing Market: Anatomy of a house price boom"* ECFIN Country Focus, Vol. 5 No. 11, European Commission, Directorate-General for Economic and Financial Affairs; http://ec.europa.eu/economy_finance/publications/publication13282_en.pdf

total dwelling stock was only around 55%, this increased to 70% by 2001 and has remained broadly constant since. The increase followed the introduction in 1980 of the right for tenants in social housing to purchase their home from the local authorities, typically at a discount. The year of 1980 also saw a significant liberalisation of the UK mortgage market as the Supplementary Special Deposit Scheme, also known as the 'corset', was abolished. The corset had imposed penalties on banks whose interest-bearing deposits grew faster than a pre-set limit, and its removal led to a crowding in of banks into the domestic mortgage market. This significantly boosted mortgage credit supply and eased lending terms, thereby contributing to a large rise in the number of new mortgage loans. Together with the aforementioned demand factors, these structural changes in the UK housing market helped create more dynamic market conditions, albeit at the cost of greater cyclicality of housing market activity. Figure 1 plots the evolution of real UK house prices and housing transactions since 1976, with a house price peak evident in 1989 and a further one emerging in 2008.[18]

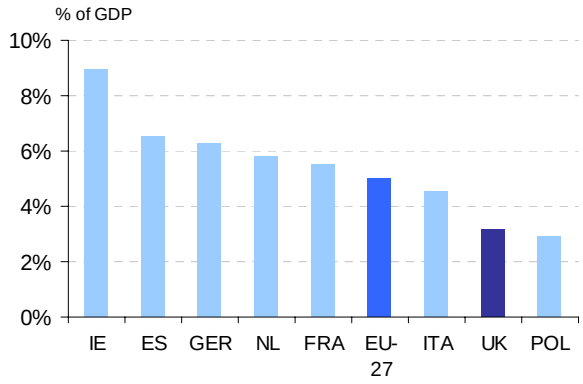
The housing 'bubble' that built up and burst between 1988 and 1992 offers a natural benchmark for assessing the current UK housing cycle. However, housing market developments in this period cannot be validly analysed without also taking into account the wider macroeconomic developments at the time. The housing market crash of the early 1990s coincided with a sharp rise in interest rates and a pronounced recession in which GDP contracted for five quarters in a row. It is beyond doubt that economic activity, house prices and households' financial expectations (and hence an important determinant of their attitude to spending) are closely associated. The following sections will set out considerations regarding the macroeconomic impact that housing market activity may in principle have, and will offer some conclusions as to the nature and direction of the causal relationship between housing market activity and economic growth.

Figure 1: UK real house price growth and property transactions



Source: UK Office of National Statistics (ONS); Nationwide Building Society

Figure 2: Housing construction as % of GDP, 1997-2007 average



Source: Eurostat

[18] We adopt the definition of a continued fall of at least 15% from the highest to the lowest point as constituting a house price 'peak'.

3. THE ECONOMIC IMPACT OF HOUSING MARKET ACTIVITY

Housing market activity is here understood as referring to both the level of housing transactions and the level of house prices, or, alternatively, changes in these two variables. While Figure 1 underlines that housing turnover and prices tend to move together, the distinction becomes important in the following sections, which examine specific links between housing market variables and macroeconomic ones.

3.1. Residential investment

Investment in housing covers both the construction of new houses and improvements to the existing housing stock. Housing investment can be expected to increase when actual or expected house price inflation is high, as the market value of the housing asset then increases relative to its construction costs, which increases investment profits and should encourage further housing investment (the famous Tobin's *q*). This relation is largely independent of the level of housing transactions, although high transactions volume may shorten the time needed to sell a new or newly upgraded house, which increases the net present value of the cash return on investment and may therefore also be associated with greater housing investment. Overall, a material fall in house prices is likely to have a dampening impact on housing investment, and this would, other things equal, reduce GDP growth. Empirically, the correlation between housing investment and house prices has been positive and moderately strong, with a correlation coefficient of 0.41.

Figure 2 shows that in the UK the value of housing construction is low in comparison to other EU countries, chiefly among these Ireland.[19] While a fall in housing investment is certainly to be expected in a housing market downturn, its overall impact would be limited by the relatively small GDP share of housing investment. In the first quarter of 2008 annual housing investment growth turned negative, falling further in the second. The sharp house price fall at the start of the 1990s resulted in year-on-year falls in housing investment of 15% per year for two consecutive years, which left housing investment levels more than 1% of GDP lower than at their peak in 1989. A similar fall this time around would reduce GDP growth by around ½% point each year for two years, and there are two reasons to think that housing investment may fall by even more over the coming 1-2 years. Firstly, the 1990 crash only saw nominal house price falls of 20% from peak to trough, whereas prices are likely to fall by 25% or more from their peak in 2007, with half of this fall having already taken place.[20] Second, the credit crunch has brought about a sharp tightening of credit conditions for households and corporations, both on price and non-price terms, which will further restrict housing investment.

3.2. Turnover-related goods and services expenditure

Individual housing transactions tend to be accompanied by a certain amount of ancillary expenditure on goods, for instance on 'white goods' and furniture. While the 40% fall in

[19] For a full discussion of the Irish housing market see J. Malzubris (2008): *Ireland's Housing Market: Bubble Trouble*, European Commission, DG ECFIN Country Focus Vol. 5 No.9; http://ec.europa.eu/economy_finance/publications/publication13187_en.pdf

[20] Kuenzel and Bjornbak (2008)

housing transactions in the first three quarters of 2008 compared to the 2007 average raises the potential for a significant impact on the aforementioned type of spending, the macroeconomic impact would be tempered by the relatively small share of owner-occupier households (around 5%) who move home in any given year. In addition, any reduction in transaction-related consumption expenditure may be partly offset by higher expenditure on other goods and services, rather than saved, and spending on replacing durables is likely to be maintained, whether or not a move between properties is involved. It also appears that growth of spending on consumer durables is no better correlated with house price growth or turnover than total consumption expenditure, which suggests that housing-related durables spending may not merit specific attention. Housing-related services spending, for instance on surveyance, estate agents or legal services, is a further source of transactions-sensitive consumption spending. Plausible estimates of the direct loss of revenue for lawyers and estate agents would come to around £0.3bn (0.025% of GDP) per year, although as in the case for durables, not all of this income loss represents a net reduction in economy-wide gross value added, as foregone expenditure may be spent on other goods and services.[21] Overall, based on this first approximation, the impact of housing-related goods and services spending on GDP growth is then small if not negligible.

3.3. Impact on private consumption

It is well established that in the UK house prices, private consumption and households' saving rate have been strongly related, with reported correlation coefficients as high as 0.8 (consumption and house price growth) and -0.9 (saving rate and house prices).[22] While the apparent degree of association appears to have weakened somewhat since 2000 as private consumption growth remained broadly steady, while house prices surged, different interpretations of this de-coupling have been offered. While some commentators take the weakening correlation as an indication that causal linkages between housing and consumer spending have weakened, others point to simultaneous changes in other economic variables, which partial analysis may fail to take account of.[23] The following sections discuss the two main channels through which the house market can directly influence private consumption, which are collateral and wealth effects. A better understanding of these channels should help in forming a view regarding the overall macroeconomic impact of the ongoing correction of house prices.

3.3.1. Collateral effects

Private consumption spending and household investment can be financed out of current income, savings or through new borrowing. Housing assets are an obvious choice of collateral against which to secure any personal borrowing, and secured lending typically carries lower interest rates than unsecured consumer credit. Housing equity is defined as the fair market value of a property minus the outstanding debt secured on it. Consequently, it varies with

[21] Calculation assumes a 40% fall in transactions from 2007 levels, with properties valued at 2008 average prices, an estate agent's commission of 1.5% of the sale price and lawyer's fee of £1200 per transaction.

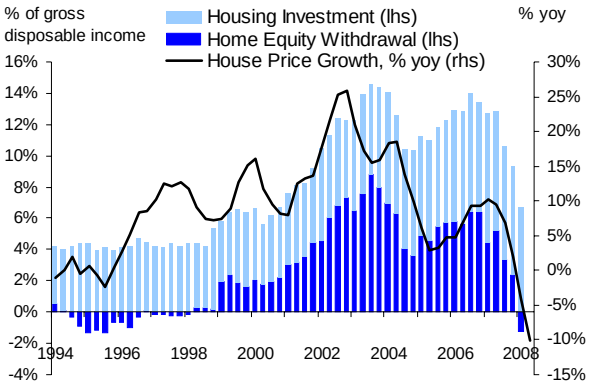
[22] Catte *et al.* (2005), Barrell and Kirby (2008)

[23] See e.g. Benito *et al.* (2006)

changes in either of the two elements, for instance a fall in house prices, which reduces housing equity.[24] By using housing equity as collateral, households can smooth consumption in response to temporary negative income shocks or in anticipation of (permanent) income or wealth gains. This can thereby ease liquidity constraints that arise due to the nature of housing equity, which itself should properly be considered illiquid individual wealth (see section 2.3.2). During periods of falling house prices, the collateral value and individuals' equity buffer shrinks, which is likely to restrict secured borrowing, thereby potentially weakening private consumption (see Box 1).

One key channel of equity release is through the use of equity release loans, i.e. taking out a larger mortgage on an existing property or a larger mortgage than is needed when moving.[25] Equity release can also be thought of as 'active' housing equity withdrawal because it requires changes to current borrowing agreements, and it increases individual indebtedness while releasing funds that can be used to finance current consumption, pay off debt or purchase assets. However, 'passive' forms of housing equity withdrawal exist that do not increase indebtedness, notably when a seller of a house does not buy a new property (e.g. if inherited or because of moving into rented accommodation), or 'trades down' by buying a cheaper house while reducing his mortgage by less than the price difference between the properties. This passive form of equity release tends to dominate active forms, and explains why there is a very strong correlation between home equity withdrawal and property transactions.

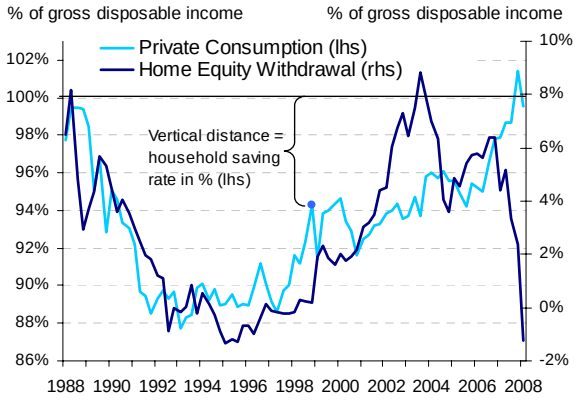
Figure 3: Net secured lending to individuals: Housing investment and Housing Equity Withdrawal components



Source: ONS; Bank of England; Nationwide

Note: Columns sum to total net secured lending to individuals

Figure 4: Private Consumption and Housing Equity Withdrawal



Source: ONS; Bank of England

Figure 3 shows a decomposition of net secured lending to individuals (i.e. gross secured lending minus repayments and write-offs of secured loans) into housing investment and home

[24] Housing equity is reduced as the property value falls or as debt increases, but only the latter should be referred to as 'equity withdrawal'. When an individual sells one property to buy another, equity is withdrawn in the transaction if the difference in the properties' market value V and that of the associated mortgage debt D satisfies the following condition: $((V_{new} - V_{old}) - (D_{new} - D_{old})) < 0$.

[25] Note that this type of activity does not include remortgaging, which is the transferral of an existing mortgage to a new lender to take advantage of lower rates, and does not involve additional borrowing.

equity withdrawal (HEW). The latter is the Bank of England's regularly published measure of net housing equity withdrawal, which strips out housing investment from net secured lending flows. HEW shows a broadly positive relation with house prices, and in Q2 2008 turned negative for the first time since the late 1990s. This correlation is not surprising, since all passive equity withdrawal operations necessarily involve housing transactions, which in turn correlate with house price growth (see Figure 1).

The association between HEW and house prices is likely to continue, but the implications of a house price and transactions-induced fall in HEW for private consumption and GDP growth are not self-evident. Up until 2002, HEW closely tracked private consumption, with the co-movement clearly breaking down in 2007 (Figure 4). The alleged de-coupling of house price and private consumption from as early as 2000 onwards appears less pronounced upon inspection of this figure. While private consumption *growth* was indeed stable over the current decade, it nevertheless far outstripped growth in disposable income, thus resulting in a sharp decline of the savings rate to below zero in Q1 2008, which is consistent with a continued association of consumer spending and house prices for all but the most recent period.

Whether or not a link between private consumption and house prices is due to an inherent causal relationship that may have weakened is an important question, but not one that is central to the aim of this chapter.[26] By invoking the fact that, either way, HEW provides funding that can be used for private consumption or the net acquisition of financial assets, the causality issue can be sidestepped. The debate then shifts to the actual use of released equity, which proves a more easily verifiable matter, albeit not uncontested. Using English housing survey data on *gross* equity withdrawal, Benito and Power (2004) find that the both the level of equity withdrawal and the marginal propensity to use withdrawn equity for spending or investment purposes differs significantly depending on whether the withdrawal is active or passive. Passive withdrawal forms such as last time sales and trading down are more likely to pay off existing debt or to reinvest in other assets. Passive withdrawals accounted for around 60% of total value of gross withdrawals in 2002, a proportion comparable with the US.[27] Active withdrawals through overmortgaging however are more likely to be spent, with the most important individual spending item being home improvement such as redecoration, extension or conversion of a property. However, most home improvement is counted in the UK National Accounts as housing investment rather than private consumption, which would weaken any direct link between equity withdrawal and private consumption while underlining the aforementioned sensitivity of residential investment to house price changes.

[26] For an overview of the 'causality vs. common factors' debate see Benito *et al.* (2006)

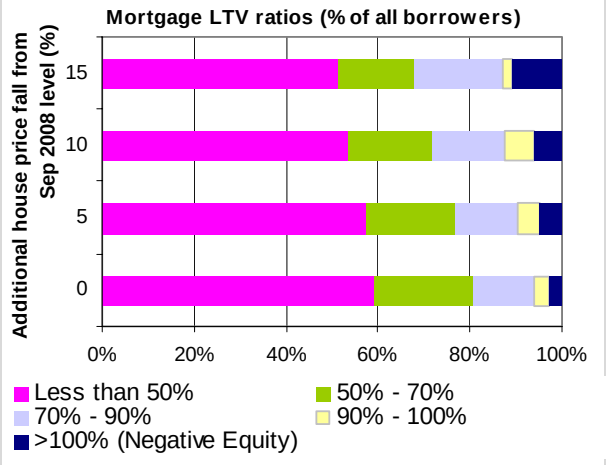
[27] See Greenspan and Kennedy (2008)

Box 1. UK Households with negative housing equity

Negative housing equity occurs when a homeowner's existing mortgage debt exceeds the market value of the purchased house, resulting in a loan-to-value ratio (LTV) in excess of 100%. In the early 1990s during the last UK housing market downturn a large number of homeowners experienced negative housing equity as nominal house prices declined and a relatively large proportion of households had purchased their home at high loan to value ratios and at the peak of the boom. In 1992, around 7% or 1.2 million owner-occupied households were estimated to be in negative equity (compared with less than 100.000 in 1989).

Over the last decade, strong annual house price increases and higher transaction levels supported by lower unemployment and falling interest rates have markedly reduced the scale of negative equity in the UK. Unlike the mid-1990s, recent years saw only a small share of households with loan to value ratios approaching 100% (around 1-2% of all mortgages in 2007). The typical loan to value ratio is around 80%, which is not particularly high by European standards. However, beside the Netherlands the UK is the only European country where a buyer can borrow more than 100% of the value of the property, although in the wake of the credit crunch this kind of lending has virtually disappeared in the UK. Furthermore, the UK shows much higher shares of residential mortgage loans to GDP (83% of GDP compared to an EU average of 49% in 2006).

The on-going adjustment in the UK housing market, with a fall in average house prices so far of around 15% from the peak in the third quarter of 2007, is likely to trigger a re-emergence of negative housing equity. According to the Bank of England, as at the end of September 2008 only around 3% of mortgagors were in negative equity, corresponding to just above 350,000 borrowers. This shows that many existing homeowners with substantial buffers of housing equity built up during the last ten years are now better positioned to absorb a negative house price shock. In 2007, around 60% of mortgagors had more than £100,000 of equity in their homes, compared to less than 10% in 1993. However, a continued downward trend in UK house prices will force more households into negative equity in the near future. Estimates of the potential increase of negative equity vary and are surrounded by great uncertainty.



Source: Bank of England

In its October 2008 Financial Stability Report, the Bank of England presents different scenarios according to which between 5% and 11% or 550.000 to 1.3 million of all mortgage holders could find themselves in negative equity if house prices fell further by 5% to 15% from their September 2008 level (see figure). Other independent analysts point, dependent on the assumed house price falls, to between 950.000 and 2.7 million households (8% to 23% of outstanding mortgages) potentially being affected by negative equity by the end of 2009.[28]

Negative equity disproportionately affects first-time buyers, but in general need not be a problem as long as homeowners are willing and able to remain in their existing homes by keeping up their mortgage payments. The remainder of the mortgage debt that is not covered by the home's market value typically needs to be paid off out of savings if a household wishes to move, which tends to lower consumption for affected households. Unlike in the US, UK mortgage loans are recourse loans, meaning that lenders can lay claim on a borrower's income and other assets to recover the outstanding debt in its entirety. This implies that homeowners in negative equity cannot reduce their overall debt by simply 'posting back the keys' to their lenders. Increasing negative equity may also hamper geographic labour mobility and have a negative impact on consumer confidence and the willingness to borrow for spending. At the current juncture an increasing number of households will struggle to keep up mortgage payments, as the worsened prospects for income growth and employment increase mortgage default risk, offset to some degree by historically low interest rates. But this is largely independent of whether

[28] See Capital Economics (2008) and Saunders (2008).

individuals find themselves in negative equity or not, as default risk is primarily determined by income flows in relation to the (fixed) monthly mortgage service costs, making mortgage default a liquidity issue rather than a solvency issue.

Other empirical studies have yielded relatively diverse results regarding the use of home equity. Klyuev and Mills (2007) review survey evidence from OECD countries other than the UK, concluding that typically less than 20% of HEW is used for private consumption. Greenspan and Kennedy (2008) use US household surveys and find that 12% of withdrawn equity is used for private consumption, but find that a similar amount is used to repay consumer loans, on the basis of which they count such repayments as indirectly financing private consumption. However, based on econometric analysis, the Klyuev and Mills study finds a large and significant negative impact of UK housing equity withdrawal on the saving rate in the short-run, implying a corresponding positive consumption stimulus. Catte *et al.* (2004) estimate that in the UK 89% of withdrawn equity is consumed. Hurst and Stafford (2004) distinguish US equity extractors according to whether they face liquidity constraints, and estimate that 66% of equity withdrawn by constrained households is consumed, compared to only 20 per cent for non-constrained households, who have other forms of liquid assets at their disposal to finance spending.

Overall, it is therefore difficult to confidently state a central estimate of the propensity to spend withdrawn equity, but in light of the above evidence an estimate of 30% would appear reasonable.[29] Assuming that HEW levels in 2008 remain at their level in the first half of 2008, this would constitute to a reduction in household funding (but not income) of around £40bn (3% of GDP, 4% gross disposable income) compared to 2007. Applying a spending propensity of 30%, this would lower private consumption in 2008 by almost 1% of GDP compared to 2007, and allowing for an offsetting fall in imports increase this would reduce GDP by slightly more than 0.5 percentage point. This would increase the household saving rate by around just under 1 percentage point.

3.3.2. Wealth effects

Housing wealth effects are characterised by an increased propensity to consume and a reduction in the incentive to save, both as a result of rising net housing wealth. In a standard life-cycle model of consumption, an increase in wealth relative to income would prompt individuals to increase their consumption relative to their income by borrowing against their wealth, which would lower the saving rate. As housing assets account for around 48% of total household assets, with the majority of financial assets being mainly tied up in individuals' pension funds and remaining liquid financial assets being held by a relatively small share of the population, housing wealth is the most important store of individual wealth. Extensive research has examined the relationship between different forms of wealth and household spending, with results for the UK indicating that the impact of housing wealth per se on private consumption is small or zero, once controlling for collateral effects (i.e. equity withdrawal) and other factors common to both house prices and private consumption (e.g. income, interest rates, credit liberalisation).[30]

[30] Two of the most comprehensive studies on wealth effects are Aron and Muellbauer (2006) and Catte *et al.* (2005). Results presented in Catte et al. (2005) show that the positive short-run response of UK consumption

These empirical findings have typically chimed with the consensus view in theoretical debates on housing wealth effects, which argues that pure wealth effects should not be significant in aggregate because housing is both a consumption good and an asset.[31] In particular, this implies that although individual current wealth increases in response to house price changes, the "redemption value" of housing wealth is far lower than for financial wealth, because individuals typically still require housing once they move or sell their (increasingly valuable) property. And because house prices will have risen across the board, accumulated wealth will need to be used to pay for the next property. The exact conclusions of the debate however vary with an individual's economic time horizon and the extent to which an individual discounts the income and utility of those that would receive the housing asset as an inheritance.

Finally, on simple inspection of national accounts data wealth effects are more difficult to detect than collateral effects because equity withdrawal data unambiguously constitute financial flows that are available for consumption, in addition to current income. Having already analysed collateral effects in great detail in the preceding section, wealth effects are then only amount to the counterfactual hypothesis that, in the absence of the strong historic house price increases, consumption would have been lower and savings higher. The above theoretical and empirical results however suggest that such a hypothesis is not worth entertaining further if one already accounts for the role of housing collateral in private consumption.

4. FISCAL EXPOSURE TO A HOUSING MARKET DOWNTURN

4.1. Overview of taxation on housing in UK

Taxes on housing wealth and property transactions in the UK primarily consist of the annual council tax, stamp duties on the transfer of property, inheritance taxes and capital gain taxes[32]. In financial year 2007/08 the combined value of housing taxes is estimated to have reached 2¾% of GDP (Figure 1), equivalent to almost 6% of total government revenues. Housing taxes increased by 1.0 percentage point of GDP during the past ten years, primarily on account of higher stamp duties on property transactions.

Council tax, an annual tax on housing wealth that helps finance services provided by local authorities, accounts for the greater part of housing taxation the UK. In 2007/08, council tax revenues amounted to 1.6% of GDP or 4.0% of total revenues. The tax is payable by the person living in the property and it is based on the assessed value of a property in April 1991, when all properties were assigned to a valuation band. In turn, the valuation band determines the amount of council tax payable on a property. However, since the property valuation on

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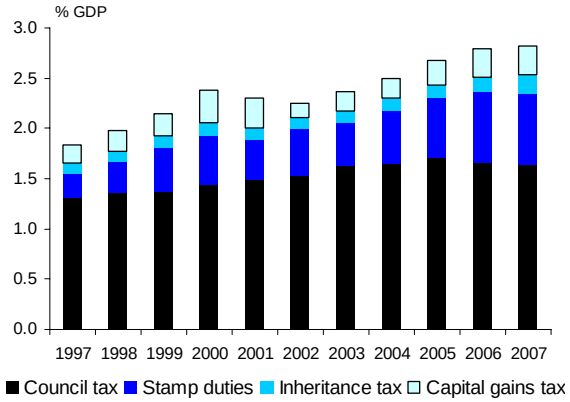
to housing wealth overshoots its long-term effect, and similar overshooting results have been mirrored in research by Her Majesty's Treasury and the Bank of England.

[31] For a summary see Catte *et al.* (2005:13)

[32] Revenue from VAT on housing repair is estimated at 0.05% of GDP and, as implied by the conclusions on housing transaction-related consumption expenditure in section 3.2, are not expected to have a significant effect on revenue flows.

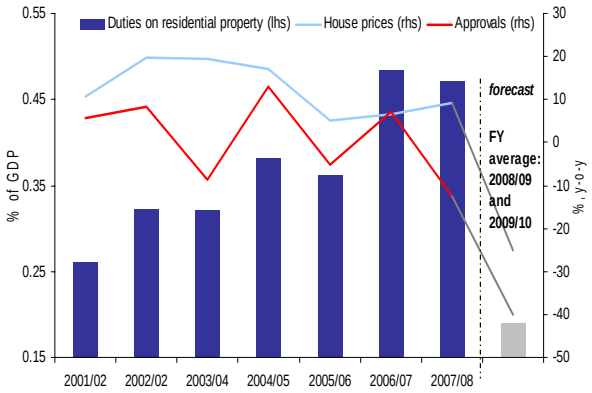
which the tax is based is kept constant, the council tax is exogenous to the housing business cycle.

Figure 5: Taxation of housing, % of GDP



Source: HM Revenue and Customs

Figure 6: Stamp duty on residential property



Source: HM Revenue and Customs, Commission estimates

By contrast, revenues on stamp duties are highly sensitive to the housing-market cycle. Stamp duty is payable on transactions involving transfers of land and property, and duty rates vary according to the selling price (see Table 1 below). Duties are not payable when the transaction price does not exceed the threshold value of £125,000 for residential property[33]. A transaction involving an average-priced property, estimated at around £184,000 in 2007[34], is subject to stamp duty of 1%. As a result, property transactions with purchasing prices greater than £250,000, which accounted for a fifth of total residential transactions in 2007, contributed to four-fifths of stamp duties on housing during that year.

Table 1: Stamp duty on residential property

Purchase price (in thousands)	*£0 - £125*	*£125 - £250*	*£250- £500*	*Above £500*	*All bands*
Tax rate (%)	0	1	3	4	
Number of transactions (in thousands), 2007	744	671	315	79	1809
Revenue from stamp duty (£ billion), 2006/07	0	1380	2515	2555	6445
Source: HM Revenue and Customs and Commission estimates					

Over the past eight years, stamp duties on housing transactions almost doubled from 0.26 % of GDP in 2001/002 to 0.47% in 2006/07. During the first half of the present decade the greater part of the increase was driven by double-digit growth in house prices, with the sharp drop in housing transactions in 2003/04, 2005/06 and 2007/08 interrupting the upward trend in intakes. Looking forward, the latest trends in housing transactions and the prospects for a continued correction in house prices raise expectations of significant losses from revenues on stamp duties in 2008/09 and 2009/10. Figure 2 presents estimates of average annual stamp duty revenues in 2008/09 and 2009/10 assuming both (a) a 50% drop in annual average

[33] The government announced in September 2008 that stamp duty would not apply to purchases of residential property of up to £175,000 until 3 September 2009.

[34] Nationwide House Price Index: http://www.nationwide.co.uk/hpi/default.asp

property transactions relative to 2007/08 and (b) an overall drop in prices by 30% during the two years to 2009/10. The estimates indicate that annual average stamp duty revenues in 2008/09 and 2009/10, at 0.19% of GDP, would fall to less than half the revenue in 2007/08. This would lead to cumulative revenue losses of around ½% of GDP over the two years.

Residential property is also to subject to inheritance tax and capital gains tax. Imputed rent - the implicit income arising from the fact that home owners can be considered as paying themselves rent - has not been taxed in the UK since 1960. Inheritance taxation is payable on the value of the assets (net of liabilities) of deceased persons transferred on death. An estate worth more than £312,000 is subject to inheritance tax at 40% on the value above this threshold. Receipts from inheritance taxes in 2007/08 amounted to less than 0.3% of GDP, primarily because the tax threshold is adjusted to ensure that the estate of the average owner-occupier is not subject to taxation. Given that inheritances of land and buildings liable to taxation are estimated to account for around half the total value of inherited estates[35], changes in inheritance taxes from the housing market cycle would not have a significant impact on government revenues.

Capital gains tax (CGT) is also payable on the gains realised on the disposal of non-owner-occupied housing. Largely due to the exclusion of sale of property used as primary residence, total capital gains tax receipts are relatively small and have remained stable at around ¼% of GDP over the past ten years. Chargeable gains from transactions involving residential and commercial property account for less than ⅓ of total capital gains[36]. In addition, since housing transactions account for a small part of the stock of housing[37], the greater part of gains and losses from changes in property prices are not realised in the short term and, therefore, the effect of changes in asset prices on capital gains tax intakes in the near term are expected to be very limited.

4.2. Prospect of losses on housing taxes in UK compared to other Member States

Although there is no readily available measure of housing taxes in the EU Member states, an assessment of the relative importance of housing taxation may be made by taking into consideration those taxes that are partly associated with housing. Such a measure of housing taxation can be compiled from the OECD Revenue Statistics 2007, which refers to the data up to 2005, by summing up: 'recurrent taxes on immovable property' (regular taxes on the use or ownership of immovable property), 'taxes on capital and financial transactions' (including stamp duties on the transfer or sale of immovable property), 'estate and inheritance taxes', 'capital gains tax' and 'other non-recurrent taxes on property'. This definition of housing taxes will tend to overstate housing taxes, since it also includes some receipts from properties on immovable property, such as from taxes on shares. In 2005, UK housing taxes as a percent of GDP measured on the basis of this relatively broad definition were estimated at 4½% of GDP, compared to the more narrowly-defined estimate of 2⅔% of GDP referred in section 3.1,

[35] http://www.hmrc.gov.uk/stats/inheritance_tax/07ir126.pdf

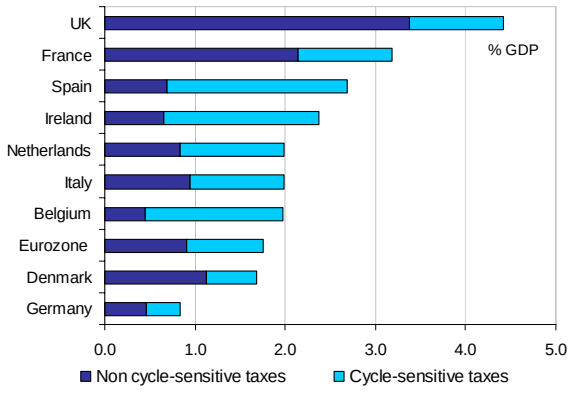
[36] http://www.hmrc.gov.uk/stats/capital_gains/table14-4.pdf

[37] The latest available data shows that in 2004/05 the sale of non-financial assets that were held in ownership for less than two years accounted for only 18% of total nonfinancial disposals: http://www.hmrc.gov.uk/stats/capital_gains/table14-5.pdf

which was derived from the detailed data breakdown provided by HM Revenue and Customs[38].

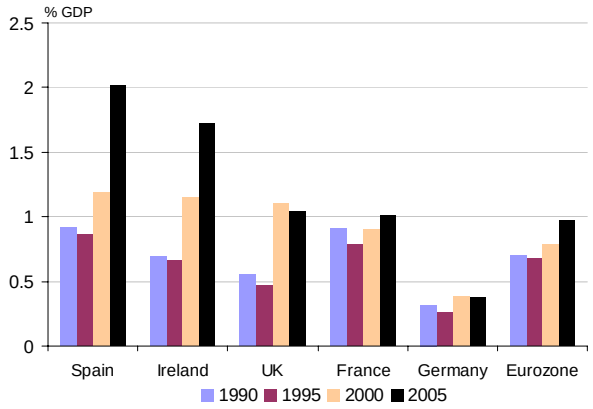
Housing taxes may also be categorised according to their sensitivity to the housing market cycle. Receipts from 'recurrent taxes on immovable property' (such as council tax), capital gains tax and other non-recurrent taxes (including taxes on increases in land value as a result of development permission) can be considered as inelastic or relatively less elastic to changes in housing market conditions, whereas taxes on capital transactions and inheritance taxes are highly market-sensitive revenue sources.

Figure 7: Housing taxes in the EU, % of GDP



Source: 2007 OECD Revenue Statistics, Commission estimates

Figure 8: Evolution of cycle-sensitive housing taxes in EU, % of GDP



Source: 2007 OECD Revenue Statistics, Commission estimates

The cross-country comparison suggests that the (broadly-defined) housing taxes-to-GDP ratio in the UK is almost 2½ times greater than in the eurozone and it is higher than in all the other Member States (Figure 3). Nevertheless, the ratio of UK cycle-sensitive housing taxation (CSHT) to GDP is only slightly higher than in the euro zone. In addition, it is less than two-thirds the ratio in Ireland and only around half that in Spain, underlining the greater sensitivity of pubic finances in those two countries to housing market developments. The increase in CSHT over the past ten years provides an indication of the relative exposure of UK public finances to the housing market downturn (Figure 4). In particular, if the share of housing market activity in GDP were to revert to 1995 levels, government revenues from CSHT would drop by around ½% of GDP. Although this is almost half the corresponding drop in revenues in Ireland and Spain, it is twice the shortfall in revenue that would occur in the euro area. This indicates a relatively high fiscal exposure of the UK to the housing market downturn currently underway.

4.3. Tax revenues contingent on banking sector housing-related asset portfolios

Given the interlinkage between the housing market meltdown in the United States, the global financial crises and the tightening of lending conditions in the UK, this section considers the wider fiscal consequences of financial sector losses on international residential-backed

[38] This refers to the sum of taxation from council taxes, stamp duty on land and immovable property, inheritance taxes on residential buildings and capital gains tax on land and buildings.

securities and on domestic mortgage lending. The sharp correction in UK house prices and the tightening of credit availability carries the risk of an increase in mortgage defaults, which would impact negatively on financial sector profits and on the tax revenue on those profits. However, asset writedowns as a result of losses on structured financial instruments, especially those backed by US sub-prime mortgages, could have a more immediate impact on corporate tax revenues on financial sector profits, which in 2007 were equivalent to almost 1.0% of GDP.

4.3.1. Losses on international mortgage-backed securities

The emergence of the financial sector crisis since August 2007 has translated into a sharp acceleration in banks' losses from asset writedowns. Most of these losses were made on US residential mortgage-backed securities (RMBS), although some financial corporations were also exposed to the collapse of Lehman brothers in September 2008 and to losses on investments related to Icelandic banks. Table 2 reports estimates of writedowns and credit losses since the last quarter of 2007 for banks in the UK, Europe and the United States. The credit losses include the year-on-year increase in the provisions for bad debts. The largest banks in the UK reported credit losses of 2¾% of GDP, one percentage point higher than in Germany and almost three times more than in France. Among the EU Member States, only Belgium reported higher credit losses relative to the size of its economy.

Table 2: Fiscal costs of banking sector credit losses

	credit losses		potential fiscal costs[1]	
	Qtr.4 2007 and 2008		loss in corporate tax revenue	loss in income/ capital taxes[2]
	€ bln	% of GDP	% of GDP	
UK	47.9	2.6	0.74	0.14
Germany[3]	52.0	2.1	0.53	0.07
France	19.4	1.0	0.28	0.12
Holland	11.5	2.0	0.50	0.17
Belgium	11.3	3.2	1.07	0.23
America[4]	526.3	4.2	1.27	0.26
Europe[4]	209.5	1.6	0.36	0.12

[1] Estimates based on statutory tax rates on corporate profits and dividend income. Tax rates derived from *Tax Database*, Centre for Tax Policy and Administration, OECD: http://www.oecd.org/document/60/0,3343,en_2649_34533_1942460_1_1_1_1,00.htm

[2] Estimates assume dividends as a share of profits of 35%, reflecting computations based on the UK economic accounts.

[3] Estimates based on an effective corporate tax rate of 38½% in 2007 and 28½% in 2008.

[4] America includes USA and Canada. Europe includes banks from countries that are not members of the European Union, primarily those registered in Switzerland.

SOURCE: Bloomberg, Commission estimates

The potential direct fiscal cost of the bank's credit losses consist of lower revenue from corporate tax on financial sector profits and reduced income (or capital) tax intakes on distributed profits. The UK faces combined tax revenue losses of almost 1.0% of GDP, two-thirds of which would reflect lower corporate tax receipts. In Europe, the fiscal costs of credit

losses as a proportion of GDP are expected to be about half those in the UK and a third of those in the United States.

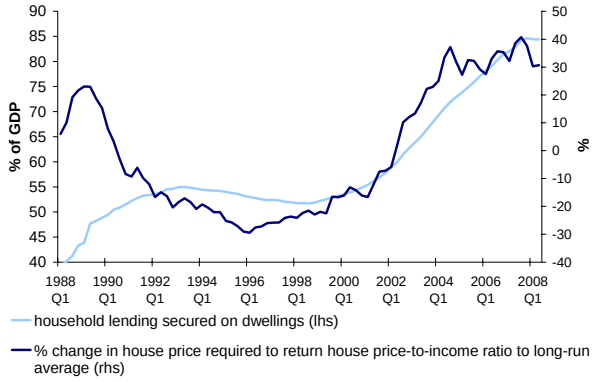
Given the credit losses reported by banks so far, the foregone tax revenues reported above represent a ceiling to the tax losses that Member States could incur from reported credit losses. In fact, the writedowns include asset value reductions that only decrease equity and, therefore, would be excluded by the banks from their earnings figures. In addition, some of the credit losses are expected to be recorded outside the Member State where the parent bank is registered, possibly through subsidiaries based in other Member States, such as in Luxembourg, or in offshore jurisdictions. Finally, tax legislation in some Member States, including in the UK, allows companies to carry forward losses to set against income in future accounting periods, thereby delaying the impact of higher losses on tax revenues. However, prevailing liquidity constraints reduce the likelihood of corporations carrying forward lower tax liabilities from credit losses. In fact, loss-making financial corporations in the UK could actually use losses incurred in 2008 to claim refunds against corporate tax paid in the preceding year, which would bring forward the significant negative effect of international credit losses on UK public finances.

4.3.2. Losses on domestic lending

Over the past decade, rising house prices, coupled with favourable economic conditions and low interest rates, boosted the demand for and supply of credit in the UK. Household borrowing from banks and building societies secured on dwellings rose to 85% of GDP in the second quarter of 2008, up from 52% ten years earlier (Figure 5). The financial sector also progressively assumed more credit risk, including through more lending to households with high loan-to-income ratios.

The positive equity built by households in the near term as a result of the sharp increase in house prices over the past ten years has cushioned households from lower house prices in the near term. In fact, writeoffs on lending to individuals in the first half of 2008 remained practically unchanged when compared to the same period last year, at 0.3% of full-year GDP. However, the scope for further downward adjustments in house prices (Figure 5) carries the risk of an increase in mortgage defaults, which, combined with the effect of the broader macroeconomic weaknesses on the banking sector's loan book, would feed into higher credit losses (see Box 1).

Figure 9: Lending secured on dwellings and house price valuation



Source: Bank of England, Commission estimates

According to the Bank of England estimates[39], a 15% drop in house prices would lead to an increase in the share of borrowers in negative equity from 3% of total mortgagors to 13%. Stress-testing calibrations by the BoE indicate that in a risk scenario characterised by a contraction in output and a sharp fall in asset prices, bank write-offs on lending to households, including due to higher mortgage arrears, and non-financial companies would result in cumulative domestic credit losses for UK banks by up to £70 billion (4½% of annual average GDP) over a period of five years[40].

Commission estimates based on a statutory tax rate of 28% imply that the commercial banks' losses on domestic lending in the macroeconomic risk scenario envisaged by the Bank of England would lead to cumulative losses from corporate tax on financial sector profits over the next five years by 1.2% of annual average GDP. This compares with corporate tax revenues on financial sector profits during the past five years of 4.1% of annual average GDP.

5. CONCLUSION

The preceding sections have found that two channels constitute the main transmission mechanisms from housing market activity to economic growth. Based on expectations that nominal house prices are likely to fall by at least 25% from their peak in autumn 2007, a weakening of residential investment in response is likely to subtract around ½ percentage point from GDP growth in for two consecutive years respectively, against a baseline scenario of unchanged 2007 housing investment levels. Secondly, private consumption levels can be expected to fall in response to a sharp fall in home equity withdrawal, subtracting ½ percentage point off GDP growth for one year. These estimates should merely be taken as a comparative statics exercise against a baseline scenario of unchanged levels of GDP components. However, they appear plausible in light of recent econometric estimates of the impact of house prices on GDP growth presented in Barrell and Kirby (2008), which suggest that a 25% fall in house prices would reduce GDP levels by 0.5% in the first year, 2% in the second and 1.5% in the third compared to a baseline scenario.

Revenue statistics indicate that the share of government revenue from cycle-sensitive housing taxation (CSHT) in the UK is similar to that in the euro area. However, during the past ten years the increase in the ratio of CSHT-to-GDP in the UK has been twice that recorded in the euro area, underscoring the UK's fiscal exposure to a domestic housing market downturn. The latter is set to feed-through into lower government revenue primarily on account of a drop in stamp duties on residential property transactions. The latest trends in housing transactions and the forecast drop in house prices are expected to reduce stamp duty intakes by ½% of GDP over the two-year period ending 2009/10. Meanwhile, the interlinkage between the global

[39] Bank of England Financial Stability Report, October 2008, Issue No. 24, pp. 10.

[40] Bank of England Financial Stability Report, October 2008, Issue No. 24, Box 4, pp. 28.

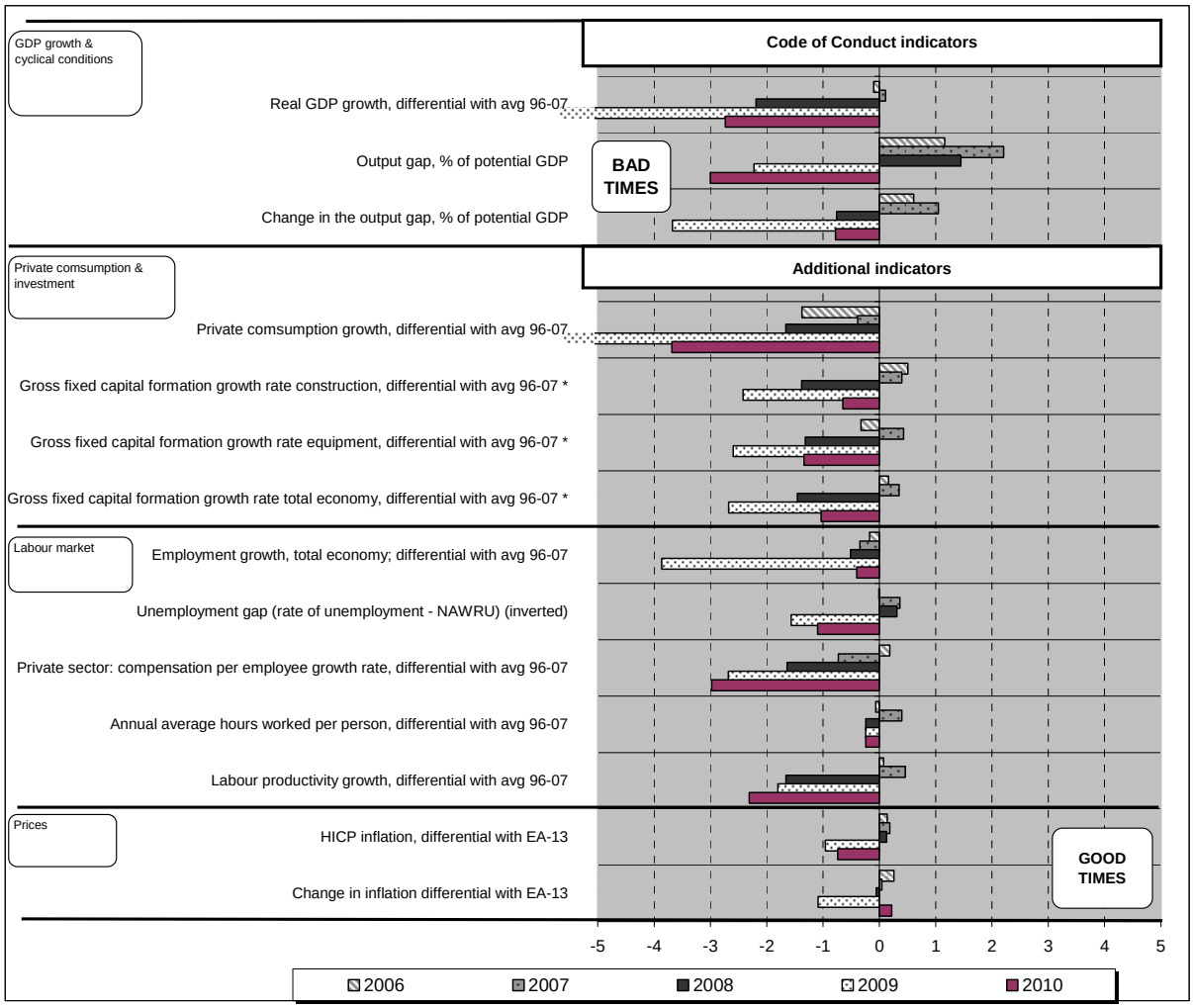
financial crisis and the UK housing market carries the risk of financial sector losses on domestic lending. Commission estimates based on bank write-offs on household lending envisaged by Bank of England stress-test calibrations imply cumulative losses from corporate taxation over the next five years by 1.2% of annual average GDP. Finally, the credit losses reported by the UK's major banks in 2008 also confirm the UK financial sector's substantial exposure to the meltdown in the US housing market. Government revenue losses as a result of banking sector losses on international mortgage-backed securities could reach almost 1% of GDP, more than twice the comparative drop in the revenue ratio in Europe.

REFERENCES:

- **Barrell, R. and Kirby, S. (2008):** *Consumption, Housing Wealth and Financial Crises*, National Institute Economic Review, No. 205, July 2008, National Institute of Economic and Social Research, London
- **Benito, A. and Power, J. (2004)**, *Housing Equity and Consumption: Insights from the Survey of English Housing*, Bank of England Quarterly Bulletin, Autumn 2004
- **Benito, A. Thompson, J., Waldron, M. and Wood, R. (2006)**: *House prices and consumer spending*, Bank of England Quarterly Bulletin, Summer 2006
- **Capital Economics (2008)**: *One in five borrowers to be affected by negative equity*, Housing Market Update, 29 October 2008
- **Catte, P. Girouard, N., Price, R. and André, C. (2005)**: *Housing Markets, Wealth and the Business Cycle*, OECD Economics Department Working Papers No. 394, December 2004
- **Greenspan, A. and Kennedy, J. (2008)**: *Sources and Uses of Equity extracted from Homes,* Oxford Review of Economic Policy, Volume 24 No. 1, 2008, pp. 120-144
- **Kuenzel, R. and Bjornbak, B. (2008)**: *The UK Housing Market: Anatomy of a house price boom*, ECFIN Country Focus, Vol. 5 No. 11, European Commission, Directorate-General for Economic and Financial Affairs
- **Malzubris, J. (2008)**: *Ireland's Housing Market: Bubble Trouble,* DG ECFIN Country Focus Vol. 5 No.9; European Commission, Directorate-General for Economic and Financial Affairs
- **Saunders, M. (2008)**: *Housing Slide worsens*, Economic and Market Analysis (Sterling Weekly), Citigroup, 18 April 2008

ANNEX 2. ADDITIONAL TABLES AND FIGURES

Figure 1: Good and bad economic times



Source: Commission services' January 2009 forecast (COM) and successive convergence programmes

Table 1: Budgetary implementation in 2008

	2007/08		2008/09	
	Planned CP Nov 2007	**Outcome CP Jan 2009**	**Planned CP Nov 2007**	**Outcome CP Jan 2009**
Government balance (% of GDP)	-3.0	-2.8	-2.9	-5.5
Difference compared to target	**0.2**		**-2.6**	
Of which : due to a different starting position end 2007			0.2	
due to different revenue / expenditure growth in 2008			-2.6	
p.m. Denominator effect and residual [2,3]			-0.2	
p.m. Nominal GDP growth (planned and outcome)			4.8	3.0
Revenue (% of GDP)	38.6	37.9	38.8	36.7
Revenue surprise compared to target [1]	**-0.7**		**-2.1**	
Of which : due to a different starting position end 2007			-0.7	
due to different revenue growth in 2008			-2.0	
p.m. Denominator effect [2]			0.6	
p.m. Residual [3]			-0.1	
p.m. Revenue growth rate (planned and outcome)			5.3	-0.3
Expenditure (% of GDP)	41.6	40.7	41.7	42.2
Expenditure surprise compared to target [1]	**-0.9**		**-0.5**	
Of which : due to different starting position end 2007			0.9	
due to different expenditure growth rate in 2008			-0.7	
p.m. Denominator effect [2]			-0.7	
p.m. Residual [3]			-0.1	
p.m. Expenditure growth rate (planned and outcome)			5.0	6.8

Notes:

[1] A positive number implies that the outcome was better (in terms of government balance) than planned.

[2] The denominator effect captures the mechanical effect that, if GDP turns out higher than planned, the ratio of revenue or expenditure to GDP will fall because of a higher denominator. Although the denominator effect can be very significant for revenue and expenditure separately, on balance they usually largely cancel against each other.

[3] The decomposition leaves a small residual that cannot be assigned to the previous components. The residual is generally small, except in some cases where planned and actual growth rates of revenue, expenditure and GDP differ significantly.

Source : Commission services

Table 2: Evolution of budgetary targets in successive programmes

		2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
General government balance[1] (% of GDP)	**CP Jan 2009**	**-2.8**	**-5.5**	**-8.2**	**-7.1**	**-5.6**	**-4.4**	**-3.4**
	CP Nov 2007	*-3.0*	*-2.9*	*-2.4*	*-2.1*	*-1.8*	*-1.6*	*n.a.*
	COM Jan 2009	-2.8	-5.7	-9.5	-9.2	n.a.	n.a.	n.a.
General government expenditure[2] (% of GDP)	**CP Jan 2009**	**40.7**	**42.2**	**43.7**	**43.7**	**42.9**	**42.1**	**41.4**
	CP Nov 2007	*41.6*	*41.7*	*41.4*	*41.3*	*41.1*	*41.1*	*n.a.*
	COM Jan 2009	44.9	47.2	50.8	50.8	n.a.	n.a.	n.a.
General government revenue[1,2] (% of GDP)	**CP Jan 2009**	**37.9**	**36.7**	**35.5**	**36.6**	**37.3**	**37.7**	**38.0**
	CP Nov 2007	*38.6*	*38.8*	*39.0*	*39.2*	*39.3*	*39.5*	*n.a.*
	COM Jan 2009	42.1	41.4	41.2	41.6	n.a.	n.a.	n.a.
Structural balance[3] (% of GDP)	**CP Jan 2009**	**-3.2**	**-5.3**	**-7.2**	**-6.2**	**-5.1**	**-4.2**	**-3.5**
	CP Nov 2007	*-3.0*	*-2.7*	*-2.3*	*-1.9*	*-1.6*	*-1.5*	*n.a.*
	COM Jan 2009	-3.7	-5.9	-8.5	-8.0	n.a.	n.a.	n.a.
Real GDP[4] (% change)	**CP Jan 2009**	**3.0**	**-¼**	**-½**	**2.0**	**3.0**	**3.0**	**3.0**
	CP Nov 2007	*3*	*3*	*2*	*2¾*	*2½*	*2½*	*n.a.*
	COM Jan 2009	3.0	-0.6	-2.3	0.9	n.a.	n.a.	n.a.

Note:

[1]Data adjusted by Commission services to reflect the UK's treatment of UMTS receipts.

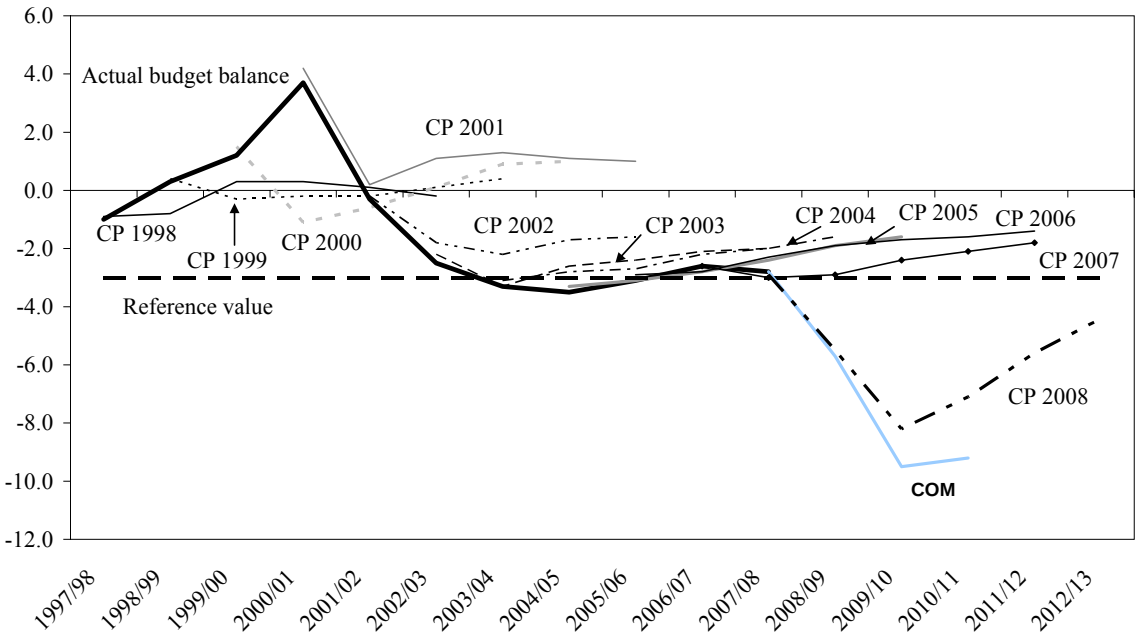
[2] Data for general government revenue and expenditure are not provided by the UK on a harmonised ESA95 basis. The figures shown in the table relate to the UK series drawn from Table 4.D of the programme update, which exclude some components of the ESA95 harmonised definitions of total revenue and expenditure. For 2012/13 and 2013/14, general government revenue and expenditure figures are extrapolated from public sector projections.

[3]Cyclically-adjusted balance excluding one-off and other temporary measures. Cyclically-adjusted balances according to the programmes as recalculated by the Commission services on the basis of the information in the programmes. One-off and other temporary measures are zero according to the most recent programme and the Commission services' January 2009 interim forecast.

[4]GDP projections reported in the table are those underlying the public finance projections.

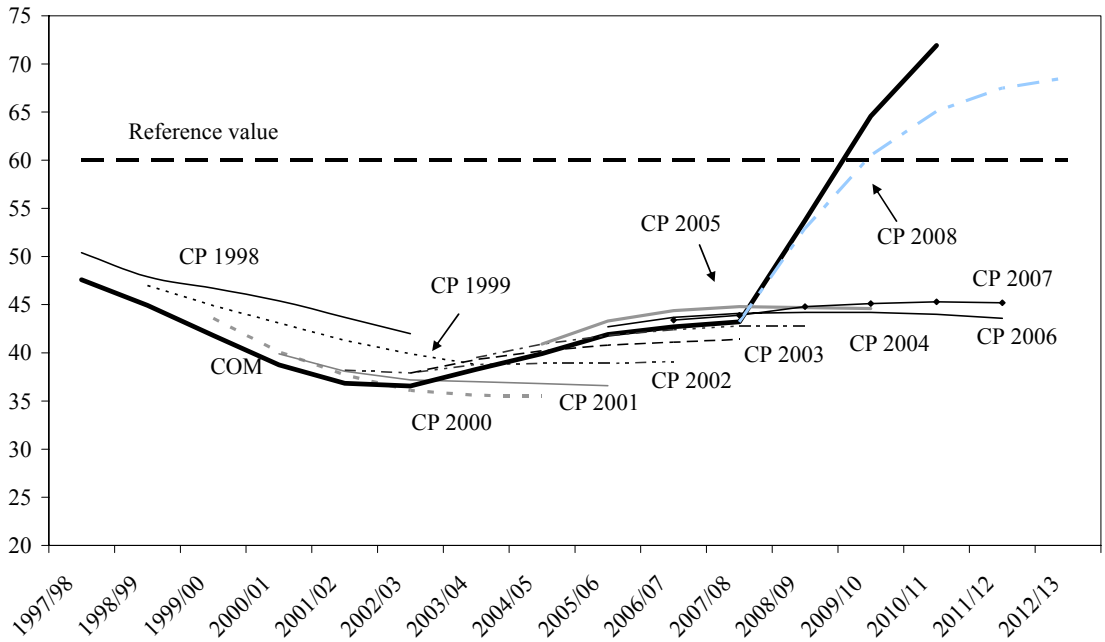
Source:
Convergence programmes (CP); Commission services' January 2009 Interim economic forecasts (COM)

Figure 2: Government balance projections in successive programmes (% of GDP)



Source: January 2009 interim forecast (COM) and successive convergence programmes

Figure 3: Debt projections in successive programmes (% of GDP)



Source: Commission services' January 2009 interim forecast (COM) and successive convergence programmes

Table 3: Long-term age-related expenditure: main projections

(% of GDP)	2004	2010	2020	2030	2040	2050	Change 2010- 50
Total age-related spending	**19.6**	**19.4**	**19.9**	**21.8**	**22.9**	**23.6**	**4.2**
- Pensions	6.6	6.6	6.9	7.9	8.4	8.6	2.0
- Healthcare	7.0	7.2	7.6	8.1	8.7	8.9	1.7
- Long-term care	1.0	1.0	1.1	1.3	1.5	1.8	0.8
- Education	4.6	4.2	4.0	4.1	4.0	4.0	-0.2
- Unemployment benefits	0.4	0.3	0.3	0.3	0.3	0.3	0.0
Property income received	**0.7**	**0.7**	**0.6**	**0.6**	**0.5**	**0.5**	**-0.2**

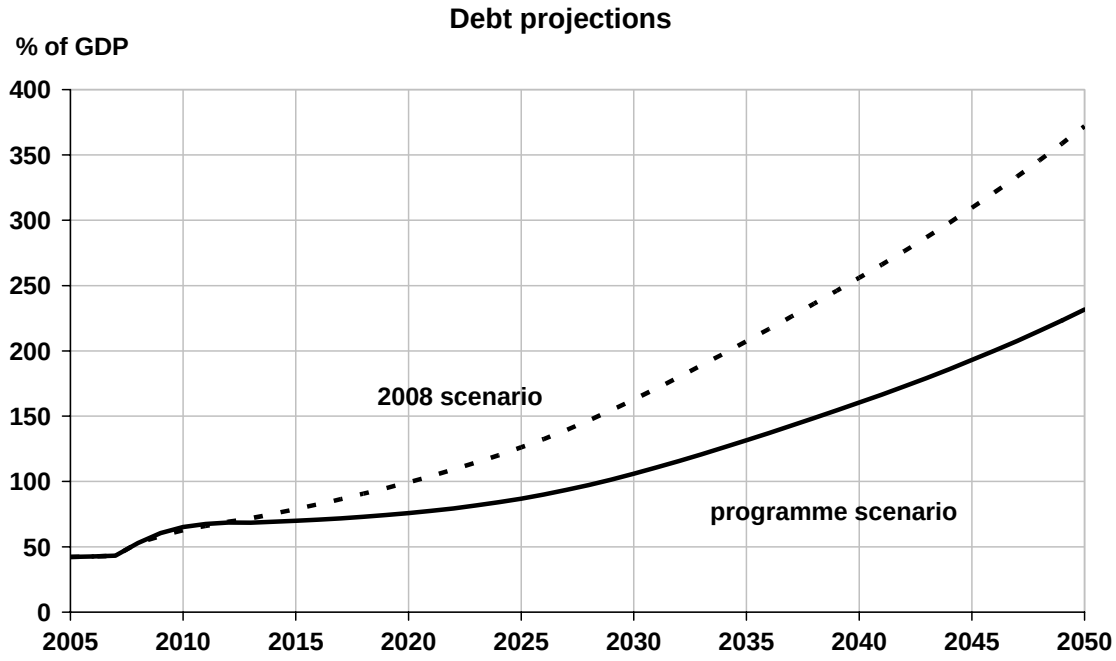
Source: Economic Policy Committee and Commission services.

Table 4: Sustainability indicators and the required primary balance

	2008 scenario			Programme scenario		
	S1	**S2**	**RPB**	**S1**	**S2**	**RPB**
Value	6.5	7.6	4.2	3.6	4.7	4.2
of which:						
Initial budgetary position (IBP)	4.1	4.3	-	1.3	1.5	-
Debt requirement in 2050 (DR)	0.2	-	-	0.2	-	-
Long-term change in the primary balance (LTC)	2.1	3.2	-	2.1	3.2	-

Source: Commission services.

Figure 4: Long-term projections for the government debt ratio



Note: Being a mechanical, partial-equilibrium analysis, the long-term debt projections are bound to show highly accentuated profiles. As a consequence, the projected evolution of debt levels should not be seen as a forecast similar to the Commission services' short-term forecasts, but as an indication of the risks faced by Member States.
Source: Commission services.

Table 5: Additional factors

	Impact on risk
Debt and pension assets	-
Decline in structural balance until 2010 in COM January forecast 2009	-
Significant revenues from pension taxation	na
Alternative projection of cost of ageing	na
Strong decline in benefit ratio	na
High tax burden	na
Non-age related budgetary measures with intertemporal effect	na

Note: '-': factor tends to increase the risk to sustainability, '+': factor tends to decrease the risk to sustainability.
'na': not applicable.
Alternative projections are often presented in the programmes, whose assumptions often diverge from the common method. Projections currently discussed in the Economic Policy Committee but not yet published, are for the time being also considered "unofficial".
An explanation on these factors can be found in chapter IV of: European Commission (2006), The long-term sustainability of public finances in the European Union, European Economy No. 4/2006.
Source: Commission services.

ANNEX 3. COMPLIANCE WITH THE CODE OF CONDUCT AND TABLES FROM THE PROGRAMME

The 2008 update of the United Kingdom's convergence programme **substantially follows the model structure** of the table of contents as set out in Annex 1 of the Code of Conduct. While ordering and structuring of individual chapters in the programme partly differ from the model structure, almost all sub-sections required by the code of conduct appear in the programme. The main exception to this is the programme's lack of an equivalent of the model structure's chapter 4, which presents sensitivity analysis and a comparison with the previous update.

The programme **does not adhere to the code of conduct** in terms of compliance with data requirements. The programme has substantial gaps both in the provision of compulsory data and in optional data. The following **compulsory** sets of data have not been provided:

In table 1a (Macroeconomic Prospects), 2007 levels of real GDP and its components are missing. Government consumption and investment deflators in Table 1b (Price developments) have not been provided for the entire programme period, and 2007 deflator levels for GDP, private consumption, export and import are also not provided. Table 1c (Labour market developments) is entirely missing. Gaps exist for the capital account in Table 1d (Sectoral balances). The detailed breakdown of General Government budgetary prospects (Table 2) does not provide data for some tax revenue components and some of the selected components of expenditure. The representation of expenditure items by function has not been provided (Table 3: General Government expenditure by function). The General Government debt developments table (Table 4) has data gaps for stock-flow adjustment sub-components and financial debt. Insufficient detail is provided on potential growth components (Table 5). No data is provided on the long term sustainability of public finances (Table 7) and there is a substantial lack of data on basic assumptions (Table 8).

As for the provision of **optional** data, there are gaps for the later forecast years with respect to the statistical discrepancy in the sectoral balance (Table 1d) and the detailed breakdown of revenues (Table 2).

The complete lack of compulsory labour market data is particularly serious since the absence of such data greatly complicates the task of calculating the potential output in the programme using the commonly agreed methodology. The detailed breakdown of expenditure and revenues does not follow the aggregation methods of ESA95. Data for general government expenditure and receipts, while based on ESA95 components, use different aggregation methods from the harmonised measure. The programme update also continues the UK practice of accounting receipts from the sale of UMTS licences as an annual income stream rather than the sale of an asset, contrary to the Eurostat decision of 14 July 2000 on the allocation of such receipts. Consequently, in this assessment all relevant UK programme data have been adjusted to present them on a harmonised basis compliant with the Eurostat decision.[41]

The tables on the following pages show the data presented in the December 2008 update of the Unite Kingdom's convergence programme, following the structure of the tables in Annex 2 of the code of conduct. Compulsory data are in bold, missing data are indicated with grey-shading.

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[41] The principal effect of this adjustment is, relative to figures presented in the programme, to increase the deficit by reducing annual revenues by just over £1.0 billion (currently around 0.1% of GDP); as nominal GDP grows in the outer years of the projections, the difference as a share of GDP becomes less significant.

Table 1a. Macroeconomic prospects

	ESA Code	2007	2007	2008	2009	2010	2011	2012
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. Real GDP	B1*g	*n.a.*	3	¾	-1¼ to -¾	1½ to 2	2¾ to 3¼	n.a.
2. Nominal GDP	B1*g	*1401*	6	4¼	½ to 1	4 to 4½	5½ to 6	n.a.
Components of real GDP								
3. Private consumption expenditure	P.3	*n.a.*	3	1½	-1½ to -1	1¼ to 1¾	2¼ to 2¾	n.a.
4. Government consumption expenditure	P.3	*n.a.*	1¾	2¾	2¾	1	0	n.a.
5. Gross fixed capital formation	P.51	*n.a.*	7	-4½	-8¼ to -7¾	2¼ to 2¾	6½ to 7	n.a.
6. Changes in inventories and net acquisition of valuables (% of GDP)	P.52 + P.53	*n.a.*	¼	0	-¼ to 0	0	0	n.a.
7. Exports of goods and services	P.6	*n.a.*	-4½	¾	¼ to ¾	3¼ to 3¾	5¼ to 5¾	n.a.
8. Imports of goods and services	P.7	*n.a.*	-1¾	½	-2½ to -2	2½ to 3	4 to 4½	n.a.
Contributions to real GDP growth								
9. Final domestic demand		-	3¾	¾	-2 to -1½	1½ to 2	2½ to 3	n.a.
10. Changes in inventories and net acquisition of valuables	P.52 + P.53	-	¼	0	-¼	0	0	n.a.
11. External balance of goods and services	B.11	-	-¾	0	¾	¼	¼	n.a.

Table 1b. Price developments

	ESA Code	2007	2007	2008	2009	2010	2011	2012
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. GDP deflator		*n.a.*	2¾	3½	1¾	2½	2¾	n.a.
2. Private consumption deflator		*109¾*	2	4¼	1¾	3	2¾	n.a.
3. HICP[1]		*n.a.*	2	3¾	½	2¼	2	n.a.
4. Public consumption deflator		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5. Investment deflator		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6. Export price deflator (goods and services)		*n.a.*	2½	10¼	2¼	2¾	1¼	n.a.
7. Import price deflator (goods and services)		*n.a.*	1	9½	4¼	3¾	2¼	n.a.

[1] Optional for stability programmes.

Table 1c. Labour market developments

	ESA Code	2007	2007	2008	2009	2010	2011	2012
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. Employment, persons[1]		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2. Employment, hours worked[2]		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3. Unemployment rate (%)[3]		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4. Labour productivity, persons[4]		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5. Labour productivity, hours worked[5]		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6. Compensation of employees	D.1	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7. Compensation per employee		*n.a.*	n.a.	n.a.	optional	optional	optional	optional

[1]Occupied population, domestic concept national accounts definition.

[2]National accounts definition.

[3]Harmonised definition, Eurostat; levels.

[4]Real GDP per person employed.

[5]Real GDP per hour worked.

Table 1d. Sectoral balances

% of GDP	ESA Code	2007	2008	2009	2010	2011	2012
1. Net lending/borrowing vis-à-vis the rest of the world	B.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
of which :							
- Balance on goods and services		-3½	-3¼	-3	-3¼	-3	n.a.
- Balance of primary incomes and transfers		-¼	½	¼	½	½	n.a.
- Capital account		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2. Net lending/borrowing of the private sector	B.9	-1	1¼	5	5	3½	n.a.
3. Net lending/borrowing of general government	EDP B.9	-2.8	-5.4	-8.1	-7.0	-5.6	-4.4
4. Statistical discrepancy		n.a.	optional	optional	optional	optional	optional

Table 2. General government budgetary prospects

	ESA Code	2007/08	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
		Level	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
Net lending (EDP B.9) by sub-sector								
1. General government	S.13	*-39.7*	-2.8	-5.4	-8.1	-7.0	-5.6	-4.4
2. Central government	S.1311	*-39.2*	-2.8	-5.1	-7.9	-6.9	n.a.	n.a.
3. State government	S.1312	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4. Local government	S.1313	*-0.5*	0.0	0.3	0.3	0.1	n.a.	n.a.
5. Social security funds	S.1314	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
General government (S13)								
6. Total revenue	TR	*539.0*	37.9	36.7	35.5	36.6	n.a.	n.a.
7. Total expenditure	TE[1]	*578.7*	40.7	42.1	43.6	43.6	n.a.	n.a.
8. Net lending/borrowing	EDP B.9	*-39.7*	-2.8	-5.4	-8.1	-7.0	-5.6	-4.4
9. Interest expenditure	EDP D.41	*30.6*	2.2	2.1	1.8	2.6	-2.9	-3.0
10. Primary balance[2]		*n.a.*	-0.6	-3.3	-6.3	-4.4	-2.6	-1.3
11. One-off and other temporary measures[3]		*0*	0	0	0	0	0	0
Selected components of revenue								
12. Total taxes (12=12a+12b+12c)		*419.5*	29.5	28.3	27.0	28.0	n.a.	n.a.
12a. Taxes on production and imports	D.2	*176.0*	12.4	11.9	11.5	12.2	optional	optional
12b. Current taxes on income, wealth, etc	D.5	*239.6*	16.9	16.2	15.3	15.7	optional	optional
12c. Capital taxes	D.91	*3.9*	0.3	0.2	0.2	0.1	optional	optional
13. Social contributions	D.61	*95.5*	6.7	6.7	6.8	6.8	optional	optional
14. Property income	D.4	*n.a.*	n.a.	n.a.	n.a.	optional	optional	optional
15. Other[4]		*n.a.*	n.a.	n.a.	n.a.	optional	optional	optional
16=6. Total revenue	TR	*539*	37.9	36.7	35.5	36.6	n.a.	n.a.
p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)[5]			n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Selected components of expenditure								
17. Compensation of employees + intermediate consumption	D.1+P.2	*n.a.*	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**
17a. Compensation of employees	D.1	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
17b. Intermediate consumption	P.2	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
18. Social payments (18=18a+18b)		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
18a. Social transfers in kind supplied via market producers	D.6311, D.63121, D.63131	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
18b. Social transfers other than in kind	D.62	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
19=9. Interest expenditure	EDP D.41	*30.6*	2.2	2.1	1.8	2.6	n.a.	n.a.
20. Subsidies	D.3	*9.8*	0.7	0.8	0.8	0.7	n.a.	n.a.
21. Gross fixed capital formation	P.51	*27.9*	2.0	2.2	2.4	2.2	n.a.	n.a.
22. Other[6]		*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
23=7. Total expenditure	TE[1]	*578.7*	40.7	42.1	43.6	43.6	n.a.	n.a.
p.m.: Government consumption (nominal)	P.3	*n.a.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

[1] Adjusted for the net flow of swap-related flows, so that TR-TE=EDP B.9.

[2] The primary balance is calculated as (EDP B.9, item 8) plus (EDP D.41, item 9).

[3] A plus sign means deficit-reducing one-off measures.

[4] P.11+P.12+P.131+D.39+D.7+D.9 (other than D.91).

[5] Including those collected by the EU and including an adjustment for uncollected taxes and social contributions (D.995), if appropriate.

[6] D.29+D4 (other than D.41)+ D.5+D.7+D.9+P.52+P.53+K.2+D.8.

Table 3. General government expenditure by function

% of GDP	COFOG Code	2006	2011
1. General public services	1	n.a.	n.a.
2. Defence	2	n.a.	n.a.
3. Public order and safety	3	n.a.	n.a.
4. Economic affairs	4	n.a.	n.a.
5. Environmental protection	5	n.a.	n.a.
6. Housing and community amenities	6	n.a.	n.a.
7. Health	7	n.a.	n.a.
8. Recreation, culture and religion	8	n.a.	n.a.
9. Education	9	n.a.	n.a.
10. Social protection	10	n.a.	n.a.
11. Total expenditure (=item 7=23 in Table 2)	TE[1]	n.a.	n.a.

[1]Adjusted for the net flow of swap-related flows, so that TR-TE=EDP B.9.

Table 4. General government debt developments

% of GDP	ESA Code	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1. Gross debt[1]		43.2	52.9	60.5	65.1	67.5	68.6
2. Change in gross debt ratio		0.9	9.6	7.6	4.5	2.5	1.1
Contributions to changes in gross debt							
3. Primary balance[2]		-0.6	-3.3	-6.3	-4.4	-2.6	-1.3
4. Interest expenditure[3]	EDP D.41	2.2	2.1	1.8	2.6	n.a.	n.a.
5. Stock-flow adjustment		0.0	5.5	0.1	0.2	0.5	0.5
of which:							
- Differences between cash and accruals[4]		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Net accumulation of financial assets[5]		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
of which:		-	-	-	-	-	-
- privatisation proceeds		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Valuation effects and other[6]		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
p.m.: Implicit interest rate on debt[7]		5.3	5.1	3.5	4.5	4.8	4.7
Other relevant variables							
6. Liquid financial assets[8]		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7. Net financial debt (7=1-6)		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

[1]As defined in Regulation 3605/93 (not an ESA concept).

[2]Cf. item 10 in Table 2.

[3]Cf. item 9 in Table 2.

[4]The differences concerning interest expenditure, other expenditure and revenue could be distinguished when relevant.

[5]Liquid assets, assets on third countries, government controlled enterprises and the difference between quoted and non-quoted assets could be distinguished when relevant.

[6]Changes due to exchange rate movements, and operation in secondary market could be distinguished when relevant.

[7]Proxied by interest expenditure divided by the debt level of the previous year.

[8]AF1, AF2, AF3 (consolidated at market value), AF5 (if quoted in stock exchange; including mutual fund shares).

Table 5. Cyclical developments

% of GDP	ESA Code	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1. Real GDP growth (%)		3	-¼	-½	2	3	3
2. Net lending of general government	EDP B.9	-2.8	-5.4	-8.1	-7.0	-5.6	-4.4
3. Interest expenditure	EDP D.41	2.2	2.1	1.8	2.6	n.a.	n.a.
4. One-off and other temporary measures[1]		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5. Potential GDP growth (%)		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
contributions:							
- labour		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- capital		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- total factor productivity		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6. Output gap		0.6	-0.3	-1.5	-1.9	-1.3	-0.7
7. Cyclical budgetary component		0.3	0.0	-0.8	-1.3	-1.0	-0.6
8. Cyclically-adjusted balance (2 - 7)		-3.1	-5.4	-7.3	-5.7	-4.6	-3.8
9. Cyclically-adjusted primary balance (8 + 3)		-0.9	-3.3	-5.5	-3.1	-1.6	-0.8
10. Structural balance (8 - 4)		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

[1]A plus sign means deficit-reducing one-off measures.

Table 6. Divergence from previous update

	ESA Code	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Real GDP growth (%)							
Previous update		3	3	2	2¾	2½	2½
Current update		3	-¼	-½	2	3	3
Difference		0	-3¼	-2½	-¾	½	½
General government net lending (% of GDP)	EDP B.9						
Previous update		-2.6	-2.9	-2.8	-2.4	-2.1	-1.8
Current update		-2.8	-5.4	-8.1	-7.0	-5.6	-4.4
Difference		-0.2	-2.5	-5.3	-4.6	-3.5	-2.6
General government gross debt (% of GDP)							
Previous update		43.4	43.9	44.8	45.1	45.3	45.2
Current update		43.2	52.9	60.5	65.1	67.5	68.6
Difference		-0.2	9.0	15.7	20.0	22.2	23.4

Table 7. Long-term sustainability of public finances

% of GDP	2000/01	2005/06	2010/11	2020/21	2030/31	2050/51
Total expenditure	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Of which: age-related expenditures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Pension expenditure	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Social security pension	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Old-age and early pensions	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other pensions (disability, survivors)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Occupational pensions (if in general government)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Health care	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Long-term care *(this was earlier included in the health care)*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Education expenditure	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other age-related expenditures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Interest expenditure	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total revenue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Of which: property income	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Of which : from pensions contributions (or social contributions if appropriate)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Pension reserve fund assets	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Of which : consolidated public pension fund assets (assets other than government liabilities)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Assumptions						
Labour productivity growth	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Real GDP growth	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Participation rate males (aged 20-64)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Participation rates females (aged 20-64)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total participation rates (aged 20-64)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Unemployment rate	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Population aged 65+ over total population	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Table 8. Basic assumptions

	2007	2008	2009	2010	2011	2012
Short-term interest rate[1] (annual average)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Long-term interest rate (annual average)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
USD/€ exchange rate (annual average) (euro area and ERM II countries)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nominal effective exchange rate	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
(for countries not in euro area or ERM II) exchange rate vis-à-vis the € (annual average)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
World excluding EU, GDP growth	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EU GDP growth	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Growth of relevant foreign markets	7	5¼	2	4¼	7	n.a.
World import volumes, excluding EU	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Oil prices (Brent, USD/barrel)	n.a.	n.a.	60.1	n.a.	n.a.	n.a.

[1]If necessary, purely technical assumptions.

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