Economic Assessment of the Euro Area

AUTUMN REPORT 2008

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EXECUTIVE SUMMARY

Among the findings contained in the report are the following:

- On the basis of the latest available data it is anticipated that GDP in the Euro area will fall by 0.4% in 2009. Very modest growth of +0.5% is anticipated for 2010 with a return to a more satisfactory performance of +1.6% in 2011. GDP is also expected to fall next year in the US, Japan and the UK. Unemployment is projected to rise steeply in the Euro area in the coming years, while government budget positions will deteriorate. Uncertainty on the short-term outlook is currently huge and the developments may even be more negative than projected here.
- The rate of inflation in the Euro area should fall to 1.7% in 2009 and 1.4% in 2010. While there is a significant possibility of a fall in prices in the US in the second half of 2009 and 2010, inflation in the Euro area is expected to remain positive through to the end of 2010. As a consequence of the reduction in inflationary pressures, it is expected that the ECB will reduce its rate of interest to 2% at some point over the next 6 months.
- Were it not for the financial crisis in the US, and contagion to the EU financial system, growth in the Euro area would have remained around 1% in 2009. This highlights the significance for the Euro area economy of the world financial crisis. Research, described in this report, highlights the urgency of co-ordinated action to recapitalise the banking system in the EU and in the US. In the absence of adequate measures, shortage of credit could prolong the current recession well into 2010.
- The report considers the likely long-term consequences of the current financial crisis for the level of GDP. The results presented in the paper suggest that a small permanent increase in the risk premium, and a consequential increase in the long-term cost of capital, could reduce the **level** of GDP in the US and the UK in the long-term by around one per cent. The impact on the Euro area would be less negative.
- This report considers the likely impact of a co-ordinated fiscal stimulus involving the Euro area, the UK and the US and contrasts the results with the effects if each region undertook a fiscal stimulus on its own. The results suggest that there are benefits from co-ordinated action rather than individual action.

OUTLOOK FOR THE EURO AREA

1.1 Overview

Over the past year our forecasts for the major world economies have become steadily more pessimistic. On the basis of the information in late November we see a simultaneous recession in the US, Japan, the UK and the Euro area. For the Euro area, output is likely to fall by 0.4 per cent next year and the negative impact on activity will result in only a moderate return to growth in 2010. On the basis of current policies, our analysis indicates it will be 2011 before the rate of growth in the Euro area approaches its long-term trend.

Our analysis also suggests that the global financial crisis has played a key role in pushing the major world economies into recession. The research outlined in this report also suggests that urgent action to deal with the financial crisis through recapitalising the banking system holds the best prospect of avoiding a prolonged recession.

Table 1: Summary of Key Forecast Indicators for the Euro Area

	2005	2006	2007	2008	2009	2010	2011
Output Growth Rate	1.8	3.0	2.6	1.1	-0.4	0.5	1.6
Inflation Rate (Harmonised)	2.2	2.2	2.1	3.4	1.7	1.4	1.4
Unemployment Rate	8.8	8.3	7.5	7.4	7.8	8.3	8.3
Govt. balance as % of GDP	-2.5	-1.3	-0.7	-1.1	-2	-2.3	-2

1.2 Global Outlook

1.2.1 KEY DEVELOPMENTS

Prospects for the world economy have deteriorated sharply in the last three months, and we are forecasting that global growth will slow to under two per cent in 2009. The origins of the global crisis lie in the financial sector and they are discussed in Box 1. Box 2, in analysing the experience with previous financial crises, sets the context for this report. What was in January a downside worry around the forecast became by May a serious downside risk. By November it has become the main scenario. This was avoidable, and our

forecasts and policy advice over the last year have been designed to find ways around the crisis. If the US had managed to avoid the collapse of Lehman's in mid September we would not have seen the sudden fault line shift in global financial markets that then developed. A banking crisis is like a car crash, we should not forecast one, but warn the driver that it is becoming more likely, explain the consequences and advise on how to prevent it happening.

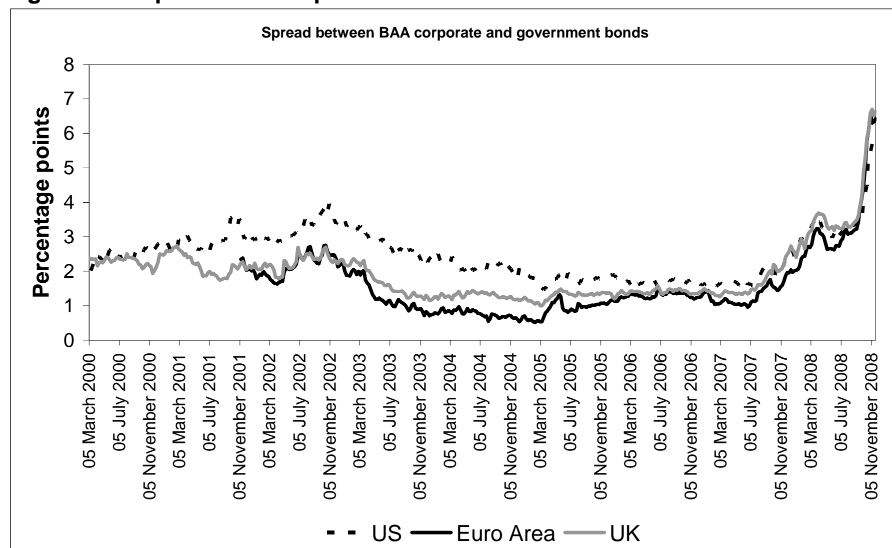
Our forecast involves a period of severe credit rationing and hence a collapse in demand throughout Europe and in the USA. The credit crisis was not inevitable, and even now some of its impacts can be prevented. The crisis has emerged because many banks, especially in the US, have made losses, and these losses have been spread around the global financial system. These losses mean the capital asset base of the system has shrunk and banks will try to recapitalise by raising charges and also by making rights issues. In the process, they will also cut back on their loan books to bring them back to their desired levels of leverage. However, as the economy slows and assets are downgraded, Basel II rules require that capital adequacy ratios rise. This speeds the contraction of the loan book and worsens the economic situation. Once a crisis develops, banks can no longer make rights issues and have to rely on raising charges and rationing loans. The economy is driven further into crisis.

There are alternatives. The banks need a great deal more capital to maintain their loan books, and it would be possible for the state to provide this with large scale capital injections. Honahan (2008) reports that on average in banking crises in the last 30 years, the cost to the state has been 10 per cent of GDP. The UK has so far pledged just over 2 per cent of GDP, and the US is now to use just over 4 per cent of GDP from the TARP for this purpose. Other countries have made movements somewhere in between. If the UK and the US moved to provide up to 10 per cent of GDP as assets to the banks then many of the credit constraints we see emerging in those countries would disappear. However, bank nationalisation is not popular with the banks or with politicians. Each bank wishes to avoid it to protect their shareholders. If they survive, they gain. However, there is a systemic risk that some bank will fail if we do not see forced recapitalisation. This will produce a more severe crisis for the economy but perhaps better returns for the surviving banks. It is for the state to balance individual and systemic risks and benefits. The balance appears to be in favour of large scale nationalisation. Our forecast is based on the assumption that we will not see this, and hence that the credit constraint bites, and that the adequacy of the capital base of the banking system is achieved through increased margins and smaller loan books. The 'no crisis' scenario illustrated below is just about achievable if the authorities act quickly, but as Barrell, Hurst and Kirby (2008) show, the longer the crisis is expected to last the worse its immediate impacts.

Our central forecast for the world economy incorporates a sharp rise in risk premia and credit rationing, affecting both consumer spending and investment in the US, the UK and in the Euro Area countries. While Japan was initially less exposed than Europe to the US subprime crisis, equity markets in Japan have dropped even more sharply than in many European countries over the last few months. On top of this, the yen has appreciated by close to 15 per cent, and net trade will cease to support growth in Japan. With the Japanese recession expected to extend to 2010, we see a significant chance of deflation re-emerging in Japan.

Below we decompose the impact of our key assumptions regarding risk premia and credit rationing on our forecasts for the US and Europe, and also look at a scenario in which risk premia and credit rationing only rise in the US and the UK, to assess the impact on the Euro Area from trade spillovers.

Figure 1: Corporate bond spreads



The investment risk premium is the additional return that a lender demands in order to cover the risk of default on its loans to firms. In periods of heightened risk aversion, lenders may simply cease to lend to high risk borrowers at any price, making a precise measure of the risk premium unobservable, as it is part of the shadow price of borrowing when borrowing is constrained. In the absence of severe credit rationing, an adequate proxy of the investment risk premium is the spread between corporate and government bond yields, and movements in it can also signal periods of potential credit rationing. Figure 1 plots the movement in corporate bond spreads, measured as the yield on BAA corporate bonds against 10 year government bond yields, in the US, Euro Area and UK over the last several years. These spreads have widened steadily since the summer of 2007, and at the time of writing

exceeded 5.5 points in the US, well above the previous recent peaks of 2002 and 1982. US spreads have not exceeded 4 points since the depression years of 1931-1933, when they reached over 7 points. Spreads in the UK and Euro Area currently stand at recent historical highs of about 6.5 points. The investment risk premium forms part of the user cost of capital, and a rise in this spread will have a negative impact on private sector investment.

In addition to investment, risk premia also affect consumer spending through a number of channels. As bank lending tightens, the margin between borrowing rates and lending rates widens, increasing the cost of borrowing against future expected income in order to smooth the consumption path. We refer to the premium on consumer loans as the lending wedge. Heightened risk aversion also means that risky borrowers may be refused loans, increasing the number of liquidity constrained consumers. In the face of a prolonged slowdown and rising unemployment, consumers may also adjust their assessment of future income prospects, or reduce the weight they place on expected future earnings in current consumption decisions as they become more risk averse, leading to a rise in what is termed the consumer discount premium. These factors will all act as a strong restraint on consumer spending in the coming months, on top of the impact of lower current income and wealth.

In Figures 2-4, we strip out the effects of higher risk premia and credit rationing, firstly on investment and then on both consumption and investment, in order to illustrate the impact of these assumptions on our central forecast. This helps quantify the extent to which the deterioration in economic prospects is directly attributable to the financial crisis.The size of the shock to consumer spending incorporated in our forecast was calibrated from simulation results reported in Barrell, Hurst and Kirby (2008), to approximate the impact of a 400 basis point rise in the consumer discount premium on current consumption in the UK and US, and a rise of 200 basis points in the lending wedge. Within the Euro Area, the size of the shock is differentiated across countries, to reflect the widening dispersion on 10 year government bond yields, with the smallest shock being to Germany followed by France and then Italy, as these countries have had fewer problems with their banking systems than has the UK or the US. Other countries attract the same premia as the UK and US. As shown in Figures 2 and 4, these assumptions reduce growth in the US and the UK by two percentage points or more in 2009 and by 1½ percentage points in the Euro Area (Figure 3).

Figure 2: United States GDP growth

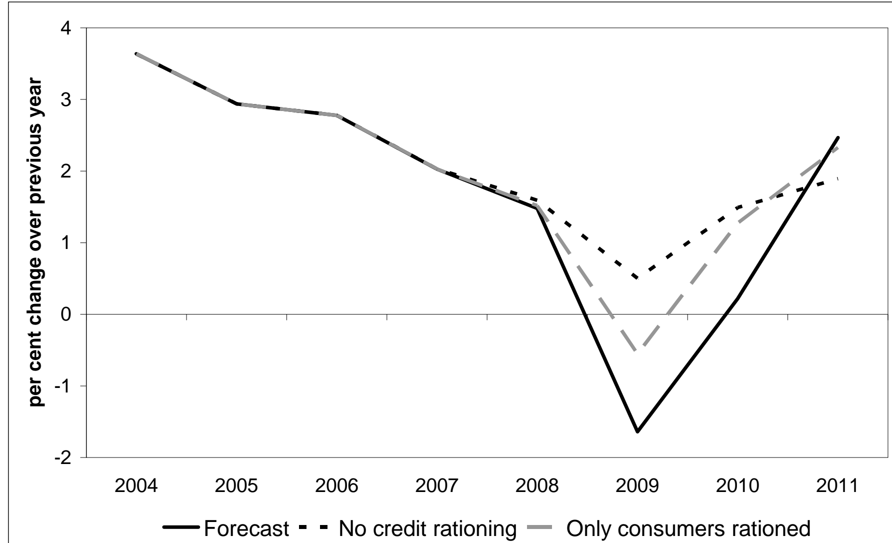


Figure 3. Euro Area GDP growth

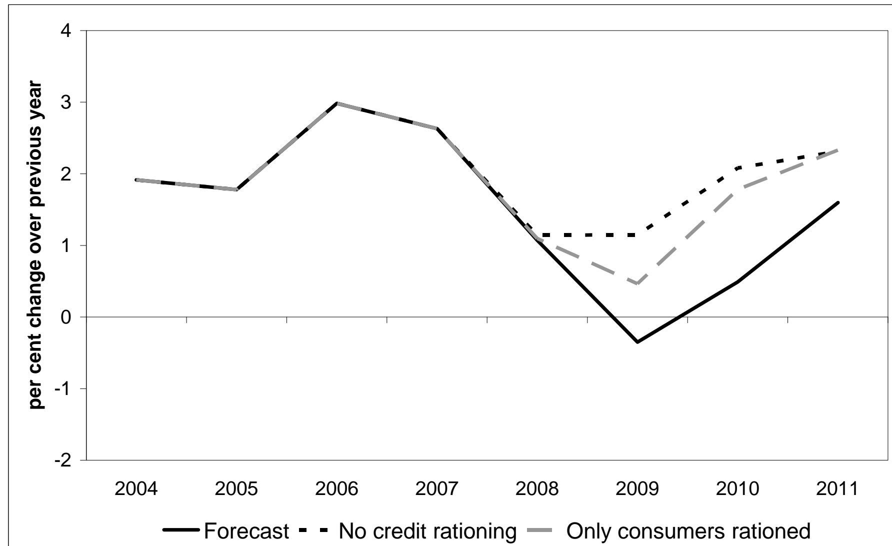
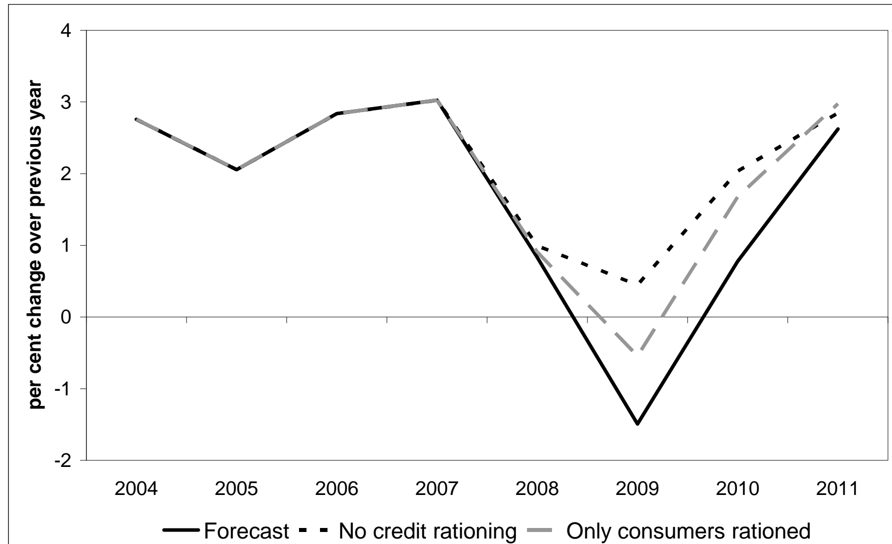
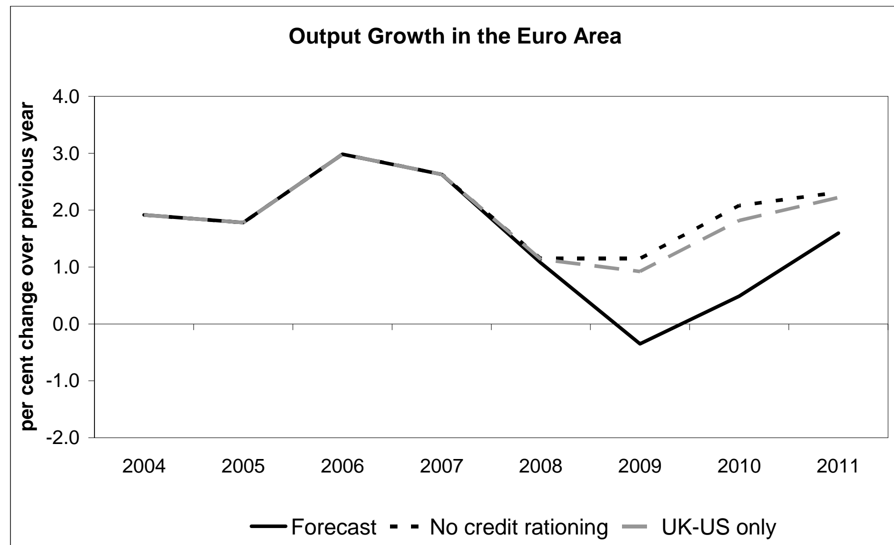


Figure 4. UK GDP growth



The banking crisis has emanated from the US, as Box 1 shows, and it appears to have influenced the Euro Area. However, it is useful to be able to decompose the impacts on the Euro Area into those that come from trade with the affected parties, and those that come from financial contagion. We have replicated our forecast, but we have assumed that neither consumers nor producers are credit rationed in the Euro Area. Figure 5 shows that most of the impact of the crisis on the Euro Area must come from our assumption about financial contagion and credit rationing, as the "UK and US only" crisis growth path is close to that with no crisis.

Figure 5: Decomposing the scope of the crisis



BOX 1: Origins of the crisis

In the early 2000s, world GDP growth was stronger than at any time since the first oil crisis in the early 1970s. Growth was particularly strong in emerging economies, such as China, and in the US. Growth in the Euro Area was modest. At the same time, imbalances were building, however. China, Japan, the Euro Area and many commodity producing countries were running large current account surpluses, while the US current account deficit was deepening. A new division of labour developed between emerging and advanced economies, providing advanced economies with cheap consumer goods. Inflation was low and monetary policies accommodative, particularly in the US, in spite of a strong rise in asset prices.

The large amounts of liquidity being available for investment (a 'savings glut', according to Ben Bernanke) contributed to the creation of a rapidly expanding market for sub-prime mortgages- mortgage loans to households of doubtful creditworthiness. In 2006, the market share of such loans peaked, accounting for around 20 per cent of the US mortgage market. The progressive accumulation of debt was supported by a continuous increase in house prices and low interest rates. Credit standards were lax; so was supervision. The real

estate boom masked potential insolvency and facilitated debt renegotiations. House-owners ran limited risk, because in the case of serious arrears- US legislation enabled them to transfer mortgaged property to the lender without further consequences.

Together with prime loans, sub-prime loans were packaged into Collateralised Debt Obligations (CDOs), which got good credit ratings and generated high returns. These packages were sold worldwide. Investors insured themselves by means of credit default swaps (CDSs). The BIS reported in September 2008 that the total amount of CDSs had risen by 45 per cent annually during the past three years, and the amount outstanding was 57,324,560 billion dollars by the end of June 2008, only slightly less than world GDP in US dollars in 2007. Under these circumstances, widespread defaults on sub-prime loans led to deleveraging on a scale unheard-of, upsetting the financial system as a whole. When investors became aware of the threat in August 2007 risk premiums suddenly started to rise. Since then financial institutions have become increasingly unwilling to lend funds to each other.

The housing boom in the US, which has lasted for more than a decade, has compounded the financial crisis. When interest rates started to rise, the boom came to an abrupt end. House prices in the US are down by almost 20%. As a result, almost 10 million home-owners face mortgage debt that exceeds the value of their property. The collapse of household wealth is eroding consumer confidence and causing residential investment to nose-dive.

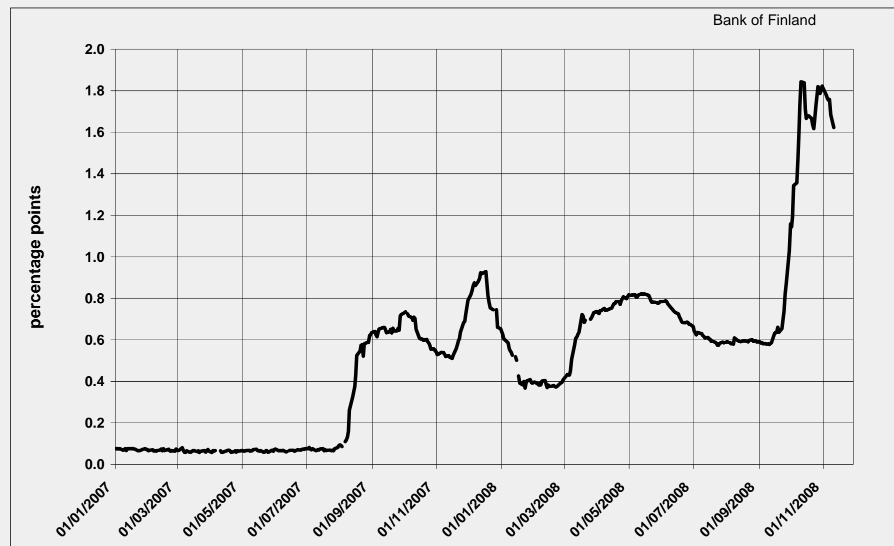
In August 2007, central banks were forced to inject large amounts of liquidity into money markets in a coordinated action. The aim was to revitalise short-term money markets, which are essential for the daily operations of many financial institutions. Risk measures rose markedly (see Figures 6 and 7). On September 15 2008, investment bank Lehman Brothers filed for Chapter 11 bankruptcy protection and Bank of America took over Merrill Lynch. Risk premia exploded and the global financial system came close to collapse. Since then, central banks and governments are actively supporting financial institutions. The initial rejection of the Troubled Asset Relief Program by the House of Representatives on September 29 further raised the risks. This plan was accepted later and also modified significantly. The situation continued to worsen until several leading central banks substantially reduced their key interest rates in a concerted action on October 8. Later on, governments moved to guarantee household deposits and to recapitalise banks that are considered essential to the financial system.

The situation is still serious. Money markets are still not functioning normally.

Short-term inter-bank lending rates still exceed the comparable low-risk yields and risk spreads remain high.

Figure 6: US Money Market Risk: Libor Minus Treasury Bill Yields

Figure 7: Money Market Risk in the Euro Area, 3 month euribor minus 3 month eurepo



Severe slowdown in world trade

Available data up to the third quarter show a substantial deceleration in world trade growth. US imports of goods and services, long the growth engine for the rest of the world, were down 2% in the first 3 quarters from a year earlier, the first drop in US imports since the recession of 2001. Up to recently, strong imports of major commodity producing countries have softened the global slowdown. World trade growth is projected at 4% in 2008, down from 6% in 2007.

The severe cyclical downturn in major advanced economies will lead to a severe slowdown in foreign trade in 2009, even in the absence of protectionist measures. US imports will drop further. Moreover, imports of euro area countries - still rising in 2008 - are projected to drop as well. As most of those imports are coming from other euro area countries, their exports are projected to stop increasing. The more so as trade with the new member states of the EU is likely to decelerate further. On top of lower European and US imports, global trade is dampened by softer imports of commodity producing countries caused by the severe drop in real export revenues. World trade growth is projected at 2% in 2009, the lowest growth rate since 2001. As the projected recovery in 2010 is moderate, world trade growth is projected at the sub par rate of 4%.

BOX 2: The real fall-out of banking crises tends to be big

Financial market crises are associated with substantial output losses. In a 2008 study, Reinhart and Rogoff identify 18 financial crises in OECD-countries after 1970. In the first year of these crises, economic growth in the countries concerned fell by 1¼%-points on average.[a] In the next two years, economic growth was even 2¼%-points lower than in the year prior to the crisis. More in-depth research confirms the substantial negative impact that financial crises potentially have on the real economy.[b] When an economic downturn is preceded by financial distress, the downturn tends to be longer and more severe than when it is not. Not every financial crisis seriously affects the real economy, however. The real impact of turmoil on financial markets depends on the nature of the financial crisis and on conditions prevailing at the onset of the crisis. Downturns that follow banking distress are generally more severe than those that follow episodes of unrest on stock and bond markets. The evidence presented in the literature is consistent with the classical view of credit crises: the key channel through which banking distress feeds into the real economy is the weakening of financial intermediaries' balance sheets, prompting them to reduce credit supply and leading to increased borrowing cost. This is what sets banking distress apart from other types of financial market corrections.

In spite of the financial innovation of the last decade and the growth of non-bank sources of lending, banks are still the pivot of the financial system in most countries. Banks extend their balance sheets during booms, taking advantage of rising asset prices. As long as these prices keep rising, perceived risk diminishes. An unexpected, sudden decrease in asset returns then may prompt a reassessment of exposure, possibly leading to a cycle of hasty deleveraging. In this sense, the banks' asset management is procyclical. The size of the output loss caused by a banking crisis depends on conditions prevailing at its onset. The IMF finds that rapid rises in house prices and credit in the build-up to a crisis significantly aggravate the impact on the real economy.

Financial crises not only affect GDP and labour markets but also governments' fiscal positions. This is partly the result of expansionary fiscal measures and decreasing tax revenues. To a large degree however, government debt increases because the government is forced to support the financial sector in one way or another. To give an extreme example: the Swedish financial crisis of 1991 led to a jump in public debt from 43% of GDP in 1990 to 67% of GDP in 1992. The Swedish experience also shows however, that the surge in debt may be largely temporary, as part or all of the new debt is paid off when the government sells its supportive stake in financials.

Figure 8: GDP-growth in countries hit by a financial crisis[c]

[a] See C.M. Reinhart and K.S. Rogoff, Is the 2007 U.S. Sub-Prime Financial Crisis So Different? An International Historical Comparison, NBER working paper 13761, January 2008. The crises are: Spain (1977), Norway (1987), Finland (1991), Sweden (1991), Japan (1992), Australia (1989), Canada (1983), Denmark (1987), France (1994), Germany (1977), Greece (1991), Iceland (1985), Italy (1990), New Zealand (1987), United Kingdom (1974, 1991, 1995), and United States (1984). The first five are the so-called 'big five crises'.

[b] IMF, Historical evidence on financial crises, Box 3.3 in World Economic Outlook, April 2002 and IMF, Financial stress and economic downturns, Chapter 4 of World Economic Outlook, October 2008.

[c] Median growth rate of GDP before, during and after 18 financial crises in OECD-countries since 1970.

Pronounced drop in commodity prices

During summer 2008, the long-lasting boom in commodity markets came to an end. Commodity prices peaked in early July, and the prices of virtually all commodities have fallen substantially in recent months. In particular, for those commodities in which price increases had been especially dramatic, i.e. crude oil and food commodities, the subsequent decline has been even more spectacular. However, the level of prices in most commodities is currently still significantly higher than in 2002, when the upward spiral in prices first began.

Crude oil, for example, at around 50 US Dollars per barrel in mid-November is still expensive by historical standards.

Real commodity prices are expected to retreat substantially in 2009 from their record levels reached in 2008. The turnaround in prices in the commodity markets is mainly due to the deterioration in the global macroeconomic environment. During the summer it became clear that the housing crisis in the US and the associated problems in international financial markets would indeed have serious ramifications for global growth and demand for commodities. The downward adjustment of prices has accelerated in September and October. With supply increasing in response to high prices, markets moved into surplus for many commodities. The response of financial investors to the new environment, which turned from bullish to bearish, may have pushed the prices of some commodities below their equilibrium levels. The oil market situation has eased considerably with weakening demand combined with increasing OPEC spare capacity and the turn of the price curve in forward markets from backwardation to strong contango. The forecast assumes that OPEC will be successful in curtailing production and, as a result, the oil price will stabilise at around 60 US-$ per barrel and start rising again once the global economic recovery starts to bud.

The price level is projected to remain high compared to recent history and prices could start rising again from this elevated trough once economic recovery is established. In recent years real commodity prices shifted upwards as the global supply/demand balance for most commodities tightened as a consequence of the economic rise of China and India. The rise in these economies will continue despite a rather large but temporary moderation of growth. In the longer-term, commodity prices in general, and energy prices in particular, will probably start rising strongly again due to inadequate investment. This is against the background that Chinese growth, while more moderate for the time being, is still relatively commodity intensive. Energy efficiency in China has hardly increased in recent years after having shown significant improvement in the years before 2002.

BOX 3: Fiscal Policy

Fiscal fine tuning has been out of fashion for several decades, but many serious politicians and academic economists are now calling for significant fiscal stimulus packages. Large and coordinated fiscal policy actions would be wise at present because we are in a financial crisis, not in normal times. In normal times a cut in taxes with no change in government spending involves borrowing from the future. The net gain in output and consumption is probably zero, with just a shift forward in time for both. In a financial crisis some individuals and firms are constrained, they face credit rationing. When those same individuals come to pay higher taxes in the future to pay back the tax rebated now they will not be credit constrained. Firms who wish to invest

are constrained. Some firms produce goods or services in markets where unused capacity cannot be shifted to future use – it evaporates. Some individuals have labour they cannot sell at the market price because firms are constrained. If policy lifts constraints it changes the structure of the economy. The effects of the tax cut now could therefore be larger than the opposite effects of the rise in taxes in the future. In a financial crisis there are almost certainly clear net gains from fiscal ”coarse” tuning.

We consider four alternative secnarios on fiscal action using the international macro model, NiGEM. In each case taxes have to start to rise in three years time to gradually pay back the debt that current tax reductions create. In addition, monetary policy is not assumed to react in the first two years, and to then follow its normal pattern. We assume that financial markets are forward looking and hence in the first period long term interest rates and the exchange rate increase and the equity price falls because short term interest rates are assumed to rise after two years. These changes will induce wealth and competitiveness effects that will crowd out some of the impact of increased incomes. The model is structured with forward looking firms whose investment decisions depend largely upon the user cost of capital and anticipated trend output three years ahead, as investments take time to mature. Hence there are limited accelerator effects. Together these features mean that multipliers are low, as is common on similar models, as in Al Eyd and Barrell (2005). These results are consistent with the empirical work in Blanchard and Perotti (2002). Multipliers are also affected by the openness of the economy, as we can see from Table 2, as much of an increase in demand disappears into imports. Table 2 shows the effects of a fiscal stimulus where each country acts alone (or in the case of the Euro area where it acts as a unit).

Table 2: Impacts on GDP of a one percent of GDP fiscal expansion

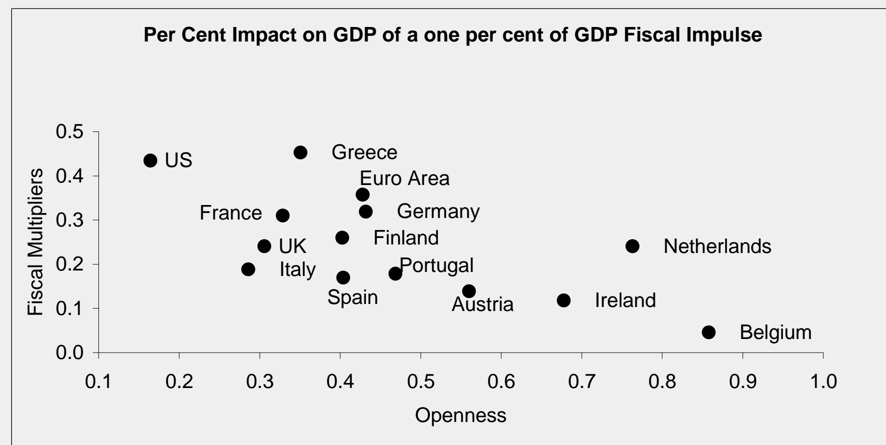
Uncoordinated	Immediate tax rebate	Direct Tax	Indirect Tax	Government Consumption
	Year 1	Year 1	Year 1	Year 1
US[a]	0.43	0.29	0.36	0.96
UK[a]	0.24	0.17	0.19	0.63
Euro Area[b]	0.36	0.29	0.23	0.72
France[a]	0.31	0.29	0.22	0.61
Germany[a]	0.32	0.31	0.26	0.47
Italy[a]	0.19	0.12	0.11	0.57
Netherlands[a]	0.24	0.19	0.17	0.52
Spain[a]	0.17	0.09	0.14	0.61

(a) Country acting alone

(b) Policy enacted in all Euro Area countries

In each of our four cases we raise spending or cut taxes by one per cent of GDP for one year. The experiments are first of all taken one country at a time and are then coordinated across countries. Column one gives the impact on output of an immediate one off payment to tax payers. As it arrives on the 1st January 2009 incomes rise markedly in the first quarter, and given normal propensities to consume out of current income, it would have a relatively large impact in the first year. In the medium term the effects are similar to our second experiment in column two, which involves a cut in the direct tax rate for one year to provide the same size increase in income, but spread evenly over the year. It therefore takes myopic consumers time to spend some of the change in their incomes. Our third column involves a temporary reduction in the VAT rate to reduce revenue by the same amount. The final column involves an increase in government spending of one per cent of national income, increasing government borrowing by the same amount as the other policies. As we can see from the Table, increasing government spending immediately would have the most impact, but it is not feasible as increasing spending takes time to implement efficiently and is very difficult to undertake on a temporary basis where the expenditure evaporates after just a year. In normal times there is always some crowding out and 'multipliers' (the impact effects) are less than one. There is a simple relationship between openness and the multiplier, as we can see from the figure.

Figure 9: Fiscal multipliers in open economies*



* Multipliers are calculated as a per cent difference from base (GDP), Openness is a ratio of imports over GDP

In Table 3 we detail the relationship between changes in consumption and changes in real disposable incomes. Where this number is large, as in Germany, we can say that more consumers are borrowing constrained than where it is small, as in the UK. In normal times a cut in the VAT rate would raise output by more than an equivalent cut in direct taxes when borrowing constraints are limited. Consumers who are not borrowing constrained will see durables goods such as cars are temporarily cheaper and will bring spending forward when VAT goes down for a year. Income earners who are not borrowing constrained will save much of an income tax rebate because they know they will have to pay higher taxes in future. This simple relationship helps us formulate policy advice.

In a financial crisis many more people than usual will not be able to borrow, and the balance of advantage would shift heavily in favour of a cut in income tax. The government would do the borrowing for individuals and firms that the crisis prevents them from doing for themselves. If the tax cut helps reduce only a quarter of the borrowing constraint individuals and especially firms are facing in our forecast, it will be fifty per cent more effective than it would be in normal times.

Table 3: Ratio of a per cent change in consumption from base over per cent change in personal disposable income from base`

Uncoordinated			
	Pulse	Direct Tax	Indirect Tax
	Year 1	Year 1	Year 1
US	**0.35**	**0.26**	**0.41**
UK	**0.34**	**0.26**	**0.41**
France	**0.55**	**0.53**	**0.60**
Germany	**0.75**	**0.72**	**0.85**
Italy	**0.32**	**0.24**	**0.30**
Netherlands	**0.49**	**0.37**	**0.52**
Spain	**0.28**	**0.15**	**0.34**

If much of the effects of a one country at a time policy leak abroad then there may be a case for coordinating policies. If the UK, the US and all Euro Area countries were to coordinate a fiscal expansion then in normal times smaller more open economies would gain more, as we can see from Table 4. We look at a coordinated tax rebate across these countries with the same fiscal and monetary responses. The size of gain depends on how open you are, who you trade with and how sensitive you are to the financial market crowding out that results. Interest rates will, after the first two years, rise more, and hence long rates will rise more and equity prices fall more than in the one country at a time case. Increasing exports more than offsets this, at least in this experiment. We can see from the table that the large, relatively closed but financially sophisticated US benefits least from the coordination of policies. The smaller an economy is the more it benefits, as we can see. The Netherlands acting alone finds much of a stimulus leaks into imports, but if countries coordinate the effects are three times as large.

There are many issues to be considered when recommending a fiscal stimulus. In our simulations all tax cuts are paid back in future so there are no worries over solvency. This would have to be clear in any real world experiment. In normal times fiscal policy just redistributes consumption over time. Only when constraints exist now but not in the future, and only when policy can release those constraints can there be a strong case for fiscal activism. In that case the balance of advantage shifts heavily toward direct tax or social levies rebates to relieve constraints. If a country does not face credit rationing then the case for a fiscal expansion is much weaker, especially when debt stocks are rising.

Table 4: The gains from coordination
Difference between coordinated and uncoordinated policy

	absolute	percent
US	0.05	12.40%
UK	0.18	75.80%
Euro Area	0.06	17.35%
France	0.15	47.09%
Germany	0.15	45.62%
Italy	0.12	64.37%
Netherlands	0.47	195.43%
Spain	0.11	67.73%

1.2.2 EXTERNAL ENVIRONMENT

China

Chinese growth decelerated considerably during 2008, to 9 per cent in the third quarter after growing by an average of over 11 per cent annually in 2006 and 2007. The slowdown was due to damage arising from the devastating earthquake in June, and production restraints as a result of the Olympics during the summer. The direct effects of the financial crisis on the Chinese economy have been limited, as the sector is rather undeveloped. However, the indirect impact on industrial output and fixed investment through the weakening of exports has been larger than expected. For example, power generation decreased by 4 per cent in October, and steel production by 17 per cent. Projections of fourth quarter growth fell below the 8 per cent limit, which the government regards as critical for social stability.

As a response to the weakening situation, the government announced a RMB 4000 billion stimulus package to be utilised in 2009 and 2010. It is expected to boost the economy by stimulating infrastructure investments, improving social well-being, enhancing environmental protection, accelerating earthquake reconstruction and granting export rebates. Monetary policy has also eased as inflation has retreated from the very high levels in the Spring. This huge stimulus package consists partly of already planned investment decisions, which reduces its impact. Excluding the impact of the stimulus package, China's GDP growth in the next three years would fall short of the 7.5 per cent growth during the 1998-99 crisis, according to our forecasts. The stimulus is likely to add about one percentage point to the forecast growth.

Slower growth in China affects markedly the growth of other Asian economies through the trade links. It also affects the growth of industrialised countries by intensifying competition in manufacturing goods. On the other hand slower growth in China supports the global economy by easing commodity price pressures and slowing the growth of emissions.

United States

The US managed to stave off a decline in output in the second quarter of 2008, primarily due to a strong positive contribution to growth from net exports, which added 0.7 percentage points to quarterly GDP growth. This was attained through a sharp contraction in import demand, effectively exporting the US recession to the rest of the world, and coincided with output declines in the second quarter in Japan, Germany, France and Italy. However, the US dollar has strengthened in recent months, which combined with weaker demand from the rest of the world suggests that the US will no longer be able to rely on exports to sustain the economy, and advance estimates indicate that GDP declined slightly in the third quarter of the year. Available monthly data for October point to a sharper contraction in the final quarter of the year, and we expect the recession to deepen further next year.

Private consumption expenditure declined by 0.8 per cent in the third quarter, as the support from tax rebates that sustained consumption in the second quarter waned. The decline in consumption expenditure was especially pronounced in the durable goods sector. Retail sales dropped sharply in October, and we expect a further contraction in consumption of a similar magnitude this quarter. In the third quarter housing investment dropped by 5.2 per cent on a quarterly basis, and further declines are forecast for the next several quarters. The level of housing investment expressed as a share of GDP continues to plummet, and we expect that this ratio will fall to 2 per cent next year, compared to a long-term historical average of 4.5 per cent and the recent peak of 5.5 per cent in 2005. The advance estimates also indicate that business investment declined by 0.2 per cent in the third quarter of 2008, and we expect sharper declines reflecting rising risk premia and credit rationing until mid-2010.

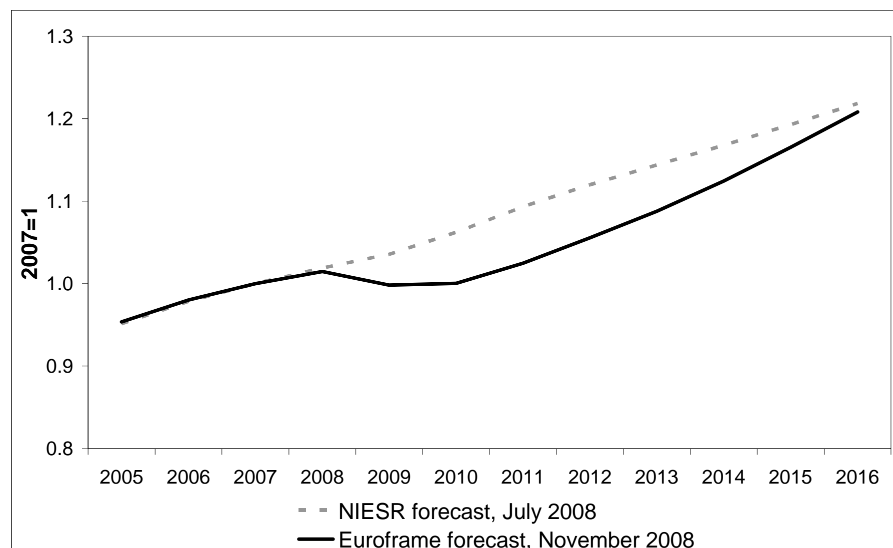
While inflation in the US rose to 4.4 per cent in the third quarter (as measured by the year-on-year rise in the consumer expenditure deflator) we expect inflation to fall back sharply over the forecast horizon, due to the sharp drop in the oil price and the softening labour market, and indeed the consumer price index dropped by 1 per cent in October compared to September (on a seasonally adjusted basis). We see a significant risk of deflation in the US over the forecast horizon. The Federal Reserve cut interest rates by a total of 100

basis points in October, to 1 per cent. Our forecast envisages a further 25 basis point cut in US interest rates, but with interest rates so low there is little room for additional cuts, and the US may well find itself liquidity trapped.

We estimate that the rise in investment risk premia will reduce growth in the US next year by about 1 percentage point, while heightened risk aversion and credit rationing for the consumer sector will reduce GDP growth by a further 1 percentage point (see figure 2 above). Altogether, we forecast a contraction in US GDP of 1.6 per cent next year, with growth recovering from mid-2010.

Figure 10 shows the path for the level of GDP from our current projection, in comparison to NIESR's July baseline forecast. Much of the loss of output is expected to be temporary, although we do expect permanent scarring in the range of about 1 per cent of GDP, similar in magnitude to the output loss anticipated in the UK. The impact of the sustained rise in risk premia on trend output is partly offset by recent declines in the oil price (See Barrell and Kirby (2008) for a deeper analysis with reference to the UK).

Figure 10: The impact of the financial crisis on the level of US GDP



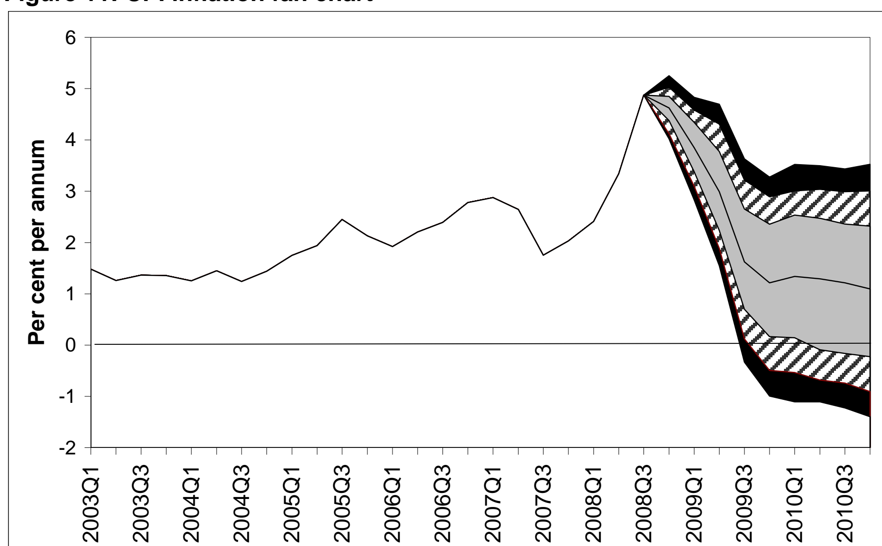
United Kingdom

The UK economy continues to weaken. The preliminary estimate of GDP suggests the economy contracted by 0.5 per cent on a quarterly basis in the third quarter of this year. This follows zero growth in the second quarter of 2008. The contraction of the economy started in May and marks the beginning of the first recession in the UK since 1991. The contraction is being led by consumer spending and private sector investment. With the economy moving sharply into reverse in the third quarter of this year, we expect GDP growth of just 0.8 per cent in 2008, down from 3 per cent in 2007. The overall

contraction next year is forecast to be around 1½ per cent. The corresponding peak to trough fall in the level of output is around 2 per cent.

UK policy makers have taken aggressive action since the collapse of the US investment bank Lehman Brothers. A £37 billion (2½ per cent of money GDP) bank re-capitalisation programme has been introduced to take stakes in a number of UK banks, effectively nationalising one (the Royal Bank of Scotland). The Bank of England has intervened in money markets in order to boost liquidity. The Monetary Policy Committee (MPC) of the Bank of England has cut the Bank Rate aggressively. In October the MPC lowered the Bank Rate by 50 basis points as part of the internationally coordinated monetary loosening. In November, the MPC lowered the Bank Rate by 150 basis points to 3 per cent, the lowest rate for 54 years. Our projections of the Bank Rate are based on market expectations. These suggest a further cumulative 100 basis point reduction in the Bank Rate. However, the MPC still have room to loosen monetary policy further.[1]

Figure 11: CPI inflation fan chart



Note: The bounds are 95, 90 and 80 per cent confidence intervals

Figure 11 shows probability bands around our central forecast for the CPI inflation rate (the MPC's target measure of inflation). These probability bands are derived from stochastic simulations on our baseline forecast using the historical residuals from the equations in NiGEM. A combination of significantly weaker oil prices and a contracting economy are expected to push inflation below the target rate of 2 per cent over the medium term. Indeed our central projection is for the rate of inflation to fall below target in the second half of 2009. As shown in figure 11, there is a small risk of the UK economy moving into a period of deflation (on the CPI measure). Further reductions in

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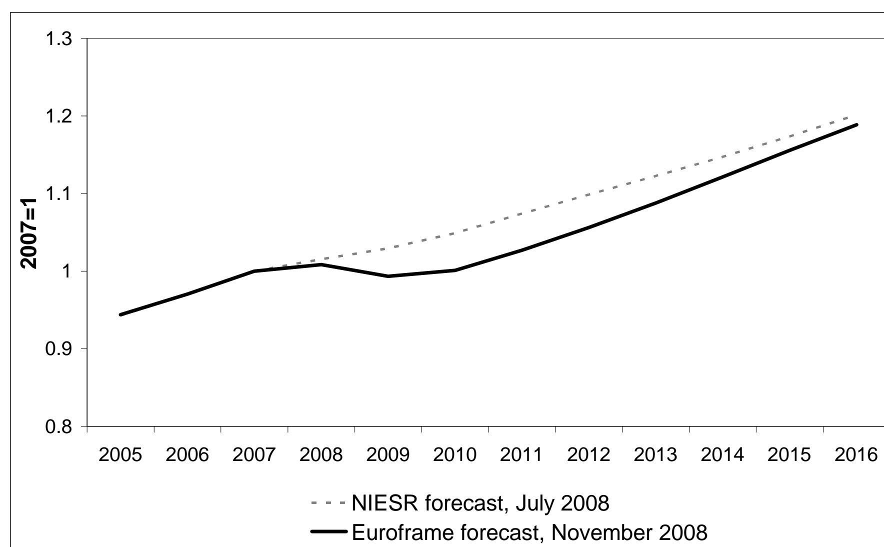
[1] A Bank Rate below 2 per cent would be the lowest interest rate set by the Bank since it was founded in 1694.

the Bank Rate below what the market expected, at the time our numbers were completed, would be consistent with hitting the inflation target., and reduce the risk of deflation.

The UK government have signalled they are willing to participate in a coordinated fiscal policy response. Without announcements by the government we can only speculate on the exact response. A combination of spending increases and reduction in certain taxes on a temporary basis would seem to be the most likely response. As we note in Box 3, coordination is key if a fiscal boost to the economy is to be effective. Introducing a fiscal stimulus package via increases in government spending and/or tax cuts has a limited impact if introduced unilaterally, since much of the fiscal boost is lost through import leakages. Our central projection does not include any assumptions about fiscal policy. Even before any fiscal loosening it is clear that a rather rapid deterioration in the public finances should be expected. The financial balance under Maastricht is expected to move from a deficit of 2.8 per cent of money GDP in 2007, to a deficit of over 6 per cent of money GDP in 2010 and 2011.

Trying to judge the longer term impact of these global shocks on the UK economy is important. An understanding of how trend has changed enables us to evaluate the sustainability of fiscal policy decisions further out. Figure 12 shows the path for the level of GDP from our current projection, prior to any fiscal packages we advocate or may be announced on 24 November, in comparison to NIESR's July baseline forecast. There are three factors affecting the difference in shape. In the short run the banking crisis has brought significant credit rationing and demand is expected to fall rapidly relative to capacity output. However, the events of the last 12 months are likely to have a permanent effect, or scar, on trend output. The rise in risk premia in bond and equity markets that was seen up until mid September persuaded us that the user cost of capital would be higher by perhaps 200 basis points for a sustained period. Barrell and Kirby (2008) suggested that this would reduce trend output by around 1.7 per cent or so. As figure 12 shows, we actually now expect only around 1 per cent of output to be permanently lost. The overall long run loss of trend output in our projection would have been greater but for the projection for oil prices being around 47 per cent below the July baseline. Our calculations suggest that this adds 0.4-0.5 per cent to UK trend output by 2015, offsetting some of the scar from the financial crisis

Figure 12: The impact of the financial crisis on the level of UK GDP



Current situation and prospects for NMS

The situation in NMS is quite complex. The majority of these countries enjoyed a continuation of strong economic growth in the third quarter (namely Bulgaria, Romania, Slovakia, Poland, Czech Republic). Lithuania and Hungary recorded a more modest performance, in line with the recent domestically driven moderation in the pace of growth, while GDP contracted in Estonia and Latvia. The symptoms of the overall global economic slowdown, which include increases in the cost of capital and restrictions in accessing credit, only emerged in September. The data suggests a slowdown in industrial output, a fall in orders, and declining economic and business sentiment.

Altogether we expect NMS economies to grow by 4.6% in 2008 and by 2.9% in 2009, with all countries experiencing the deterioration. The deceleration in growth will largely be a result of relatively weaker export performances due to the overall global slowdown, and will also be a result of the deteriorating business climate and restricted access to credit. We estimate that lower growth in NMS could in turn negatively affect the exports of Austria (by 0.6 percentage points), Germany and Italy (0.5 percentage points each), France (0.3 percentage points), the Netherlands and Belgium (0.2 percentage points each). 2010 should bring a recovery in all the NMS economies, as part of the wider global economic recovery and as a result of productivity gains in most NMS countries.

1.3 Euro Area Detail

EURO AREA FORECAST

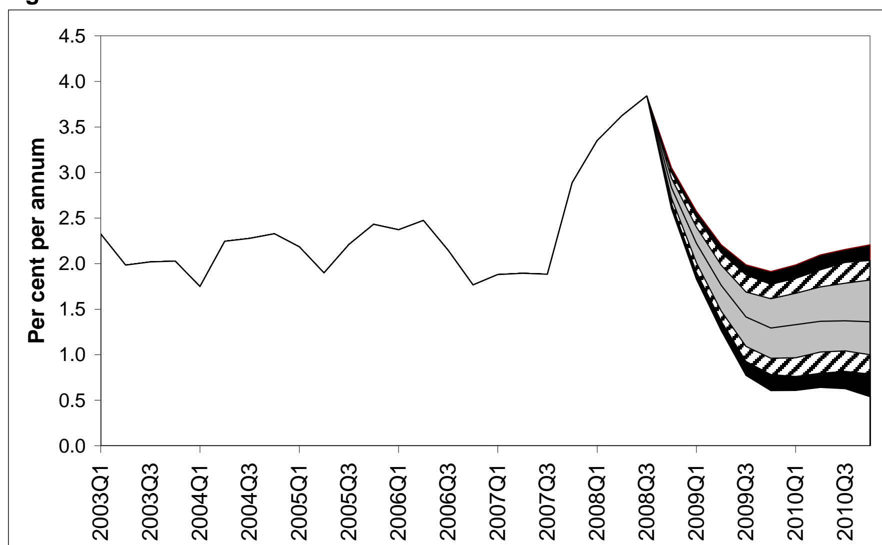
The economic outlook for the Euro Area has deteriorated rapidly in recent months. Following growth of 0.4% in the fourth quarter of 2007 and 0.7% in the first quarter of 2008 real GDP decreased for two consecutive quarters, by 0.2% in both the second and third quarters of this year. Thus, the economic expansion in the Euro Area ended well before the financial crisis entered a new stage in September 2008. Economic sentiment indicators and industrial production signalled a serious slowing of the economy already early in the year. However, since the summer indicators have gone virtually into free fall with still no bottom in sight, suggesting a further substantial deterioration in the economy. According to the *EUROFRAME Euro Growth* indicator, year on year GDP growth will become negative in the final quarter of 2008 for the first time since early 1993, implying another significant decline on a quarterly basis.

A number of negative factors have been at work in ending the upturn of the Euro Area economy: a significant deterioration of the terms of trade in combination with an appreciation of the euro in the first half of the year; adjustment in house markets in a number of countries; increased uncertainty, declining external demand and a deterioration in financing conditions as a result of the financial crisis. These factors impacted on the individual countries to a varying degree. In the third quarter, weakness was most pronounced in Germany and Italy (-0.5% quarter on quarter), while the French economy seems to have resisted somewhat better (+0.1% following up on a 0.3% decline in the second quarter).

Euro area inflation increased strongly in the first part of the year, but peaked at 4.1% in July 2008 and has decelerated since then to 3.2% in October. Differences in inflation across countries remained substantial with inflation ranging from 2.5% in Germany, the Netherlands and Portugal to 4.8% in Belgium and even 5.8% in Malta. The dynamics in overall HICP inflation are dominated by developments in energy and food prices, which have started to moderate in recent months. Core inflation (excluding prices for energy, food, alcohol and tobacco) remained relatively stable at close to 2% over the past couple of years. Given the current downward adjustment in prices for crude oil and food commodities and a projected moderation in average earnings growth, inflation should decelerate quickly over the coming months, and is forecast to drop significantly below 2% by mid-2009. The benign inflationary environment should support purchasing power and hence private consumption, reversing the trend that prevailed in the first half of 2008 when high inflation was a major factor behind the negative growth of consumption for two consecutive quarters.

Figure 13 illustrates probability bands around our central inflation forecast, derived from stochastic simulations on our baseline forecast using NiGEM. While we see little risk of deflation over the forecast horizon, there is also little risk of inflation rising above 2 per cent, leaving room for more aggressive interest rate cuts as discussed below.

Figure 13: HICP inflation fan chart



However, employment is set to weaken and unemployment should continue to rise. The decline in Euro Area unemployment, which had started in early 2005, came to a halt in March 2008 when the unemployment rate reached 7.2% (down from 9% in early 2005). Since then it has risen to 7.5% (October). Behind this still modest rise in overall Euro Area unemployment are uneven developments in domestic labour markets. While the unemployment rate rose rapidly in some countries, especially in Spain (from 9.6 to 11.9%) and Ireland (from 5.2 to 6.6%), countries that experience a strong adjustment of output and labour in the construction industry, unemployment continued to decline in several other countries, including Germany, the Netherlands and Austria. We expect the increase in unemployment to accelerate and broaden in the coming quarters. On average the standardized unemployment rate is forecast to rise to 7.8% in 2009, from 7.4% in 2008, and increase further to 8.3% in 2010.

The weakness in the labour market will restrain private consumption in 2009, and in combination with more limited access to credit and generally less supportive financial environment (as a fallout from the financial crisis) leads us to expect a decline in private consumption in the Euro Area by 0.6% in 2009. Even more gloomy is the outlook for private fixed investment which we expect to fall by 7.4% in 2009 and a further 3.7% in 2010. Housing investment is leading the way, with housing starts having declined by 20-50% in a number of countries, but business investment is also severely affected by reduced sales

and profit expectations and tighter financial conditions. Government expenditure should support growth, but only moderately so, based on current spending plans. A significant positive contribution can be expected from net exports as export volumes should decline much less than import volumes given the recent significant devaluation of the euro and the relative resilience of demand in important export destinations, including emerging Asia and the larger part of Central and Eastern Europe.

All in all, we forecast real GDP in the Euro Area to shrink by 0.4% in 2009. A recovery is not expected to materialize before the second half of next year, and will be very gradual based on the baseline assumptions of only limited fiscal stimulus and modest monetary easing. This scenario assumes that normalization of risk premia will be gradual and reflects macroeconomic adjustment underway in many countries that takes time. Growth in 2010 will still be low, at 0.5%, and will accelerate in the baseline forecast to 1.6% only in 2011, still below the growth rate of potential output.

Monetary Policy

The economic environment facing the ECB has changed dramatically over the past months. Less than five months ago, on 9 July 2008 the ECB raised its central policy rate to 4.25% from 4% that had prevailed since June 2007 due to concerns about second-round effects of high energy prices on inflation. Since then the economic outlook has quickly deteriorated while the outlook for inflation has substantially improved. Massive action to provide necessary liquidity to banks during the weeks of financial turmoil was supplemented by a cut in its interest rate by 0.5 percentage points on 8 October, as part of the joint concerted action of major central banks, and by a further 0.5 percentage points on 6 November. The ECB's interest rate is now at 3.25%. It has remained close to zero in real terms if calculated using the year-on-year CPI inflation rate but is probably significantly positive on the basis of annualized current inflation or expected inflation.

Given the continued rapid deterioration of all leading indicators that point to strong downward momentum in the economy and an increased probability of a serious recession ahead and, at the same time, a marked improvement in the inflation outlook due to falling commodity prices, it may well be that the ECB has significantly fallen behind the curve. This is especially so since risk premia remain high on the inter-bank market, and the softening of the monetary stance is not as large as it would be in normal times, leaving credit conditions tighter both for households and companies. We expect that the ECB will reduce its main interest rate further to 2% in the remainder of this year and in the first months of 2009 and leave it unchanged at that level until there are signs that GDP growth prospects start to stabilise and that some recovery is

under way, i.e. not before 2010. A more aggressive easing to a level of 1% would according to NiGEM increase real GDP growth by around a quarter of a percentage point next year and perhaps a little more in 2010. However, in the current environment of financial sector distress the traction of monetary policy may be reduced, supporting the case for fiscal policy action.

Euro area external monetary conditions have eased since last summer thanks to the fall in the euro vis-à-vis the US dollar – the euro fell from record levels of more than 1.50 to 1.25 in mid-November – and even more strongly against the Yen. However, at the same time the euro appreciated relative to the British pound and a number of emerging economy currencies. In terms of nominal effective exchange rates, the euro devalued by a cumulative 8% since the middle of this year. We expect bilateral exchange rates between major currencies to stabilise in 2009 at around 1.30 dollar per euro, 0.80 British pound per euro and 100 yen per dollar. Under the assumption of some further currency depreciation in emerging countries, the nominal effective exchange rate of the euro will appreciate slightly over our forecasting horizon, remaining significantly below the peak level seen this year, but substantially higher than at the start of the decade.

Fiscal Policy

Budgetary positions have deteriorated in 2008 in most euro area countries under the effect of the economic slowdown. The move has been especially rapid in Ireland, where a surplus of 3% of GDP in 2006 diminished to close to zero in 2007 and is expected to turn into a deficit of close to 6% this year. The budgetary position has also worsened rapidly in Spain where the budgetary position will swing from a surplus of 2.2% in 2007 into a deficit of the same size in 2008, under the combined effects of lower GDP growth and fiscal stimulus plans. With the major exception of Germany, fiscal deficits are expected to rise in most euro area countries in 2008, mainly due to lower GDP growth Although in reaction to the deterioration of the economic outlook there are some stimulatory fiscal measures already decided upon in several countries – apart from Spain this includes Germany, Austria, Finland and France – these are generally relatively small in size (with the exception of Austria where the package is around 1.5/2 percentage points of GDP), sometimes directed only to certain sectors, and are often taking place in countries where a slightly restrictive policy stance was already announced.

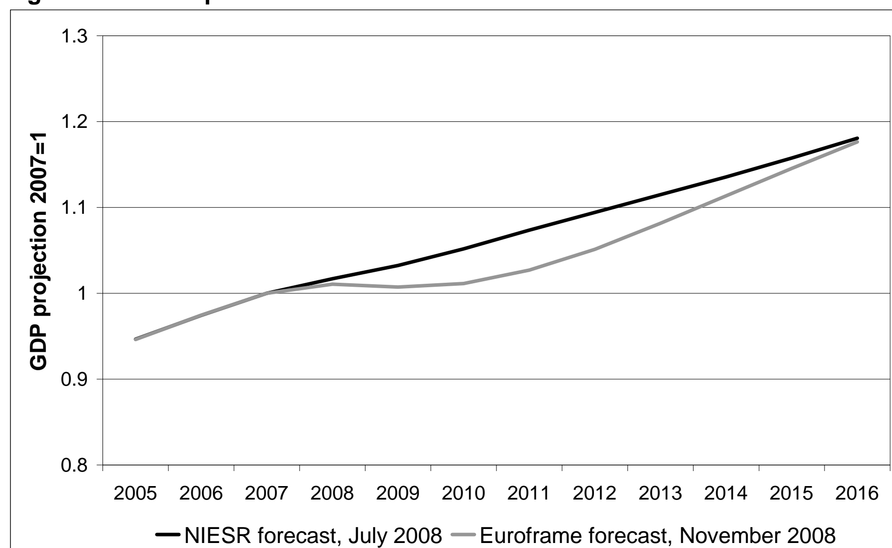
Based on current budget plans, we expect the deficit at the euro area level to rise from 0.7% of GDP in 2007 to 1.1% in 2008 and 2% in 2009. These figures do not include any significant fiscal cost from the financial sector stabilization measures, which are extremely hard to estimate at the current stage. On a cyclically adjusted basis this implies a slight decline in the

government deficit and, hence, a slightly contractionary fiscal stance, although there are large uncertainties around the measures of potential output used in such calculations.

The rules of the Stability and Growth Pact allow automatic stabilisers to play freely and deficits to rise above 3% of GDP without initiating an 'excessive deficit procedure' under 'exceptional circumstances', and it has been acknowledged at the EU level that this is currently the case. In an extraordinary situation such as the one the EU is facing now, stimulatory measures may be tolerated when deemed appropriate, even if they bring deficits above 3% of GDP. The European Commission is expected to release a set of proposals aiming to support growth in Europe on 26 November. There is a possibility that a significant positive fiscal impulse will be implemented in the EU, and the possible effects of coordinated fiscal policies are discussed in Box 3.

Figure 14 shows the path for the level of GDP from our current projection, in comparison to NIESR's July baseline forecast. Almost all of the output loss in the Euro Area is expected to be temporary, with all but less than ½% of GDP recovered by 2016, compared to permanent losses of about 1% in the UK and the US.

Figure 14: The impact of the financial crisis on the level of Euro Area GDP



GERMANY

The German economy has rapidly deteriorated over the course of 2008. After strong growth of 1.4% in the first quarter, real GDP contracted over the following two quarters by 0.4% and 0.5%, respectively. While the decline in the second quarter has been a reaction to high GDP growth in the first quarter which was partly due to the method of seasonal adjustment, the decline in output in the third quarter has to be taken at face value, and some recent

indicators point to further weakness in the fourth quarter which would confirm that the German economy has entered recession. The most important factor behind the slowdown is the deterioration in exports due to the downturn in major trading partners and the appreciation of the euro until the middle of the year. The worsening of exports has started to negatively affect investment. Furthermore, inflation picked up during the first half of the year, mainly due to the strong increase in food and oil prices. This led to a further decline in real private consumption expenditures.

As the German economy is strongly export oriented, the outlook critically hinges on the forecast for global economic activity. We expect a serious slowdown especially in the industrial countries. Although some large emerging countries like China and India will still grow at relatively robust rates, external demand is likely to contract for most of 2009. Lower sales expectations and production plans will reduce business investment. While there is still no clearcut evidence that the financial crisis has significantly reduced credit availability for German firms, tighter credit standards and higher risk premia will contribute to the decline in investment. A bright spot is the large fall in oil prices, which lowers the import bill in Germany by roughly 30 billion euro per year. This generates a huge stimulus for domestic demand, in particular for private consumption. On the other hand, higher uncertainty is expected to raise the savings rate. Moreover, declining employment will put downward pressure on disposable income. Enhanced credit availability which is at the heart of the fiscal package that just passed the parliament will only trigger limited additional investment in the current business climate. All in all, real GDP is expected to decline by 0.2% in 2009 and rise by 1.1% in 2010, after an increase of 1.5% in 2008.

FRANCE

French GDP growth reached 2.4% on a year on year basis in the third quarter of 2007 and has since then decelerated, down to 0.6% in the third quarter of 2008. The French economy seems so far to have avoided falling in technical recession: GDP fell by 0.3% in the second quarter of the year but rose by 0.1% in the third quarter according to the first release of quarterly national accounts.

Households' consumption has so far been resilient, growing by 0.2% in the third quarter while investment started to decline from the second quarter. Both stockbuilding and net exports' contributions to growth were nil in the third quarter. However, short-term indicators suggest that French GDP growth will turn negative in the fourth quarter of 2008.

French HICP annual inflation peaked to 4% in July 2008 and decelerated to 3% in October, with core inflation fluctuating at around 2%. The decline in

raw material prices will allow inflation to decelerate further and we expect the private consumption deflator to decelerate from 3.2% in 2008 to 2% next year and 1.3% in 2010-2011.

French GDP will grow by close to 1% this year, before decreasing by 0.5% in 2009, in our baseline scenario of persisting tight credit conditions. The main positive factor as compared to 2008 will be the favourable effect of decelerating inflation on households' purchasing power and hence consumption.

We expect the fiscal impulse to remain slightly negative (by around -0.2% of GDP each year), despite some recently announced measures in favour of employment and company investment. 100,000 jobs will be created in the non-market sector and are estimated to cost 250 million euros (0.01% of GDP) in government accounts in 2009 (the amount would be 500 million in full year). Tax rebates will be introduced in 2009 in order to support new investment, through the exemption of the 'taxe professionnelle' levied on companies, which would translate into tax revenues losses of 1 billion euros (0.05% of GDP) but only in 2011.

The government has planned substantial amounts for rescue packages of the financial sector: 320 billion euros in terms of government guarantees for interbank lending and 40 billion euros for bank recapitalisation, of which 10.5 billions have up to now been used. Also a special fund ('fond public d'intervention') is to be created to support "strategic" companies in difficulty. This fund would be allocated 100 billion euros and be funded through public debt. As in the case of the bank recapitalisation, insofar as this fund will acquire shares in companies, there will be no impact on the net government debt.

ITALY

In line with the larger euro area economies, Italian economic activity decreased both in the second and in the third quarters (-0.3 and -0.5 per cent quarter on quarter) and cyclical indicators point to a sharp slowdown in the fourth quarter as well. Italy is in recession and according to our projections GDP growth will be negative both this year and the next.

In the first part of the year the outlook was mainly affected by both the surge of world energy and food prices and the international business cycle slowdown; more recently the dramatic increase in the fragility of the financial and credit markets of the main advanced economies has been the main driver of the sharp worsening in the outlook. Notwithstanding the oil price fall, consumption continues to be weighed down by the huge fall in the real value

of the financial wealth (-11 per cent expected for this year) and by a decrease in the propensity to consume. In fact, whereas inflationary pressures are rapidly declining, the pessimism of household and firms, shown by consumer and business surveys, and the increase in the cost of borrowing have been holding down both consumption and investment in machinery, equipment and transports. Along with the international cycle, building investment is declining as well, ending the long cycle registered over the last ten years. All in all, domestic demand is expected to fall this year and the next, reflecting negative rates of change in consumption and investment. Consumer price inflation is expected to rise to an average of 3.8 per cent this year and then to fall back towards 2 per cent in the course of 2009, as the impact of the acceleration in unit labour costs is expected to be offset by the oil price fall and a narrowing of margins in response to the weakness of economic activity and competitive pressures.

The Economic and Planning Document for 2009-13 (presented in July) and the Budget Plan approved in early October set the new objective for net borrowing in 2008 at 2.5 per cent of GDP, compared with 1.9 per cent in 2007. It planned a reduction in the budget deficit to 2.1 per cent of GDP in 2009 and more vigorous adjustment efforts in the following two years in order to achieve a balanced budget in 2011. We expect that the deterioration in the economic outlook will be reflected in the public finances (automatic stabilisers will work), and a fiscal package to counteract the recession is currently under discussion, but no specific measures have been announced so far. Because of the high public debt and the increasing burden for interest payment (the spread between 10 years BTP and Bund has increased recently and is now 100 bp), the amount of the fiscal stimulus under discussion is modest, amounting to 4 billion euros (around 0.2 per cent of GDP), and the measures will be focused on direct taxes in order to support low income households and firms.

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FORECAST TABLES

Annex Table 1: Summary of Key Forecast Indicators for Euro Area[a]

	2005	2006	2007	2008	2009	2010	2011
Output Growth Rate	1.8	3	2.6	1.1	-0.4	0.5	1.6
Inflation Rate	2.2	2.2	2.1	3.4	1.7	1.4	1.4
Unemployment Rate	8.8	8.3	7.5	7.4	7.8	8.3	8.3
Gov. Balance as % GDP	-2.5	-1.3	-0.7	-1.1	-2	-2.3	-2

a GDP data shown in the tables are adjusted for working-day variation.

Annex Table 2: Real GDP in Major Economies

	World	OECD	China	EU-27	Euro Area	USA	Japan	Germany	France	Italy	UK
	Annual percentage changes										
1999-2005	3.7	2.6	9.1	2.3	2.0	2.8	1.3	1.2	2.2	1.4	2.8
2006	5.0	3.2	11.1	3.2	3.0	2.8	2.4	3.2	2.4	1.9	2.8
2007	4.9	2.7	11.4	2.9	2.6	2.0	2.0	2.6	2.1	1.4	3.0
2008	3.8	1.7	9.3	1.3	1.1	1.5	0.8	1.4	0.9	-0.3	0.8
2009	1.9	-0.3	7.6	-0.3	-0.4	-1.6	-0.2	-0.2	-0.5	-0.5	-1.5
2010	2.6	0.6	7.1	0.7	0.5	0.2	-0.3	1.1	0.6	0.0	0.8
2011	3.9	2.1	7.5	2.0	1.6	2.5	0.7	2.0	1.7	0.8	2.6

Annex Table 3: Private Consumption Deflator in Major Economies

	OECD	EU-15	Euro Area	USA	Japan	Germany	France	Italy	UK
	Annual percentage changes								
1999-2005	2.0	1.9	2.0	2.2	-0.9	1.2	1.3	2.6	1.7
2006	2.2	2.1	2.1	2.8	-0.3	1.2	1.7	2.7	2.3
2007	2.1	2.0	2.0	2.6	-0.6	1.7	1.4	2.2	2.4
2008	3.5	3.3	3.3	3.8	1.2	2.8	3.0	3.7	2.9
2009	2.9	2.1	2.0	1.5	0.5	1.7	2.0	2.2	2.1
2010	1.1	1.4	1.4	0.5	-0.8	1.1	1.3	1.8	1.5
2011	0.4	1.3	1.4	-0.1	-1.0	1.3	1.3	1.9	1.0

Annex Table 4: World Trade Volume and Prices

	World trade volume	World export prices in $	Oil price ($ per barrel)[a]
	Annual percentage changes		
1999-2005	6.8	1.9	29.7
2006	8.8	2.7	63.4
2007	6.1	7.0	70.5
2008	3.6	8.2	98.0
2009	1.9	-5.4	61.6
2010	4.0	-1.8	62.3
2011	7.0	-1.1	61.1

[a] Based on the unweighted average of the Brent, WTI (West Texas Intermediate) and Dubai oil prices.

Annex Table 5: Interest Rates

	Short-term interest rates				Long-term interest rates			
	USA	Japan	Euro Area	UK	USA	Japan	Euro Area	UK
2006	5.0	0.2	2.8	4.6	4.8	1.8	3.9	4.5
2007	5.1	0.5	3.8	5.5	4.6	1.7	4.4	5.0
2008	2.1	0.5	3.8	4.7	3.8	1.5	4.3	4.6
2009	0.8	0.5	2.1	2.0	3.9	1.5	4.1	4.3
2010	1.4	0.7	2.6	2.6	4.2	1.7	4.3	4.6
2011	2.4	0.9	3.1	3.3	4.5	1.8	4.5	4.7
2008Q1	3.2	0.5	4.0	5.4	3.7	1.3	4.1	4.5
2008Q2	2.1	0.5	4.0	5.0	3.9	1.6	4.8	4.9
2008Q3	2.0	0.5	4.2	5.0	3.9	1.5	4.5	4.8
2008Q4	1.0	0.4	3.0	3.3	3.8	1.5	3.8	4.4
2009Q1	0.9	0.5	2.3	2.0	3.7	1.5	4.0	4.3
2009Q2	0.8	0.6	2.0	2.0	3.8	1.5	4.1	4.3
2009Q3	0.8	0.6	2.0	2.0	3.9	1.5	4.1	4.4
2009Q4	0.8	0.6	2.0	2.0	4.0	1.6	4.2	4.4
2010Q1	1.0	0.7	2.3	2.0	4.1	1.6	4.3	4.5
2010Q2	1.3	0.7	2.5	2.8	4.2	1.7	4.3	4.5
2010Q3	1.5	0.8	2.7	2.8	4.3	1.7	4.4	4.6
2010Q4	1.8	0.8	2.8	3.0	4.3	1.7	4.4	4.6
2011Q1	2.0	0.9	3.0	3.0	4.4	1.8	4.5	4.7
2011Q2	2.3	0.8	3.1	3.1	4.5	1.8	4.5	4.7
2011Q3	2.5	1.0	3.3	3.4	4.6	1.9	4.6	4.7
2011Q4	2.8	1.0	3.3	3.7	4.6	1.9	4.6	4.8

Annex Table 6: Effective Exchange Rates

	USA	Japan	Euro Area	Germany	France	Italy	UK
	Annual percentage changes						
2006	-1.5	-6.7	0.1	0.0	0.1	0.0	0.7
2007	-4.4	-4.5	4.0	1.8	2.0	2.0	2.3
2008	-2.6	11.4	4.8	1.9	2.5	2.3	-10.8
2009	8.4	9.9	-4.5	-2.0	-2.2	-2.3	-3.8
2010	1.9	0.1	1.5	0.6	0.6	0.8	0.5
2011	1.9	0.3	1.6	0.6	0.7	0.8	0.5

Annex Table 7: Bilateral Exchange Rates

	Bilateral rate against US Dollar		
	Yen	Euro	Sterling
2006	116.3	1.26	0.54
2007	117.8	1.37	0.50
2008	104.3	1.47	0.54
2009	99.6	1.32	0.60
2010	100.9	1.30	0.61
2011	102.1	1.29	0.62
2008Q1	105.2	1.50	0.51
2008Q2	104.6	1.56	0.51
2008Q3	107.6	1.50	0.53
2008Q4	99.9	1.32	0.60
2009Q1	99.9	1.32	0.60
2009Q2	99.9	1.32	0.60
2009Q3	99.0	1.31	0.60
2009Q4	99.6	1.31	0.60
2010Q1	100.2	1.31	0.61
2010Q2	100.8	1.30	0.61
2010Q3	101.2	1.30	0.61
2010Q4	101.5	1.29	0.61
2011Q1	101.8	1.29	0.61
2011Q2	102.0	1.29	0.62
2011Q3	102.2	1.29	0.62
2011Q4	102.2	1.28	0.62

Annex Table 8: Euro Area, Main Features of Forecast[a]

	2005	2006	2007	2008	2009	2010	2011
	Annual percentage changes						
Volumes							
Consumption	1.8	2.0	1.6	0.3	-0.6	1.4	1.9
Private investment	3.1	6.7	4.2	-0.8	-7.4	-3.7	3.2
Government expenditure	1.5	1.8	2.4	1.7	1.9	1.8	1.6
Stockbuilding[b]	0.1	0.0	0.0	-0.2	-0.1	0.1	0.1
Total domestic demand	2.1	2.8	2.3	0.3	-1.4	0.7	2.1
Export volumes	5.2	8.4	6.0	2.8	-0.1	1.7	4.3
Import volumes	5.8	8.2	5.4	1.3	-2.7	2.4	5.7
GDP	**1.8**	**3.0**	**2.6**	**1.1**	**-0.4**	**0.5**	**1.6**
Average earnings	2.5	2.6	2.5	3.6	2.5	1.1	1.6
Harmonised consumer prices	2.2	2.2	2.1	3.4	1.7	1.4	1.4
Private consumption deflator	2.0	2.1	2.0	3.3	2.0	1.4	1.4
Real personal disposable income	1.2	1.6	1.8	1.0	1.2	0.5	1.1
	Levels						
Standardised unemployment %	8.8	8.3	7.5	7.4	7.8	8.3	8.3
Government financial balance[c]	-2.5	-1.3	-0.7	-1.1	-2.0	-2.3	-2.0
Government debt[c]	70.8	67.2	64.8	64.0	65.6	66.2	65.7
Current account[c]	-0.1	-0.2	-0.2	0.1	1.9	1.2	0.7

[a] See footnote a of Annex table 1.
[b] Change as percentage of GDP.
[c] As a percentage of GDP.