Economic Assessment of the Euro Area

Winter 2012/2013

February 2013

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Executive Summary

As a result of relatively weak external demand, continuing financial uncertainty and the contractionary stance of fiscal policy, output fell in the Euro area in 2012. Over the course of 2012 there was a slowdown in some key economies, which has carryover effects into 2013. Even though we anticipate some recovery in confidence in some major economies over the course of this year, the outcome is still likely to be a further limited fall in GDP in 2013 in the Euro Area of 0.3 per cent. For 2014, a recovery in domestic demand within the Euro Area should see a return to significant growth in GDP of around 1.3 per cent. However, this forecast must be considered in the light of the continuing vulnerability to financial shocks of a number of the Euro Area member states.

This vulnerability of countries in financial distress is being addressed through a continuing major fiscal adjustment. However, there is also a major fiscal adjustment under way across other members of the Area and this is having a substantial negative effect on growth. Without this fiscal adjustment the Euro area would be looking to growth this year at around 1½ per cent and next year at approximately 2 per cent.

Table 1: Summary of Key Forecast Indicators for Euro Area

	2012	2013	2014
Output Growth Rate	-0.5	-0.3	1.3
Inflation Rate (Harmonised)	2.5	1.5	1.6
Unemployment Rate	11.4	12.4	12.0
Govt. Balance as % of GDP	-3.2	-2.7	-2.1

1. Introduction

When EUROFRAME published its economic assessment this time last year we considered a number of scenarios for the Euro Area economy in 2012 and 2013 (EUROFRAME, 2012). The most pessimistic scenario, which assumed continuing high sovereign risk premiums and continuing major problems in the banking sector, envisaged a substantial fall in GDP both in 2012 and 2013. In the event, while major problems persisted in the Euro Area economy, there was some progress over the year in tackling them, so that the eventual outturn for 2012 was a small fall in GDP. However, the serious problems in the Euro Area have persisted for longer than we anticipated in last year's "Central Forecast" and, as a result, our forecast for 2013 envisages another year of falling output (Table 1).

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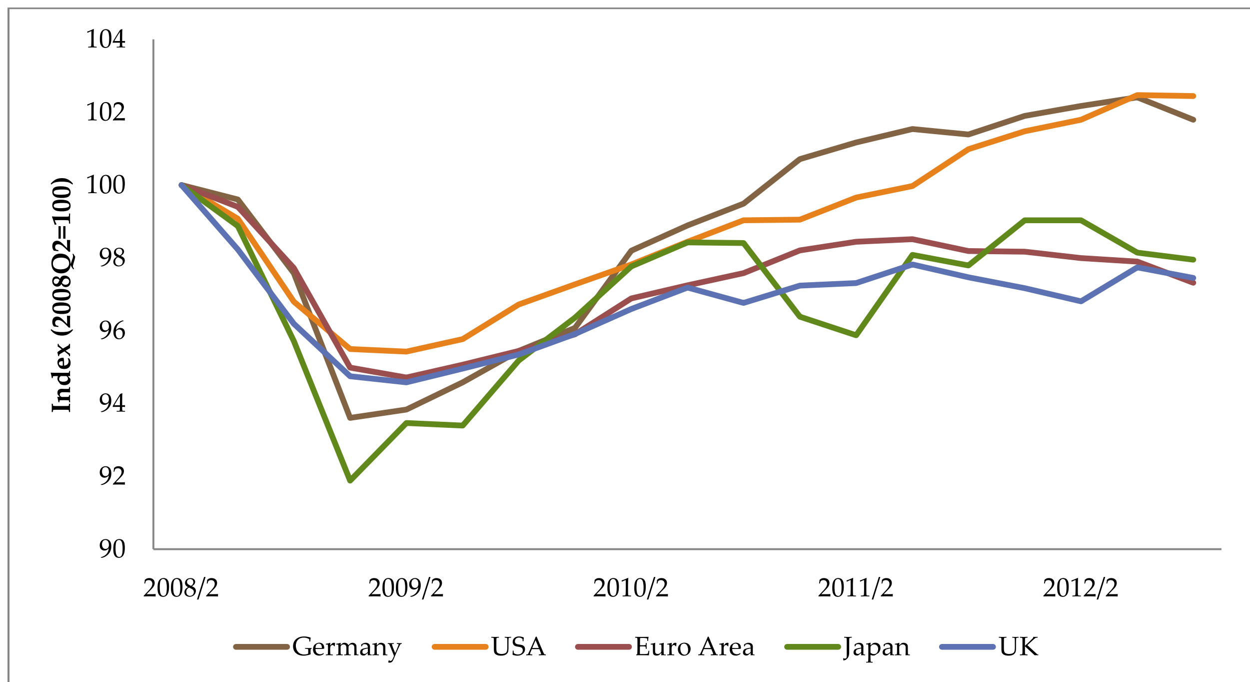
The analysis in this report points to the importance of the overall fiscal stance in the Euro Area in explaining economic developments. Without the tightening of fiscal policy, across a wide range of Euro Area members, the Euro Area economy would have seen significant growth last year and it could also have anticipated growth of around 1½ per cent this year. Instead, because of the deflationary impact of fiscal policy, we are forecasting another year without growth in 2013. While fiscal policy will remain tight in the Euro Area next year, it is likely to have a less negative effect on growth. When combined with some turnaround in domestic demand in the Euro Area members which have already completed their fiscal adjustment, this should see a return to significant growth in 2014.

The current global background and key risks to our forecast are discussed in Section 2. This section also provides a summary of the approach to managing the Euro Area sovereign debt crisis to date. In Section 3 of the report we provide an analysis of prospects for major world economies. Section 4 sets out our forecast for the Euro Area, Germany, France and Italy for the next two years. Section 5 discusses the effects of the announced fiscal tightening measures in 11 Euro Area economies for the next two years. Section 6 concludes.

2. Key Developments and Global Outlook

The world economy continues to grow the fourth year after the Great Recession and the financial crisis in winter 2008/9. The average growth rate is clearly weaker than the debt-driven growth before the recession. Emerging economies have, for the most part, continued growing strongly, although their growth rates have also decelerated. Growth in advanced economies has, on the other hand, remained weak and uneven. Some countries, like the US and Germany, have already passed the production peak achieved before the recession, while the Euro Area and Japan are still producing two per cent less than before the recession (Figure 1). Some Euro Area countries facing severe sovereign debt problems have drifted into a depression contributing to a recession in the Euro Area as a whole in summer 2012. In the crisis countries, the economic environment is characterized by the downward spiralling dynamics from high unemployment, weak aggregate demand compounded by fiscal austerity, high public debt burdens, and financial sector fragility.

Figure 1: Quarterly GDP Profiles in Selected Countries

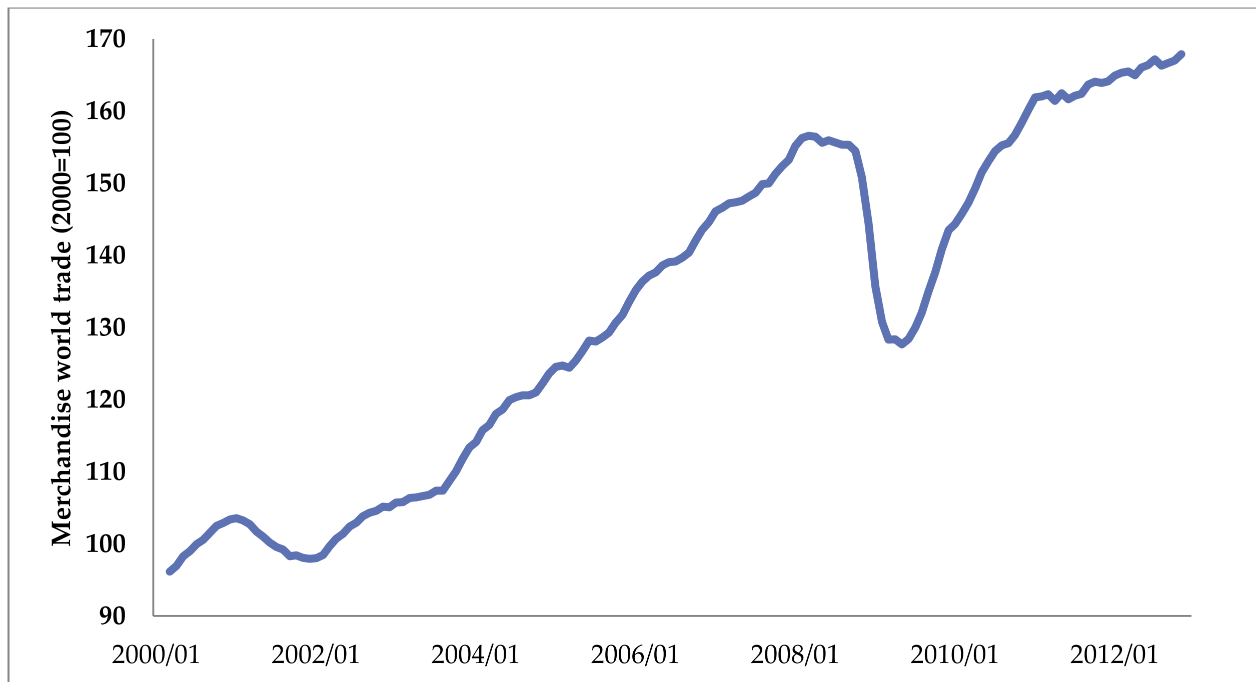


Source: OECD, ETLA

In general, attempts to tackle the high debt burden in advanced economies will impede growth and making any significant improvement in the unemployment rate unlikely. Economic growth in China has recently accelerated slightly due to more accommodative policy and restocking. Other major emerging market economies, however, face both external vulnerabilities and increased domestic challenges as export markets in industrialised countries remain weak. The short-term economic outlook continues to be challenging and is characterized by uncertainties and risks on the downside.

World trade volume increased 2.3 per cent during 2012 (Jan/Nov 2012 compared to Jan/Nov 2011) largely driven by import and export growth in emerging economies and in the US (Figure 2). This is a sharp slowdown compared to the 5.8 per cent growth in world merchandise trade recorded in 2011. Among emerging economies, import growth last year was highest in North Africa and Middle East. This may be a delayed reflection of recycled oil revenues, following the sharp rise in the oil price in 2011. In the advanced economies, the US trade figures were a positive exception. Stagnating GDP growth caused imports into the Euro Area to decline, whereas Japanese exports contracted because of sluggish growth in export markets, political upheaval in China, and the strength of the Yen.

Figure 2: World Merchandise Trade



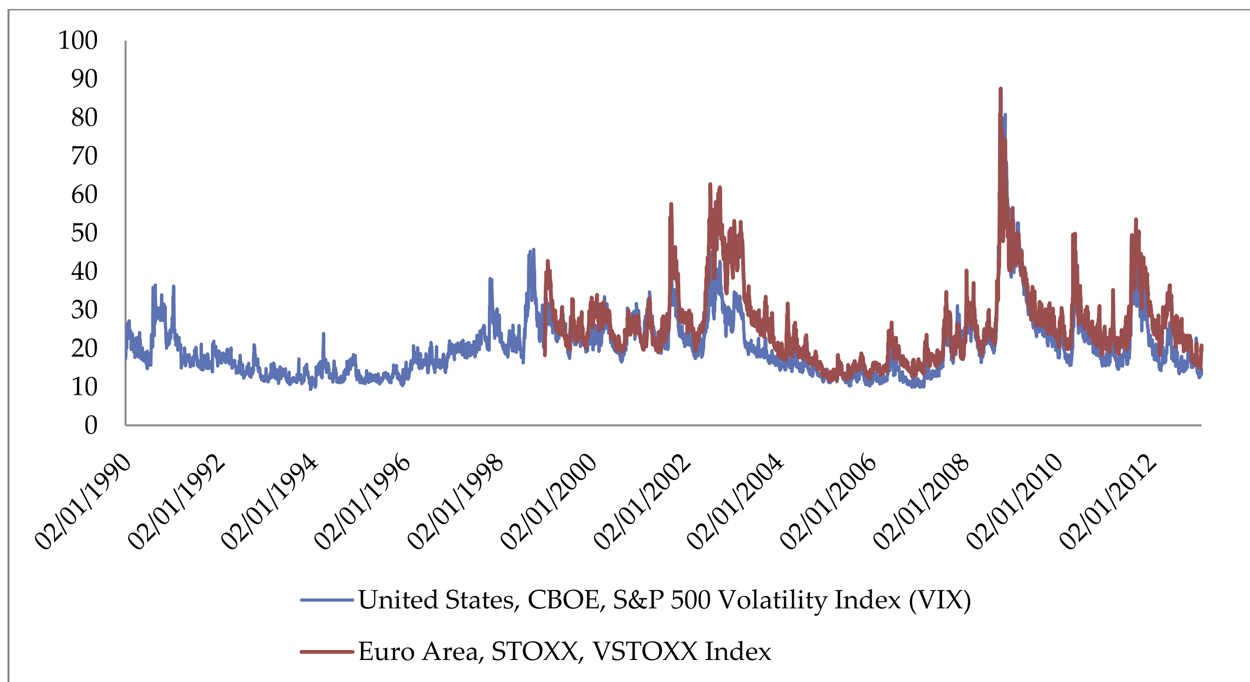
Source: CPB World Trade Monitor

Weaknesses in the major developed economies are at the root of continued global economic woes. Most of the developed economies, but particularly those in Europe, are dragging growth downwards as high unemployment, continued deleveraging by firms and households, continued banking fragility, heightened sovereign risks, and continued fiscal tightening all lead to slower growth and higher unemployment. Several European economies are currently in recession. In Germany, output growth has also slowed significantly, while France's economy is stagnating. A number of new policy initiatives were taken by the Euro Area authorities in 2012 to challenge the Euro Area sovereign debt crisis (see Box 1 below). The Outright Monetary Transactions (OMT) programme and steps towards greater fiscal integration and coordinated financial supervision and regulation were designed to address some of the deficiencies in the original design of the Economic and Monetary Union (EMU). Since the OMT was announced, sovereign risks in the member states in crisis have declined. Significant as these measures

may be, however, their effects are being partially offset by other policies, most notably fiscal austerity. This is dragging output and employment growth down. The majority of countries in the Euro Area remain subject to the Excessive Deficit Procedure (EDP) under which they must submit plans to bring their fiscal deficits close to balance within a specified time frame.

Despite the recent slowdown in real economic activity, global financial conditions improved further in the fourth quarter of 2012 in the Euro Area in particular. The easing financial conditions are diversified across various segments of the financial sector. Bond spreads in the Euro Area periphery declined, while prices for many risky assets, notably equities, generally rose. Measures of uncertainty, as for instance the VIX for the US as well as the VStoxx for the Euro Area, have improved steadily since October 2012 and have now reached pre-crisis levels (Figure 3). This mirrors the recent easing of tensions in European debt markets and declining intra-euro-area imbalances. European financial markets are, however, still hampered by severe frictions and the financial system is still not functioning efficiently. In many countries, banks are still weak, and their positions are made worse by low growth. As a result, many borrowers still face tight borrowing conditions. Moreover, the US policymakers did avoid the full impact of the fiscal cliff, but expenditure cuts have not yet been settled and a rise in the statutory borrowing limit of the US has been postponed until May

Figure 3: Financial Market Volatility in the Euro Area and the US



Source: MACROBOND, WIFO

Global headline inflation figures have been strongly influenced by commodity prices in recent years. Energy has stayed expensive, but its price has shown considerable fluctuations. Rapidly rising demand,

most notably in China, and lagged supply, in conjunction with more expensive energy sources, have increased the overall price level. In addition, a politically fragile situation in many oil producing countries, particularly in Iran, has had a big impact on the perception of energy supply risks.

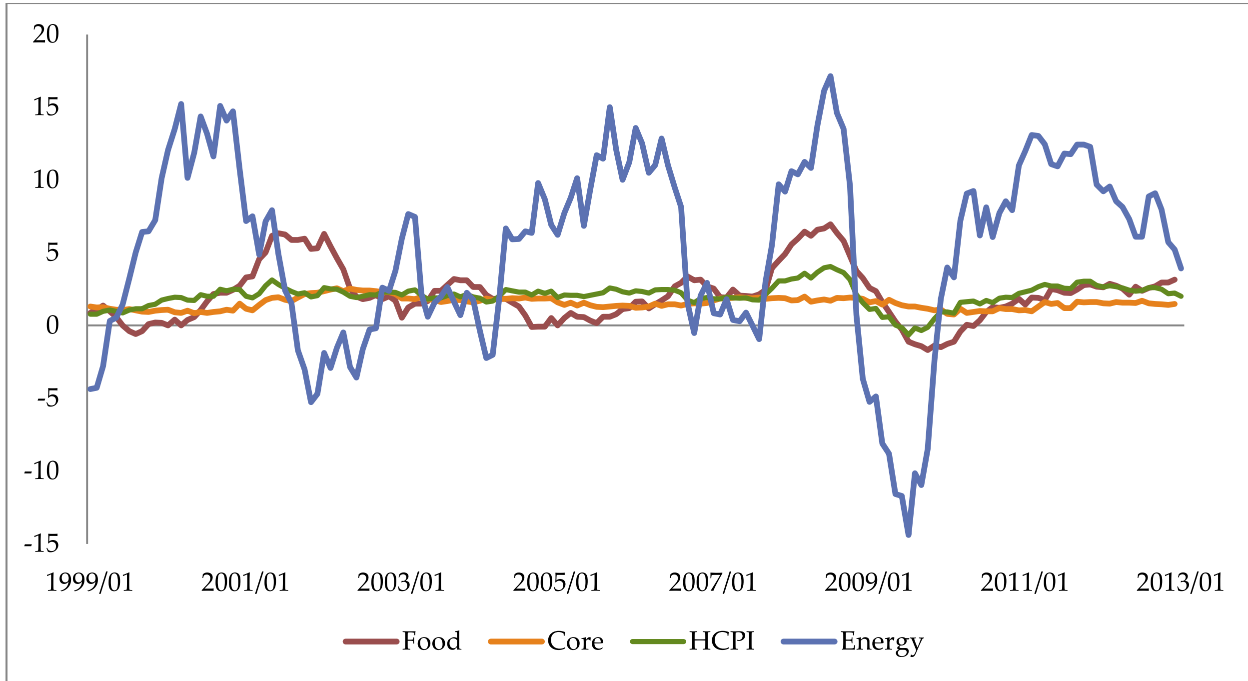
An important new feature, especially in the US market, is the large-scale development of shale gas and unconventional oils like bio fuels or gas to liquids. The IEA has estimated that the US will be the largest oil producer in the next five years and the largest gas producer by 2015. Energy raw material prices are expected to come under downward pressure over the near-term, provided geopolitical tensions stay in control.

Strong food price rises have also been an important driver of inflation globally. Even in industrialised countries, the rise in food price has affected inflation rates, where their weight in consumption baskets is relatively small. In China, food inflation is a measure that the government monitors closely when formulating its economic policies. The share of food in the consumption basket is at the moment about 30 per cent, compared to that of around 14 per cent in the Euro Area. Food price rises have been generated by the rising demand for land due to bio fuel production and by adverse weather conditions globally. Prices have decreased recently, but the situation is still very risky as bad weather could trigger a new food price spike. The Chinese inflation rate slowed from 2.5 per cent in December to 2 per cent in January, despite a 4.7 per cent rise in food prices.

Domestic unit labour costs, or labour costs adjusted for labour productivity, have been stable in the USA, rising (Germany, France, Italy, and Finland) or in a strong decline (Spain, Greece, Ireland and Portugal) since the onset of the Great Recession in winter 2008-2009. The decreasing unit labour costs in many Euro Area countries reflect the crisis in sovereign finance and the need for a major rebalancing in the affected economies. The very difficult recession has entailed rapidly declining total output and even more rapidly declining wages and employment. This has allowed relative cost levels to approach a more competitive level.

Core inflation (inflation less energy and food) has been well under control and it has fluctuated around 1.5 per cent in the Euro Area, around 2 per cent in the US and around -0.5 per cent in Japan (Figure 4).

Figure 4: Euro Area Harmonised Inflation by Main Groups



Source: Eurostat, ETLA

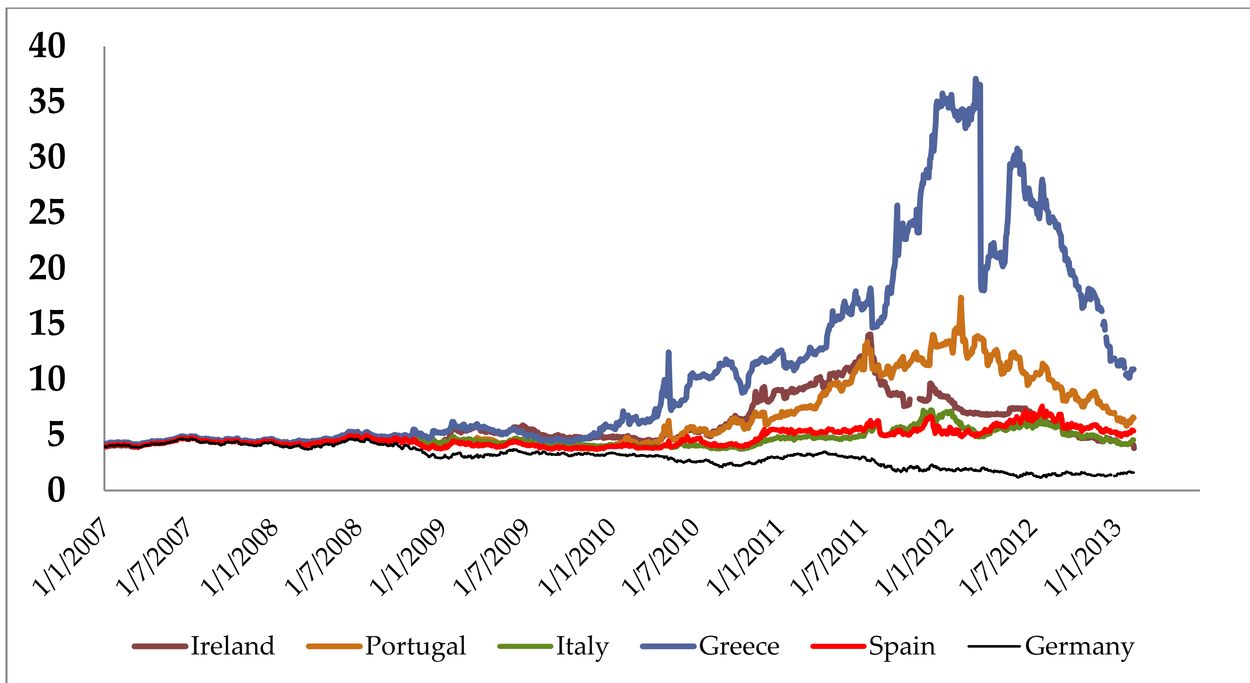
Monetary policy in industrialised countries is very accommodative, due to the sustained effort to revitalise economies. Steering rates of the central banks are very close to zero and unconventional measures are widely used to get economies moving. Some positive signs may be seen in the Euro Area, as confidence seems to have improved due to special measures by the ECB. In the US, where growth is comparatively strong, the Federal Reserve continues to ease the monetary stance. It has announced that the steering rate will stay close to zero as long as the unemployment rate remains above 6.5 per cent, expected inflation does not exceed the 2 per cent target by more than 0.5 percentage points and long-term inflation expectations remain contained. In addition, the Federal Reserve continues its monthly purchasing of mortgage-backed bonds at the pace of $40bn per month and longer-term treasury securities at a pace of $45bn per month. In Japan, the steering rates are close to zero and the unconventional asset purchase programme was recently expanded aiming to end deflation and ease the pressure on the strong yen. In China, the central bank is keeping its monetary policy 'prudent', but it watches inflation closely.

Exchange rates have fluctuated rather strongly in 2012 in response to the developments in the Euro crisis and to the carry–trade, where speculators try to benefit from low Japanese interest rates by borrowing in Yen and investing in high yield assets in other currencies like the Australian dollar. The

euro weakened strongly vis-a-vis the USD in summer 2012, when the speculation of the break-up of the Euro was at its strongest, but has since strengthened bringing it close to the level in spring 2012. The Japanese Yen strengthened up to September 2012 due to the carry-trade, but the expansionary economic policy recently adopted by the Bank of Japan and the new government has contributed to the strong depreciation of the Japanese currency between the end of 2012 and the beginning of 2013 (against US dollar and the euro). The Swiss franc and the Swedish krona have benefitted from their safe haven status.

Long-term bond markets have been dominated by the Euro Area crisis, where the yields of crisis countries rose to levels that forced them to apply for financial assistance (Figure 5). Bond yields of crisis countries have normalised since last summer due to the announcement of the OMT programme by the ECB (see Box 1). However, Spanish and Italian yields have recently reacted negatively to signs of weaknesses in the governance of these countries. The yields in the US and in the UK have hovered close to 1.8 per cent and in Japan close to 0.8 per cent, reflecting low inflation expectations and related modest growth outlooks.

Figure 5: 10-year Government Bond Yields in Selected Countries



Source: Bloomberg, Financial Times, ETLA

2.1. Key Risks

A further deepening of the financial crisis is a key risk for the Euro Area and the global economy. The risks related to the US budgetary decision making continue as the US 'fiscal cliff' issue is not resolved but merely postponed until March, and the debt ceiling debate is deferred until May 2013. While the quest for a resolution to the Euro Area crisis has progressed, this positive development is still insecure due to concerns about implementation of the proposed measures and their effectiveness. The situation remains sensitive to changes in confidence. Moreover, the bond markets could be destabilised again if the banking supervision agreement, which is the condition for the planned recapitalisation of banks directly by the ESM, is not achieved on time. The economic sentiment of the Euro Area has improved since October, mainly due to recent rapid improvements in the perception of Euro Area risks. The EUROFRAME Euro Growth Indicator, which is mostly based on survey data, points to almost stable growth at the turn of 2013. However, recently released fourth quarter GDP figures were weaker than expected in a number of Euro Area economies, including Germany, France and Italy, suggesting a continued vulnerability of the Euro Area economies.

The forecast decline in prices of oil and energy is possible, if geopolitical risks in the Middle East stay under control and growth in industrialised economies remains weak. On the other hand, acute political problems in the Middle East, particularly in Iran, could lead to severe supply problems, thereby triggering a sharp price rise.

Box 1: Crisis Management after Three Years of the Euro Area Sovereign Debt Crisis

The Euro Area has been struggling with its debt crisis since spring 2010, when markets started to doubt the sustainability of Greek public finances. The approach to resolving the crisis so far could be described as a trial-and-error process, where policymakers were continuously dealing with the threat of debt restructuring, due to unsustainably expensive market financing, the (un)willingness of member states, the European Commission and the IMF to finance the deficit of crisis countries, and the fear of contagion from crisis countries to other members. Action was taken when the market cost of financing government debt of the crisis countries had increased up to 6 or 7 percentage points. Until the second Greek bailout package in 2011, when the private sector had to voluntarily swap their bond holding of Greek government bonds for new bonds, with 53.5 per cent reduction in face value, the crisis was assumed to be a liquidity crisis. However, it soon became clear that the crisis is, at least partly, also a solvency crisis.

During a long march, the governance of the Euro Area has gradually been reformed, which may help in anchoring long-term expectations in the financial markets. Fiscal discipline has been strengthened, but the member states have remained unable to agree on a degree of economic policy coordination required to support growth and reduce imbalances between the member states. Additionally, governments in both crisis and non-crisis countries have made a number of decisions to consolidate

their public finances in order to improve market confidence, thereby reducing the negative contribution to growth in the Euro Area from this factor.

In spring 2010 financial markets reacted strongly to news of unsustainable Greek public finances, and the rapidly rising bond yields made the financing of the Greek deficit in the markets prohibitively expensive. The Euro Area countries tried to solve the crisis with the first Greek aid package and bilateral loans up to €110bn. This measure only postponed the crisis for one week, and a further rapid deterioration in the situation led to the establishment of the temporary European Financial facility (EFSF), a company issuing bonds, guaranteed by member states, to help Euro Area countries with severe problems in their public finances. The initial commitment of €440bn had soon to be lifted up to €780bn as the original sum appeared to be too small in relation to the scale of the risks.

Nevertheless, the crisis deteriorated further as Ireland was bailed out in the framework of the EFSF (with a lending package of €85bn) in November 2010 and Portugal (€78bn) in May 2011. As the crisis was still continuing, in June 2011 it was decided to set up a new intergovernmental organisation, the permanent Stability Mechanism (ESM), with subscribed capital of €700bn and effective lending capacity of €500bn. It became operational in October 2012. In summer 2011 it also became obvious that the first Greek package was not enough to remedy Greek public finance situation, and in October 2011 Euro Zone Heads of State agreed to a second financial assistance programme for Greece (€172.6bn) with private sector involvement. It was accepted in March 2012.

In the second half of 2011 contagion spread to Italy and Spain. This was calmed by the ECB bond buying. The ECB then decided to finance banks in crisis countries with two long-term financing operations (LTRO) together amounting to €1000bn for four years with low rates. However, this massive injection of money did not ease market pressures permanently. Greece was not able to fulfil its obligations, partly due to weak implementation and partly due to a severe depression. In June 2012, Cyprus made a request for financial assistance. Italy and Spain again were perceived as having problems in the summer of 2012 as their bond yields rose to critical levels. After long negotiations, in autumn 2012 it was announced that Greece was eligible to receive money from the ESM under its second financial assistance package. Conditional on the buy-back of Greek bonds by the government of Greece, a number of measures were taken to relieve the Greek debt burden in the early winter. For example, maturities of bilateral loans were extended by 15 years, and the income that national central banks receive from their SMP (Security Market Program) operations with Greek bonds was to be passed back to Greece as a form of financing. Greek problems spread to Cyprus due to the large exposure of Cypriot banks to Greek government debt. Cyprus applied for assistance in June 2012, but this is still under negotiation and will probably be agreed during the spring of 2013. This rescue plan is expected to include bail-in of private investors and depositors to reduce the size of bail-out.

In response to an increased risk of a break-up of the Euro Area, the ECB promised to restart buying high-yield countries' bonds on the condition that member states apply for financial assistance from the ESM. In principle, these Outright Monetary Transactions (OMT) imply unlimited bond purchases by the ECB, and have, so far, calmed the markets, thereby reducing the interest rates in the crisis countries substantially (see Figure 5 above). The decision to establish a single supervisory mechanism (SSM) under the ECB for the oversight of credit institutions gives the ESM the possibility to directly finance Euro Area banks. In addition, as such ESM financing is not counted as part of the public debt, the planned resolution mechanism for banks should help breaking the link between banks and state finances.

The OMT, a "big bazooka", combined with proposed European banking regulation, strengthened fiscal discipline in the Euro Area. Together with financial backstops (EFSF/ESM) it could, in principle, provide the tools to solve the debt crisis. The market reaction to the OMT announcement has, in fact, been favourable and it suggests that the strategy is working, despite the fact that no application has been submitted for funding and no purchases have taken place. The strategy for future crisis management is to continue restrictive fiscal policies across the EU, while aiming to formulate policies which will enhance competitiveness and growth under relatively calm financial market conditions.

However, the economic crisis is not resolved. The chosen strategy is vulnerable to setbacks in political commitments of some member states, which could potentially lead to a new intensification of the crisis, beyond the current capacity of crisis management mechanisms.

The easing of the European debt crisis is not only reflected in recent price dynamics; volume measures also point towards a steady improvement. In particular, Target2 attracted attention as a measure of interbank and euro zone liquidity conditions for most of 2012. The build-up of Target2 liabilities in the periphery was due to capital flights as banks in the core countries withdrew funds from those sovereign debt markets and residents in peripheral countries sent their capital abroad. That left peripheral debt markets short of liquidity needed to fund both public and private debt markets, and credit prices became a very visible sign of euro-area disintegration. As the euro crisis progressed, the system became more unbalanced (with potential large losses for creditor countries, such as Germany, if a Euro Area member country was forced to exit the euro zone). The most recent numbers indicate, however, that a reversal is underway. ECB statistics show that deposits in Spanish and Greek banks have recently increased. In addition, capital flight from Southern Europe has stopped, and it has even slightly reversed in recent months, which is very likely a late reaction to the Outright Monetary Transaction (OMT) announcement. However, imbalances are still large. Nevertheless, a reversal of the previous trend provides a glimmer of hope, particularly because it is mirrored by falling debts at the other end of the transfer system: the combined Target2 debts owed by Italy, Spain, Greece, Portugal and Ireland shrank from €989 billion at the end of August 2012 to €840 billion at the end of December.

For Ireland, financing conditions were further improved as a result of an agreement with the ECB ("unanimously noted" by the governing council) on the 7th of February 2013, which reduces the short-term financing needs of the Irish government.

3. External Environment

3.1. China

In the fourth quarter of 2012 Chinese GDP grew by 7.9 per cent, from 7.4 per cent in the third quarter. While domestic demand seems to have bottomed out in the summer, trade is still weak. A weak external environment, burdened by the economic difficulties of the US and Europe, a moderate pace of growth in other developing countries, and also the economic fall-out from the territorial dispute with Japan, are all restraining foreign demand. The latest data suggest an improvement in exports. However, it is not yet clear whether the firmer external demand will be sustained, and the picture is unlikely to gain clarity before mid-2013, given that data for January are usually not published and information about the first two months of the year are biased by the Chinese New Year holidays.

Evidence of the recovery in domestic demand is supported by all the main indicators, although the pace of the rebound is moderate. The construction sector shows some growth, mainly in the Beijing area, and house prices are growing both year on year and quarter on quarter in the 70 cities sample index. The real estate climate index is also improving on the whole. Industrial activity is recovering, but the rate of expansion of about 10 per cent y-o-y is still lower than in the earlier months of 2012. A relatively strong expansion is taking place in the production of cement, steel and other intermediate products, while the automotive sector is weak. Purchasing manager indices are in the expansion territory, the main exception being the "new export orders" sub-index, which is still pointing to contraction, while the overall "new order index" is now at its highest level since April 2011. Retail sales were solid throughout 2012 and have accelerated slightly in recent months.

Monetary policy has reversed its stance in the last year, both relaxing reserve requirements and credit rules for commercial banks and cutting policy rates. Despite some upward tensions on the food-sub index, the inflation rate is still low (2.5 per cent in December 2012 and 2 per cent in January 2013), and the Central Bank still has room for further expansionary measures if the current rebound turns out to be short-lived.

As far as fiscal policy is concerned, local administrations have planned a significant number of new investment projects, although it is likely that only a small part of them will actually be financed. Fiscal plans will become clearer after the coming National People's Congress in March 2013, when the new ruling leadership should define the guidelines for the central fiscal policy for the few next years and shape the path for upcoming reforms. It is unlikely that major new investment packages will be proposed.

We expect GDP to grow by 8.3 per cent on average this year due to the support of monetary policy, the improvement in the external environment and the absence of inflationary pressures. For 2014 we expect a slightly lower GDP growth rate of around 7 ½ percent, in line with a general slowdown of potential output that seems to be underway in China.

3.2. US

According to the advance estimate, US GDP roughly stalled in the fourth quarter of 2012 (-0.1 per cent annualised change), after a strong acceleration in the third quarter (3.1 per cent annualised growth). As expected, temporary factors, which had sustained growth in the third quarter, have faded. Private inventories took a downturn, and public sector expenditures declined and were only partly offset by the upturn in non-residential fixed investment and by the decrease in imports. Private consumption continued to grow at an accelerated pace (2.2 per cent annualised growth) in the fourth quarter compared to the third quarter (1.6 per cent annualised growth). Nevertheless, GDP weakness in the last three months of 2012 reflects also the one-off damages by the storms that hit the east coast.

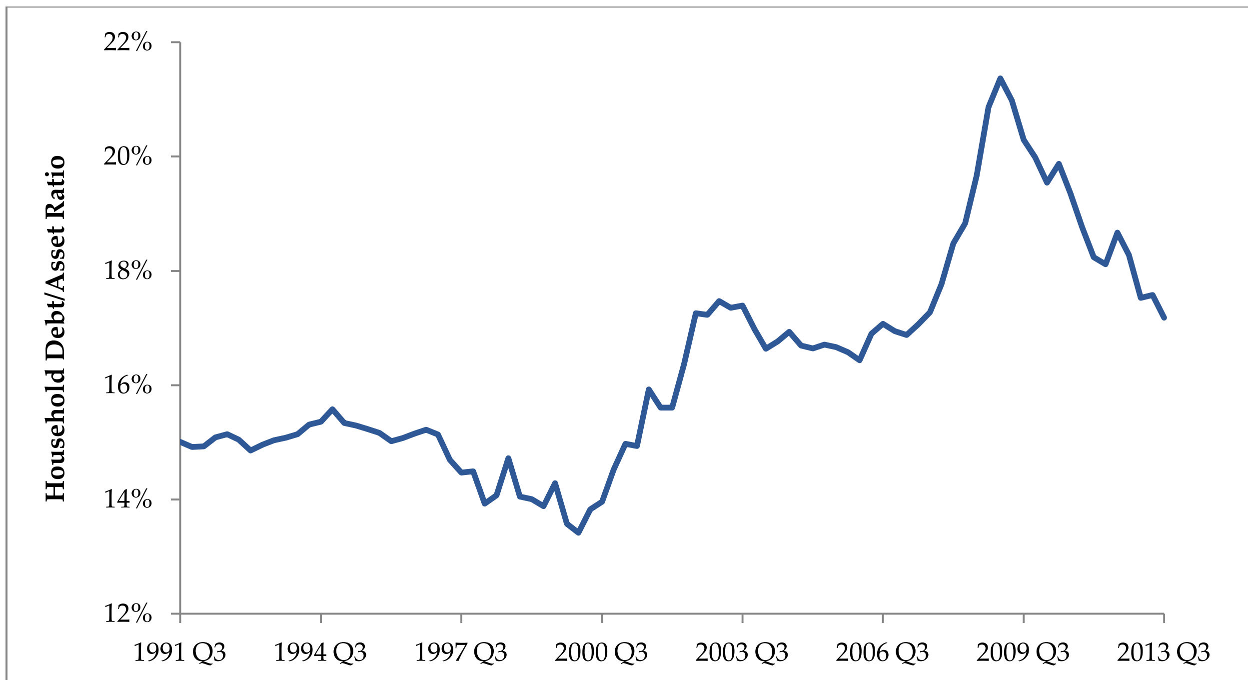
In December the Federal Reserve, in its commitment to foster employment, expedited the expansion of its balance sheets and linked future increases of the targeted federal funds rate to an unemployment rate below 6.5 per cent, conditional on projections of inflation remaining below 2.5 per cent. While in the strictest sense the new measures do not represent an additional stimulus with respect to the stance at the end of 2012, the explicit unemployment rate target provides greater transparency on the FED's decision-making process and contributes to reduce uncertainty around the future interest rate path in the US. The additional purchases of longer term Treasury securities of roughly $45 billion a month from January 2013 replace the Maturity Extension Program (twist operations), which was completed at the end of December.

The fiscal agreement reached on 1 January and the decision to eliminate the nation's statutory borrowing limit until next May avoided the full impact of the fiscal cliff and has significantly eased uncertainty. Among the approved measures, the extension for 2013 of the emergency unemployment insurance and the fiscal bonus for investments will support consumer spending and business investments this year, but overall the fiscal drag will curtail growth, with tightening measures amounting to at least 1.4 per cent of GDP this year. An agreement on the automatic cuts to expenditure is still missing (around half percentage point of GDP), and on 27 March the funding for government programs operating under the Continuing Appropriations Resolution 2013 will expire. If the full legislated spending cuts for this financial year are allowed to go ahead in March, this would reduce projected growth in the US relative to the assumptions underlying this forecast.

We expect the US economy to grow by around 2¼-2½ per cent per year in 2013 and 2014. This will be sustained by monetary policy, but we expect the reduction in the disequilibria that contributed to the Great Recession to continue. The debt/asset ratio for households is close to its pre-crisis level, owing to

both the stabilisation of liabilities and the recovery of financial and real asset prices (Figure 6), but the number of employees is still lower than the pre-crisis level. Much of the decline in the headline unemployment rate since its peak in 2009 has been achieved through labour force withdrawal, rather than employment growth. With respect to employment, the current recovery proves to be the slowest since the Second World War, with negative effects on the formation of household disposable income. In addition, the number of long-term unemployed (27 weeks or more) still accounts for more than 35 per cent of the unemployed, representing a drag for potential growth in the future.

Figure 6: Household Debt/Asset Ratio (including housing): 1991Q3 - 2012Q3



Source: Fed Flow of Funds Accounts, Prometeia

3.3. UK

The UK economy experienced a deceleration over the past three years, from 1.8 per cent in 2010, to 0.9 per cent in 2011 and 0 per cent last year. This represents the slowest post-recession recovery in output in the past one hundred years; at the end of 2012 the economy was only ½ per cent larger than at the third quarter of 2010. The poor performance of overall output is in stark contrast to the labour market, where employment is 1 per cent higher and average hours worked 0.7 per cent higher than in the third quarter of 2010. As this implies, the UK's productivity performance has been weak over the course of the past 5 years. Output per hour worked in the third quarter of 2012 was 2.6 per cent below the level at the start of 2008.

Export volumes, which contracted in 2012, are expected to barely provide a positive contribution to GDP growth in 2013. The EU is the UK's single largest export market, accounting for 47.5 per cent of all UK exports (goods and services) in 2011, and the weakness of demand there is one of the major reasons behind this poor performance. But this is not the only reason. UK exporters have continued to lose market share, even after sterling depreciated sharply. The sterling effective exchange rate depreciated by around 22 per cent between the third quarter of 2007 and fourth quarter of 2009 yet exporters' price competitiveness gains have been less than half this. Exporters do appear to have absorbed the depreciation into attempting to maintain or widen profit margins, rather than gain market share, possibly in response to concerns over access to working capital and predictable cash flows during the financial crisis.

We expect GDP to increase by 0.7 per cent per annum this year, accelerating to 1.6 per cent per annum in 2014, supported by an expansion of domestic demand of around 1.5 per cent per annum in each of these years. Domestic demand growth is expected to be delivered through consumer spending and business investment growth. We have assumed that business confidence returns over the coming years and, with the easing of the uncertainty over the outlook for future demand, the volume of capital spending by business will accelerate. If such conditions fail to materialise then business investment growth may well turn out to be weaker than our forecast suggests. However, a certain degree of spending is required to ensure that the stock of capital is not depleted over time.

The labour market is expected to continue its remarkable performance. We expect the unemployment rate to remain at around 8 per cent over the next couple of years and for labour market participation to remain elevated. In the three months to November the participation rate of those aged 16-64 stood at 77.5 per cent, higher than before the onset of the Great Recession in 2008. Over the next couple of years we expect the labour input to continue to rise, suggesting little or no productivity growth and prolonging the period over which the UK's productivity conundrum persists.

There is a debate raging in the UK over what are the solutions that explain this productivity puzzle. As with most things, the answer is likely a combination of most of them. However, at the time of writing no research programme has provided any robust explanation.

If measured productivity has declined due to weak demand then firms may be hoarding labour and consequently have significant spare capacity. The drop in real product wages since 2008 would have enabled firms to hoard labour (Holland *et al*., 2010). However, it seems implausible that firms would hoard labour for a period of five years. But in the presence of weak demand the UK is likely to be experiencing some degree of labour underutilisation (Martin and Rowthorn, 2012). Even so, these hypotheses do not explain the increases in employment since 2010.

Some commentators have suggested a measurement component as part of the explanation: that the pre-crisis level of output and productivity were inflated by a 'virtual' component. After the financial crisis

ends, this virtual output will not recover. Aghion, *et al.*, (2013) and Barrell *et al*. (2011) both estimate that the financial sector contributed only modestly to overall productivity growth, in the decade prior to 2008. This 'virtual' argument cannot explain the magnitude of the poor productivity performance since then.

It is possible that there has been a decline in total factor productivity due to shocks to the factors of production themselves. In particular the drop in investment activity: in the third quarter of 2012 the volume of business investment was still 11.6 per cent below the level at the end of 2007. While NESTA (2012) estimate that intangible investments[1] have declined by about 20 per cent since 2008. However, it will take a number of years of sub-par investment to have meaningful effect on productivity. But adjustment of real product wages coupled with heighted demand uncertainty may have led to firms substituting labour for capital (Disney, *et al*., 2013).

Finally, the potential for the misallocation of capital, reinforced by very loose monetary policy and an impaired banking system's willingness to use forbearance, has been put forward as an additional explanation. Broadbent (2012) has argued that the widening dispersion of rates of return across sectors is an indicator of the misallocation of capital. Firm turnover in the UK remains subdued with both corporate sector liquidations and firm creation rates remaining low (Disney *et al*., 2013).

3.4. Central and Eastern Europe Outside the Euro Area

In 2012 the macroeconomic situation in the majority of Central and Eastern European EU member states outside the Euro Area has deteriorated. Overall GDP growth in seven CEE countries slowed to below 1 per cent (compared to more than three per cent in 2011). The strongest impact was coming from the slowdown in Poland, where both investment and household consumption grew by less than 1 per cent. Investment demand (after very robust growth in 2011) declined, due to cuts in companies' outlays, and utilisation of the EU funds was not strong enough to compensate for this process. Household consumption declined to historically low levels following a fall in real incomes and the barrier of historically very low savings rate. Households used to smooth their consumption during periods of low growth in incomes and, in the past, private consumption used to be the most important engine of growth in Poland. Currently there is not much room for a reduction in savings rates and households are restraining their consumption. The positive contribution from net exports compensated for the 0 growth in domestic demand.

Conditions were worse also in the Czech Republic and Hungary, where GDP has dropped by more than 1 per cent. The external trade surplus was not high enough to fully compensate for the drop in

[1] Intangible investments include investment in R&D, training and development, software development, branding, design and business process and advertising.

domestic demand (consumption and investment). In Bulgaria the expected growth of GDP, at 1 per cent, also reflects a fall in net exports, which were offset by strong consumer demand.

The brightest situation was in Latvia where GDP grew by over 5 per cent, driven by robust investment (over 15 per cent), strong consumer demand and a modest positive net export component. In Lithuania economic growth was also relatively high (3.6 per cent), with strong household consumption and a positive contribution from net exports, offsetting 0 growth in investment. In both countries strong de-stocking contributed negatively to total GDP growth.

The outlook for Central and Eastern Europe in the coming years depends on the prospects for the EU, as well as internal fundamentals. The growth rate in New Member States outside the Euro Area should be only slightly above 1 per cent in 2013, and close to 3 per cent in 2014. In 2013 we expect some acceleration in growth in the Czech Republic, Hungary, Bulgaria and Romania, which should compensate for the further slowdown in Poland and Baltic States. GDP dynamics in Poland will be driven entirely by net exports, with very weak consumer demand and a contraction in investment (GDP growth at 1.5 per cent in 2013 and 2.6 per cent in 2014). Although companies still enjoy a fairly favourable financial situation, the recessionary mood in the EU, as well as slow growth in the domestic market, will limit their investment plans and reduce employment. Experiencing "the employer market", with growing unemployment (harmonised unemployment rate above 11 per cent), wage growth will remain at the level of inflation, which will further restrain household incomes. 2014 should see a gradual improvement in the labour market and the investment situation. Having experienced a high utilisation of EU funds in 2012, 2013 can only bring stagnation in this area, added to a further fall in companies' outlays. In 2014 the funds from the new EU financial perspective will not yet have an impact. In the Czech Republic and Hungary, domestic demand will improve only slightly, with net exports continuing to contribute positively to GDP growth. Domestic demand in the Baltic region should slow down. Confidence should gradually return and this will help to overcome internal restrictions on domestic demand in some countries. Overall, an acceleration in growth in 2014 is expected in all seven CEE countries.

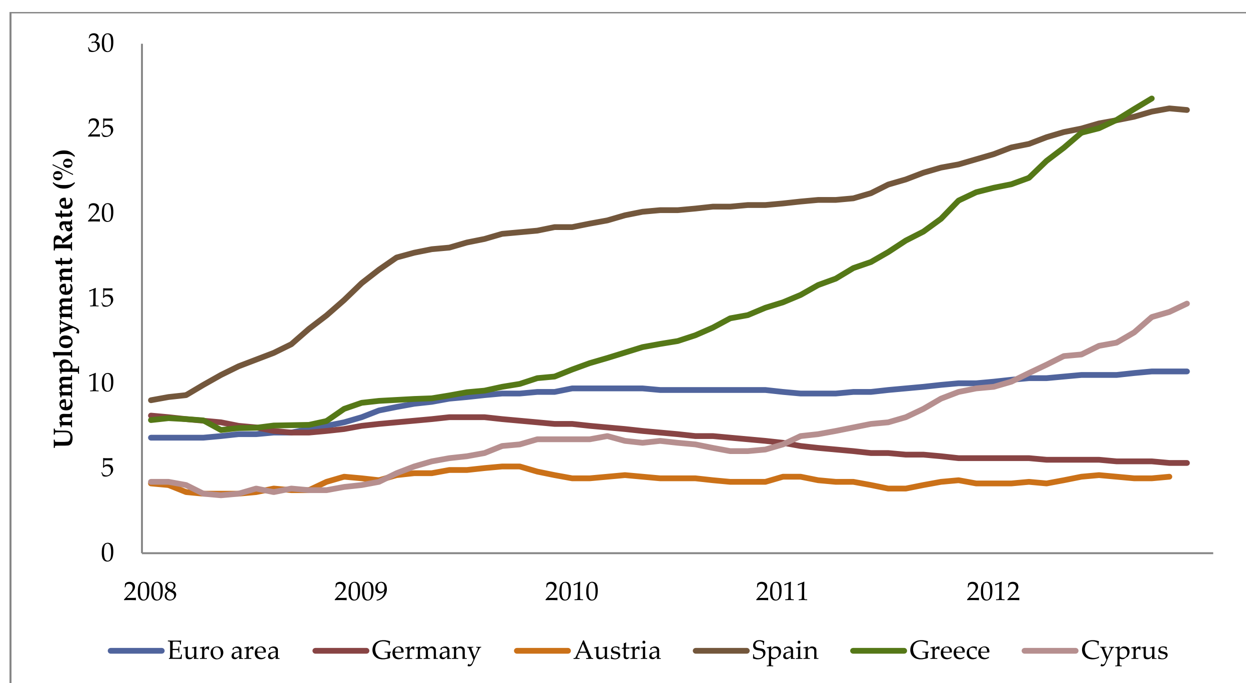
4. Forecast for the Euro Area

The recession in the Euro Area, which started in the second half of 2011, has been maintained throughout 2012. Fiscal policy was tightened further in response to the sovereign debt crises and deleveraging in the private sector continued. In the fourth quarter of 2012, the decline in GDP has accelerated again to a rate of 0.6 per cent, marking the fifth consecutive quarter of shrinking output in the Euro Area. Slowing demand and uncertainty about the evolution of the Euro Crisis, coupled with bank financing constraints in some countries which are experiencing severe problems in the banking sector, led the corporate sector to sharply reduce investment. With housing markets in recession in several countries and public investment cuts, fixed investment in 2012 was down by 4 per cent year on year. Private consumption was also reduced substantially (-1 per cent). Real disposable incomes suffered as labour incomes declined because of falling employment (and in a number of countries also because of wage cuts), and taxes were raised in order to reduce government budget deficits. While imports contracted slightly in response to weak domestic demand, exports held up relatively well, increasing by more than 3 per cent. As a result, net exports made a 1.5 percentage points contribution to GDP growth.

In the course of 2012, the scale of the downturn in the Euro Area increased. While in the first half of the year strong contraction of activity in the countries following adjustment programmes was still partly balanced by a number of countries so far less affected by the crisis (including Germany, Austria, Finland, Slovakia), the deterioration of sentiment in the second half was broad-based. GDP in the fourth quarter looks to have been falling almost everywhere. However, the Euro Area continues to face dramatic differences in cyclical positions with some countries (especially those directly hit by sovereign debt crises) mired in severe recessions, and others experiencing downturns which, so far, have been relatively mild.

This situation is clearly reflected in the labour market. In the Euro Area as a whole the unemployment rate rose by 1 percentage point in the course of 2012 to reach 10.7 per cent of the labour force in the last three months of the year (Figure 7). However, this masks large differences across countries. The situation is most desperate in Spain and Greece, where unemployment rates are in excess of 25 per cent, and a severe deterioration has also been registered in Cyprus, where the unemployment rate jumped by 4 percentage points to almost 15 per cent. At the same time, in Ireland, Portugal and more recently also in Italy, the labour market seems to have stabilized, although with unemployment at very high levels. On the positive side, the labour market remained robust in countries such as Germany, Austria and Finland, where unemployment rates have remained constant or declined from already relatively low levels (Figure 7).

Figure 7: Unemployment Rates in Selected Euro Area Countries

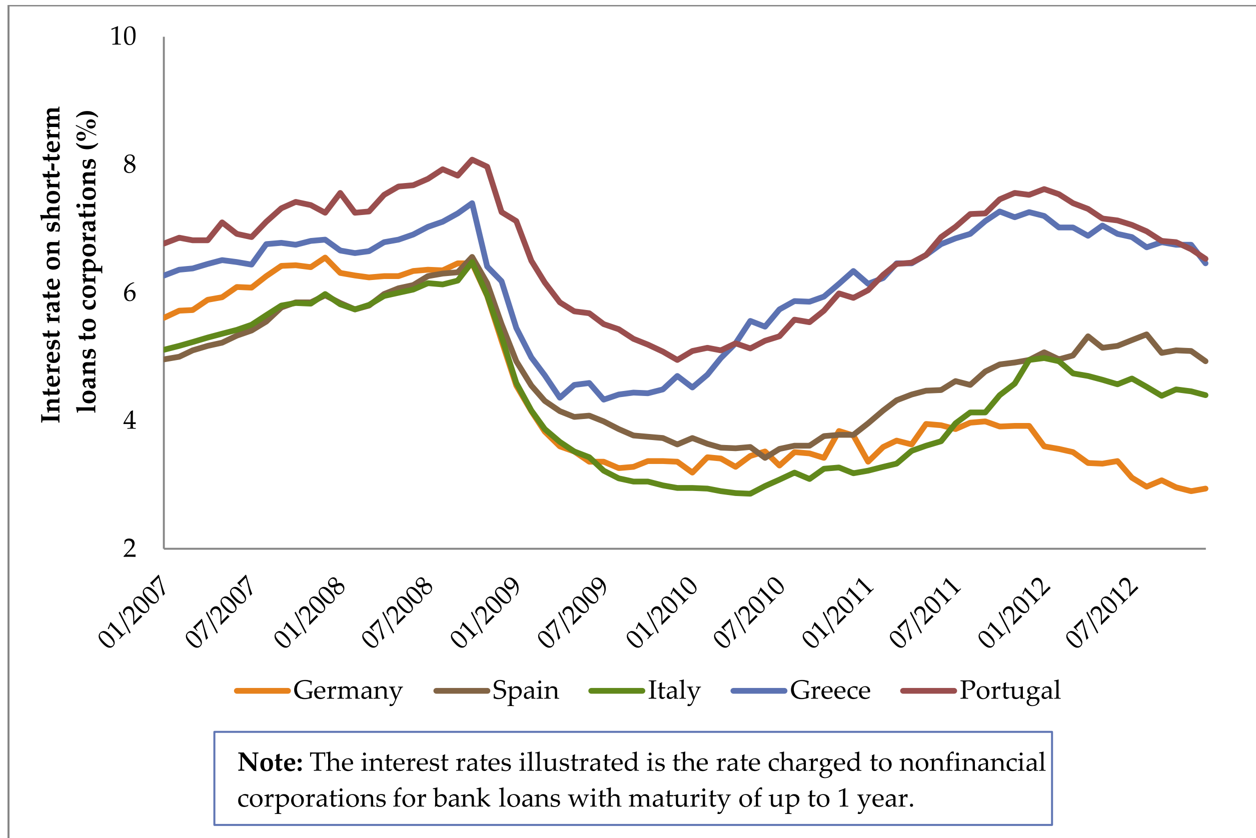


Source: Eurostat, IfW

Consumer price inflation was moderate in recent months. Whereas it hovered around 2.5 per cent in the first nine months of 2012, it has come down to 2 per cent in January 2013. Energy prices also increased at a slower pace. Inflation is still driven to some extent by higher excise taxes. The main VAT rate was increased by 3 percentage points in September in Spain and by 2 percentage points in October in the Netherlands. Finland has increased its rate by 1 percentage point at the start of this year. The impact of excise tax increases is currently significant also in Italy and in Portugal. The combined effect of such measures on inflation in the Euro Area was 0.5 percentage points at the end of 2012, according to figures from Eurostat. Taking account of the impact of taxes and strong price fluctuations (such as in energy and fresh food), underlying inflation in the Euro Area is currently at around 1 per cent.

The monetary and financial environment for the Euro Area economy has improved in recent months. Undoubtedly, the sovereign debt crisis continues to weigh heavily on economic activity in many countries. However, the divergence in financing conditions between individual countries has been reduced in the second half of 2012. Following the introduction of the OMT programme by the ECB (see Box 1 above), risk spreads of government bond yields of programme countries over German bond yields declined substantially (Figure 5 above), and the interest rate differential for bank credit between the crisis countries and Germany ceased to widen (Figure 8).

Figure 8: Interest Rates or Corporate Loans With Maturity of up to One Year

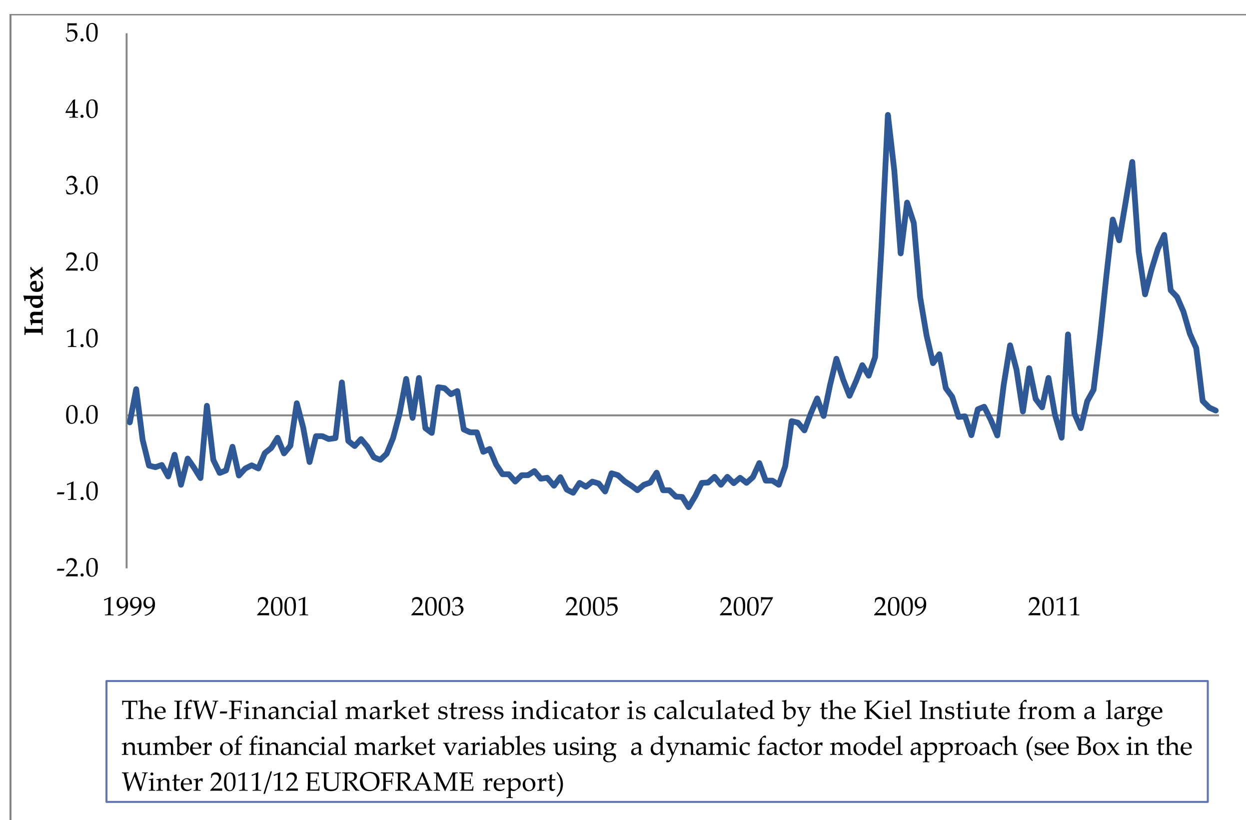


Note: The interest rates illustrated is the rate charged to nonfinancial corporations for bank loans with maturity of up to 1 year.

Source: ECB, IfW

The Financial Market Stress Indicator calculated by the Kiel Institute, which summarises the financial environment by aggregating a large number of financial market variables (see Box in the Winter 2011/12 EUROFRAME report), came down steeply to reach almost neutral territory, after having peaked at an extraordinarily high level in July (Figure 9). Our forecast is based on the assumption that financial strains in the Euro Area will gradually ease over the forecast horizon. There are, however, clear down-side risks associated with this assumption. Renewed financial market stress, which could impact negatively on confidence and activity in the Euro Area, remains a threat to the outlook, as economic policy has not established a consistent medium-term strategy to resolve the crisis.

Figure 9: IfW Financial Market Stress Indicator for the Euro Area 1999-2013



Source: IfW Kiel

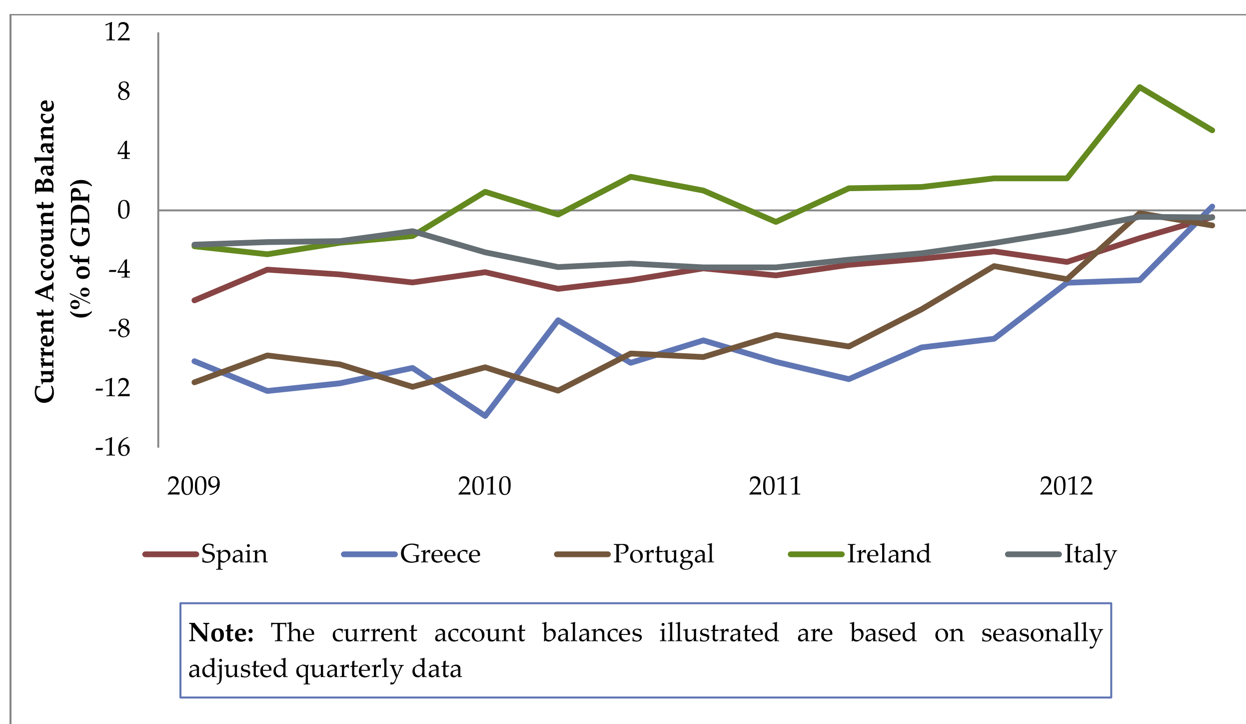
While monetary policy is projected to remain expansive, with the main refinancing rate stable at 0.75 per cent over the next two years, fiscal policy will continue to be a drag on growth over the forecast horizon. In 2012, governments' efforts to consolidate their budgets continued unabated. The deficit targets agreed upon with the Commission were, nevertheless, generally missed, mainly because revenues undershot expectations. Not only was the recession generally stronger than expected, but it also turned out that parts of the economy with a high tax elasticity were particularly badly hit. In 2013, governments plan to continue with their policies aimed at improving the structural budget balance. We expect another substantial negative fiscal impulse of 1 percent of GDP. As a result, the combined general government deficit in the Euro Area countries should shrink, despite stagnant output, from 3.2 per cent of GDP in 2012 to 2.7 per cent in 2013. In 2014, we expect the fiscal stance to become less restrictive (with a discretionary fiscal impulse expected to decline to -0.4 per cent in 2014). This still implies a negative fiscal stance in almost all Euro Area countries, especially in the more fragile ones (Portugal, Greece, and Ireland). Only in Germany and Italy would the fiscal stance be close to neutral. Due to a recovery in activity, the aggregated Euro Area budget deficit should, nevertheless, decline to 2.1 per cent.

Sentiment indicators suggest that the economy is approaching the trough in the current cycle. The Commission's Economic Sentiment indicator in January 2013 improved for the third consecutive month. However, the level of confidence is still very low and data so far fail to show any improvement: industrial production and turnover, construction activity and retail sales volumes all continued to decline towards the end of last year, suggesting that economic activity in 2013 is starting from a very low base. We nevertheless expect Euro Area GDP to stabilize at the beginning of 2013, followed by a gradual recovery afterwards. The EUROFRAME Euro Growth Indicator has started to improve. An additional element supporting this view is the fact that real M1 has recently started to increase again. This indicator has proved to have substantial predictive power with respect to Euro Area output developments 6-12 months ahead.

Growth in exports should strengthen, albeit moderately, due to improvements in the external environment in both the advanced economies and in the emerging economies. Under the assumption that uncertainties around the future of the Euro Area will continue to subside, domestic demand is projected to pick up in Euro Area countries which have not implemented strong fiscal tightening and enjoy accommodative financial conditions (e.g. Germany). Investment activity should pick up, reflecting extremely low interest rates and relatively high capacity utilization. Private consumption is also expected to start increasing significantly in this group of countries, underpinned by solid gains in real disposable incomes. In many other countries of the Euro Area, however, domestic demand will remain depressed by fiscal restraint and structural adjustment processes in the private sector. The divergence of developments in domestic demand will help the process of rebalancing within the currency area to progress. Structural adjustments in public balances and in labour costs have already contributed to a substantial improvement in the current accounts of the crisis countries (Figure 10), even if much of this development may be of cyclical nature. The correction of the current account positions may not yet have gone far enough to improve the external asset positions of these countries on a sustained basis.

Overall, any recovery in economic activity in the Euro Area as a whole is expected to be modest for the time being, resulting in a further contraction in GDP year-on-year in 2013. In 2014, confidence is expected to improve, and the fiscal impulse will be less negative. Therefore, GDP is expected to grow by 1.3 per cent next year. Such a rate will, however, not be enough to significantly reduce unemployment. The unemployment rate in the Euro Area is forecast to rise to 12.4 per cent this year and remain close to 12 per cent in 2014. Given our assumption of a gradual decline in oil prices and a stronger euro, inflation is projected to drop to 1.5 per cent in 2013 before rising slightly to 1.6 per cent in 2014. The current account surplus of the Euro Area is forecast to rise above 2 per cent of GDP this year and next, from an estimated 0.8 per cent in 2012.

Figure 10: Current Account Balance in the Euro Zone Crisis Countries



Note: The current account balances illustrated are based on seasonally adjusted quarterly data

Source: Eurostat; national central banks, IfW

Table 2: Euro Area Forecast Details

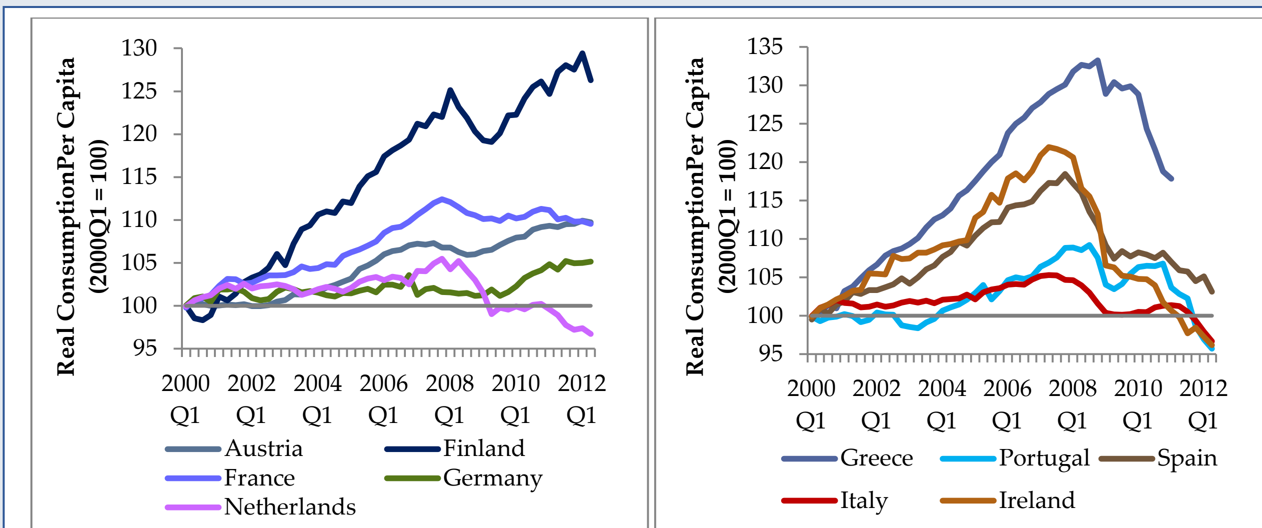
	annual percentage change						
	2008	2009	2010	2011	2012	2013	2014
Consumption	0.4	-0.9	0.9	0.1	-1.2	-0.5	0.4
Private investment	-1.9	-14.4	0.2	2.1	-4.5	-1.8	3.7
Government expenditure	2.1	2.4	0.3	-0.3	-0.6	-1.4	0.0
Stockbuilding(a)	-0.1	-0.9	0.7	0.2	-0.4	0.0	0.1
Total domestic demand	0.2	-3.7	1.4	0.6	-2.1	-1.0	1.0
Export volumes	0.9	-12.4	11.0	6.5	3.0	2.3	6.1
Import volumes	0.7	-11.0	9.5	4.3	-0.7	0.9	6.3
GDP	0.3	-4.3	2.0	1.5	-0.5	-0.3	1.3
Average earnings	3.4	3.1	1.0	1.7	1.4	1.2	1.2
Harmonised consumer prices	3.3	0.3	1.6	2.7	2.5	1.5	1.6
Private consumption deflator	2.6	-0.5	1.7	2.5	2.2	1.6	1.6
Real personal disposable income	0.8	0.0	-0.6	-0.7	-1.3	-0.6	0.3
Standardised unemployment rate, %	7.7	9.6	10.1	10.1	11.4	12.4	12.0
Govt. balance as % of GDP	-2.1	-6.3	-6.2	-4.1	-3.2	-2.7	-2.1
Govt. debt as % of GDP	70.2	80.0	85.4	87.3	93.5	94.0	92.9
Current account balance as % of GDP	-1.5	-0.2	0.0	0.1	0.8	2.2	2.3

Box 2: Trends in Consumption since the Crisis

Household consumption is the single largest component of the Euro Area economy, accounting for nearly 60 per cent of GDP on average over the period 2000 to 2012 (European Commission, 2013). In light of the contraction in GDP experienced during the crisis in many Euro Area economies, movements in consumption represent a key economic indicator, and it is therefore important to understand its determinants.

The beginning of the last decade saw a positive trend in real private consumption across Europe. However, Figure 1 illustrates a stark divergence in the path of consumption between the non-crisis economies (Germany, France, Austria, Netherlands, Finland) and crisis economies (Portugal, Italy, Ireland, Greece, Spain) of Europe after the onset of the financial crisis. On the one hand, the non-crisis nations suffered declines of varying degrees in their levels of per capita consumption but have, for the most part, seen consumption return to growth. On the other hand, the crisis nations have experienced much larger falls in consumption than any of the non-crisis nations, and as of 2012 Q2, they have failed to demonstrate a flattening out of consumption levels or a return to growth.

Figure 1: Trends in Real Per-Capita Consumption in Crisis and Non-crisis countries (2000Q1=100)

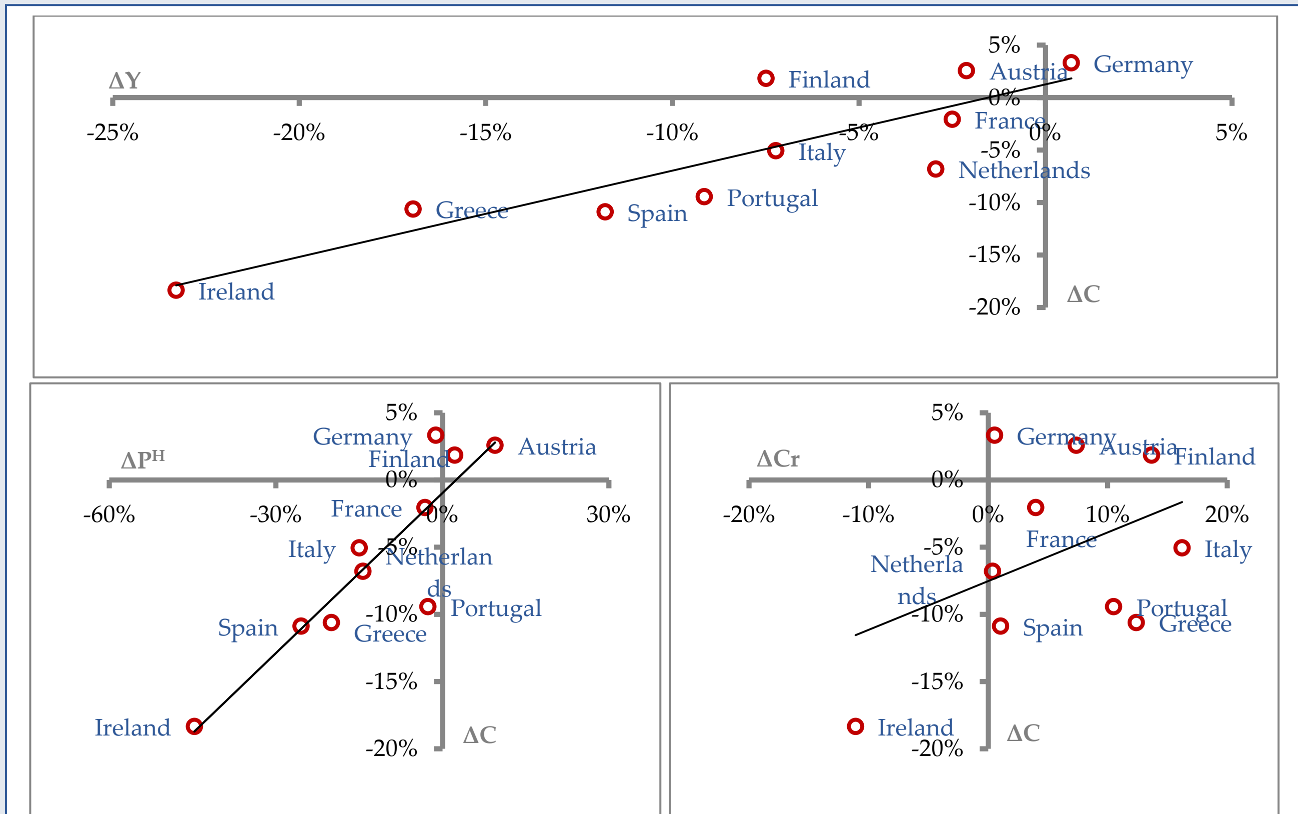


Source: O'Connell et al. (2013)

Note: Data in O'Connell et al. (2013) was obtained from various international sources, including Eurostat, the IMF

Following analysis by O'Connell et al. (2013), the observed changes in consumption since the onset of the crisis can be related to changes in three key variables – income, housing wealth, and credit – as illustrated in Figure 2. This relationship is positive: declines in real personal disposable incomes per capita, real housing wealth, and the supply of private credit are associated with declines in real consumption per capita.

Figure 2: Relationship between changes in Real Consumption Per-Capita and Changes in Real Incomes per Capita, Real Housing Wealth, and Supply of Credit between 2008 Q1 and 2011 Q4 in European Economies



Legend:
ΔC – Change in real household consumption per capita over the period 2008Q1 to 2011Q4*
ΔY - Change in real personal disposable income per-capita over the period 2008Q1 to 2011Q4*
ΔP^H - Change in real house prices over the period 2008Q1 to 2011Q4*
ΔCr - Change in the supply of private credit over the period 2008Q1 to 2012Q1*

Notes: *For Greece the change in consumption, house prices and supply of private credit is measured over the period 2008Q1 to 2011Q1 because of data availability issues.
** Data in O'Connell et al. (2013) was obtained from various international sources, including Eurostat, the IMF and the UN, and may not be entirely consistent with data from national sources

The observed positive relationship between changes in consumption and changes in real personal disposable incomes during the crisis (Figure 2, upper part) could have occurred because consumers revised income expectations downwards, experienced an increase in personal taxes, engaged in increased precautionary saving in the face of an uncertain economic outlook and in anticipation of increased future tax bills, and/or faced credit constraints, which prevented them from offsetting the decline in income through borrowing. In fact, the relationship between changes in credit and changes in consumption since 2008Q1 illustrated in the bottom right part of Figure 2 suggests that credit constraints are not an issue for consumers in non-crisis economies, but that decreases in credit supply

during the crisis could be restraining consumption expenditure in crisis countries, such as Ireland. It is also important to note that data for 2011 and 2012 show declines in credit supply not only in Ireland but also in Spain, Portugal and the Netherlands, suggesting that credit constraints might also be holding back consumption in these countries. Moreover, there is evidence that more highly indebted households tend to restrict consumption more than less heavily indebted households (e.g. Dynan, 2012), and, given the very considerable increase in household debt in the pre-crisis period, the requirement for balance sheet repair might be forcing households to allocate significant resources to cover debt repayments.

Finally, the positive relationship between changes in consumption and changes in housing wealth, as measured by changes in real house prices (bottom left part of Figure 2), could be interpreted as consumers recognising the previous expansion in housing wealth as being the result of a bubble and thus unlikely to support consumption in the near future.

References:

European Commission (2013), Annual National Accounts, GDP and Main Components, *Eurostat*. [Online] Available from: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/main_tables.

Dynan, K. (2012). *The U.S. Household Debt Overhang*, [Online] Available from: http://www.brookings.edu/research/speeches/2012/10/25-household-debt-dynan.

O'Connell, B., O'Toole, C. & Žnuderl, N. (2013), *Trends in Consumption since the Crisis*, [Online] Dublin, ESRI. Available from: http://www.esri.ie/publications/latest_publications/view/index.xml?id=3693.

4.1. Germany

The German economy has recently lost momentum but is anticipated to accelerate again in the course of 2013. While in the first half of 2012 the expansion was fairly solid, the second half of 2012 saw a marked deceleration, with a fall in output of 0.6 per cent in the final quarter. Partly due to the resulting negative carry over, real GDP on a working day adjusted basis will increase again at a modest rate of 0.6 per cent this year, following growth of 0.9 per cent in 2012 and 3.1 per cent in 2011. In the course of 2013, however, the expansion of the German economy should accelerate noticeably and, for 2014, we expect a growth rate of close to 2 per cent. The slowing of economic growth over the past year has been reflected in the labour market. Employment growth has come to a standstill and unemployment increased on a seasonally adjusted basis. However, the deterioration in the labour market is very moderate so far and, on the back of improving economic activity, unemployment should start declining again towards the end of this year. The survey based unemployment rate, which dropped to 5.5 per cent in 2012, is thus expected to remain fairly stable in 2013 and to resume its decline in 2014. The robust situation on the labour market supports growth in disposable incomes, thereby creating the

foundation for private consumption to become an important source of economic growth in the current and the coming year.

In 2012, strong revenue growth and expenditure restraints have helped to achieve a small surplus in the general government budget. In 2013 the budget will move into deficit again, mainly due to the softer labour market. The fiscal impulse will be slightly positive this year, with the reduction of the contribution rate to the public pension system from 19.6 per cent to 18.9 per cent being the most important stimulatory measure. For next year, we assume a broadly neutral fiscal stance, and a stronger growth environment should lead the budget back to surplus.

The crisis in the Euro Area remains the main burden on the German economy, affecting both German exports and investment activity due to continuously elevated uncertainty about economic perspectives. Uncertainty has been reduced somewhat in recent months, particularly since conditions on Euro Area financial markets improved after the announcement of the OMT programme by the ECB. While growth in the Euro Area outside Germany is likely to remain weak during the forecasting period, thereby limiting the potential for exports to this market, overall export demand should continue to provide a stimulus to the German economy given the projected return to relatively solid economic growth in the rest of the world, particularly in large emerging economies.

As a result of an improving outlook for exports, and based on the assumption that the situation with respect to the Euro Zone crisis will continue to stabilize, the corporate sector should start to increase investments in the course of this year, especially since German firms are able to benefit from extremely favourable financing conditions, as interest rates are projected to remain very low. Financing conditions also support residential investment. Wages are anticipated to continue their accelerating trend, with a rise in compensation per hour of 3 per cent and 3.5 per cent this year and next, respectively. As the German inflation rate is forecast to remain at close to 2 per cent, we are looking for palpable gains in private households' purchasing power, despite the temporary downturn in employment. This should result in a robust increase in private consumption. Thus, domestic demand is likely to become the main driver of growth in 2013 and 2014. Imports are forecast to pick up substantially in response. As a result, net external trade, in contrast to previous years, will not make a significant contribution to German economic growth. The current account surplus relative to GDP is expected to decline slightly.

4.2. France

French GDP has remained almost stagnant since mid-2011 and was in the fourth quarter of 2012 1.1 per cent below its pre-crisis level in the first quarter of 2008. The situation is worse for industrial production, which stood 14 per cent below its pre-crisis level in December 2012.

In the absence of economic growth, the French unemployment rate rose from 9.9 per cent to 10.6 per cent between December 2011 and December 2012, in terms of the EUROSTAT concept. Meanwhile HICP inflation decelerated from 2.5 per cent at the end of 2011 to 1.5 per cent in December 2012, with underlying inflation down from 1.7 per cent to only 0.7 per cent. Deflationary pressures are underway.

At the beginning of 2013, OFCE's short-term quarterly GDP indicator based on survey data suggests that French GDP growth will remain close to 0 in the first quarter of 2013. Output in the industrial sector is likely to remain depressed in 2013, especially on the basis of the latest investment survey from January. In the industrial sector, companies expect to keep their investment flat this year, with a sharp decline expected in transport equipment, particularly the automobile industry (-21 per cent in value for 2013, revised downwards from -6 per cent in the October 2012 survey). This is one of the strongest signals that the French automobile sector remains in a deep crisis.

The export contribution to French GDP was close to 0 on average over the first four quarters of 2012. Due to their geographical orientation, French exports have been especially affected by the decrease in imports from Southern Euro Area countries in crisis. But the decline in output in French industry since the beginning of the crisis, and relative to the situation in Germany, has led the former Sarkozy government and the new Hollande government to put competitiveness at the top of the policy agenda. Hence the government in place since the May 2012 presidential elections asked Louis Gallois to deliver a report on French competitiveness last autumn, on the basis of which 'A Pact for competitiveness' was designed. The main idea is to cut labour costs through a tax credit on corporate taxation based on the wage bills, amounting to €20 billion in 2013, to be offset in terms of budget costs by higher taxation on households and by public expenditures cuts. This scheme, the so-called CICE (*Crédit d'impôt pour la compétitivité et l'emplo*i) will, according to estimates produced at OFCE (see Plane, 2012), generate 150,000 jobs and reduce the unemployment rate by 0.6 percentage point over 5 years (i.e. by 2018), due to capital-labour substitution effects. It will have almost no impact on GDP growth, due to the restrictive impact of financing measures. In February 2013, the employers' organisation (the Medef) and 3 of the 5 employees' trade-unions signed an agreement, which facilitates lay-offs and allows for cuts in working hours and wages in the case of firms in difficulty.

Fiscal policy was strongly contractionary in 2012, with discretionary measures amounting to 1.5 per cent of GDP, of which 1 percentage point were tax-based and 0.5 percentage points were public expenditure based. While there is virtually no prospect for increased private domestic demand in France in the short-term, either through consumption (in view of low real incomes' growth prospects)

or investment (in view of gloomy demand prospects) sides, fiscal policy will remain strongly contractionary in 2013. The French government has committed to bringing the public deficit down from 5.2 per cent of GDP in 2011 to 3 per cent of GDP in 2013. Under current official fiscal plans, the effort will amount to 2 per cent of GDP in 2013 (of which 1.5 per cent of GDP will be tax based and 0.5 per cent expenditures based). As the tax increases hit mainly high income earners and big companies, the French government expects a relatively small growth impact. Fiscal measures will leave the public deficit slightly above 3 per cent of GDP in 2013, under our GDP growth forecasts (0 as compared to 0.8 per cent for the government). In 2014, under current fiscal plans, fiscal consolidation efforts will amount to 0.7 per cent of GDP (almost entirely expenditure-based). This attenuation of the fiscal effort, combined with a slightly better external outlook, would lead French GDP to grow by 1.1 per cent in 2014, in line with the Euro Area average growth. However, this will leave the unemployment rate at above 10 per cent, still one of the major policy issues for the French economy. Fiscal consolidation will also remain a big issue, since the government plans to bring public finances into balance in 2017, without increasing taxes, which implies public expenditures cuts of 60 billion euros (3 per cent of GDP), among them large cuts in social expenditure.

4.3. Italy

After five consecutive quarters of recession, a quick recovery is still unlikely. Despite the marked improvement in financial markets and the reduction of the Btp-Bund spread, prospects for economic activity have not improved yet.

While in 2011 the positive contribution of foreign trade had helped to offset falling domestic demand, in 2012 the contraction in imports was insufficient to compensate for the reduction in investment and private consumption. This is mainly the result of the ongoing fiscal consolidation, which should have allowed the budget deficit to have dropped below the threshold of 3 per cent in 2012.

We expect that the lower risk premium on Italian bonds will not be enough to counterbalance the restrictive effects of public sector deleveraging. The deleveraging process is expected to continue and its consequences, in terms of reductions in households' disposable incomes and contractions of public sector demand, will continue to affect the Italian economy. Exports will be the only positive driving force for recovery.

The downward trend in investment is expected to continue in the first half of the year, reflecting weak prospects for demand, excessive capacity and unfavourable conditions for access to credit. The recovery we expect for the second half of the year is unlikely to prevent a still significant decline for the year, following the sharp drop of more than 11 per cent in 2012. The recovery in household consumption is expected to be even slower. It is important to note that the decline in household consumption continued in the fourth quarter of last year, reaching an annual average of approximately

-4 per cent in 2012, and that this downturn, albeit less severe than in the previous year, will last for most of this year. Therefore, 2013 is also expected to see another significant decrease in consumer spending, which is expected to be even more intense and prolonged than that experienced during the severe fiscal adjustment of 1992-93.

In summary, the foreign sector will contribute positively to GDP growth for the third consecutive year. It is only from next summer that domestic demand is currently expected to stop contracting after the longest post-war recession of seven quarters. In 2014 the growth of domestic demand will turn positive and, after three years of declines, GDP growth will amount to 1.1 per cent.

Last year the unemployment rate started to rise again, reaching 11.2 per cent in December, a level that had not been registered since 1999. The unemployment rate is expected to increase at a slower pace until the first half of 2014, and to remain close to 12 per cent for a long time. Such persistence reflects the sluggishness of the labour market response to cyclical fluctuations, despite the greater flexibility reached in recent years.

The reduction in the Btp-Bund spread will figure in a lower average cost of debt and, according to our calculations, this will amount to savings in terms of interest expenditure of around €1.1 billion in 2013 and 3.3 billion in 2014. In addition, the tax burden is at a historical high (close to 45 per cent of GDP), and this will lead to a significant deficit reduction this year, above the government commitment but still in line with the targets in terms of structural balance rules. The increase in the negative fiscal impulse this year is mainly driven by indirect taxes: the budget law approved the increase in the ordinary VAT rate from 21 per cent to 22 per cent starting from the 1st of July, the introduction of the Tobin tax, further increases in stamp duties, and the introduction of a new local tax on waste disposal and local services.

5. Assessing Fiscal Consolidation Programmes 2012-2014

Table 3 reports the planned and enacted fiscal consolidation programmes in 11 Euro Area countries for 2012-14. The policy impulse is defined as the expected impact of legislative changes to tax rates and discretionary spending commitments introduced in a given year on total government spending or revenue, as a per cent of ex ante GDP. A positive impulse represents an expansion (a tax cut or a spending increase) whereas a negative impulse indicates a contractionary or consolidation policy. The policy impulses to be introduced in each year are split into those that affect revenues and those that affect expenditure.

Fiscal policy has been restrictive in most of the countries in our sample since 2011, with the deepest consolidation measures introduced in Portugal, Ireland, Spain and Greece where the sovereign crisis has been most acute. Cumulative measures in these four countries over the three-year period amount to more than 6 per cent of GDP. Consolidation measures amounting to 3-4 per cent of GDP are planned in France, Italy, Belgium, the Netherlands, the UK and the US, while only a modest adjustment is planned in Austria and Finland and policy is broadly neutral in Germany.

In order to assess the impact of these planned consolidation packages on GDP, the deficit and the stock of government debt, a series of simulations are run. We use the NiGEM world model to provide a quantitative assessment of the impact of policy tightening measures on GDP growth in the Euro Area.

We consider two alternative scenarios that incorporate different assumptions on the behaviour of households and of financial markets. Because of the unusual situation in the Euro Area today the assessment of the impact of fiscal policy is not straightforward. In the first scenario, we implement the policy plans detailed in Table 3, under the assumption that the economy is behaving as in normal times, e.g. with flexible interest rates that do not bind, and liquidity constraints in line with the long-run average. In the second scenario, we allow for an impaired interest rate channel and heightened liquidity constraints; assumptions we consider more realistic under current conditions.

Under normal circumstances a tightening in fiscal policy would allow an inflation-targeting central bank to follow a lower interest rate path, which would tend to partially offset the negative multiplier effects of the budgetary action. In the ‘normal times’ scenario, we allow an endogenous response in short-term interest rates. With forward-looking financial markets, the long-term interest rate, which determines the borrowing costs of firms for investment, is driven by the expected path of short-term interest rates over a 10-year forward horizon. As the expected path of short-term rates comes down, long-term interest rates fall, stimulating investment and offsetting part of the fiscal contraction.

However, with interest rates already at exceptionally low levels, further fiscal tightening measures are unlikely to result in such an offsetting monetary policy reaction. In our second scenario, which we believe to be a better reflection of the current environment, this interest rate adjustment channel is blocked, and both short and long term interest rates are held fixed to the baseline.

Table 3. Discretionary ex-ante net fiscal impulses 2012-2014, as announced by governments

	2012			2013			2014			Cumulative 2012-2014		
	Fiscal impulse	of which tax based	of which spending based	Fiscal impulse	of which tax based	of which spending based	Fiscal impulse	of which tax based	of which spending based	Fiscal impulse	of which tax based	of which spending based
Austria	-0.3	-0.2	-0.1	-0.4	-0.2	-0.2	-0.4	-0.2	-0.2	**-1.1**	**-0.6**	**-0.5**
Belgium	-1.7	-1.3	-0.4	-0.9	-0.8	-0.1	-0.5	-0.5	0	**-3.1**	**-2.6**	**-0.5**
Finland	-0.3	-0.3	0	-0.5	-0.4	-0.1	-0.2	-0.1	-0.1	**-1.0**	**-0.8**	**-0.2**
France	-1.5	-1.0	-0.5	-2.0	-1.4	-0.6	-0.7	0	-0.7	**-4.2**	**-2.4**	**-1.8**
Germany	-0.2	0	-0.1	0.1	0.2	-0.1	0.1	0.1	0	**0.1**	**0.3**	**-0.2**
Greece	-4.7	-1.6	-3.1	-2.6	-0.2	-2.4	-2.8	0.6	-3.4	**-10.1**	**-1.2**	**-8.9**
Ireland	-2.3	-1.0	-1.3	-2.1	-0.9	-1.2	-1.8	-0.6	-1.2	**-6.2**	**-2.5**	**-3.7**
Italy	-3.2	-2.3	-0.9	-1.1	-0.6	-0.5	0	0.1	-0.1	**-4.3**	**-2.9**	**-1.5**
Netherlands	-0.7	-0.2	-0.6	-2.2	-1.5	-0.7	-0.7	0.1	-0.8	**-3.6**	**-1.6**	**-2.0**
Portugal	-2.7	0.3	-3.0	-2.4	-0.9	-1.4	-2.1	-0.2	-1.9	**-7.2**	**-0.8**	**-6.4**
Spain	-3.5	-0.6	-2.9	-4.4	-0.4	-4.0	-0.3	0.9	-1.2	**-8.2**	**-0.1**	**-8.1**
Euro Area total	**-1.6**	**-0.8**	**-0.8**	**-1.4**	**-0.6**	**-0.8**	**-0.4**	**0.1**	**-0.5**	**-3.4**	**-1.3**	**-2.1**

Note: Here we define the discretionary fiscal impulse as the ex-ante expected change in revenue/spending as a % of ex-ante GDP as a result of announced policy changes. The impact on GDP will depend on the fiscal multipliers in each country, and cannot be read directly from this table. The ex-post impact on government balances will depend on the response of GDP, and so also cannot be read directly from this table.

Exchange rate movements also differ between the two scenarios. In the first scenario we assume forward-looking financial markets, and exchange rates adjust to ensure that uncovered interest parity holds. With forward-looking financial markets, a fiscal consolidation can be expected to allow lower interest rates over the longer-term, and so competitiveness gains in the short-term. This offsets some of the impact of consolidation measures on GDP in the short-term. In the second scenario, when the interest rate channel is impaired, the exchange rate channel will also be impaired and exchange rates are held fixed to the baseline. Exchange rate adjustments in response to a consolidation programme should reflect not just the policy adopted in the consolidating country, but the relative stance of fiscal policy in a global context. The scenarios we present in this paper are restricted to consolidation programmes in the Euro Area, although a broader global tightening of fiscal policy is currently underway. In this case, the assumption of a neutral impact on the exchange rate is probably justified.

The second normal transmission channel that is likely to be impaired at present is related to the difficulties currently faced within the European banking system. During a prolonged downturn, when unemployment is high and job security low, a greater percentage of households and firms are likely to find themselves liquidity constrained. In a hypothetical world with perfect capital markets and forward-looking consumers with perfect foresight, households would smooth their consumption path over time, and consumer spending would be largely invariant to the state of the economy or temporary fiscal innovations. However, in reality, at any given time, some fraction of the population is liquidity constrained; that is, they have little or no access to borrowing, so that their current spending is largely restrained by their current income. In a prolonged recession this fraction can be expected to rise, especially when the downturn has at its roots an impaired banking system. We operationalise this effect in the NiGEM model through an adjustment to the short-term income elasticity of consumption. If liquidity constraints are not important, households can borrow when incomes are low in order to smooth their spending path. In this case, the path of consumption will be less sensitive to short-term fluctuations in income. However, when liquidity constraints are high, there is less scope to borrow to smooth spending, and consumption will be much more reliant on current revenue streams.

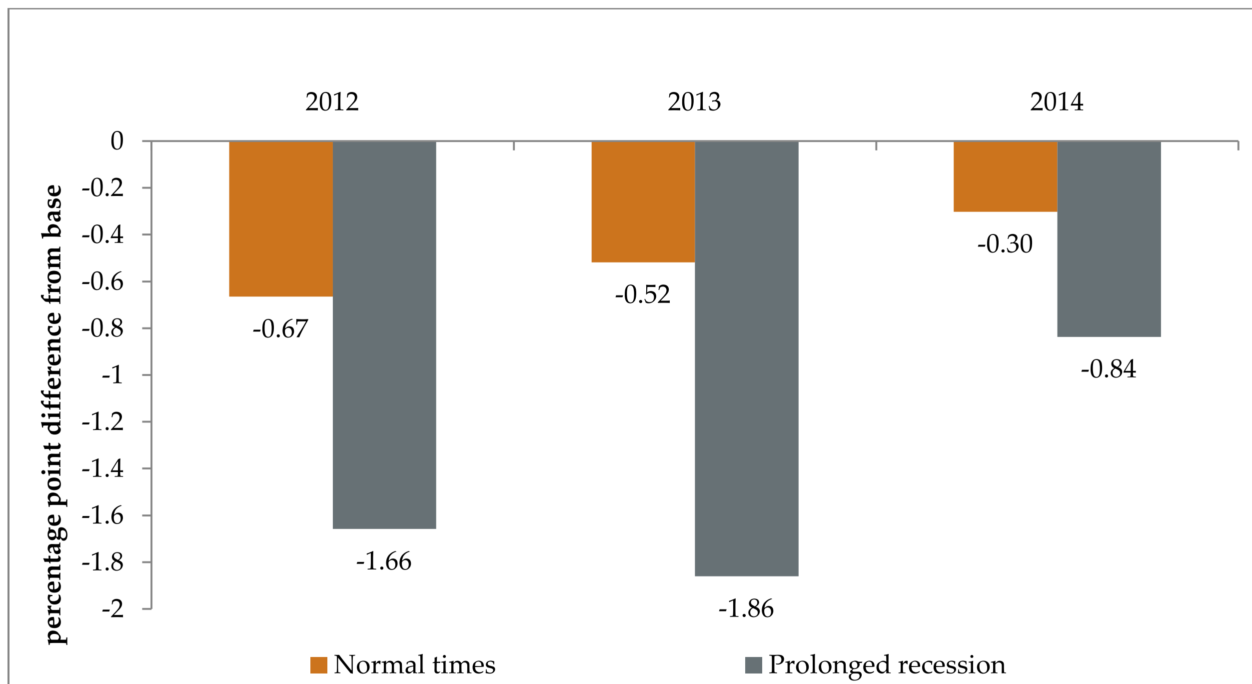
In the ‘normal times’ scenario, we make the assumption that savings behaviour and the number of liquidity constrained consumers are as in normal times. In the more realistic scenario we follow the approach in Holland (2012), and modify the parameter that defines the short-term income elasticity of consumption in each country according to the degree of financial stress, as captured by the 10-year government bond spreads over Germany. We raise the short-term income elasticity of consumption by 0.1 percentage point in Germany and by 0.4 percentage points in Greece, with proportional adjustments in other countries.

Figure 11 illustrates the estimated impact of the fiscal tightening programmes detailed in Table 3 on GDP growth in the Euro Area, according to the NiGEM simulations. We designate the first scenario described above as the “normal times” scenario and the second scenario as the “prolonged recession”

scenario. According to the NiGEM simulations, if we were in 'normal times,' when interest rates and exchange rates are able to soften the impact on output from a fiscal tightening programme and temporary declines in income can be partially offset through borrowing or by an adjustment to savings, the estimated impact of the consolidation programmes currently underway in the Euro Area would be relatively limited. GDP growth in the Euro Area would be expected to be 0.3-0.7 percentage points weaker per annum as a result of the three-year fiscal tightening programme in this case. Without an impaired interest rate channel, or any fiscal tightening outside of the Euro Area, long-term interest rates would be expected to decline by about 25 basis points, while the exchange rate would be expected to depreciate by nearly 4 per cent. However, at the current juncture our assumption is that policy rates set by the ECB are at their floor, and the second scenario presented here does not allow policy rates to fall below 0.75 per cent.

In the prolonged recession scenario that allows for an impaired interest rate channel and heightened liquidity constraints, the expected impact on GDP growth is much stronger. The current consolidation programme under way in the Euro Area can be expected to reduce GDP growth by 0.8-1.9 percentage points per annum in the Euro Area from 2012-2014. This follows tightening measures introduced in 2011, which we estimate reduced GDP growth by 0.6-0.9 percentage points in that year (EUROFRAME, 2012).

Figure 11: Impact on GDP Growth in the Euro Area



These model-based estimates suggest that in the absence of tightening measures the Euro Area economy could have expanded by about 1.3 per cent last year, compared to the observed contraction of 0.5 per cent. The estimates also suggest that in the absence of fiscal tightening measures we would forecast growth of 1.6 per cent for the Euro Area this year and 2.1 per cent for 2014.Ex-ante fiscal tightening measures over the three-year period amount to 3.4 per cent of ex-ante GDP in the Euro Area as a whole. The ex-post improvement in the fiscal position will be significantly less than this, in the order of 1.5 to 2 per cent, depending on both the strength of automatic stabilisers and the size of the fiscal multipliers.

6. Conclusion

Looking back at last year's EUROFRAME report, the outturn for GDP in 2012 lies somewhere between our "central forecast" and our "downside scenario". It took longer than anticipated in last year's "central forecast" to turn the tide on the financial uncertainty affecting quite a number of members of the Euro Area. Nonetheless, progress was made and, if sustained, it will be supportive of a longer-term recovery in the Euro Area economy. In addition, fiscal policy this year is more contractionary than was envisaged this time last year.

As a result of relatively weak external demand, continuing financial uncertainty and the contractionary stance of fiscal policy, output fell in the Euro area in 2012 (-0.5 per cent). Over the course of 2012 there was a slowdown in some key economies, which were previously contributing much of the growth. This slowdown has carryover effects into 2013.

Even though we anticipate some recovery in confidence in major economies over the course of this year, the outcome is still likely to be a limited fall in GDP in 2013 in the Euro Area of around 0.3 per cent. Weak external demand will not be enough to compensate for the fall in domestic demand. For 2014, a recovery in domestic demand should see a return to significant growth in GDP of around 1.3 per cent. However, this forecast must be considered in the light of the continuing vulnerability to financial shocks of a number of the Euro Area member states.

This vulnerability of countries in financial distress is being addressed through a continuing major fiscal adjustment. However, the major fiscal adjustment under way across other members of the Area is also having a substantial negative effect on growth. Without this fiscal adjustment the Euro area would be looking to growth this year of around 1½ per cent and next year of approximately 2 per cent.

7. References

Aghion, P., Besley, T., Browne, J., Caselli, F., Lambert, R., Lomax, R., Pissarides, C., Stern, N. and van Reenen, J. (2013) *Investing for Prosperity: Skills, Infrastructure and Innovation*. Report for the LSE Growth Commission.

Barrell, R., Holland, D. and Liadze, I. (2011) 'Accounting for UK economic performance 1973–2009', in Giudice, G., Kuenzel, R. and Springbett, T. (eds), *UK Economy: The Crisis in Perspective. Essays on the Drivers of Recent UK Economic Performance and Lessons for the Future*, London, Routledge, Taylor & Francis Group, pp. 11–38.

Broadbent, B. (2012) *Productivity and the allocation of resources*, Speech given at Durham Business School, 12 September.

Disney, R., Wenchao, J. and Miller, H. (2013) 'Productivity Puzzles', in Emmerson, C., Johnson, P. and Miller, H. (eds) *The IFS Green Budget*, The Institute for Fiscal Studies: London.

EUROFRAME (2012) *Economic Assessment of the Euro Area Winter 2011/12 Report*, [Online] Available from: http://www.euroframe.org/index.php?id=3

Holland, D., (2012), *Less Austerity, More Growth?*, NIESR DP No. 400, [Online] Available from http://www.niesr.ac.uk/pdf/301012_110656.pdf

Holland, D., Kirby, S. and Whitworth, R. (2010a), 'A comparison of labour market responses to the global downturn', *National Institute Economic Review*, 211, January, pp. F38–42.

Martin, B. and Rowthorn, R. (2012) *Is the British economy supply constrained II? A renewed critique of productivity pessimism*, Centre for Business Research and UK~IRC, May.

NESTA (2012), Plan I, the case for innovation-led growth, [Online] Available from http://www.nesta.org.uk/library/documents/PlanIwebv3.pdf.

Plane, M. (2012) Evaluation de l'impact économique du crédit d'impôt pour la compétitivité et l'emploi, *Revue de l'OFCE*/Varia, 126.

8. Appendix: Forecast Tables

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

	2008	2009	2010	2011	2012	2013	2014
Output Growth Rate	0.3	-4.3	2.0	1.5	-0.5	-0.3	1.3
Inflation Rate (Harmonised)	3.3	0.3	1.6	2.7	2.5	1.5	1.6
Unemployment Rate	7.7	9.6	10.1	10.1	11.4	12.4	12.0
Govt. Balance as % of GDP	-2.1	-6.3	-6.2	-4.1	-3.2	-2.7	-2.1

Annex Table 2: Euro Area Forecast Details

	annual percentage change						
	2008	2009	2010	2011	2012	2013	2014
Consumption	0.4	-0.9	0.9	0.1	-1.2	-0.5	0.4
Private investment	-1.9	-14.4	0.2	2.1	-4.5	-1.8	3.7
Government expenditure	2.1	2.4	0.3	-0.3	-0.6	-1.4	0.0
Stockbuilding(a)	-0.1	-0.9	0.7	0.2	-0.4	0.0	0.1
Total domestic demand	0.2	-3.7	1.4	0.6	-2.1	-1.0	1.0
Export volumes	0.9	-12.4	11.0	6.5	3.0	2.3	6.1
Import volumes	0.7	-11.0	9.5	4.3	-0.7	0.9	6.3
GDP	0.3	-4.3	2.0	1.5	-0.5	-0.3	1.3
Average earnings	3.4	3.1	1.0	1.7	1.4	1.2	1.2
Harmonised consumer prices	3.3	0.3	1.6	2.7	2.5	1.5	1.6
Private consumption deflator	2.6	-0.5	1.7	2.5	2.2	1.6	1.6
Real personal disposable income	0.8	0.0	-0.6	-0.7	-1.3	-0.6	0.3
Standardised unemployment rate, %	7.7	9.6	10.1	10.1	11.4	12.4	12.0
Govt. balance as % of GDP	-2.1	-6.3	-6.2	-4.1	-3.2	-2.7	-2.1
Govt. debt as % of GDP	70.2	80.0	85.4	87.3	93.5	94.0	92.9
Current account balance as % of GDP	-1.5	-0.2	0.0	0.1	0.8	2.2	2.3

Annex Table 3: Real GDP in Major Economies

	annual percentage change									
	World	OECD	China	EU-27	Euro Area	USA	Japan	Germany	France	Italy	UK
2008	2.8	0.2	9.8	0.3	0.3	-0.3	-1.1	0.8	-0.2	-1.2	-1.0
2009	-0.6	-3.6	9.0	-4.3	-4.3	-3.1	-5.5	-5.1	-3.1	-5.5	-4.0
2010	5.1	3.0	10.4	2.1	2.0	2.4	4.7	4.0	1.6	1.8	1.8
2011	3.8	1.8	9.3	1.6	1.5	1.8	-0.5	3.1	1.7	0.6	0.9
2012	3.1	1.3	7.8	-0.3	-0.5	2.2	2.0	0.9	0.0	-2.2	0.0
2013	3.4	1.3	8.3	0.1	-0.3	2.2	0.7	0.6	-0.3	-0.8	0.7
2014	3.9	2.2	7.6	1.5	1.3	2.6	1.9	1.9	1.1	1.1	1.6

Annex Table 4: Private Consumption Deflator in Major Economies

	annual percentage change								
	OECD	EU-15	Euro Area	USA	Japan	Germany	France	Italy	UK
2008	2.9	2.8	2.6	3.3	0.3	1.7	3.0	3.1	3.4
2009	0.2	-0.1	-0.5	0.1	-2.4	0.0	-0.7	-0.1	1.4
2010	1.7	2.0	1.7	1.9	-1.7	2.0	1.1	1.6	3.7
2011	2.3	2.8	2.5	2.4	-0.8	2.0	2.1	2.8	4.5
2012	1.8	2.2	2.2	1.8	-0.7	1.7	1.8	2.6	2.7
2013	1.8	2.0	1.6	2.1	-0.5	2.0	1.5	1.9	2.4
2014	1.8	2.2	1.6	1.7	1.2	1.9	1.5	1.8	2.1

Annex Table 5: World Trade Volume and Prices

	annual percentage change		
	World trade volume	World export prices ($)	Oil price ($per barrel)
2008	2.9	5.7	95.7
2009	-10.4	-8.0	61.8
2010	12.5	1.0	78.8
2011	5.8	4.0	108.5
2012	3.1	-3.6	110.5
2013	4.6	3.7	105.0
2014	6.8	3.8	100.0

Annex Table 6: Interest Rates

	Per cent per annum							
	Central bank intervention rates				Long-term interest rates			
	USA	Japan	Euro Area	UK	USA	Japan	Euro Area	UK
2008	2.1	0.5	3.9	4.7	3.6	1.5	4.2	4.5
2009	0.3	0.1	1.3	0.6	3.2	1.3	3.7	3.7
2010	0.3	0.1	1.0	0.5	3.2	1.2	3.3	3.6
2011	0.3	0.1	1.2	0.5	2.8	1.1	3.9	3.1
2012	0.3	0.1	0.9	0.5	1.8	0.8	3.2	1.8
2013	0.3	0.1	0.8	0.5	1.9	0.9	2.9	2.2
2014	0.3	0.1	0.8	0.5	2.3	1.0	3.2	2.7
2011Q1	0.3	0.1	1.0	0.5	3.4	1.2	3.9	3.7
2011Q2	0.3	0.1	1.2	0.5	3.2	1.2	4.0	3.4
2011Q3	0.3	0.1	1.5	0.5	2.4	1.0	3.7	2.8
2011Q4	0.3	0.1	1.3	0.5	2.0	1.0	3.8	2.3
2012Q1	0.3	0.1	1.0	0.5	2.0	1.0	3.5	2.1
2012Q2	0.3	0.1	1.0	0.5	1.8	0.9	3.4	1.8
2012Q3	0.3	0.1	0.8	0.5	1.6	0.8	3.2	1.7
2012Q4	0.3	0.1	0.8	0.5	1.7	0.8	2.8	1.8
2013Q1	0.3	0.1	0.8	0.5	1.8	0.8	2.7	2.0
2013Q2	0.3	0.1	0.8	0.5	1.9	0.8	2.8	2.2
2013Q3	0.3	0.1	0.8	0.5	2.0	0.9	2.9	2.3
2013Q4	0.3	0.1	0.8	0.5	2.1	0.9	3.0	2.4
2014Q1	0.3	0.1	0.8	0.5	2.2	0.9	3.1	2.5
2014Q2	0.3	0.1	0.8	0.5	2.3	1.0	3.2	2.6
2014Q3	0.3	0.1	0.8	0.5	2.4	1.0	3.2	2.7
2014Q4	0.5	0.1	0.8	0.5	2.5	1.1	3.3	2.8

Annex Table 7: Nominal Exchange Rates

	Annual percentage change						
	USA	Japan	Euro Area	Germany	France	Italy	UK
2008	-2.0	12.9	5.1	2.0	2.6	2.5	-11.9
2009	7.0	15.5	6.0	2.4	1.7	2.4	-10.5
2010	-3.1	4.6	-6.1	-3.6	-2.8	-3.3	-0.2
2011	-3.0	7.2	2.3	0.7	1.1	1.4	0.0
2012	3.5	2.3	-3.5	-1.9	-1.9	-1.7	4.4
2013	-0.6	-14.7	4.7	2.4	2.4	2.6	-3.8
2014	-0.2	-0.8	0.1	0.0	0.1	0.1	-0.3

Annex Table 8: Bilateral Exchange Rates

	Bilateral rate against US$		
	Yen	Euro	Sterling
2008	103.4	0.683	0.545
2009	93.6	0.720	0.641
2010	87.8	0.755	0.647
2011	79.8	0.719	0.624
2012	79.8	0.778	0.631
2013	92.4	0.735	0.636
2014	92.7	0.733	0.637
2011Q1	82.3	0.732	0.624
2011Q2	81.7	0.695	0.614
2011Q3	77.7	0.709	0.621
2011Q4	77.3	0.742	0.636
2012Q1	79.3	0.763	0.636
2012Q2	80.1	0.780	0.632
2012Q3	78.6	0.799	0.633
2012Q4	81.2	0.771	0.623
2013Q1	91.4	0.740	0.633
2013Q2	92.7	0.733	0.637
2013Q3	92.7	0.733	0.637
2013Q4	92.7	0.733	0.637
2014Q1	92.7	0.733	0.637
2014Q2	92.7	0.733	0.637
2014Q3	92.7	0.733	0.637
2014Q4	92.7	0.733	0.637