

The background of the cover features a stylized map of Europe in shades of orange and yellow. Overlaid on the map are several white, five-pointed stars of varying sizes, arranged in a semi-circular pattern that mimics the flag of the European Union. The overall color scheme is warm and vibrant, with a gradient from light yellow at the top to a darker orange at the bottom.

QUARTERLY REPORT ON THE EURO AREA

Volume 10 N° 2 (2011)

Highlights in this issue:

- The Stability Programmes in euro-area Member States
- A primer on EU/IMF adjustment programmes in the euro area
- Private sector balance sheet adjustment in the euro area: how far still to go?
- Fiscal governance in euro-area Member States: insights from a fiscal governance database
- The impact of an increase in oil prices on economic activity

Table of contents

Editorial	5
I. Special topics on the euro-area economy	7
1. The Stability Programmes in euro-area Member States	7
2. A primer on the EU/IMF adjustment programmes in the euro area	11
3. Private sector balance sheet adjustment in the euro area: how far still to go?	19
4. Fiscal governance in euro-area Member States: insights from a fiscal governance database	27
5. The impact of an increase in oil prices on economic activity	32
II. Recent DG ECFIN publications	37
Boxes	
2.1. New financial instruments	12
4.1. Examples of national fiscal frameworks: Belgium and Austria	30
5.1. A DSGE model with energy sectors	33

EDITORIAL

Following the difficult period of deep recession in 2009, the euro-area recovery that set in subsequently remains on track. However, growth in the coming quarters is expected to not accelerate much and is bound to be uneven due to divergent adjustment needs of Member States. The Commission's spring 2011 forecasts point to a likely expansion in euro-area output of 1³/₄% in both 2011 and 2012. The recovery will be supported by a progressive broadening of the sources of demand. But the ongoing deleveraging process in the private and public sectors will continue to weigh on spending in the short term. Considerable risks surround this scenario, not least related to unrest in the Middle East and North Africa and its negative impact on oil prices, as well as the threat posed by sovereign bond market fragility. The contributions in this edition of the Quarterly Report take a closer look at some of these risks, notably regarding the growth impact of oil price shocks and the measures taken to address country-specific vulnerabilities in a number of euro-area Member States.

Against the background of rising oil prices this year caused by supply disruptions and rising risks in Middle East and North Africa, one of our special topics presents results from oil price shock simulations using the Commission's QUEST model. These show that the underlying causes of oil price shocks matter for economic activity. While negative oil supply shocks generally cause negative growth effects, oil demand shocks (i.e. those due to fast growth in the global economy) tend to be less negative for GDP growth. At present, both supply disruptions and higher world demand for oil appear to be at work, so that negative growth effects from higher oil prices are at least partly offset by strong external demand for euro-area exports.

The economic outlook is partly shaped by adjustment needs to private balance sheets. A further contribution in this edition of the Quarterly Report therefore reviews the balance sheet situation of euro-area households and non-financial corporations. Since the crisis a notable common pattern for both sectors has been their shift to a precautionary stance, raising their net lending and thereby strengthening their balance sheets. Some deleveraging has taken place in the corporate sector and both sectors show portfolio reallocation towards a less risky asset composition. A comparison with the US reveals

important differences between the two sectors in terms of adjustment needs. The euro-area's household sector looks comparatively strong compared to its US counterpart, whereas the reverse is true for the euro-area's corporate sector. This suggests that balance sheet adjustment is likely to continue in the euro-area corporate sector in the short-to-medium term while balance-sheet constraints on household consumption should be more limited.

Turning to financial markets, turbulence on euro-area sovereign markets has remained high in the first half of 2011. Despite the utmost resolve of policymakers and a string of ambitious and far-reaching policy measures, some euro-area sovereigns continue to face acute challenges. Greece in particular remains in the eye of the storm. It has become clear that the path leading to renewed market funding access is less smooth than expected at the signing of the first financial assistance programme in May 2010. The fourth joint review mission to Greece in May 2011 concluded that, overall, significant progress has been achieved during the first year of the adjustment program, in particular in the area of fiscal consolidation. However, reinvigoration of fiscal and broader structural reforms is necessary to further reduce the deficit and debt and achieve the critical mass of reforms needed to improve the business climate and pave the way for sustainable economic recovery. Efforts to frontload the use of structural funds for growth supporting investments and stepped-up technical assistance are being prepared by the Commission to contribute to this process.

At the European Council summit of 23/24 June 2011, Heads of State have reiterated that everything necessary to ensure the financial stability of the euro area will be done and have called on Greek authorities to continue implementing with resolve the necessary adjustment efforts to put the country on a sustainable path. On 28/29 June the Greek Parliament adopted key laws on fiscal and economic reform strategy and privatization in a vital step towards long-term reform and consolidation. This also safeguards the disbursement of the July instalment under Greece's first financial assistance programme, which the Eurogroup approved on 1 July. Furthermore, it lays the foundations for a second programme. The European Council has agreed an approach for private sector involvement

through strictly voluntary rollovers of existing Greek debt at maturity, which paves the way for Finance Ministers to complete the work on key outstanding issues by the end of summer.

While addressing short-term financing needs in some Member States is a top priority, a fundamental overhaul of troubled economies is also necessary. The structural reforms required for this are the subject of a further special topic in this edition, which examines the joint EU/IMF adjustment programmes in Greece, Ireland and Portugal. It explains the rationale behind their design and reviews their results so far. Ensuring rapid fiscal consolidation, raising growth potential and at the same time containing risks of contagion is crucial in all three countries. However, while the three programme countries share some common features and challenges, the nature of their macroeconomic imbalances are highly country-specific. The adjustment programmes have therefore been designed so as to be both comprehensive and tailor-made to country-specific needs.

While adjustment programmes represent the most comprehensive type of integrated surveillance, the latter covers all euro-area Member States. The first European Semester, which was successfully concluded in June, embodies the integrated surveillance approach in a streamlined sequence of macroeconomic, fiscal and structural assessment of Member States by the Commission. The June European Council endorsed country-specific recommendations in these policy areas for each Member State and the euro area as a whole. These recommendations will help inform and guide national policymaking so as to achieve a growth-oriented and internally consistent economic strategy for the EU. Overarching recommendations have further been issued to Member States using the euro.

Against this background, the edition of the Quarterly Report at hand takes a closer look at some aspects of the new framework for integrated surveillance. On the fiscal front, the latest vintage of euro-area Member States' Stability Programmes show significant, frontloaded and mainly expenditure-based fiscal consolidation. Although consolidation is underway, and the debt path is projected to begin declining by 2012, further efforts will be needed to address the debt challenge. To achieve the 2012 public balance targets set out in the Stability Programmes, euro-area Member States

will need to ensure full implementation of announced policy measures. Furthermore, beyond 2014, additional policy measures will be needed to address the costs of population ageing.

A related topic in this edition examines fiscal governance frameworks, i.e. the procedures and institutions that underpin the conduct of budgetary policymaking. The analysis of numerical fiscal rules, medium-term budgetary frameworks and independent fiscal institutions points towards a trend improvement in fiscal frameworks in the euro area since the 1990s. Nevertheless, progress seems to have stalled in 2009 and fiscal governance remains weak in some Member States. This assessment highlights the need to strengthen fiscal frameworks in the euro area.

Finally, the comprehensive package on the EU's crisis response approved by the European Council last May has now been almost fully implemented. Agreement has been reached on the European Stability Mechanism Treaty and on the amendment to the European Financial Stability Facility (EFSF), which now await ratification by Member States. The legislative package on economic governance reform, which comprises 6 legislative proposals first presented by the Commission in September 2010, is pending agreement by the Council and the European Parliament. Finding agreement on the remaining relatively minor issues should be treated as a priority, so as to allow for the most pressing economic governance needs to be addressed without further delay. Once enacted, the legislation will address previous shortcomings in the areas of fiscal policy coordination and establish an effective surveillance framework for macroeconomic imbalances. It also puts in place appropriate enforcement mechanisms and sets minimum standards for national fiscal frameworks.

The crisis has clearly highlighted the need for more thorough surveillance and coordination of Member States' economic policies at the EU level. The comprehensive response to upgrade the EU's economic governance framework is a key element in this.

MARCO BUTI

DIRECTOR-GENERAL

I. Special topics on the euro-area economy

1. The Stability Programmes in euro-area Member States

A key element of integrated policy surveillance in the newly-established European Semester are Member States' Stability Programmes, which lay out their planned fiscal developments until 2014. The programmes show a significant, frontloaded and mainly expenditure-based consolidation carried out in a realistic scenario of a supportive macroeconomic environment. The projected average annual improvement in the structural deficit is well above ½ pp of GDP and the debt path is projected to be reversed by 2012. However, although consolidation is underway, further efforts will be needed to address the debt challenge. To achieve the 2012 public balance targets set out in the Stability Programmes, euro-area Member States still have to specify additional policy measures, accounting for around ½% of GDP. Furthermore, beyond 2014, additional policy measures will be needed to address the costs of population ageing.

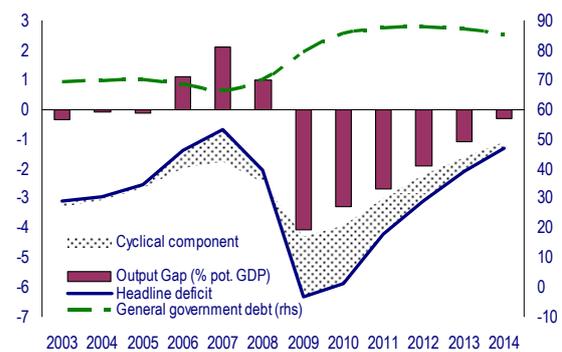
Member States' Stability Programmes foresee significant consolidation

The broad picture of the fiscal developments until 2014, as projected by euro-area Member States in their Stability Programmes (SPs), is one of a significant consolidation carried out in a supportive macroeconomic environment but of a debt challenge still to be addressed.

Between 2007 and 2009 public finances across the euro area were markedly hit by a set of factors including the working of automatic stabilisers, discretionary measures and a fall in revenues due to the burst of housing/credit bubbles in some countries. This was followed by a second phase in 2010 during which the fiscal stance was broadly neutral as many Member States continued to support their economies with discretionary measures while others began a partial withdrawal of the stimulus. A phase of consolidation has begun in 2011 with a projected significant tightening of the fiscal stance.⁽¹⁾ According to the Stability Programmes submitted by euro-area Member States, the general government deficit is projected to shrink from 5.9% of GDP in 2010 to 1.3% of GDP in 2014 (see Graph 1.1). This tightening is projected to take place in line with the gradual closure of the output gap by 2014: the cyclical improvement of the public balance is thus projected to account for 1¾ pp, while the structural element accounts for just under 3 pp. The government debt path is projected to be reversed by 2012 but the decline would occur at a very slow pace. Looking beyond the programmes' horizon, closing the deficit does not in itself,

address the debt problem adequately as the ageing issue remains.

Graph 1.1: Output gap, government debt and deficit in SPs, euro area (% of GDP)



Source: Commission services, SPs.

Member States' fiscal projections are based on realistic growth assumptions

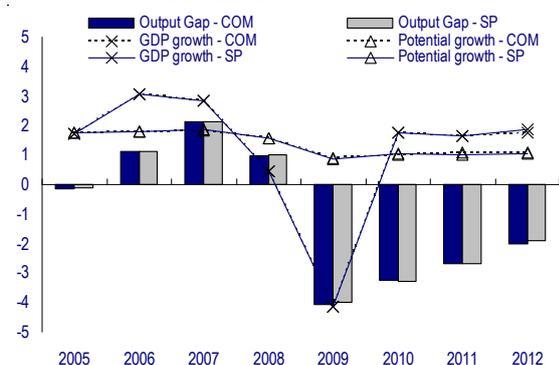
Euro-area Member States base their fiscal projections for 2011 and 2012 on realistic growth assumptions. The Stability Programmes project growth to be 1.7% and 1.9% for 2011 and 2012 respectively. These figures are in line with the Commission Spring forecast for 2011 and also very close for 2012. The SPs posit a slightly stronger cyclical recovery than in the Commission forecasts with a slightly faster closure of the output gaps (see Graph 1.2).

In order to generate growth during a time of fiscal consolidation, the private and/or the external sector must fill the shortfall arising from the restraint in the public sector. Graph 1.3 shows that all Member States except Malta are showing a combination of a tightening in general government alongside an expansion in the private

⁽¹⁾ For 2011, the Commission forecasts and the Stability Programmes projections of the general government deficit are equal (4.3% of GDP). This is, however, not the case for 2012, as discussed later in this section.

sector.⁽²⁾ In most cases, the private-sector expansion is smaller than the contraction in the public sector, meaning that an increase in the net external position is expected. An improvement in the external sector is set to play a significant role in Malta, Cyprus, the Netherlands and Slovakia.

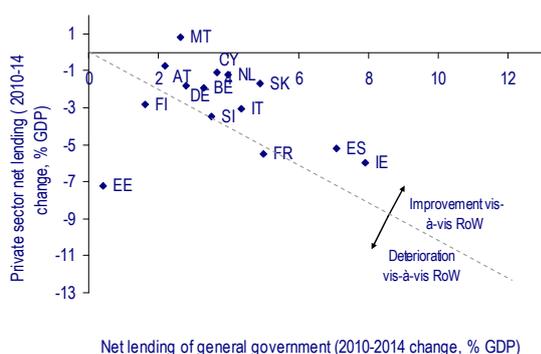
Graph 1.2: GDP growth, potential GDP growth and output gap projections, euro area (in %)



Source: Commission services, SPs.

For Finland, France and Estonia, the increase in demand from the private sector is projected to more than make up for the expected decrease in the public sector. As a result, these countries are projecting a decreasing current account.

Graph 1.3: Sectoral net lending and relative ULC changes (2010–2014), % GDP



(1) A position above the dotted 45 degree line signifies that increased net lending in the public sector more than offset falls in private sector net lending, thus resulting in lower net lending vis-à-vis the rest of the world.

Source: Commission services, SPs.

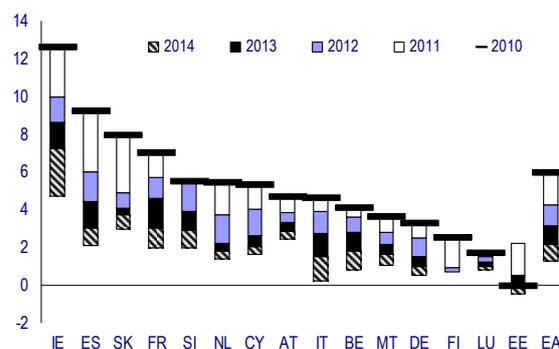
⁽²⁾ Greece and Portugal have not submitted their Stability Programmes and are not included in the analysis. However, the euro area average includes figures for Greece and Portugal as set out in their economic adjustment programmes

Consolidation is now underway in the euro area as a whole

Virtually all Member States are anticipating consolidation in 2011 and, on average, the plans are for significant and frontloaded consolidations. With the return of economic growth in 2010 and its gradually broadening in 2011 and 2012, the consolidation is now underway in the euro area as a whole. Graph 1.4 shows Member States' planned changes in government deficits over the 2010–2014 horizon as set out in the SPs. It shows that, on aggregate, the euro area is projected to improve its fiscal positions every year between 2010 and 2014. The general government deficit is planned to fall from 5.9% of GDP in 2010, to 4.3% in 2011, 3.1% in 2012, 2.1% in 2013 and 1.3% in 2014.

There are, however, variations at Member States level in this time profile of improvements. For some countries such as Italy, Belgium, Luxembourg and Estonia, the adjustment is back-loaded – although in some cases only to a limited extent – in the sense that the decrease in both the general government deficit and the structural deficit is projected to be higher during the second half of the timeframe of the programmes (2013–2014) than during the first half (2011–2012).

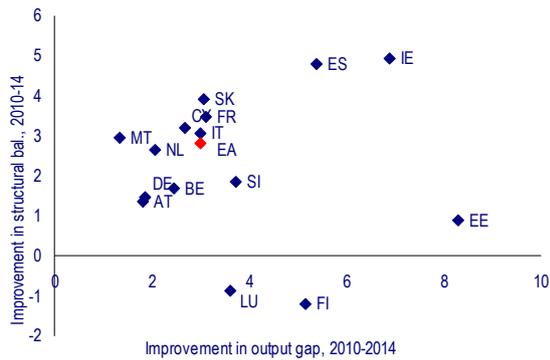
Graph 1.4: Planned changes in government deficits over 2010–2014 in the SPs (in pp of GDP)



Source: Commission Services, SPs.

A significant tightening of the fiscal stance is projected in 2010-2014 in most euro-area Member States' SPs. The structural balance is projected to improve by 2¾% of GDP whereas the output gap improves by around 3% of potential GDP (see Graph 1.5). The tightening is particularly strong in Spain and Ireland, two countries aiming to ease investors' concerns. Conversely, Luxembourg and Finland stand out from other euro-area countries due to their planned structural loosening.

Graph 1.5: Change in the structural balance and in the output gap, euro area (2010-2014, % of potential GDP)



Source: Commission Services, SPs.

But further measures will be needed to achieve the 2012 targets set out in the SPs

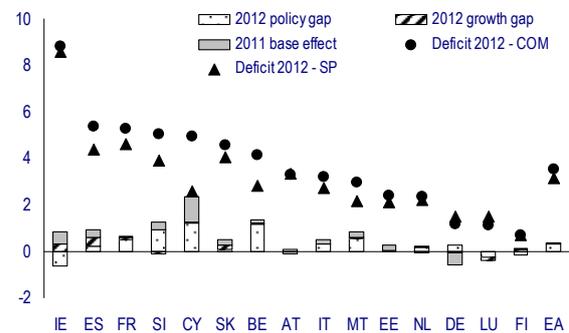
Overall, both the SPs projections and the Commission forecasts show a considerable reduction in the general government deficit. However, for 2012 the SPs deficits are targeted to be some 0.4 pp of GDP lower than projected in the Commission services' Spring 2011 forecast, while debt is projected to be around 1 pp of GDP lower. For the euro area, the Commission is forecasting a deficit of 3.5% of GDP, while the SPs show an expected deficit of 3.1% of GDP. The better deficit figures in the SPs partly stem from slightly stronger growth forecasts by Member States, but are mainly the result of additional policy measures included in the SPs but not yet specified in sufficient detail ('2012 policy gap'). This can be seen in Graph 1.6 which breaks down the differences in the deficit projections between the Commission forecasts and the SPs in 3 components: the '2011 base effect' ⁽³⁾, the '2012 growth gap' ⁽⁴⁾ and the '2012 policy gap' ⁽⁵⁾.

All Member States except Austria, Germany, Luxembourg, and Finland are targeting lower deficits than the Commission projections for 2012. In the case of Slovenia and Belgium, the SPs project deficits that are over 1 pp lower than the Commission's, while Cyprus's SP projects deficits more than 2 pp lower. The fact that these

⁽³⁾ Stems from differences in the growth assumptions for 2011 and/or from differences in assessing the impact of the 2011 consolidation measures.
⁽⁴⁾ This effect reflects the difference in the growth assumptions in 2012 and is calculated using the standard semi-elasticities to estimate the impact of growth on the deficit.
⁽⁵⁾ This effect stems from the difference in the quantification of the consolidation measures to be taken for 2012 as the Commission forecasts are undertaken on an unchanged policy basis, meaning that only measures already specified and decided upon are taken into account.

differences are mainly driven by the policy effect shows that Member States will only meet the forecasts set out in their SPs if they introduce all the measures outlined in their programmes. This represents a risk factor as it is unclear how easy it will be to introduce these additional policy measures. The policy gap is near or above 1pp of GDP in the case of Slovenia, Cyprus and Belgium, precisely the countries for which SCs and the Commission forecasts differ by at least 1 pp regarding the deficit for 2012.

Graph 1.6: General government deficit for 2012: decomposition of the gap between the SP projections and the Commission forecasts (in pp of GDP)



Source: Commission Services, SPs.

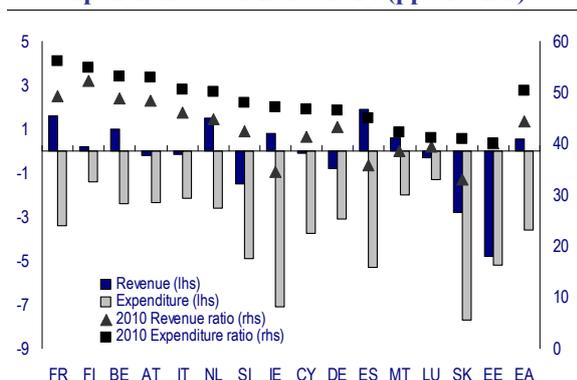
The projected average structural adjustment is mainly expenditure-based and annually well above 0.5 pp of GDP

Graph 1.7 shows the SPs' planned changes in both the public expenditure and revenue ratio between 2010 and 2014, as well as the level of these ratios in 2010. Overall, in the euro area, the consolidation is due to be primarily expenditure based. While revenues are due to increase by 0.5 pp of GDP between 2010 and 2014, expenditures are set to shrink by 3.6 pp. The Graph further shows that the overall picture of an expenditure-based consolidation holds true for the vast majority of Member States. However, a number of countries are cutting revenues alongside expenditure. For these countries, greater cuts in expenditure will be necessary in order to ensure that deficits return durably below the 3% ceiling specified by the Stability and Growth Pact.

In the cases of France and (to some extent) Belgium, it should be noted that the consolidation effort is in part relying on increases in the revenue ratio despite the fact that these countries have among the highest tax burdens in the euro area. Conversely, despite a low starting level, the tax

ratio is projected to decrease significantly in Slovakia, Estonia and Slovenia⁽⁶⁾, adding to the expenditure cuts that are needed to eliminate the deficit. As most of these countries have low starting levels of expenditure, there is an added risk that it may prove difficult to realise the projected expenditure – and thus deficit – cuts.

Graph 1.7: **Planned changes in revenue and expenditure over 2010–2014 (pp of GDP)**



Source: Commission services, SPs.

The structural average annual increase between 2010 and 2014 is well above 0.5 pp. of GDP. An improvement of 1 pp. of GDP is pencilled in between 2010 and 2011, ¾ pp. between 2011 and 2012, followed by improvements of ½ pp. While countries are moving towards their Medium Term Objectives, very few of them are set to achieve them by 2014. Only Germany, Italy and Estonia are projecting to reach them.

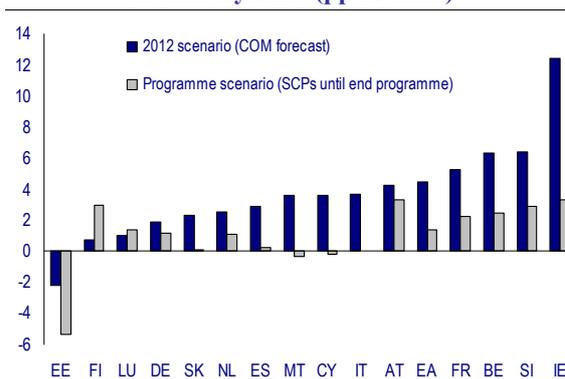
Consolidation is critical to reverse the debt path but also to contain the effects of ageing

Consolidation is necessary to overturn the additional fiscal pressures brought about by the crisis but the long-term pressures caused by an ageing population remain. Over the medium and long-term, additional policy measures will be needed to address the increases in debt that population ageing will cause. For example, population ageing means that the potential growth

is set to fall over the coming decades and the cost of providing services for the aged is set to increase. In 2060, euro-area age related expenditures are expected to be higher than in 2010 by 6.3 pp of GDP.

The SPs are ambitious in their plans for the years until 2014, but these plans are not going to be the end of the effort. In order for debt to fall below the 60% of GDP threshold by 2030, yearly additional structural improvements of more than 0.2 pp of GDP would be required from 2015 until 2020, on average. This assumes that the structural primary balance (in % GDP) is kept constant at the end-of-programme levels in the SPs, reflecting planned changes in fiscal policies as reported in the SPs. For some countries, (Ireland, Austria, Slovenia and Finland) significantly higher efforts will be required.

Graph 1.8: **Cumulated budgetary effort required until 2020 to reach a debt level of 60% of GDP by 2030 (pp of GDP)**



Source: Commission Services, SPs.

By contrast, the slightly more cautious "2012 scenario" holds the structural primary balance ratio constant at the 2012 level estimated in the Commission's Spring 2011 forecasts (reflecting the "unchanged policy" assumption). In this scenario, the cumulated consolidation effort for the euro area is of 4.5 pp of GDP, i.e. just under ½ of a percentage point per annum from 2013 until 2020.

⁽⁶⁾ For some of these countries the shrinking tax ratio is mainly driven by decelerating EU structural funds absorption over the period. Since EU structural funds are deficit-neutral, this is mirrored by a decrease of the expenditure ratio.

2. A primer on the EU/IMF adjustment programmes in the euro area

Overcoming the sovereign debt crisis is a major challenge for the euro area. Unprecedented financial assistance programmes have been put in place in some euro-area Member States – Greece, Ireland and Portugal – as urgent policy intervention was needed to limit contagion risks in the common interest of all Member States. This section provides an overview of the joint EU/IMF adjustment programmes in Greece, Ireland and Portugal, explains the rationale behind their design and reviews their results. The programmes were designed by the European Commission and IMF, in liaison with the ECB, to address country-specific vulnerabilities of the Member States concerned in the structural, fiscal and financial domain. They aim at ensuring sound and rapid fiscal consolidation and at raising growth potential while tackling contagion risks. Overall, while the programme in Portugal is too recent to have yet yielded substantive results, the programme in Ireland is on track with both fiscal consolidation and banking sector recapitalisation well underway. While Greece has also delivered a notable fiscal adjustment to date, the overall progress is more complex in light of the debt level and the political context. Fiscal and broader structural reforms should be pursued vigorously in all three countries. This should allow for further reductions in government deficits and should generate a critical mass of reforms needed to improve the business climate and growth prospects, thereby paving the way for sustainable economic recovery.

This section casts a light on the joint EU/IMF financial assistance programmes put in place in three countries of the euro area — Greece, Ireland and Portugal. Its aim is to provide an overview of the ongoing programmes by explaining the rationale behind their design and reviewing their results to date. As the sovereign crises in these Member States were caused by country-specific factors, the assistance programmes have been tailored to country-specific vulnerabilities. This section therefore follows a country-by-country structure.

The unfolding of the 2008-09 financial crisis and, in its wake, the financial rescue operations, stimulus packages and operation of automatic stabilisers, have considerably strained public finances in all Member States. Pre-existing imbalances in terms of public debt have worsened. A lasting knock-on effect of the crisis is the upward reassessment of risk on all markets. Previously overlooked vulnerabilities in Member States have been driving sovereign yields and CDS spreads up, thus fuelling further the deterioration of public finances. Given the common currency and deep financial and trade integration, the macro-financial stability of both the euro-area and EU Member States was at stake. Urgent policy intervention was needed to manage contagion risks in the common interest of all Member States.

The Balance-of-Payments (BoP) assistance activated for Hungary, Romania and Latvia in 2008-09 in conjunction with the IMF served as a basis for the programme design for Greece, Ireland and Portugal. Besides their national

specificities, the three joint EU/IMF conditional financial assistance programmes aim at safeguarding the integrity of the euro and all economies of the euro area in the face of unprecedented market turmoil. They address a wide range of economic challenges and tackle specific national weaknesses as the crises in Greece, Ireland and Portugal have very different root causes. They are articulated around three main fronts: financial repair, fiscal consolidation, growth and competitiveness. Their policy components are described in detail further on.

In Greece, public debt was on an unsustainable path before the crisis and public sector reporting was weak, even misleading. Price inflation and wage developments were at odds with labour market conditions. Thus the adjustment programme focuses on regaining competitiveness and fiscal health. In Ireland, the crisis was induced by the bursting of a property market bubble. The oversized banking sector faced large losses and its rescue by the government weighed heavily on public finances. Hence the programme emphasises banking sector recapitalisation and streamlining of public finances. In Portugal, low productivity growth and significant wage increases over the last decade undermined the country's competitiveness and its export market shares. Public expenditure growth outpaced GDP growth, leading to fiscal difficulties. The programme therefore focuses on reining in the public deficit and debt while enhancing the economy's growth potential.

These three financial assistance programmes are prominent parts of a broader euro-area/EU crisis

Box 2.1: New financial instruments

In May 2010, the Eurogroup agreed to provide financial assistance for a total amount of € 80 billion to Greece. This support is organised through bilateral loans by the participating Member States, pooled by the Commission to ‘transform’ the bilateral loans into a single loan to Greece. In March 2011 the Euro Area Summit agreed to extend the maturity of loans to Greece to 7½ years on average. The shares of participating Member States in the total loan are calculated on the basis of the ECB paid capital key. Three euro-area Member States — Ireland, Portugal and Slovakia — are currently not participating in the disbursement of bilateral loans to Greece. Slovakia opted for not participating, and has been joined by Ireland and later Portugal as these Member States themselves called for external financial assistance.

The May 2010 agreement was followed by a reflection on possible new support mechanisms, and two new instruments were devised to cover the financing needs of governments.

The European Financial Stabilisation Mechanism (EFSM) provides for the financing of up to €60bn for the benefit of all Member States. ⁽¹⁾ It was established in May 2010 by a Council Regulation on the basis of Article 122(2) of the Treaty on European Union. The European Commission borrows on behalf of the EU on markets and lends to countries.

The European Financial Stability Facility (EFSF) was created by the euro-area Member States following the Ecofin Council’s decision of 9 May 2010. It borrows on the markets under guarantees by euro-area Member States and on-lend the proceeds. The Commission and the EFSF coordinate their market activities closely. Euro-area heads of government agreed at the Euro Area Summit of March 2011 to raise the EFSF’s effective lending capacity to €440bn until its expiry in 2013.

Member States agreed to the creation of a permanent crisis resolution mechanism — the European Stabilisation Mechanism (ESM) — in March 2011. Its effective lending capacity will be €500bn and it will be established by an international treaty. The ESM will take over the role of the EFSF and the EFSM in providing external financial assistance to euro-area Member States after June 2013. ⁽²⁾

⁽¹⁾ Because of the EFSM’s higher pricing, non-euro area Member States have a greater incentive to use the Balance-of-Payments facility.

⁽²⁾ However, the EFSF will remain in place after June 2013 to administer the outstanding bonds. It will remain operational until it has received full payment of the financing granted to Member States and it has repaid its liabilities. Any undisbursed or unfunded portions of existing loan facilities will be transferred to the ESM.

resolution package. ⁽⁷⁾ Overcoming the sovereign debt crisis is a major challenge for the euro area. The architects of Economic and Monetary Union (EMU) had not foreseen the unfolding of events that led to soaring sovereign spreads in peripheral economies. An underlying pre-crisis tenet of EMU was that the Stability and Growth Pact (SGP) as well as national self-interest would preclude highly vulnerable sovereign debt positions, and that there was therefore no need for such instruments. Innovative institutional solutions therefore had to be found in the face of the euro area’s sovereign debt crisis. In particular, an institutional pre-requisite for the programmes was the creation of new financial instruments for euro-area countries, which are described in Box 2.1.

⁽⁷⁾ For a review of Europe’s comprehensive policy response to the crisis see *Quarterly Report on the Euro Area*, Vol. 10, No 1 (2011).

Coordination with the IMF

EU/IMF joint programmes for Greece, Ireland and more recently Portugal have led to an unprecedented level of cooperation between the two institutions. The programmes were designed during joint missions with extensive information exchange. The Commission negotiates the programme on behalf of Member States and in liaison with the European Central Bank (ECB). Policy conditionality clauses on fiscal, structural and financial aspects are designed in a consistent way so as to avoid conflicting objectives. Legal documents (Memoranda of Understanding, Memoranda of Economic and Financial Policies and Letters of Intent) are fine-tuned with the IMF and the ECB. There is also joint communication, with an EU/IMF/ECB press conference at the end of the mission and coordinated publications.

As a rule of thumb — and in line with the country’s financing needs and the facilities’

lending volume available — the EU provides two thirds of the programme funding and the IMF the remaining third. Both institutions seek to align their lending conditions and instalment schedule. Pooling EU and IMF institutional and financial resources thus achieves greater financial power and more financial stability and credibility.

Policy conditionality and review missions

Disbursements are subject to the fulfilment of policy conditionality criteria. These are assessed during quarterly review missions by the Commission in cooperation with the IMF and in liaison with the ECB. If targets are missed or are expected to be missed, additional action will be taken by national authorities to meet the targets set in the Memorandum of Understanding.

A snapshot of programme implementation in Greece

The 2008-09 global crisis exposed Greece's vulnerabilities. Market sentiment vis-à-vis the country worsened sharply in early 2010 as the downturn took a heavy toll on public finances. Significant overspending and a sharp fall in government revenue pushed the general government deficit to an estimated 13.6% of GDP in 2009. Government debt reached 115% of GDP at the end of 2009. Moreover, the extent of the deterioration in the fiscal position was revealed with some delay due to serious deficiencies in Greece's accounting and statistical systems. Delays in the implementation of corrective measures disconcerted financial markets, which began questioning Greece's fiscal sustainability. Rating agencies downgraded the sovereign, and the yield on sovereign bonds and CDS spreads increased significantly.

Following a further worsening of market conditions in the course of April 2010, the authorities requested bilateral financial assistance from euro-area Member States and a Stand-By Arrangement from the IMF. On 2 May 2010, the Eurogroup agreed to provide bilateral loans pooled by the European Commission for a total amount of €80 billion, to be disbursed over the period May 2010-June 2013. The financial assistance provided by euro-area Member States is part of a joint package, with the IMF financing an additional €30 billion under a Stand-By Arrangement. This financial assistance package was designed to fully cover the government's financing needs related to its fiscal deficit and all its maturing medium- and long-term liabilities

until the beginning of 2012, and progressively less thereafter. However, due to the settlement of unforeseen arrears accumulated in the past, the debt maturing within the programme period has increased. The Greek state has also accumulated new arrears. As market access remains limited to short-term market financing and the regaining of long-term market access in early 2012 is now unlikely, the programme has become underfinanced.

Euro-area Member States and the IMF have been devising solutions to cover the shortfall in Greece's revised financing needs, even beyond the current program, spanning the period between mid-2011 and mid-2014. A revised reform package — including an ambitious €50 billion privatisation plan — was adopted by the Greek Parliament on 29 and 30 June. Against this background, and on the basis of the debt sustainability analysis by the Commission and the IMF, Eurogroup ministers approved the disbursement of the fifth tranche of the current Greek Loan Facility (amounting to €12 billion, of which €8.6 billion from euro-area Member States) on 1 July. In addition, private sector involvement is being sought through voluntary rollovers of maturing Greek debt. All this prepares the ground for a second programme, which will be financed from both official and private sources, as agreed by the June 2011 European Council.

It should also be noted that, in order to improve debt sustainability, the Council decided in March 2011 to extend the maturities of loans to Greece to 7.5 years. The interest rate on the EU part of the loans is a floating rate based on the 3-month Euribor plus a margin of 2 pp until the third anniversary of the disbursement, and 3 pp thereafter.

The overarching objective of the programme is to durably restore Greece's credibility for private investors by securing fiscal sustainability, safeguarding the stability of the financial system, and boosting potential growth and competitiveness. To this end, the programme consists of a comprehensive set of ambitious and mutually reinforcing policies, grouped around the following three policy areas:

Fiscal consolidation. Sustainability-enhancing fiscal consolidation is urgently needed. The immediate priority is to contain the government's financing needs and reassure markets on the determination of the authorities to do whatever it takes to secure medium- and long-term fiscal

Table 2.1: Overview of adjustment programmes in euro-area Member States

	Greece	Ireland	Portugal
Period covered by EU assistance	Assistance available up to June 2013.	Assistance available up to December 2013.	Assistance available up to June 2014.
Financial instruments	Bilateral loans from euro-area Member States	EFSF; EFSM; bilateral loans from the UK, Sweden and Denmark, Irish reserves	EFSF; EFSM
Amount granted by the EU	Up to € 80 bn	Up to € 45 bn	Up to € 52 bn
Total size of the assistance (including other lenders)	€ 110bn (30 bn from IMF)	€ 85bn (22.5 bn from IMF)	€ 78bn (26 bn from IMF)
Number of instalments under EU assistance	Up to 12 instalments	Up to 12 instalments	Up to 12 instalments
Amount disbursed under EU assistance so far	€ 38.5bn (4 instalments)	€ 15bn (2 instalments)	€ 6.5bn (1 instalment)
Main areas of policy conditionality	<ul style="list-style-type: none"> * Fiscal consolidation * Fiscal governance and reporting reform * Reform of the public wage system * Pension reform * Financial sector regulation and supervision reform * Other structural reforms (related to Europe 2020 agenda) 	<ul style="list-style-type: none"> * Fiscal consolidation * Labour market reform * Public administration and taxation reforms * Energy sector liberalisation * Financial sector regulation and recapitalisation * Other structural reforms (related to Europe 2020 agenda) 	<ul style="list-style-type: none"> * Fiscal consolidation * Banking sector recapitalisation and deleveraging * Prudential Capital Assessment Review * National Recovery Plan to mitigate adverse effects on growth * Labour market reform * Other structural reforms (related to Europe 2020 agenda)

Source: Commission services.

sustainability. The policy programme provides for a very large macroeconomic adjustment, especially in the public sector. The fiscal deficit is projected to be reduced from almost 14% of GDP in 2009 to below 3% of GDP in 2014. Consolidation should rely on measures that generate savings in public sector expenditure and improve the government's revenue-raising capacity. To this end, an ambitious programme to privatise state assets and enterprises has also been spelled out. In parallel, measures are needed to provide reassurance on the durability of the fiscal adjustment, including by specifying and locking in consolidation measures for 2011 and 2012, reforming the pension system and strengthening the fiscal framework. The programme also includes associated structural measures, such as public administration reforms and measures to fight corruption and tax evasion.

Notwithstanding the considerable efforts needed, the programme ensures that the burden of the adjustment is shared fairly. Policies were designed to protect the most vulnerable in society from the effects of the economic downturn. By contrast, a larger contribution to the consolidation of government finances is expected from those who have so far not carried their fair share of the tax burden. Although public sector wages and pensions have been reduced, the programme aims to limit the burden on minimum wage earners, while preserving an adequate safety net.

Safeguarding the financial sector. Financial sector policies aim to restore confidence and

ensure the long-run viability of the banking sector. This is ensured through short-term bank liquidity support, measures to recapitalise banks without prejudice to competition rules, and the establishment of the Hellenic Financial Stability Fund (HFSF). The objective of the Fund is to safeguard the stability of the Greek banking system. It may provide equity capital to credit institutions by acquiring preference shares and, under certain conditions, common shares in the banks concerned.

Structural measures. Finally, the structural reform agenda prioritises those reforms that have a large growth-enhancing or budgetary impact in the short-to-medium run. Reforms to tackle undeclared work will broaden the scope of the formal economy, thereby improving tax collection. Unleashing the economy's growth potential is the core objective of these structural reforms. Labour market reforms will spur job creation and increase wage flexibility. Product market reforms, not least in the services sector, will step up market contestability, reduce the rents of vested interest groups and help to curb price pressures. Synergies between these measures will help to improve the business environment and competitiveness of the economy by removing rigidities, reducing production costs and increasing competition.

Latest Developments: The fourth Greek review mission in May 2011 concluded that while significant progress had been achieved during the first year of the adjustment programme, there had

been implementations problems and the recession in 2010 had been more pronounced than anticipated. The private sector has shown wage moderation and has even registered wage cuts in some sectors. Gains in competitiveness have supported export growth. However, reinvigoration of fiscal and broader structural reforms was considered necessary to further reduce the deficit and achieve the critical mass of reforms needed to improve the business climate and pave the way for sustainable economic recovery.

In the fiscal area, further sustained deficit reduction requires comprehensive fiscal structural reforms. This strategy includes significant downsizing of public sector employment, restructuring or closure of public entities, and rationalisation in entitlements, while protecting vulnerable groups. On the revenue side, the government intends to reduce tax exemptions, raise property taxation, and step up efforts to fight tax evasion. The government is also committed to significantly accelerate its privatisation programme with the aim of realising revenues of €50 billion by the end of 2015.

In the financial sector, liquidity remains tight, but policies are in place to ensure adequate liquidity provision for the banking system. The banking sector remains fundamentally sound and the authorities are increasing capital requirements to further strengthen capital buffers, giving priority to market-based solutions. However, the Financial Stability Fund is available as a backstop for viable banks that cannot raise capital in the private market.

Further progress has been made with structural reforms. Legislation has already been passed or is under way to modernise public administration, reform healthcare, improve the functioning of the labour market, remove barriers to setting up and operating a business and liberalise transport and energy. The government is committed to continue pushing ahead in these areas, with particular emphasis on growth drivers.

Building on the comprehensive policy package, discussions on the financing modalities for Greece's economic programme took place in June and early July 2011. End June, the Greek Parliament adopted a set of key laws on fiscal and economic reform strategy and privatization. This paved the way for the approval by the Eurogroup and the IMF's Executive Board of the disbursement of the July instalment under Greece's first financial assistance programme.

A snapshot of programme implementation in Ireland

From the summer of 2010 onwards, investors became increasingly concerned about the Irish banking sector and public finances. Banks' losses turned out to be much bigger than foreseen earlier. This affected the funding of the banks, which became increasingly difficult. Also the financing costs of the sovereign increased sharply, in part owing to the blanket guarantee it had given to the banks' financing in 2008. Although the Irish authorities implemented measures and announced plans with the aim of restoring confidence and ensuring funding, these efforts did not succeed in improving the financing situation. Banks lost access to market funding and corporate deposit outflows accelerated, and the cost of government borrowing reached unsustainable highs. Consequently, the Irish authorities requested financial assistance from the EU and IMF on 21 November 2010 and discussions on the programme were finalised during the following week.

A programme of €85bn financial assistance was agreed at staff level with the European Commission and the IMF, in liaison with the ECB, and approved by the Ecofin Council and the IMF Board in December 2010. Of the overall package, €67.5bn is split equally across the following sources (i.e. €22.5 billion each): (i) the European Financial Stabilisation Mechanism (EFSM), (ii) the European Financial Stability Facility (EFSF), together with bilateral loans from the United Kingdom, Denmark and Sweden (together: €4.8bn), and (iii) the International Monetary Fund. In addition to this €67.5bn, €17.5bn will be financed by an Irish contribution through its treasury cash buffer and investments by Ireland's National Pension Reserve Fund (NPRF). The programme provides for up to €50bn in fiscal needs and up to €35bn in banking support measures between 2011 and the end of 2013. The interest rate of the EFSM and EFSF depends on the prevailing market rates at the time of each drawdown plus a margin. These margins were calculated at the beginning of the programme to align the EU and the IMF lending rate. Margins were set at 292.5 basis points for the EFSM and 247 basis points for the EFSF. The lending rate of the EFSF is further increased by costs of credit enhancements.

The key objective of the programme is to restore financial market confidence in the Irish banking sector and the sovereign. To achieve this

objective, the programme has three key components.

Safeguarding the financial sector. The first aim of the programme is a fundamental downsizing and reorganisation of the banking sector. Addressing market perceptions of weak capitalisation, overhauling the banks' funding structure, as well as gradual downsizing and deleveraging of the banking system will be required. These steps will be backed by the availability of programme funds for both recapitalisation and deleveraging.

Fiscal consolidation. Second, the programme comprises a strategy to restore fiscal sustainability. Building on the authorities' National Recovery Plan, the consolidation strategy will rely to a large extent on broad-based expenditure restraint. International experience shows that this is a typical characteristic of successful and sustainable fiscal consolidation episodes. At the same time, the tax system will undergo profound change. The formerly narrow tax base is being broadened with a view to enhancing revenue stability and, together with increases in specified tax rates, contributing to the generation of additional revenue.

Structural measures. Third, structural reform is needed to boost growth. The programme includes measures to remove potential structural impediments to competitiveness and employment creation. Specifically, labour market measures should boost employment. Product market reforms should include the opening up of sheltered service sectors and thus contribute to stronger competition and productivity growth.

Latest developments: The EC/ECB/IMF review mission in April 2011 found that the authorities adequately complied with the conditionality underpinning financial assistance.

In the banking sector, the comprehensive recapitalisation and reforms announced on 31 March are a major step towards restoring the Irish banking system to health. The Central Bank of Ireland published the Financial Measures Programme (FMP), which presented bank capital requirements and deleveraging commitments based on the Prudential Capital Assessment Review (PCAR) and the Prudential Liquidity Assessment Review (PLAR). These exercises found that banks need €24bn of fresh capital to provide banks with adequate levels of capital to cover lifetime losses and to help deleverage the

banking system to sustainable levels. The banks will be recapitalised by 31 July 2011, after eliciting contributions from subordinated bondholders through liability management exercises. The credibility of the exercise has been reflected in a positive market reaction, with Irish bond yields declining following the announcement.

On the fiscal front, the targets for end-December 2010 and end-March 2011 were met with a comfortable margin. The budget deficit is projected at about 10½ percent of GDP in 2011, and the authorities reaffirmed their strong commitment to the fiscal consolidation agreed in the EU/IMF-supported programme, as well as to a deficit of 3 percent of GDP in 2015.

Regarding structural reforms, supportive measures in the Jobs Initiative and reform of sectoral wage-setting arrangements on the basis of an ongoing review will foster job creation. The government also plans to introduce legislative changes to remove restrictions on trade and competition in sheltered sectors, including the legal profession, medical services and pharmacies. Other measures to combat structural unemployment and protect vulnerable groups include a temporary reduction in the lower rate of social contributions, the reallocation of capital expenditure to more labour-intensive projects and a temporary increase in the number of internships and specific skills training courses to deal with structural unemployment. In addition, the Department of Social Protection will draw up a programme of reforms to better target social support at those on lower incomes, and ensure that work pays for welfare recipients.

In summary, Ireland is making good progress in overcoming the worst economic crisis in its recent history. Continued programme implementation, with support from the EU and the IMF, remains key to ensure Ireland's return to capital markets at affordable interest rates. The successful conclusion of the first review has allowed the disbursement of €4.6bn (€3.0bn by the EU, and €1.6bn by the IMF). The next programme review mission is scheduled for July 2011.

A snapshot of programme implementation in Portugal

Unfavourable fiscal developments and a bleak outlook for economic growth led to a deterioration of confidence and rising pressures in sovereign bond markets in early 2011, culminating in Portugal's request for official assistance. In

parallel, the banking sector, which is heavily dependent on external financing, became increasingly cut off from market funding and resorted extensively to Eurosystem funding. The government stepped down after failure to gain parliamentary approval for the Stability Programme in late March 2011. In the wake of consecutive downgrades of Portuguese sovereign bonds, interest rates reached levels that were no longer compatible with long-term fiscal sustainability.

Following the formal request for financial assistance made by the Portuguese authorities on 7 April, the terms and conditions of the financial assistance package were agreed by the Eurogroup and the Ecofin Council on 17 May 2011. The financial package covers Portugal's financing needs of up to €78bn. The European Financial Stabilisation Mechanism (EFSM) and the European Financial Stability Facility (EFSF) will provide up to €52bn (€26bn from each), to be disbursed over three years. Further support will be made available by the International Monetary Fund (IMF) for up to €26bn under an Extended Fund Facility. The EFSM loan will have a maximum average maturity of 7.5 years and a margin of 215 basis points on top of the EU's cost of funding. For the EFSF, a margin of 208 basis points, as well as the costs of its cash buffers, is added to the EFSF cost of funding. This yields conditions similar to those of the IMF support. The aid is being provided on the basis of a three-year policy programme for the period up to mid-2014. It includes a banking support scheme of up to €12bn to provide the necessary capital in case market solutions cannot be found.

The programme has received the backing of the main political parties and is structured around three main areas. First, a credible and balanced fiscal consolidation strategy, with the government deficit projected at 5.9% in 2011 and falling to 3% of GDP by 2013. Second, deep and frontloaded structural reforms, including in the labour market and the judicial system. Third, efforts to safeguard the financial sector through recapitalisation supported by back-up facilities.

Fiscal consolidation. The fiscal objectives of the programme are ambitious but realistic. The government deficit is expected to reach 5.9% of GDP in 2011, 4.5% of GDP in 2012 and 3% in 2013, in line with the requirements under the Excessive Deficit Procedure. Government debt is expected to peak at around 108% in 2013 and start declining thereafter.

Consolidation efforts are frontloaded, broad-based and supported by a wide range of measures to reduce expenditure and increase revenue. On the expenditure side, the measures include wage moderation in the public sector, lower transfers to local and regional administrations and state-owned enterprises, pension adjustments and lower capital expenditure. On the revenue side, some of the measures include broadening the corporate and personal income tax bases by reducing tax deductions and special regimes, ensuring convergence of personal income tax deductions applied to pensions and labour income, modifying property taxation, broadening the VAT base by reducing exemptions and reclassifying goods subject to intermediate and reduced rates.

Fiscal consolidation will be supported by supporting measures aimed at strengthening the fiscal framework to improve all stages of the budgetary process, including monitoring and risk management. In addition, Portugal will reap efficiency gains from substantial reorganisation of its public administration at the national, regional and local level.

Structural measures. Structural reforms cover a wide range of areas, including the labour market, the housing market, education, energy, transport, the business environment, the judicial system, services and healthcare. The approach to structural reforms is heavily frontloaded. Already in 2011, Portugal is expected to implement a first batch of measures aimed at strengthening labour market functioning by limiting severance payments and making working time arrangements more flexible. Unemployment benefits will be reformed with a view to avoiding unemployment traps and increasing the fairness of the system. In the energy sector, network industries and services, Portugal will adopt measures to promote competition and flexibility. The overarching objective of these structural reforms is to raise potential GDP growth, notably by boosting productivity and labour use. Making rapid progress towards this goal is key for employment and welfare, as well as for long-term fiscal sustainability.

Safeguarding the financial sector. Bank liquidity remains tight, even if the Portuguese banking system has weathered the crisis relatively well so far. On the back of the programme, Banco de Portugal is monitoring carefully the liquidity situation of the banking system and will intervene if necessary. In particular, government-guaranteed bonds may be issued up to a maximum of €35bn.

During the programme period, the banking sector should adopt a strategy for balanced and orderly deleveraging so as to eliminate its funding imbalances on a permanent basis. Furthermore, the bank solvency support mechanism is endowed with resources of up to €12 billion. At the same time, banks are required to further strengthen their capital buffers by raising their Tier 1 capital ratio to 10% by the end of 2012.

Conclusion

The far-reaching financial assistance programmes for Greece, Ireland and Portugal aim to ensure sound and rapid fiscal consolidation and increase growth potential while limiting contagion risks. As such, they are in the common interest of all euro-area Member States. In the face of the ongoing sovereign debt crisis, joint EU/IMF programmes make the most of the European Commission's in-depth knowledge of Member States and the institutional set-up of the EU, and of the IMF's long-standing experience in international crisis management. This has contributed to making joint policy conditionality better enforceable. The partnership of the Commission, IMF and ECB with the programme countries also enhances the programmes' credibility within financial markets and bolsters public acceptance.

Overall, while the programme in Portugal is too recent to have yet yielded substantive results, the strong political consensus on the program bodes well for its implementation. Significant progress has been achieved in Ireland, in particular in the area of recapitalising and restructuring the banking sector and in fiscal consolidation. Ireland has also substantially improved its competitiveness through wage adjustments.

While Greece has also delivered a notable fiscal adjustment to date, the overall progress is more complex in light of the debt level and the political context. Reinforcement of the programme is therefore needed to ensure Greece's return to a sustainable trajectory of public finances.

Fiscal and broader structural reforms must continue to be pursued vigorously in all three countries. This should allow further reductions in government deficits and should generate the critical mass of reforms needed to improve the business climate and growth prospects, thereby paving the way for sustainable economic recovery.

3. Private sector balance sheet adjustment in the euro area: how far still to go?

Inflated balance sheets played a pivotal role in the unravelling of the crisis and the sluggish recovery in the euro area partly stems from ongoing deleveraging processes. A detailed examination of latest national account data paints a mixed picture of private sector balance sheets in the euro area. Regarding the non-financial corporate sector, some progress in balance sheet consolidation has been achieved since the trough of the recession in 2009, but further adjustment remains likely in the quarters to come as growth remains subdued and debt levels as well as debt-to-equity ratios are still high. Against the background of increased risk aversion and corporate operating profits that are still recovering from the crisis, downward pressures from balance sheets on the investment recovery are likely to persist for some time.

By contrast, the situation appears more benign on the household sector's side. Euro-area households have adjusted their balance sheets in response to the crisis through higher saving and a portfolio rebalancing towards less risky asset holdings. Although housing investment still awaits its revival, households' precautionary spending restraint during the crisis seems to have subsided in recent quarters, despite the fact that net financial wealth has not yet fully recovered to pre-crisis levels.

Introduction

Excessive leverage in the private sector, particularly in the US and some EU Member States, has been one of the root causes of the global financial crisis. Changes in lenders' and borrowers' assessment of risks and income prospects triggered balance sheet consolidation processes that have spread well beyond the borders of the countries which were the epicentre of the crisis. While the balance sheets of the public and the banking sector in the euro area have been under considerable scrutiny since the onset of the crisis, less attention has been devoted to developments in the balance sheet of the non-financial private sector. This section tries to fill the gap by reviewing the balance sheet situation of euro-area households and non-financial corporations as depicted by national accounts. ⁽⁸⁾

Operating profits of non-financial corporations have been dented by the crisis...

Euro-area companies' operating profits were hit hard by the global economic crisis. Between the peak and the trough of the cycle, profitability (as measured by the ratio of gross operating surplus to value added in the non-financial corporate sector) fell by 3.5 pp (Graph 3.1). The reasons for this exceptionally sharp drop are well-documented: the recession was associated with an unusually sharp fall in labour productivity due to

a combination of labour hoarding, reduction in working time, temporary employment support schemes and employment rigidities. As shown in Graph 3.2, the deterioration in productivity was not matched by sufficient downward wage adjustment, so that corporate profits played a critical shock absorber role during the recession.

Graph 3.1: Gross operating surplus, euro-area non-financial corporations (in % of VA, 1999Q1 to 2010Q4) (1)



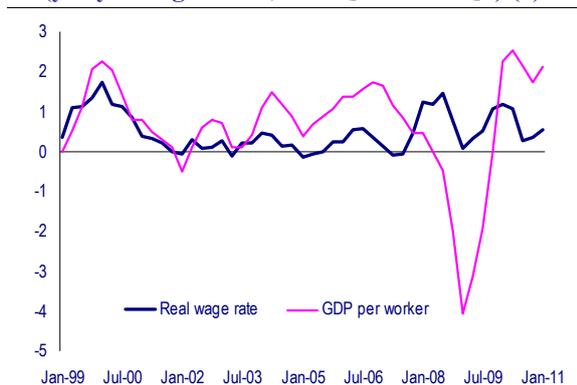
(1) Seasonally adjusted data.

Source: Eurostat.

The ongoing recovery has led to an improvement in profitability due to a sharp rebound in productivity, but the rate of profitability at the end of 2010 (last available data) remained below the levels registered in pre-crisis years.

⁽⁸⁾ The sections of euro-area national accounts providing financial and income data on individual sectors (households, corporations etc..) are published with a lag compared with standard GDP data. Consequently, this section will mostly draw on information up to 2010Q4.

Graph 3.2: Real wage rate and productivity, euro area (y-o-y changes in %, 1999Q1 to 2011Q1) (1)



(1) Seasonally adjusted data. The wage rate is calculated as the ratio of employees' compensation to the number of employees. It is deflated by the GDP deflator.

Source: Commission services.

... but the impact was cushioned by low interest rates and taxes

The picture appears more encouraging when looking at more broad-based measures of corporate profits that account for non-operating items. Due to favourable developments in interest outlays and taxes, such measures have shown a stronger recovery than gross operating surplus, with some of them now back at close to pre-crisis levels. In particular, net interest payments have come down since the early stages of the crisis and are now at historical lows. Being large borrowers, the easing of overall borrowing conditions over the past two years has cushioned the impact of the crisis on Euro-area companies' profits. A modest reduction in corporate debt (discussed hereafter) has also contributed to curb interest payments.

The impact of the crisis on net profits has also been mitigated by developments in taxes and fiscal transfers. Since the start of the crisis, revenues from corporate income taxes have registered a sharp decline due to a shrinking of the tax base (profits) and a sharp drop of the estimated actual corporate income tax rate (Graph 3.3). The estimated actual tax rate on corporate income is traditionally influenced by the cycle, but in the latest recession discretionary tax measures (mostly of a temporary nature) have also played a role.⁽⁹⁾ So far, the recovery has entailed only a modest increase in the estimated actual tax rate.

⁽⁹⁾ For an analysis of recent tax measures taken in EU Member States see: European Commission (2011), "Monitoring tax revenues and tax reforms in EU Member States 2011", *European Economy*, forthcoming.

Graph 3.3: Estimated actual corporate income tax rate, euro-area non-financial corporations (in %, 1999Q4 to 2010Q4) (1)



(1) 4 quarter moving average of non-seasonally adjusted data. The estimated actual tax rate is calculated as the ratio of tax revenues on income and wealth to gross operating surplus.

Source: Commission services

Finally, it is also worth stressing that corporations have absorbed the impact of the crisis on their savings (i.e. the share of profits that is not paid to tax authorities, shareholders or creditors but retained to acquire physical and financial assets) by curbing dividend payments. Although distributed profits tend to be strongly cyclical, their drop in the latest recession was very sharp and their recovery has so far been modest.

Overall, the picture in terms of profitability painted by national accounts at the end of 2010 appears mixed. Operating profits improved with the recovery, albeit from a very low level, and non-operating profits have been boosted by factors (low interest rates, favourable fiscal developments) which are partly temporary.

Corporations' spending behaviour remains cautious

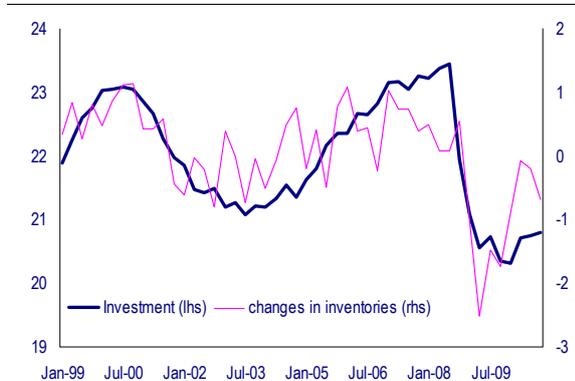
Whereas euro-area companies have made comparatively limited use of job cuts during the crisis (at least by historical standards), they have resorted extensively to an alternative cyclical adjustment variable, namely gross capital formation. As shown in Graph 3.4, both gross fixed capital formation (i.e. investment) and inventories have been curtailed sharply during the crisis, with their share in corporate value added falling well below the troughs of the downturn of the early 2000s.

Investment and inventories have bottomed out since the beginning of the recovery but the situation remains mixed, with corporations clearly displaying very cautious spending behaviour.

First, corporate investment has recovered only moderately since the beginning of 2010, expanding marginally faster than value added. As a result, the ratio of investment to value added remains very low. The first release of National Accounts for 2011Q1 points to an acceleration of total gross capital formation (i.e. including corporations but also households and government) at the beginning of the year, although the extent of the pick-up for corporate investment will only be known when the data is available end-July.

Second, inventories have rebounded more noticeably in the recovery, although this pick-up only amounts to a slowdown in the rate of de-stocking. In 2010Q4 (last available data), euro-area corporations were still depleting their stocks at a relatively high rate. Such a pattern is quite unusual at this stage of the business cycle. Recent analysis carried out on the basis of business survey data indicates that the crisis has been associated with a shift in enterprises' inventory behaviour with rising aversion to the risk of holding excessive stocks.⁽¹⁰⁾ Together with cautious investment behaviour, this can be interpreted as evidence of a persistently high degree of risk aversion in the corporate sector.

Graph 3.4: Investment and inventories, euro-area non-financial corporations (in % of VA, 1999Q1 to 2010Q4) (1)



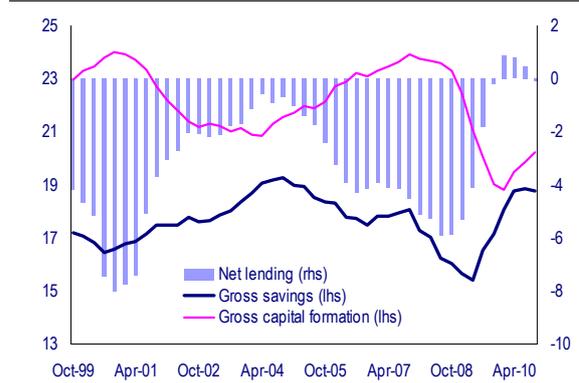
(1) Seasonally adjusted data.
Source: Eurostat.

High savings and low investment have led to large cuts in corporate needs for external funds

Cuts in capital spending since the beginning of the crisis and a strong rebound of corporate savings during 2009 have considerably reduced corporations' needs for external funds. Typically corporations are net borrowers as their funding

needs for investment exceed their capacity to generate internal funds through retained profits. During the recession, however, euro-area firms have become net providers of capital to the rest of the economy for the first time since the start of this series in 1999 (Graph 3.5). In national accounting jargon, their Net Lending/Borrowing (NLB) has turned positive.

Graph 3.5: Net lending/borrowing, euro-area non-financial corporations (% of VA, 1999Q4 to 2010Q4) (1)



(1) 4 quarter moving average of non-seasonally adjusted data. Net lending is equal to "gross savings" minus "gross capital formation" plus "capital transfers" minus "acquisitions less disposals of non-financial non-produced assets".
Source: Eurostat.

As discussed in a previous issue of this report, a sharp and persistent increase in corporate NLB can be interpreted as evidence of a process of balance sheet adjustment in the corporate sector.⁽¹¹⁾ A positive level of NLB is an indication that corporations are accumulating internal funds either to acquire foreign assets or to reduce debt. The recovery has so far been associated with only a modest fall in NLB, which remains well above its pre-crisis years and also above the peak reached during the previous balance sheet consolidation phase of 2002-2004.

The financial transaction accounts of national accounts provide the financial counterpart to developments in NLB. A given NLB position must be matched by changes in financial assets of identical size as shown in the following identity:

$$NLB = \Delta(\text{Assets}) - \Delta(\text{Liabilities}) \quad (1)$$

where Δ stands for the difference operator.

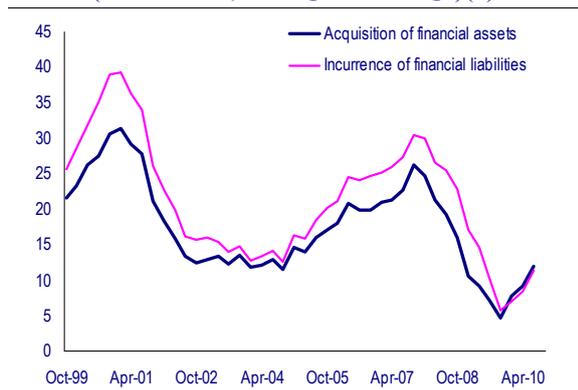
The two elements on the right-hand side of the equation are plotted in Graph 3.6. During the

⁽¹⁰⁾ See European Commission (2011), European Business Cycle Indicators, April, pp. 7-9.

⁽¹¹⁾ See European Commission (2010), "Balance sheet adjustment in the corporate sector", *Quarterly Report on the Euro Area*, Vol. 9, No. 3, pp.9-19.

crisis, non-financial corporations reduced their financial transactions dramatically both on the asset side (acquisition of new financial assets) and on the liability side (incurrence of new financial liabilities). The downward adjustment was, however, stronger on the liability side than on the asset side. The pace of financial transactions has picked up again in the recovery but remains slow.

Graph 3.6: Financial transactions, euro-area non-financial corporations (in % of VA, 1999Q4 to 2010Q3)(1)



(1) 4 quarter moving average of non-seasonally adjusted data.
 Source: Commission services.

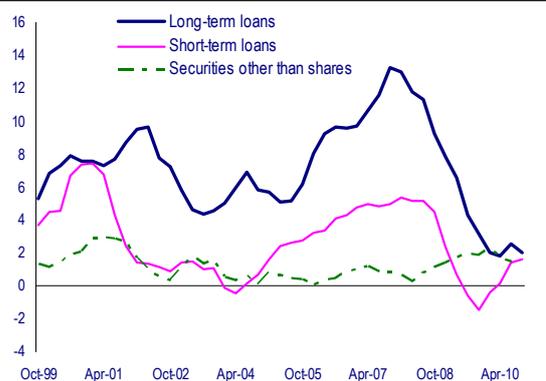
Corporations have started to restructure their balance sheets...

A closer look at the components of financial transactions suggests two interesting features of the adjustment.

First, on the asset side, the drop in the pace of acquisition is accounted for by more risky assets such as equity and financial derivatives. This suggests a desire to reallocate corporate portfolios towards safer assets, a trend which has so far only been modestly unwound with the recovery as acquisitions of more risky assets have remained well below pre-crisis peaks.

Second, on the liability side, the adjustment has mostly taken the form of a sharp drop in the take-up of new loans at both short and long maturities (Graph 3.7). The sharp moderation in borrowing via loans has been accompanied by a slight pick-up in bond issuance, although the latter was far too weak to offset the fall in loan-based borrowing. Finally, it is worth stressing that data on share issuance give no indication that corporations have tried to bolster their balance sheets by raising equity capital. As a result of the crisis, emissions of equity liabilities have fallen well below their 2007 peak and have so far shown no clear sign of recovery.

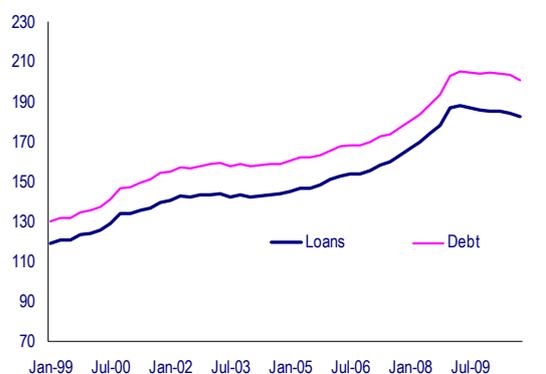
Graph 3.7: Borrowing of euro-area non-financial corporations (% of VA, 1999Q4, 2010Q4) (1)



(1) 4 quarter moving average of non-seasonally adjusted data.
 Source: Commission services.

Companies' efforts to improve their financial position have left their mark on balance sheets. The share of debt or loans in value added, which had been on a strong upward trend during the decade preceding the crisis, has been subject to a sharp inflection and has come down slightly since the start of 2009 (Graph 3.8).

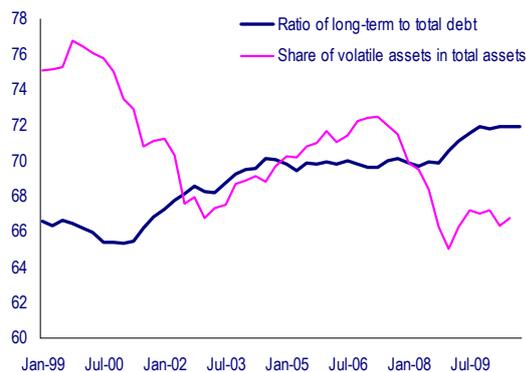
Graph 3.8: Debt level, euro-area non-financial companies (% of VA, 1999Q1 to 2010Q4) (1)



(1) End of quarter outstanding level. Debt includes both loans and securities other than shares.
 Source: Commission services.

There is also evidence that some balance sheet ratios have improved in recent quarters. On the liability side, debt maturity has been extended with the share of long-term debt in total debt rising (Graph 3.9). On the asset side, the proportion of more volatile assets (mostly equity and financial derivatives) has come down significantly. This partly reflects the sharp falls in equity prices brought about by the crisis but also, as discussed before, efforts by corporations to shed some of these assets, or at least slow the rate of their accumulation.

Graph 3.9: **Balance sheet ratios, euro-area non-financial corporation**
(in % of VA, 1999Q1 to 2010Q4) (1)



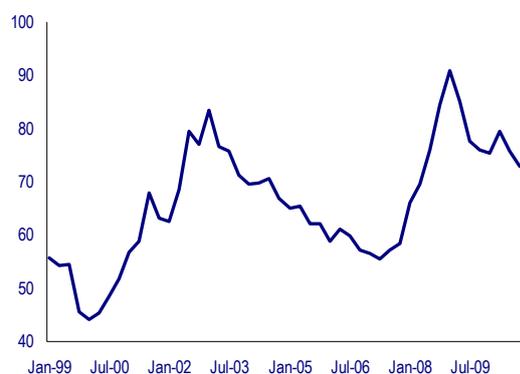
(1) Volatile assets include the following categories: (f5) shares and other equity and (F34-F7) financial derivatives and other accounts.

Source: Commission services.

... but the consolidation process is not over yet

Some balance sheet indicators, however, sound a more cautious note regarding the balance sheet outlook. For instance, this is true for the debt-to-equity ratio. It dropped sharply in the early stages of the crisis as equity prices plummeted. Since the second quarter of 2009, the combined effects of a recovery in share prices and, to a much lesser degree, a reduction in the take-up of new loans have led to an improvement in the ratio. Nevertheless, progress has been slow since the early 2010 (reflecting less favourable developments in equity prices) and the level of debt remains high relative to equity (Graph 3.10).

Graph 3.10: **Debt to equity ratio, euro-area non-financial corporations**
(in % of VA, 1999Q1 to 2010Q4)



Source: Commission services.

Faced with the prospect of a subdued recovery and resulting sluggish profit growth, companies are likely to continue to remain financially

cautious.⁽¹²⁾ Corporations are therefore likely to take advantage of the recovery by further strengthening their balance sheets through expenditure restraint. This conclusion is also backed by more recent developments in corporate credit. According to ECB data, annual growth in credit to non-financial corporations has been back in positive territory since January 2011 but remains weak, with the last reading unchanged at 0.9% in May 2011.

Euro-area household sector shifts to precautionary saving in crisis

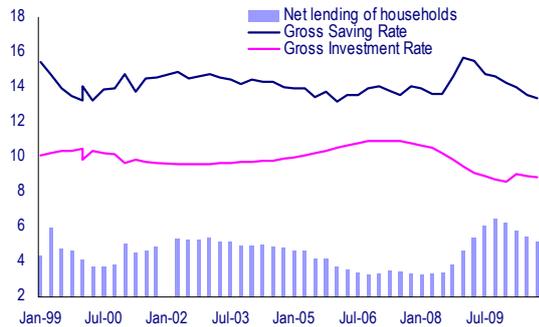
Since more than a decade the household sector in the euro area has shown a rather stable pattern of overall saving and investment, and notably more so than the corporate sector. Graph 3.11 shows that households have consistently been a net lender to other sectors of the economy, with annual net lending typically showing only relatively minor fluctuations outside crisis times. Nevertheless, the impact of the financial crisis on households' saving and investment behaviour stands out. Net lending rose by close to 3 pp. of GDP over the course of 2009 before receding somewhat in 2010, though ending the year distinctly above its long-run average.

To understand better the drivers of households' net lending behaviour, Graph 3.11 also plots the gross saving and investment ratios of the euro-area household sector. Two distinct factors stand out: firstly, the gross saving rate rose sharply in late 2008 and early 2009, but has since eased progressively and is now close to its long-term average. This suggests that the crisis brought about a temporary surge in precautionary savings, a finding that is supported by the sharp coincident rise in households' unemployment expectations between early 2008 and early 2009.⁽¹³⁾ Nevertheless, the subsequent normalisation in households' spending behaviour suggests that the crisis has not had a lasting inhibiting effect on consumption spending. Secondly, however, households do seem to have scaled back investment in a more persistent manner since the crisis. This is not least due to the downturn in a number of Member States' housing markets and, possibly, a tightening of credit conditions.

⁽¹²⁾ European Commission (2010) (op. cit.) identifies GDP growth and the debt to equity ratio as important drivers of balance sheet adjustment.

⁽¹³⁾ See the March 2009 results of DG ECFIN's Business and Consumer Surveys:
http://ec.europa.eu/economy_finance/db_indicators/surveys/index_en.htm

Graph 3.11: Household net lending and saving and investment rate, euro area (% of gross disposable income)(1999Q1-2010Q4)(1)

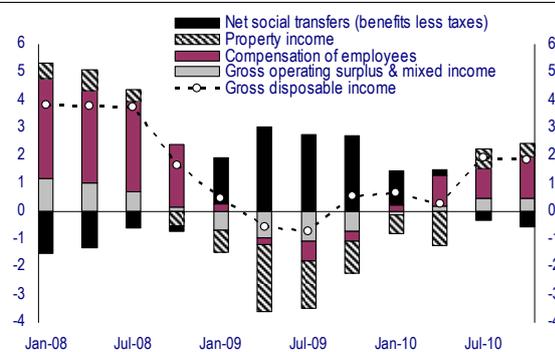


(1) Seasonally adjusted data except net lending, which is a four-quarter moving average
Source: Commission services.

Automatic stabilisers prop up household income in the face of sharp dividend falls...

Graph 3.12 presents a decomposition of gross disposable income growth over the course of the crisis. It shows that households' disposable income remained broadly constant in 2009 and was thus far less affected by the crisis than GDP. The principal reason for this stability lies in the functioning of automatic stabilisers, which propped up gross disposable income through a combination of greater social benefit payments and lower overall tax and social contribution collections. These are jointly captured in the 'net social transfers' aggregate in Graph 3.12. Furthermore, as already emphasised, a number of factors (e.g. labour hoarding, employment support schemes etc.) limited the extent to which total employment – and thus labour compensation – fell in the euro area during the crisis.

Graph 3.12: Contributions to annual household disposable income growth, euro area (in pp, 2008Q1-2010Q4)(1)



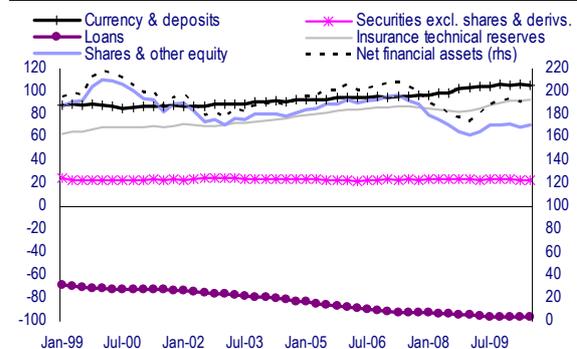
(1) 4 quarter moving average of non-seasonally adjusted data.
Source: Commission services

By contrast, Graph 3.12 shows that a crisis-induced drop in net property income had a strongly negative effect on household income growth, and was mostly driven by falling dividends. A further negative contribution came from falling income associated with households' entrepreneurial activities (i.e. gross operating surplus and mixed income). Just as for all other components, this effect was reversed over the course of 2010 and has now begun providing a positive stimulus to disposable income growth.

Crisis impact visible in households' otherwise robust balance sheets

It is instructive to supplement the preceding analysis of households' non-financial income flows and their use by an examination of developments in households' financial balances sheets. The two are intrinsically linked, as net lending generated by households in a given period increases their net claims on other sectors of the economy and therefore needs to be matched by an improvement in households' net asset position. Graph 3.13 presents an overview of the euro-area household sector's net asset holdings, revealing a consistently positive, though fairly volatile, net asset position overall.

Graph 3.13: Household net asset position by asset class, euro area (% of gross disposable income, 1999Q1-2010Q3)



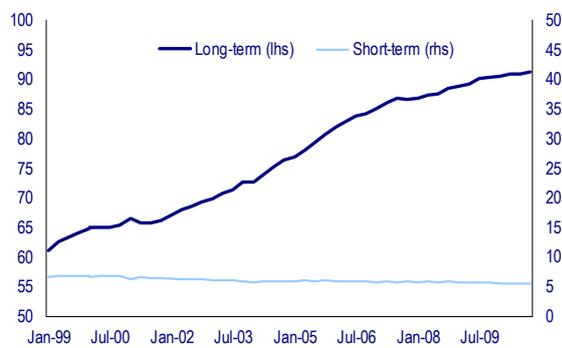
Source: Commission services.

Some of the asset classes show a noticeable trend, particularly for currency and deposits as well as insurance technical reserves on the asset side, and for loans on the liabilities side. Bond-type securities holdings appear to have been stable since 1999 whereas shares and other equity constitute by far the most volatile asset class. The crisis impact is clearly distinguishable, affecting households' overall financial assets – and therefore their net financial wealth – as well as a number of its main components.

Mortgage debt accumulation slows with crisis

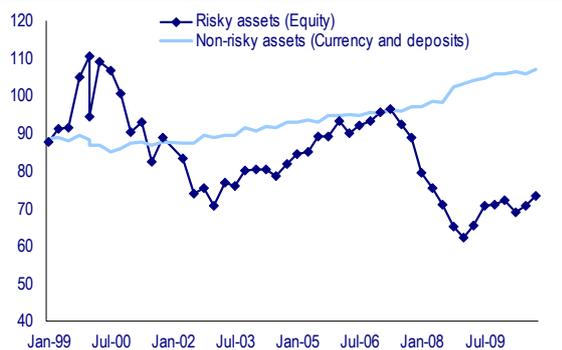
Turning to loans, which constitute the only asset class for which the euro area household sector shows a net liabilities position, Graph 3.14 depicts a secular rise in net long-term loan liabilities, mainly accounted for by rising mortgage debt. By contrast, the (far smaller) liabilities in short-term loans have been more or less unchanged since 1999. The crisis appears to have slowed the rate at which households contracted new long-term loan liabilities, as evidenced by a faint kink in the graph in mid-2007.

Graph 3.14: Household loans outstanding, euro area (% of gross disposable income, 1999Q1-2010Q4)



Source: Commission services.

Graph 3.15: Household net asset position by risk category, euro area (% of gross disposable income, 1999Q1-2010Q4)



Source: Commission services.

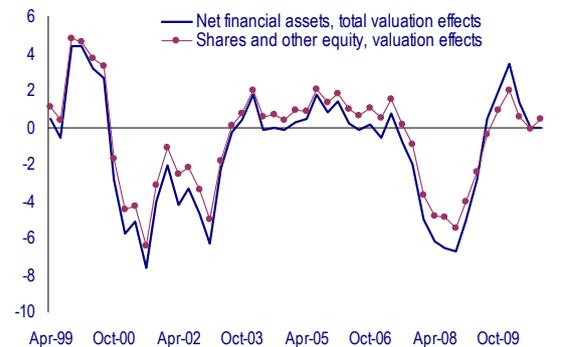
On the assets side, Graph 3.15 shows that the crisis had a major impact on households' portfolio allocation through rising risk aversion. Between early 2007 and early 2009, a sharp fall in net equity holdings stands out, which has only been reversed to a minor extent in subsequent quarters. Over the same period, an upward shift in relatively low-risk assets such as currency and

deposits is noticeable, pointing to a qualitative strengthening of households' financial position.

Household's net wealth driven by equity prices

Global equity price movements during the crisis clearly played a major part in the fall of households' net financial wealth during the crisis. To illustrate this link better, Graph 3.16 maps the valuation effects of price (and potentially currency) movements on households' net equity holdings and their total net asset position. It shows that the two are closely linked, with valuation effects for total asset holdings even slightly stronger than the equity-related ones. Since 1999, valuation effects have tended to be negative for households' financial long-term wealth overall. Finally, the equities crash in 2008 broadly matches the bursting of the dot-com bubble in 2001 in terms of its damaging effect on household wealth, although the latter partly resulted from a much sharper pre-crash rally.

Graph 3.16: Valuation effects in quarterly movements in households' net asset position, euro area (% gross disposable income, 1999Q1-2010Q4) (1)



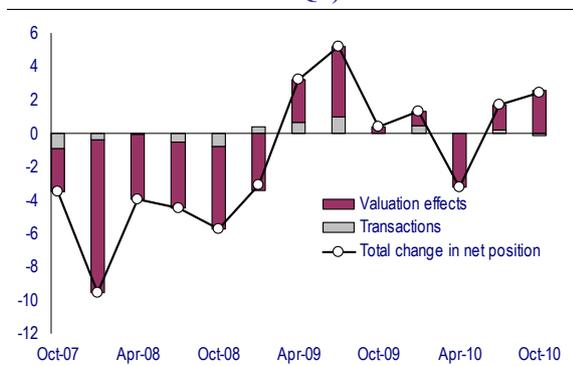
(1) 4 quarter moving average of non-seasonally adjusted data.

Source: Commission services.

The magnitude of the above valuation effects stemming from equity prices is a striking illustration of the fact that higher leverage entails greater total value at risk, as the overall impact of a given price change rises with the underlying asset stock size. Graph 3.17 shows that during the crisis the quarterly change in households' net equity wealth was by far dominated by price swings, whereas actual transactions in or out of equity markets played only a very minor role in driving equity holdings. This illustrates an important point related to balance sheet adjustment process. Consolidation efforts that aim to improve net wealth through greater net saving can easily be drowned out by price swings, especially if there are mismatches in terms of

asset types and currency denomination between the asset and liabilities side of the balance sheet.

Graph 3.17: Contributions to quarterly changes in households' holdings of equity assets, euro area (pp of gross disposable income, 2007Q4-2010Q4)



Source: Commission services.

Overall assessment: contrasting picture for corporations and households

Overall, the analysis presented in this section suggests contrasting positions for corporate and household balance sheets in the euro area. As to the non-financial corporate sector, some progress in balance sheet consolidation has been achieved since the trough of the crisis but further adjustment in the quarters to come remains likely, as growth remains subdued and debt levels as well as debt to equity ratio are still high. Against the background of increased risk aversion and corporate operating profits that are still recovering from the crisis, downward pressures from balance sheets on the investment recovery are likely to persist for some time.

In contrast, the situation appears more benign on households' side. Euro-area households have adjusted their spending, saving and investment behaviour in a pro-cyclical manner during the crisis, i.e. switching to a more precautionary stance. The resulting increase in net lending was, however, much smaller for households than for corporations. Furthermore, the rise in precautionary savings during the crisis has since been progressively unwound suggesting a more benign assessment of risks, probably supported by the relative stability of households' disposable income during the crisis. As in the case of corporations, households' balance sheets show a rebalancing towards low-risk assets. On the liabilities side an inflection in the pace of debt accumulation is visible but deleveraging has been less pronounced than for corporations. Although housing investment still awaits a revival, pressures from balance sheets on household consumption seem to have subsided in recent quarters despite the fact that net financial wealth has been deeply affected by falls in equity prices and has not yet fully recovered to pre-crisis levels.

Finally, it is worth stressing that the situation in the euro area contrasts sharply with the US. Euro-area corporations entered the crisis with a much higher level of debt than their US counterparts and have since experienced a period of deleveraging, whereas debt accumulation has been little affected by the crisis in the US. By contrast, euro-area household are much less indebted than their US counterparts. As a result, the crisis has only led to a minor slowing in the pace of new borrowing in the euro area, whereas US households have embarked on a clear deleveraging process.

4. Fiscal governance in euro-area Member States: insights from a fiscal governance database

Fiscal governance frameworks comprise the procedures and institutions that underlie the conduct of budgetary policies. Fiscal governance at national level has been gaining increased relevance recently, as reflected not least in the Commission's legislative proposals to enhance economic governance currently under negotiation. Based on an Ecofin Council mandate, the Commission services maintain a database on fiscal governance in EU Member States, focusing on three key dimensions: numerical fiscal rules, medium-term budgetary frameworks, and independent fiscal institutions. The data show that fiscal governance remains weak along the three dimensions in some Member States. Furthermore, the trend towards an increasing number of fiscal rules was reversed in 2009 (latest data available), with this fall being the first since 1990 and the average strength of such rules decreasing as well. In 2009, 16 euro-area Member States had a medium-term budgetary framework, although in many cases such frameworks showed considerable flaws. 21 independent fiscal institutions were operating in euro-area Member States in 2009. While the fiscal governance database captures the heterogeneity across euro area members, it also highlights that some Member States still have some way to go to reach the standards laid down in the draft Directive on budgetary frameworks of EU member states, which formulates the 'least common denominator' required for SGP compliance.

Introduction

Fiscal governance frameworks comprise the procedures and institutions that underpin all stages of the conduct of budgetary policies of general government (planning, approval, implementation, monitoring). A growing body of empirical research shows that well-designed fiscal governance frameworks can contribute to attaining sound budgetary positions, reducing the cyclicity of fiscal policymaking, and improving the efficiency of public spending, inter alia by placing constraints on time-inconsistent behaviour of policymakers and by forcing them to adopt a longer-term approach to fiscal policy making.

In recognition of this empirical evidence, national fiscal governance has gained increasing importance in the EU's policy framework. In recent years, the Ecofin Council has on several occasions reiterated the importance of national budgetary frameworks for the soundness of public finances.⁽¹⁴⁾ In January 2006, the Ecofin Council asked the Commission to conduct a comprehensive analysis of existing national fiscal rules and institutions in the EU Member States and their influence on budgetary developments. In April 2009, the Ecofin Council invited Member States to annually update the Commission's database on fiscal governance. One year later, it launched the regular assessment of national fiscal governance frameworks.⁽¹⁵⁾ In addition to this evaluation of national fiscal governance

frameworks against non-binding standards of best practice, the Commission is proposing a number of binding minimum requirements for fiscal governance in EU countries in the draft Council Regulation on requirements for Member States' budgetary frameworks. This was tabled by the Commission in September 2010 and is currently under discussion between the Council, the European Parliament and the Commission (together with five other legislative proposals on economic governance).⁽¹⁶⁾

Following the 2006 Ecofin Council mandate, the Commission services have built up a database on fiscal governance in the euro-area Member States that is updated annually. This unique database focuses on three specific areas: national fiscal rules, medium-term budgetary frameworks, and independent fiscal institutions.⁽¹⁷⁾ The present section provides an overview of fiscal governance in the euro-area Member States in these three areas. It is based on the latest update of the dataset, reflecting the situation as of 2009. Naturally, owing to the design of data collection, this overview cannot do full justice to all facets of national fiscal governance, and in particular recent changes in the countries reviewed.

⁽¹⁴⁾ See the Ecofin Council conclusions of October 2006, October 2007 and May 2008.

⁽¹⁵⁾ This peer review is conducted in the Economic Policy Committee; the first review round took place in May 2011.

⁽¹⁶⁾ For an overview of these legislative proposals see European Commission (2010), *Quarterly Report on the Euro Area*, Vol. 9, No 3.

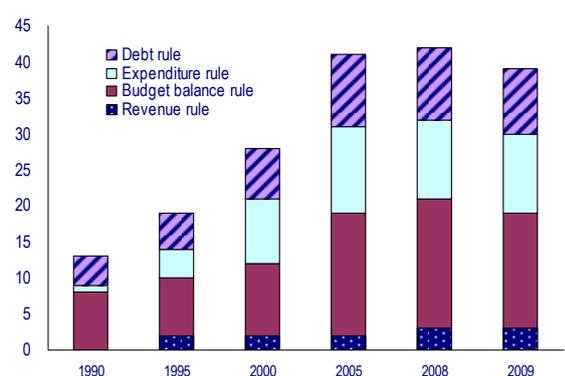
⁽¹⁷⁾ The fiscal governance dataset is available on DG ECFIN's website at: http://ec.europa.eu/economy_finance/db_indicators/fiscal_governance/index_en.htm.

Numerical fiscal rules

The Commission’s fiscal governance dataset covers numerical fiscal rules⁽¹⁸⁾ that target the main budgetary aggregates (i.e. budget balance, government expenditure and revenues, government debt or a major component thereof) in all sectors of government (central, regional, and local; general government; and social security). Procedural rules on the preparation of the annual budget are not considered.

Euro-area Member States had 42 numerical fiscal rules in place in 2009. Of these rules, which were in force across all euro-area members except Greece, Cyprus and Malta, budget balance rules were most widespread, with 18 such rules (42%). They provide some form of ceiling for the budget balance (typically the deficit), e.g. as per cent of GDP, or in absolute real or nominal terms, and often applying to the structural balance only. At the same time, euro-area Member States operated 11 expenditure rules and 9 debt rules, while there were 3 revenue rules and one combined rule constraining the budget balance and expenditure. Expenditure and debt rules also impose a ceiling on the respective budgetary aggregates, whereas revenue rules typically govern the allocation of unexpected revenues. Typically, a majority of budget balance rules (7) and debt rules (4) applied to local government, while expenditure rules were mostly in place for central government (5 such rules).

Graph 4.1: Number of fiscal rules in euro-area Member States by type (1990-2009)



Source: Commission services.

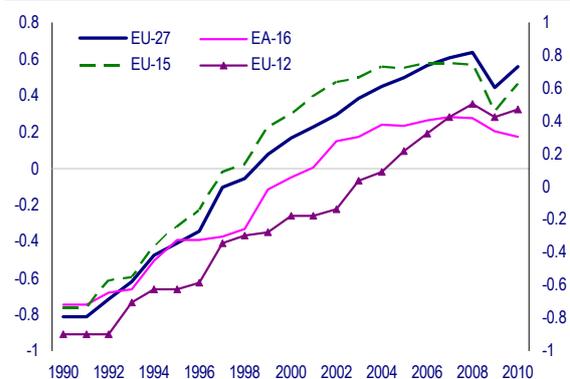
2009 was the first year in the past two decades to witness a decline in the number of numerical

⁽¹⁸⁾ The survey adopts the definition of Kopits and Symanski (1998) whereby a fiscal rule is ‘a permanent constraint on fiscal policy, expressed in terms of a summary indicator of fiscal performance’. See Kopits, G. and S. Symanski (1998), ‘Fiscal policy rules’, *IMF Occasional Paper*, No 162.

fiscal rules in force (Graph 4.1).⁽¹⁹⁾ Compared with 2008, three rules were abolished or put in abeyance (a budget balance rule in Finland and an expenditure rule and a debt rule in Slovakia). At the same time, Austria replaced a budget balance rule for all sectors of government except social security with an expenditure rule for general government.

The Commission services have devised a composite index measuring the strength of numerical fiscal rules based on five criteria: their statutory basis, the room for setting or revising objectives, the nature of the body in charge of monitoring whether the rule is complied with, enforcement mechanisms, and media visibility. The index also takes into account the coverage of general government.⁽²⁰⁾ In 2009, this fiscal rule index fell for the first time since 1990 for the euro-area average (see Graph 4.2).⁽²¹⁾ This resulted from the decrease in the number of numerical fiscal rules together with the replacement of a rule with broader coverage by one applying to a smaller share of general government finance (Austria, as described above).

Graph 4.2: The Fiscal Rule Index in the euro area and other selected aggregates (1999 to 2009)



(1) The fiscal rule index is calculated by assessing five criteria (see text). The index is standardised so that the average over the 1999-2009 sample is 0 and the standard deviation 1.

Source: Commission services.

Medium-term budgetary frameworks

Medium-term budgetary frameworks (MTBFs) comprise the procedures for preparing, implementing and monitoring multi-annual budget plans. They improve the quality of fiscal policy making, as the implications of most fiscal

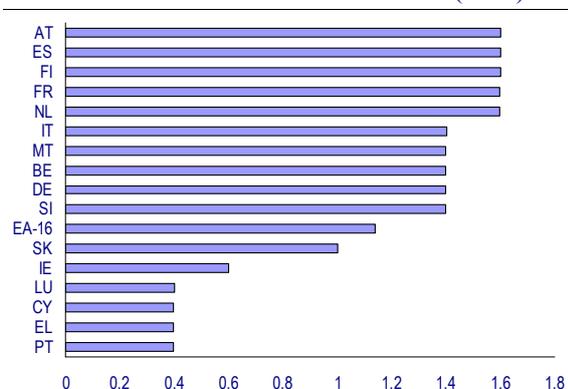
⁽¹⁹⁾ The dataset contains retrospective information back to 1990.

⁽²⁰⁾ More information on the fiscal rule index can be found on DG ECFIN’s fiscal governance website.

⁽²¹⁾ The weakening of the average strength of fiscal rules also applied to the EU-27 average, as well as the pre-2004 Member States (EU-15) and the new entrants (EU-12).

policy measures go well beyond the yearly budget cycle. In 2009, all euro-area Member States but four (CY, EL, LU, PT) had national MTBFs in addition to their Stability and Convergence Programmes (SCPs).⁽²²⁾ Most cover the whole of general government or large parts, typically with a three-year horizon — although the most developed MTBFs cover four (FI, AT) or five years (NL). In most MTBFs, the planning horizon is moved forward annually by a year, allowing earlier years' plans to be revised (rolling and flexible MTBFs). The main new development in Member States' MTBFs in 2009 was the introduction of the four-year expenditure framework in Austria.

Graph 4.3: The Medium Term Budgetary Framework Index in the euro area (2009)



Source: Commission services

From the survey information on MTBFs a composite index of their quality has been constructed on the basis of five criteria: (1) the existence of a domestic MTBF (beyond the requirements of the SCPs), (2) the link between the multi-annual budgetary targets and the preparation of the annual budget, (3) the involvement of national parliaments in the preparation of the medium-term budgetary plans, (4) the existence of coordination mechanisms between sectors of general government prior to setting the medium-term budgetary targets, and (5) the mechanisms for monitoring and enforcing multi-annual budgetary targets. Graph 4.3 shows the ranking of the euro-area Member States by this measure of MTBF quality. According to the MTBF index, four groups can be distinguished: the MTBFs of AT, ES, FI, FR, NL are most developed. IT, MT, BE, DE and SI have MTBFs of average quality, while in IE and SK there is scope for considerable improvement. Finally, CY, EL, LU and PT lack procedures for medium-term

⁽²²⁾ Details on the MTBF index can be found on DG ECFIN's fiscal governance website.

budgetary planning beyond those directly serving the European surveillance framework. In general, weaknesses relate to the lack of detail of budgetary projections, scant monitoring, the absence of correction mechanisms, and poor coordination of sub-levels of government.

Independent fiscal institutions

Independent fiscal institutions are a further institutional mechanism to improve budgetary performance by providing independent input (such as macroeconomic and budgetary forecasts), positive or normative analysis, assessment, and recommendations on fiscal policy making. The fiscal governance database includes institutions that are primarily financed by public funds but are functionally independent from fiscal authorities.⁽²³⁾ In 2009, there were 21 such institutions located in 11 euro-area Member States (CY, FI, IE, MT, SK had no such institution).

Typically, these institutions were far more common in the pre-2004 EU Member States, often with a long history, also due to the requirements of such institutions in terms of human resources, where smaller countries might have staffing difficulties.

In 2009, seven euro-area Member States had independent fiscal institutions mandated to monitor budget performance (BE, DE, ES, FR, IT, NL, PT). In four euro-area Member States, such institutions were providing budgetary forecasts (AT, BE, NL, SI) and non-binding macroeconomic forecasts (DE, FR, EL, LU). A notable development in 2009 was the establishment of a new independent fiscal institution in Slovenia, where one such institution, IMAD, had been operating already, being entrusted with evaluating the quality of public finances. The new council established in June 2009 has been assigned a consultative role in the area of fiscal policy and the implementation of

⁽²³⁾ Independent fiscal institutions (also called fiscal councils) are non-partisan public bodies other than the central bank, government or parliament that prepare macroeconomic forecasts for the budget, monitor fiscal performance and/or advise the government on fiscal policy matters. Specifically, they may provide macroeconomic forecasts for the budget preparation that do not suffer from optimistic bias; they may impartially monitor the implementation of budget plans and adherence to budgetary objectives; they may raise awareness of the short- and long-term costs and benefits of budgetary measures; and they may assess whether fiscal measures are appropriate in terms of compliance with rules, stability, and sustainability. Courts of Auditors are included if their activities go beyond accounting control and cover any of the tasks mentioned above. Think tanks, Central banks and directorates of ministries of finance are not considered.

Box 4.1: Examples of national fiscal frameworks: Belgium and Austria

In **Belgium**, high deficit and debt levels in the late 1980s and the launch of EMU in the 1990s prompted the authorities to reinforce the institutional setting to fiscal policy making. The resulting institutional reform was centred around two independent fiscal institutions: the National Account Institute (NAI) was established in 1994 and was entrusted with providing macroeconomic forecasts for budget preparation, while the reformed High Council of Finance has been responsible for monitoring fiscal policy and formulating medium-term objectives at the regional level since 1992. As part of the reform, the existing rules-based fiscal governance framework was reinforced as well. On top of the budget balance rule for local governments, five new numerical rules were implemented throughout the 1990s: an expenditure rule and a revenue rule respectively for central government, a budget balance rule and an expenditure rule for social security, and a budget balance rule for regional governments. The resulting coverage of all general government by numerical fiscal rules was complemented by reinforced multiannual fiscal planning in order to foster consolidation and accede to EMU. Due to the high level of fiscal decentralisation in Belgium, co-ordination between different levels of government is crucial. A key role in co-ordination is assumed by the HCF, which issues recommendations on general government budget balances for the years ahead. These recommendations provide the basis for political agreements between the federal and regional governments that include medium-term budgetary targets and act as internal stability programmes. Enforcement of these programmes is ensured by restrictions on debt issuance in the event of non-compliance. Important elements of the fiscal governance framework are budgetary targets (mainly expenditure ceilings) to centralise the budget preparation, which in turn are backed by a multi-annual fiscal programme as part of the coalition contract among the ruling parties. Finally, the Minister of Finance has strong powers to monitor budgetary implementation, but has limited agenda-setting powers.

In **Austria**, the main elements of the fiscal governance framework are the Austrian Stability Pact (ASP), which covers all levels of government, and the Medium-Term Expenditure Framework, which applies to the federal government. The ASP was first set up in 1996 to foster consolidation and fiscal discipline, as required under EMU. In 1999, the ASP was formalised; successors were adopted for 2001 to 2004, 2005 to 2008, and 2008 to 2013. The Pact was complemented by a consultation mechanism between levels of government to prevent legislation resulting in financial strain on other levels of government. The ASP sets deficit/surplus targets for the federal, regional and local governments, supported by a sanctioning mechanism. Initially, budgetary surpluses were not supposed to be carried over to future years. But because of the resulting pro-cyclicality such carry-over has been admitted, so that averages over the duration of the Pact are assessed instead. The ASP also includes sanctions that take the form of interest-bearing deposits that are distributed among compliant governments if targets are not reached in the following year. The sanction has not been used so far, however. A further important element of the Austrian fiscal governance framework is the Medium-Term Expenditure Framework (MTEF), introduced in 2009. It requires Parliament to adopt 4-year plans for nominal expenditure limits under five budgetary headings; these plans are annually rolled forward by one year. Expenditure ceilings are divided into fixed (about 80%) and flexible ones (for the remaining 20%); the latter cover areas that are subject to large cyclical fluctuations. Expenditure ceilings are also specified at the sub-heading level; they are binding for the following year and indicative for the three years thereafter. Line ministries can build reserves from unspent appropriations at the end of the year. Further reform initiated is expected to come into force in 2013, including performance budgeting, results-oriented management of administrative units, and a modernisation of the accounting system. Austria's fiscal governance framework is complemented by the operation of two independent fiscal institutions: the budget law is prepared using economic projections provided by the Austrian Institute for Economic Research (WIFO), while the Government Debt Committee (Staatsschuldenausschuss) provides fiscal analysis and consolidation recommendations.

structural reforms. It is authorised to evaluate fiscal policies in terms of sustainability and appropriateness under the given cyclical conditions, compliance with national and European fiscal rules, and the quality of public finance.

Conclusion

The trend towards an increasing number of fiscal rules in the euro area was reversed in 2009. Of the 45 numerical fiscal rules in force in 2008, three were subsequently abolished, ostensibly due to

their unsuitability to accommodate the fiscal policy challenges posed by the crisis. Consequently, the average strength of numerical fiscal rules also dropped by around one third against the previous year. Concerning medium-term budgetary frameworks, a novel development in 2009 was the establishment of a four-year expenditure framework in Austria. In 2009, three quarters of euro-area Member States had a medium-term budgetary framework that exceeded the SCP requirements, but in some cases, these frameworks displayed serious flaws such as insufficient coordination across sub-sectors of

general government and the lack of enforcement mechanisms; no change was registered along these lines in 2009. Finally, as regards independent fiscal institutions, the euro area saw the creation of a new body of this nature in 2009. Specifically, with the new Fiscal Council in Slovenia, the number of such institutions operating in 11 of the euro-area Member States increased to 21.

The above snapshot of fiscal governance in euro-area Member States relies on data as of 2009 and may therefore not correspond to the present situation in some cases. Besides, the dataset focuses on specific aspects of fiscal frameworks, which cannot fully reflect all the details of Member States' fiscal governance. Unfortunately, however, the quality of fiscal governance in the different areas portrayed above — numerical

fiscal rules, medium-term budgetary frameworks, and independent fiscal institutions — tends to correlate, so that strengths and weaknesses in these areas reinforce each other, leaving a group of euro-area Member States with weak fiscal governance altogether. It can be conjectured that the quality of other characteristics of fiscal governance not discussed above, such as budgetary procedures other than those related to medium-term planning, also depends on to the quality of the elements described here, underlining the need for improvement in the weakest euro-area Member States. This conclusion gains further support from the requirements spelled out in the draft Directive on EU budgetary frameworks, which specifies a minimum standard for fiscal governance in EU Member States in order to foster compliance with the SGP.

5. The impact of an increase in oil prices on economic activity

The price of oil has risen in the recent year due to more optimistic growth expectations for emerging economies and on the back of supply risks and disruptions in the Middle East and North Africa. Against this background, Section 5 presents model scenarios of endogenously driven oil price shocks using a recently constructed disaggregated version of the Commission's QUEST model. These simulations show that a proper assessment of the economic effect of a rise in oil prices requires a good understanding of the underlying causes of these price changes. Oil supply shocks generally have negative growth effects, raising costs in particular in energy intensive sectors and this spilling over to the whole economy. Oil demand shocks (i.e. those due to fast growth in the global economy) on the other hand lead to gradual but more persistent increases in the price of oil. This also has a negative impact on growth but the stimulus from higher global demand to exports can initially outweigh the negative impact from higher energy costs and the net effect on output can be positive. While these scenarios show the differences between supply and demand driven oil price shocks are significant, it is always difficult to disentangle the causes of changes in the price of crude oil in real time. At present, a combination of factors, i.e. supply disruptions as well as higher world demand for oil, are most likely playing a role, suggesting that the overall impact on growth should remain limited.

Given the expected sluggishness of the euro area's economic recovery, the evolution of oil prices forms a major concern. Oil is the most important source of energy and its price determines to a large extent other energy prices. Renewed increases in oil prices constitute a major downside risk to growth and an upside risk to inflation. Large oil price changes have been the driving force behind major recessions in recent history, and according to some also played a key role in the recent recession.⁽²⁴⁾ But what is of crucial importance is the underlying cause of oil price changes. Supply-driven oil price shocks have real effects that differ from those of oil price increases stemming from higher global demand. Against this background, this article presents model scenarios of endogenously driven oil price shocks using a disaggregated version of the Commission's QUEST model. It finds that in contrast to supply-driven oil price shocks, which have generally negative growth effects, the macroeconomic impact of oil price changes associated with higher global demand could be less adverse.

Oil price developments

Historically, oil price shocks have primarily been caused by physical disruptions in the supply of oil. This holds particularly for the shocks in the 1970s, which were associated with significant reductions in OPEC's oil supply. Following these price hikes, higher energy costs provided an incentive to reduce oil dependency and raise

investment in energy-saving technologies. They also made other sources of energy more profitable, and led to an increase in supply. As a result, oil prices were in a general decline in the following two decades. However, faster growth in emerging economies in the 2000s raised demand for oil (and other commodities) and led to a surge in oil prices. The price of oil has risen sharply over the last decade and reached historic heights in the summer of 2008, peaking at USD 145 per barrel. With the onset of the crisis and the sharp decline in global economic activity, oil prices collapsed and fell back to below USD 40 per barrel by the end of 2008 (Graph 5.1). However, since then, global oil markets have started to tighten again, as demand growth has outstripped supply. More optimistic growth expectations for emerging economies have led to a rebound in the price of oil. In 2011, the oil price has risen further on the back of supply risks and disruptions in the Middle East and North Africa. Following the loss of 1.3 mb/d of Libyan exports, spare capacity has fallen to its lowest level since late 2008, although this loss has been partly offset by increased production by other OPEC members such as Saudi Arabia. In addition to tight fundamentals, markets have concerns over unrest spreading to other regional producers, which has triggered a 'geopolitical' risk premium. The price of crude oil has hovered around USD 110-120 per barrel (EUR 80 per barrel) in recent months, and there remain widespread concerns about future price developments.⁽²⁵⁾

⁽²⁴⁾ Hamilton (2009) argues that the 2007-08 oil price shock was a major factor in causing the current recession and its impact was magnified by the rising energy share in expenditure. Hamilton, J. (2009), 'Causes and consequences of the oil shock of 2007-08', *Brookings Papers on Economic Activity* Vol. 40(1), pp. 215-83.

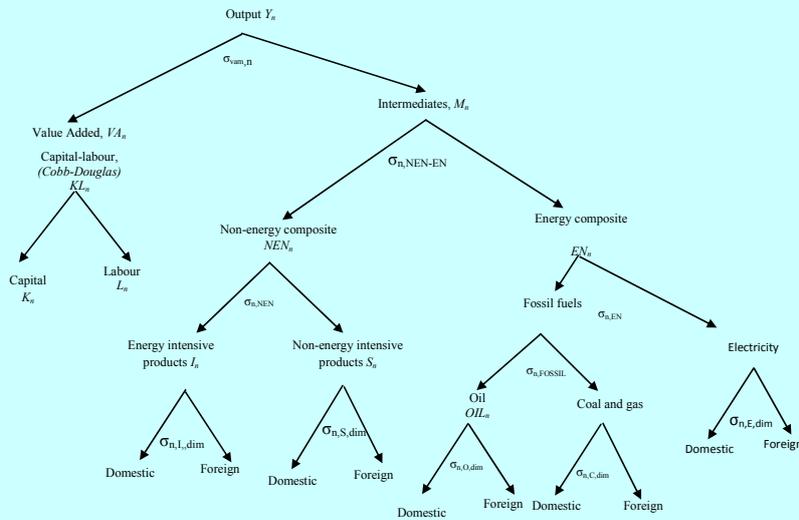
⁽²⁵⁾ The IMF (2011) analyses the long-term implications of oil scarcity, caused by unresolved tensions between expected rapid growth in oil demand in emerging markets and the downward shift in oil supply trends. IMF (2011), 'Oil scarcity, growth and global imbalances', *World Economic Outlook*, Chapter 3 (April).

Box 5.1: A DSGE model with energy sectors

The QUEST model with energy sectors is a multi-sector version of DG ECFIN’s standard open economy DSGE model. The model consists of three regions, the European Union (EU-27), the group of fossil fuel exporting countries (OEX) and the rest of the world (R). In each region, the model economy is populated by liquidity-constrained and non-constrained households, five sectors of producing firms, a monetary and a fiscal authority. We distinguish two sectors of non-energy goods and services and three energy-related sectors. Each firm in each sector produces differentiated goods which are imperfect substitutes for domestic and foreign goods. Firms use a capital and labour composite (value added VA) and a material and energy composite of intermediate goods (M). Interest rates are endogenous and the monetary authorities follow a standard Taylor rule in each region. The fiscal authority receives its revenue from taxes on factor incomes and consumption. The consumption, labour supply, fiscal and monetary authority settings closely follow those of the standard QUEST3 model (see Roeger et al., 2009 ⁽¹⁾), so we focus on the main difference, which is the production structure in a multi-sector setting (see also Conte et al., 2010 ⁽²⁾).

The nested CES production structure of each sector can be generalised as shown in the figure below. Firms use a capital and labour composite (VA) and an energy and non-energy composite of intermediate goods (M), where energy (EN) itself is composed of an oil, coal and gas composite and electricity sources. Electricity itself is produced from fossil fuels (oil, coal and gas), other intermediates, labour and capital inputs. We distinguish two non-energy sectors, an energy-intensive (e.g. transport and mining sectors, I) and a non-energy intensive sector (S). Figure 1 also shows the corresponding elasticities of substitutions between the production function composites. The calibrated values for these elasticities are shown in Table 1. These values are based on a combination of studies on energy-related CGE models (Bovenberg and Goulder, 1996; Goulder and Schneider, 1999; Sue Wing, 2003 ⁽³⁾). The sectoral composition is calibrated on the GTAP 7 database, which is primarily based on 2004 data ⁽⁴⁾. The 2004 price of oil was USD 40 per barrel; a 20% oil price increase in our simulation exercise corresponds to a USD 8 increase.

Technology of sectoral production



⁽¹⁾ Ratto M., W. Roeger and J. in 't Veld (2009), 'QUEST III: An estimated open-economy DSGE model of the euro area with fiscal and monetary policy', *Economic Modelling*, Vol. 26 (1), pp. 222-233.
⁽²⁾ Conte, A., A. Labat, J. Varga and Ž. Žarnić (2010), 'What is the growth potential of green innovation? An assessment of EU climate policy options', *European Economy Economic Papers*, No 413.
⁽³⁾ Bovenberg, A. L. and L. H. Goulder (1996), 'Optimal environmental taxation in the presence of other taxes: General equilibrium analyses', *American Economic Review*, Vol. 86 (4), pp. 985-1000. Goulder, L. H. and S. H. Schneider (1999), 'Induced technological change and the attractiveness of CO2 abatement policies', *Resource and Energy Economics*, Vol. 21 (3-4), pp. 211-253. Sue Wing, I. (2003), 'Induced technical change and the cost of climate policy', *MIT Global Science and Policy Change Report*, No 102.
⁽⁴⁾ The share of net oil imports is calibrated at 2.26% of GDP for the EU-27. We also account for the quantity taxes/excise duties on fuel, which amounts to 1.4% of EU GDP on the baseline (DG TAXUD, 2010).

(Continued on the next page)

Box (continued)

Calibration of sectoral elasticities

Elasticity	Elasticity of substitution between	Sector			
		Energy-intensive	Non-energy intensive	Energy sectors	Final consumption
$\sigma_{\text{vam,n}}$	Value added and intermediates	0.5	0.5	0.5	-
$\sigma_{\text{n,NEN-EN}}$	Non-energy and energy products/services	0.15	0.15	0.15	0.15
$\sigma_{\text{n,NEN}}$	Non-energy products/services	0.5	0.5	0.5	0.5
$\sigma_{\text{n,EN}}$	Energy products/services	0.3	0.3	0.3	0.3
$\sigma_{\text{n,FOSSIL}}$	Fossil fuel products/services	0.3	0.3	0.3	0.3
$\sigma_{\text{n,DIM}}$	Domestic and imported products/services	1.5	1.5	1.5	1.5
$\sigma_{\text{n,F}}$	Imported goods	1.5	1.5	1.5	1.5

Graph 5.1: Oil price developments (July 2001 to July 2011)



Source: Reuters ECOWIN.

Impact on economic activity

Oil price shocks affect the economy through supply and demand channels. As terms-of-trade shocks they have an impact on the economy through their effect on production decisions and relative prices. Oil price shocks represent a shift in purchasing power between oil-exporting countries and oil-importing countries. As demand for energy is relatively inelastic, an increase in energy prices leads to a loss in real income (wealth transfer) and so affects consumers' and firms' spending on goods and services other than energy. The demand effects through this income channel are important to explain the major impact of oil price changes on the economy. Supply-side effects arise from the use of oil as an input factor in the production process. With limited short-term substitution possibilities, an increase in the price of oil inputs increases production costs and affects prices and output.

Disentangling demand and supply shocks in oil markets

It is impossible to predict the macroeconomic implications of higher oil prices without knowing the underlying causes. Assuming exogeneity, i.e. allowing for the price of oil to change while keeping everything else constant, is not a valid assumption for two main reasons. First, there is the issue of reverse causality. Macroeconomic aggregates also affect oil prices and hence cause and effects are not well defined when relating changes in the price of oil to macroeconomic outcomes.⁽²⁶⁾ Second, the price of oil can be driven by supply or demand shocks in the market for crude oil. These shocks have different dynamic effects on future oil prices and different macroeconomic impacts.

Kilian (2009) employs a structural VAR model and distinguishes three types of shocks: crude oil supply shocks, defined as unpredictable innovations to global oil production; shocks to the global demand for industrial commodities, defined as innovations to global real activity; and oil-specific demand shocks, reflecting fluctuations in precautionary demand for oil driven by uncertainties about future oil supply shortfalls. He finds that an increase in precautionary demand for oil causes an immediate, persistent and large increase in the real price of oil; global demand shocks for all commodities cause delayed, but sustained price increases; while crude oil

⁽²⁶⁾ Barsky, R. and L. Kilian (2004), 'Oil and the macroeconomy since the 1970s', *Journal of Economic Perspectives* Vol. 18(4), pp. 115-34.

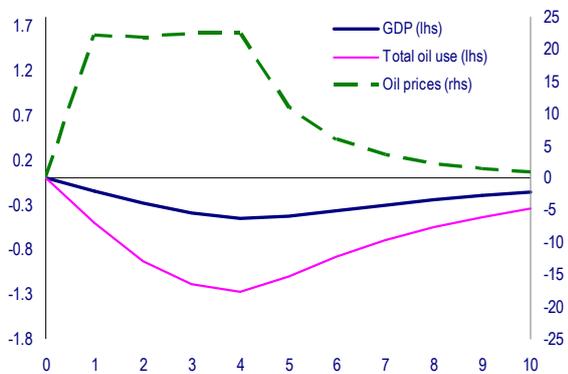
production disruptions typically cause small and transitory increases in the short run. ⁽²⁷⁾

Historical decompositions of oil price fluctuations show that oil price shocks have generally been driven by combinations of global aggregate demand shocks and precautionary demand shocks associated with market concerns about the availability of future oil supplies. Direct oil supply shocks have generally played a smaller role. However, there are now widespread concerns about future oil supplies and about a general downshift in the trend growth of oil supply due to rising scarcity in oil resources (peak oil).

Model simulations

We employ a sector-disaggregated version of the Commission’s QUEST model to analyse the different impacts of oil price shocks depending on whether they are caused by demand or supply factors. The model includes high and low energy-intensive sectors and different energy production sectors (see Box 5.1 for details). ⁽²⁸⁾ The model captures both supply and demand channels as energy serves as an input in the production process and is consumed directly by households.

Graph 5.2: Temporary oil production shock: impact on EU GDP, oil use and oil prices (in %)



Source: QUEST simulations.

The first scenario shows the impact of a severe disruption in oil production of 5% that lasts for a four-year period, after which oil production is gradually restored again (Graph 5.2). This shock leads to an increase in the price of oil of around

⁽²⁷⁾ Kilian, L. (2009), ‘Not all oil price shocks are alike: Disentangling demand and supply shocks in the crude oil market’, *American Economic Review* Vol. 99(3), pp. 1053-69.

⁽²⁸⁾ The model simulations do not account for possible changes in ‘autonomous’ (i.e. technology-driven) energy efficiency, but does capture substitution effects due to higher oil prices.

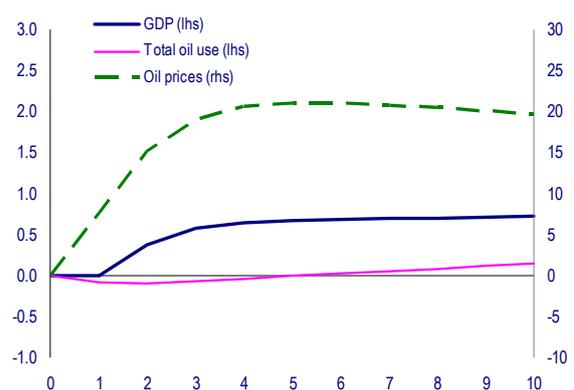
20% for the duration of the supply disruption, after which the oil price gradually returns to base again. ⁽²⁹⁾ This supply shock has negative implications for growth in the EU. Output falls by 0.15% and consumption by 0.27% in the first year relative to the baseline. Total oil use of the EU economy drops by 0.5-1.3% in the first four years.

Table 5.1: Impact of oil supply shock (in %)

Years	1	2	3	4	5
GDP EU	-0.2	-0.3	-0.4	-0.5	-0.4
Total.oil.use	-0.5	-0.9	-1.2	-1.3	-1.1
Price oil	22.1	21.8	22.5	22.5	10.9
Output energy int. sector	-0.5	-0.8	-1.1	-1.2	-1.0
Output non-int. sector	-0.2	-0.4	-0.5	-0.6	-0.6
Employment	-0.1	-0.2	-0.3	-0.3	-0.3
Consumption	-0.3	-0.3	-0.3	-0.2	-0.1
GDP RoW	-0.3	-0.5	-0.6	-0.6	-0.5

Source: QUEST simulations.

Graph 5.3: Oil demand shock: impact on EU GDP, oil use and oil prices (in %)



Source: QUEST simulations.

The second scenario shown in Graph 5.3 describes the impact of a demand-driven oil price shock, in which higher consumption demand in emerging markets boosts global economic activity. In this case, rising oil prices are due to higher global demand for oil. Rising oil prices are a drag on growth but this effect is relatively minor in relation to the positive impact of higher global demand. The EU even experiences a small positive GDP effect for the first 10 years of the simulation as the stimulus from higher global demand to exports initially outweighs the negative impact from higher energy prices. In the long term

⁽²⁹⁾ The calibration of this disaggregated version of the model is based on the EU social accounting matrix for 2004, the most recent year for which detailed sectoral data are available. As oil prices averaged around USD 40 per barrel in 2004, a 20% increase in the price corresponds to USD 8 per barrel.

the latter effect comes to dominate and the output effect turns negative.

These two scenarios illustrate the different effects demand- and supply-driven shocks can have on economic activity. Both shocks lead to a similar increase in the price of oil, but this is more gradual in the case of the demand-driven shock. As shown in Table 5.1, for a supply shock, an increase in the price of oil hits particularly strongly the energy-intensive sector and leads to an economy-wide fall in employment. Total oil use declines as costs increase, but the decline is much smaller in the demand-driven oil price shock, as higher economic activity leads to more energy use. In the oil demand shock, output in the energy-intensive sector declines on impact, but recovers in later years as global demand increases (Table 5.2). In the oil supply shock, there are spillovers to the non-energy intensive sector and output in this sector declines as well, while in the oil demand shock output in the non-energy intensive sector increases as global growth rises.

Table 5.2: Impact of oil demand shock (in %)

Years	1	2	3	4	5
GDP EU	0.0	0.4	0.6	0.6	0.7
Total.oil.use	-0.1	-0.1	-0.1	0.0	0.0
Price oil	7.6	15.1	19.0	20.5	21.0
Output energy int. sector	-0.8	-0.6	-0.3	-0.2	0.0
Output non-int. sector	0.2	0.5	0.6	0.6	0.6
Employment	-0.1	0.2	0.4	0.5	0.5
Consumption	3.6	3.0	2.5	2.2	2.0
GDP RoW	5.7	7.9	9.2	10.1	10.8

Source: QUEST simulations.

Summing up, these two scenarios show the impact of oil price changes depends crucially on the underlying causes. While supply-driven oil price shocks have a significant negative impact on economic activity, the overall impact from demand driven shocks could still be positive. Of course, in real time it is always difficult to disentangle the causes of changes in the price of crude oil. At present, a combination of factors, i.e. supply disruptions as well as higher world demand for oil, are most likely playing a role, suggesting that the overall impact of recent rises in oil prices on growth should remain limited.