Global economy and euro area

1. Global economy and euro area

1.1 Headwinds slow down global economy in 2015

Worldwide economic activity, which had had difficulty getting back on a satisfactory growth trajectory following the financial crisis and its subsequent recession, once again faced increased uncertainty and economic headwinds in 2015. It lost steam and was particularly affected by the slowdown in China, which also depressed economic activity in other emerging countries and world trade. By the summer, uncertainty surged over concerns that a less favourable environment and a reversal in the still very beneficial financial conditions would open up major vulnerabilities in some economies. Geopolitical

TABLE 1 GDP OF THE MAIN ECONOMIES

(percentage changes in volume compared with previous year, unless otherwise stated)

				p.m. Contribution to global GDP growth	*p.m. Share of global GDP*[1]	
	2013	2014	2015	*2015*	*2009*	*2014*
Advanced countries	1.1	1.8	1.9	*0.8*	*47.3*	*42.9*
of which:						
United States	1.5	2.4	2.5	*0.4*	*17.4*	*15.9*
Japan	1.6	0.0	0.6	*0.0*	*4.9*	*4.4*
Euro area	–0.3	0.9	1.6	*0.2*	*15.1*	*12.2*
United Kingdom	2.2	2.9	2.5	*0.1*	*2.6*	*2.4*
Emerging countries	5.0	4.6	4.0	*2.3*	*52.7*	*57.1*
of which:						
Emerging Asia	7.0	6.8	6.6	*2.0*	*25.0*	*29.9*
of which:						
China	7.7	7.3	6.9	*1.1*	*13.3*	*16.6*
Central and Eastern Europe	2.9	2.8	3.4	*0.1*	*3.3*	*3.3*
Russia	1.3	0.6	–3.7	*–0.1*	*3.5*	*3.3*
Latin America	2.9	1.3	–0.4	*0.0*	*8.7*	*8.6*
World	3.3	3.4	3.1	*3.1*	*100.0*	*100.0*
p.m. World trade[2]	*3.2*	*3.4*	*2.6*			

Sources: EC, IMF.
(1) According to IMF definitions and on the basis of purchasing power parities.
(2) Average of exports and imports of goods and services.

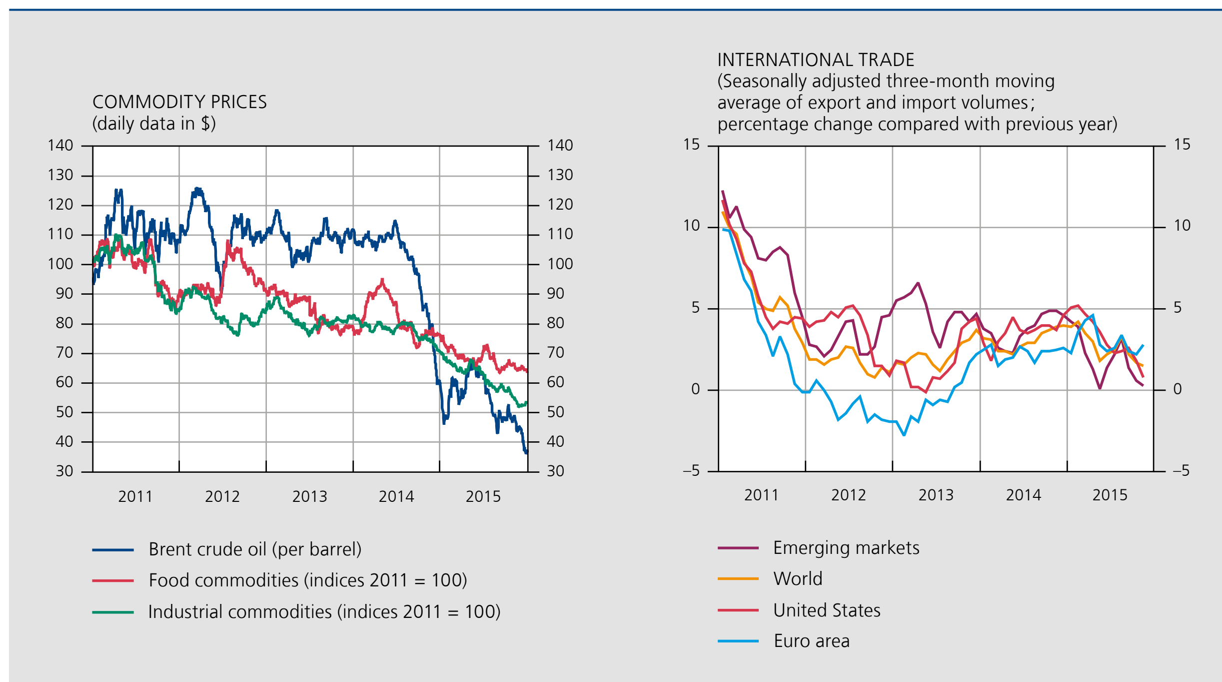
tensions served to heighten the sombre mood and started to eat into the overall economic climate. However, most of the advanced countries were able to shrug this off to a certain extent and staged further growth on the back of low oil prices and accommodating monetary policies. The upturn remained fairly subdued in the euro area and Japan, but the United States and the United Kingdom again recorded robust recoveries during the year under review.

Slowing growth in the emerging economies

The Chinese economy slowed further in 2015, but its growth remains fairly robust : economic activity was up 6.9 %, though well below the 7.3 % increase of the previous year and the peak of 14.2 % in 2007. Based on GDP and expressed in purchasing power parities, China became the world's biggest economy in 2014. To a significant extent, its growth is underpinned by rising consumption on the back of growing real incomes. Investment, by contrast, was severely squeezed, particularly in heavy industry and the property sector.

China's gradual slowdown is largely attributable to the country's transition from an investment- and export-driven economy to a growth model based on consumption and services. The Chinese authorities face a delicate balancing act, as they will need to prevent growth from falling too abruptly while they also have to stop vulnerabilities in a number of industries – e.g. the property and financial sectors – from getting worse. In order to limit the drawbacks of the country's economic rebalancing, the Chinese authorities took a number of fresh fine-tuning measures in 2015, raising infrastructure spending, for instance, and gradually loosening monetary policy. According to OECD calculations, this fiscal stimulus came to about 1.5 % of GDP in 2015. Also, the Chinese government reversed a 2014 move to stop local governments from using off-budget financing vehicles. In the monetary and financial arena, reference rates on one-year loans and deposits have been cut six times since November 2014 and are now at 4.35 % and 1.5 %, compared with 6 % and 3 % prior to this new easing cycle. As the year progressed, credit institutions saw the requirement for reserves to be held with the People's Bank of China lowered in five stages, from 19.5 % to 17 %. However, the potentially expansive effect of this should not be overestimated in view of the recent reduction in foreign currency reserves, which pushed down the Chinese banking industry's excess liquidity. The People's Bank of China changed its exchange rate policy in August and December 2015, sparking a depreciation of the renminbi. Lastly, China took significant further steps in liberalising its interest rates : having abolished the threshold rate on loans in 2013, it now moved to scrap the ceiling on deposit rates.

CHART 1 EMERGING MARKETS SLOWDOWN DEPRESSES COMMODITY PRICES AND INTERNATIONAL TRADE



Sources : CPB, Thomson Reuters Datastream.

Exports contributed negatively to Chinese growth, due to subdued foreign demand combined with the previous appreciation of the renminbi. Import growth also fell sharply. That sizeable slowdown can be attributed to the decline in exports – whose import intensity is very steep – and to the rebalancing of the Chinese economy towards greater consumption and services, which tend to be less trade-intensive than investment and manufacturing. The impact was notable mainly in commodity-exporting countries and other countries in Asia, as Chinese foreign trade is very regionally oriented. India bucked the trend and recorded growth of 7.3 %, chiefly on the back of private consumption and structural measures benefiting investment. All in all, Asia, excluding Japan, remained the most dynamic emerging region with growth at 6.6 %.

Weaker economic activity and the efforts of China – one of the world's biggest consumers of commodities – to cut the energy intensity of its production and consumption have caused a sharp fall in demand for commodities, and commodity prices continued their downward trend in 2015. At the beginning of the year, oil prices temporarily revived from their steep falls since mid-2014, but then gradually came down again to dip below $ 40 a barrel by the end of the year – from some $ 110 a barrel mid-2014. This major terms-of-trade shock severely hit economic activity in commodity-exporting countries. In countries where virtually all oil export revenue accrues to the State – in the Middle East, for instance – budgets have been significantly affected. In Latin America, economic activity contracted by 0.4 % in 2015, following subdued growth at 1.3 % in 2014. Most of this was down to deteriorating conditions in Brazil, which recorded negative growth of 3.8 %. Aside from the effect of steeply lower commodity prices, country-specific factors were also major detractors of economic activity: political uncertainty, precarious budget conditions and the requisite fiscal consolidation. In addition, inflation in Brazil surged to over 10 % by the end of 2015. In Russia, economic activity was similarly depressed by falling commodity prices. This, coupled with persistent geopolitical tensions over the conflict with Ukraine and resultant international sanctions, has pushed the country into a deep recession, as is evident from its negative growth of –3.7 %. Significant spillover effects made a big dent in economic activity in most countries of the Commonwealth of Independent States (CIS). The repercussions of Russia's recession also extended to the Central and Eastern European countries, although they could benefit from lower oil prices and the gradual recovery of the euro area.

The slowdown in the emerging economies had a major impact on world trade growth in 2015. Whereas world trade's fragile recovery post financial crisis primarily reflected subdued demand in the euro area, this recent weakness is mostly down to contracting import volumes in the emerging countries, chiefly in China, Brazil and Russia. In fact, in some months of 2015, import volumes in various emerging regions actually fell. Structural factors also continue to matter: global value chains, for instance, have not expanded any further since the crisis and do not therefore support world trade growth the way they used to. As a result, trade elasticity, expressed as world trade growth relative to global GDP growth, has plunged in the aftermath of the crisis.

Lastly, greater concern over economic conditions in the emerging economies combined with the imminent normalisation of monetary policy in the United States sharply reduced capital inflows into many of these countries, tightening funding conditions. Hardest hit were countries where steep credit growth had caused internal and external imbalances, such as Brazil, Turkey and South Africa. Many emerging countries had taken advantage of the highly accommodating post-crisis monetary policy in most advanced countries and put the ample liquidity to work in propping up their economies. Corporate debt ratios had gone up sharply and a large proportion of these debts are typically denominated in US dollars and other foreign currencies.

Advanced economies have held up well (1)

While emerging countries were seeing their economic growth slide, the US economy kept expanding and continued to serve as a key engine for global economic growth in 2015. Following a weak first quarter due to temporary factors, US domestic demand was up strongly in the rest of the year. Private consumption, which accounts for close to 70 % of US GDP, was driven by robust real income growth, a solid labour market and increased net household wealth. The concomitant recovery in the US housing market boosted investment in residential properties, but other capital spending failed to fully benefit from the still favourable financing conditions. Meanwhile, the appreciation of the US dollar caused a loss in price competitiveness in manufacturing, and this, coupled with stronger domestic demand, negatively impacted the contribution to growth from net exports.

The labour market kept up its recovery of the past few years and the unemployment rate reached levels that are generally considered – by the Federal Open Market Committee (FOMC) too – compatible with full

(1) The main macroeconomic variables for the main economies are shown in tables 1 and 2 of the Statistical Annex.

employment. That said, other labour market indicators continued to point up persistent, if declining, slack in the labour market. Broader unemployment measures – which take into account discouraged workers or involuntary part-timers – and low employment and participation rates still suggest underused labour potential. As a result, compensation for the labour factor continues to merely inch up and combined with lower energy prices and an appreciating currency to ward off any significant upward pressures on consumer prices, causing inflation expectations to be revised downwards.

By the end of 2015, the FOMC was expecting a further increase in inflation in the medium term to 2 % – the level it feels reflects long-term price stability – as temporary falls in energy and import prices should peter out and as the labour market continues to display positive dynamics. And so, at its meeting of 15-16 December, it felt the time was right to raise the corridor for the Fed funds rate by 25 basis points to [0.25 % ; 0.50 %]. In the weeks running up to the FOMC meeting, financial markets had fully anticipated this rate rise, the first since December 2008, and no extra volatility was recorded when it came. The FOMC noted that it expects policy rates to go up only gradually in the calendar year ahead, depending on inflation dynamics. Fiscal policies, by contrast, were rather neutral in 2015 : the structural primary balance improved from –1.1 % to –1.0 % of potential GDP while general government debt stalled at its historic high of 111 % of GDP.

Unlike the United States, Japan faced a stubbornly lacklustre economy in 2015. A GDP fall in the second quarter was followed by only a modest recovery in the third, and GDP ended the year only 0.6 % higher in volume terms. Despite an exceedingly tight labour market – with an unemployment rate at a historic low of 3.4 % – and wage increases (albeit subdued), private consumption lacked lustre, as households quickly built up their savings ratios. Business investment spending also disappointed, despite a cut in corporate taxes, rising corporate earnings and corporations' unprecedentedly high cash positions. In addition, the Japanese yen's depreciation failed to fully offset weaker demand from emerging Asia, particularly China.

The Bank of Japan continued to pursue extremely expansive monetary policies : after it decided to expand its monetary base to 80 trillion yen in October 2014, the Bank of Japan's balance sheet grew to around 65 % of GDP. Inflation expectations were up slightly as a result, but headline and core inflation actually slowed down to around 1 %. In terms of public finances, the reduction of the government deficit to 6.7 % of GDP failed to stem growing general government debt, currently at nearly 230 % of GDP. To keep public finances sustainable, Japan needs to achieve higher potential growth, as envisaged in the third Abenomics pillar. Additional structural reforms were announced, aiming among other things to further raise the female employment rate.

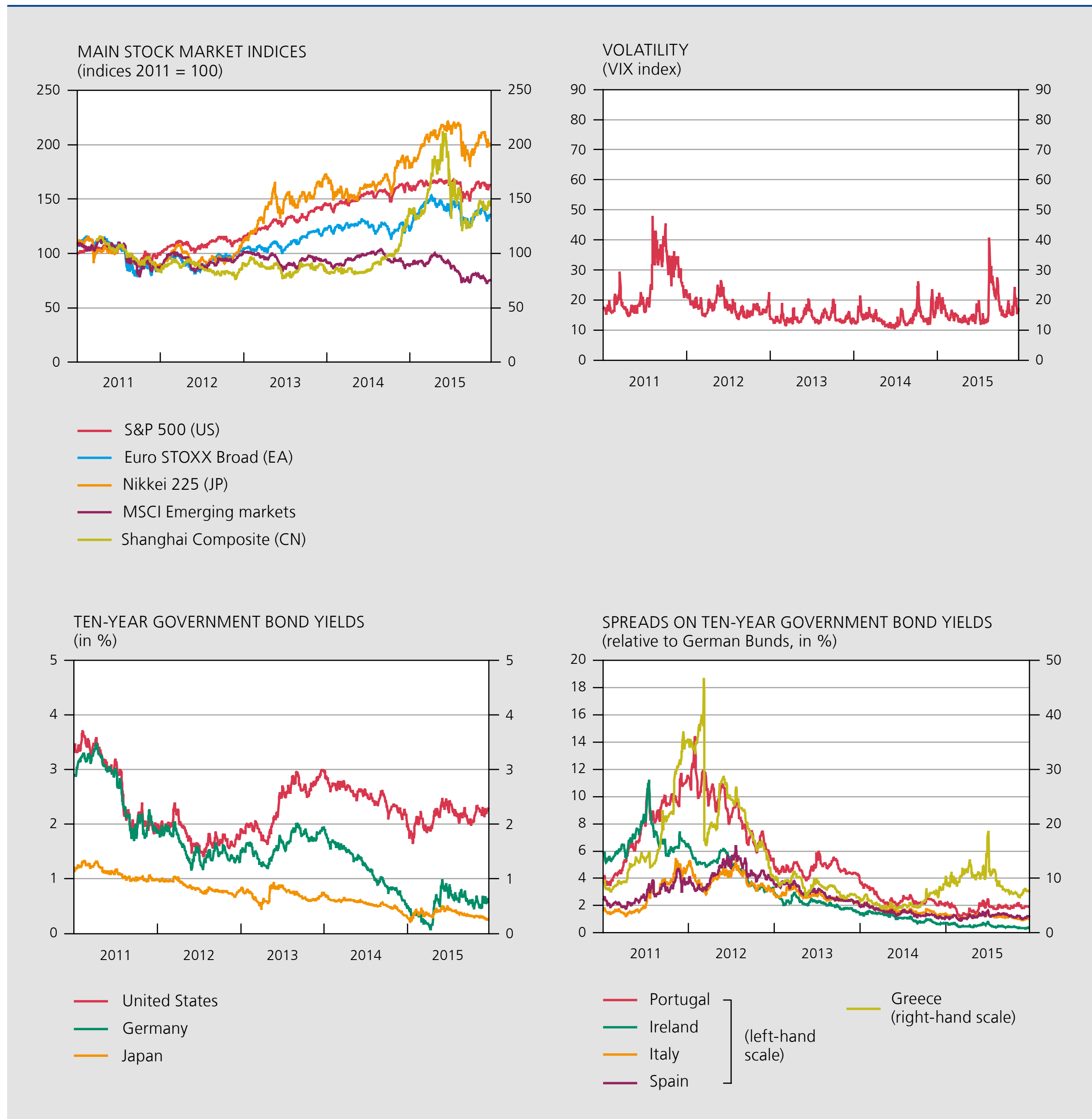
Financial market conditions relatively favourable despite greater uncertainty

On the whole, financial conditions remained relatively favourable, apart from a few pockets of increased volatility and less robust conditions in specific segments of the market. Equity markets largely forged ahead on the upward trajectory they embarked on in 2013, and notched up fresh record highs. Government bond yields stayed low, with any variations chiefly down to differences in monetary policies between the various economic regions and to market perceptions of these regions being in different phases of the economic cycle. In October 2014, the US Federal Reserve ended its asset purchase programme, as the US labour market and economy began to show more general signs of recovery. The ECB, by contrast, announced an expansion of its asset purchase programme on 22 January 2015 against a backdrop of weaker-than-expected inflation trends in the euro area. Whereas government bond yields in the United States were on an uptrend in the first months of the year, those in the euro area narrowed further and even hit a historic low in April. Japan, which also pursued a very accommodating monetary policy, likewise recorded low yields. Even government bond yields in the so-called peripheral countries of the euro area were down at the beginning of the year. In fact, with investors searching for yield, this fall was even more pronounced than for higher-rated government bonds, causing spreads relative to German Bunds to narrow. Greek government bond yields were the only ones to increase in the first half of the year, due to the election of the new Greek government and the subsequent impasse in negotiations over Greece's financial aid programme and economic adjustments, as well as growing doubt as to whether the Greeks would continue to have access to funding.

Volatility in the financial markets intensified over the summer months : after a lengthy period of downward movement, euro area government bond yields were back up in the second quarter. This was due to a confluence of factors, some of them merely technical, reflecting growing investor doubts about the accuracy of government bond valuations after a long period of declining yields. US Treasury yields continued to rise in the first six months, while the upward trend in European government bond yields was accompanied by falling European equity prices, which later rebounded to a certain degree. Growing

CHART 2 INCREASED FINANCIAL MARKET VOLATILITY IN THE SUMMER MONTHS OF 2015

(daily data)



Source: Thomson Reuters Datastream.

concerns over the state of their economies also triggered a fall in share prices of various emerging countries in the second quarter; these did not stabilise somewhat until after the summer.

Spreads between government bond yields in the euro area's peripheral countries and German Bunds were also starting to edge up in this period in the wake of increased uncertainty over the situation in Greece. These concerns came to the boil at the end of June, when the country failed to repay the IMF by the second aid programme's deadline and negotiations about future financing conditions appeared stuck. Risk premiums on Greek government bonds shot up to nearly 20 %, only to come back down again in early July, when agreement on a new aid programme was clearly in the offing. While German government bond yields inched down as investors fled to safe havens, the impact on risk premiums on other high-yield government bonds in the euro area remained limited and temporary. This was also the case with any contagion to other financial assets in the

advanced countries, as was clear from share prices, which barely budged.

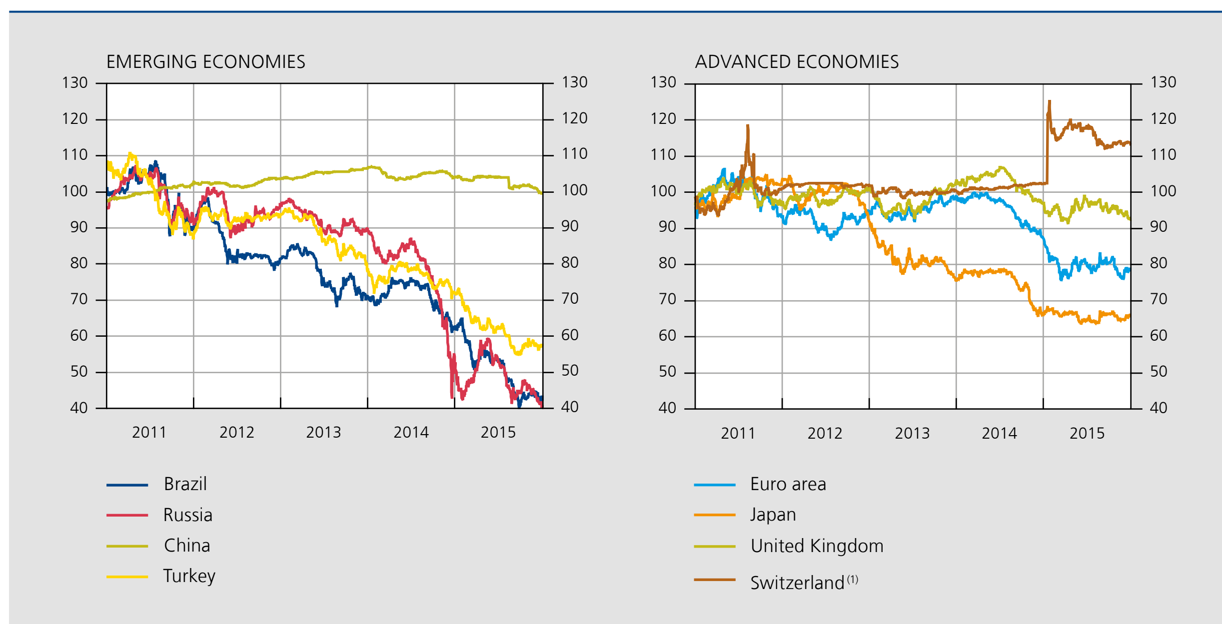
Turmoil in the financial markets did not really reach a peak until later in the summer, when developments in China took centre stage. Between 12 June and 8 July, the Chinese stock market lost over 30 % of its value, tripped up by an announcement by the Chinese supervisory authorities about a series of new measures designed to curb risky investment behaviour by the country's shadow banks, which had contributed to the 150 % surge in Chinese equities since the middle of 2014. The initial impact on global financial markets was subdued, but this changed suddenly when on 11 August the People's Bank of China announced it was to adjust its exchange rate policy. Although this was described as a transition to a renminbi exchange rate more in keeping with its actual value in the markets and although the currency's subsequent depreciation was quite modest, markets considered it a wake-up call signifying that the Chinese economy would slow down further. Panic tore through global financial markets, equity prices plunged, volatility shot up, commodity prices fell and the currencies of a range of emerging countries took a massive hit. Meanwhile, the flight to safe-haven investments pushed down yields on government bonds in the advanced countries. By October, calm was gradually returning, but market volatility spiked again and equity prices took another tumble when the ECB only partially met market expectations regarding additional quantitative easing measures.

The renminbi actually only depreciated by 3 % relative to the US dollar in the first days after the policy change was announced, after which it stabilised at some 2.5 % below its pre-turbulence level following a series of interventions by China's central bank. The turmoil nevertheless also affected the exchange rates of other emerging countries, notably in Asia. In fact, various emerging countries' currencies had been under persistent pressure in the wake of declining capital inflows related to deteriorating growth expectations and the uncertainty over the imminent normalisation of US monetary policy. More specifically, the ongoing fall in commodity prices also depressed the exchange rates of commodity-exporting countries, such as Russia and Brazil. Both the rouble and the real lost about half their value between mid-2014 – when the downturn in commodity prices accelerated – and the end of 2015.

In the advanced countries, currency market developments reflected diverging monetary policies in the different economic regions. The fall in the value of the euro relative to the US dollar – which had started mid-2014 on expectations of a further easing of the ECB's monetary policies – continued into 2015. The euro was not the only currency affected; currencies linked to the euro experienced upward pressure, the

CHART 3 CURRENCY DEPRECIATION IN THE MOST VULNERABLE ECONOMIES

(exchange rates relative to the US dollar, unless otherwise stated; index 2011=100)



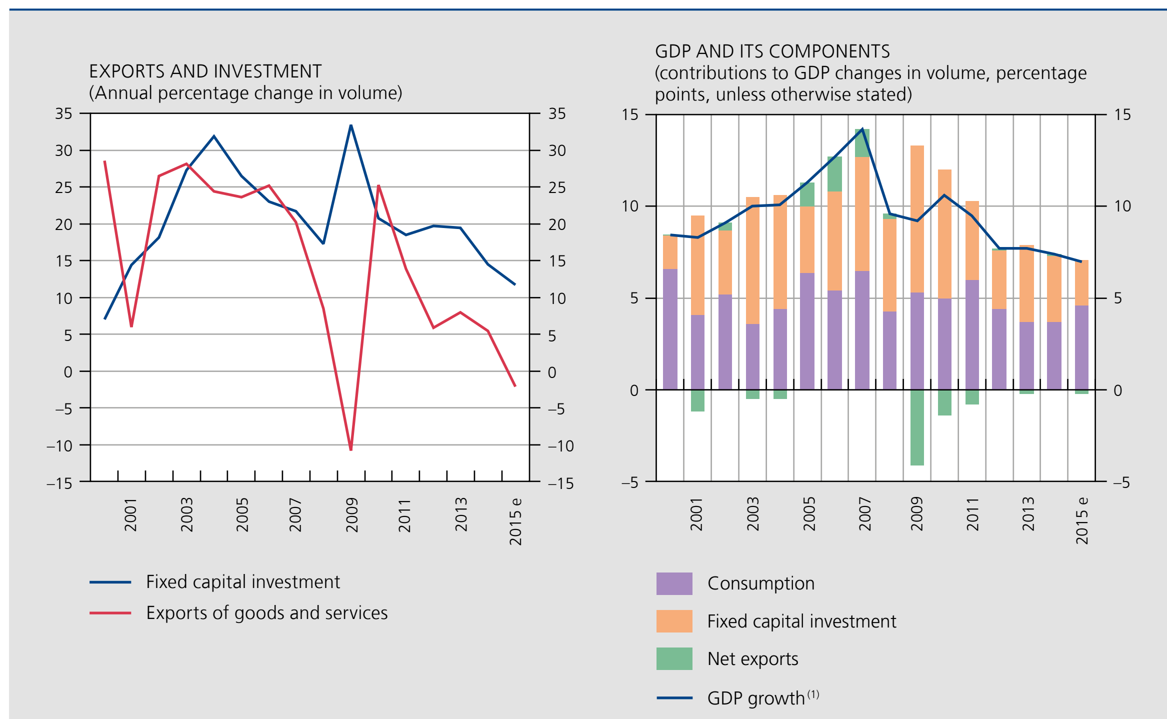
Source: Thomson Reuters Datastream.
(1) Relative to the euro.

Danish krone and Swiss franc being a case in point. In fact, pressure on the Swiss franc increased to such an extent that the Swiss central bank decided to stop supporting the minimum exchange rate of 1.20 CHF/EUR at the beginning of 2015. The financial markets reacted strongly and the Swiss franc initially surged by over 20 % against the euro, after which it gradually lost ground again. Denmark's central bank kept the krone's fluctuations within the pre-determined range vis-à-vis the euro through repeated interventions. The euro edged back up relative to the dollar during the course of the year, as it increasingly looked as if the United States would hold off normalising monetary policy. By the end of the year, it had edged back down in the wake of an expected further expansion of the ECB's asset purchase programme and the growing conviction that the Federal Reserve would finally start raising the Fed funds rate in December. Sterling and the Japanese yen staged similar movements to the euro: both depreciated vis-à-vis the US dollar in the second half of 2014 and at the start of 2015, then saw their values inch up in the course of the year before moving back down by the end.

Box 1 – Rebalancing of the Chinese economy and its consequences for the global economy

A series of events in China sparked turmoil in the financial markets in the course of 2015: share prices in the Chinese equity markets lost a great deal of ground in June/July and the renminbi depreciated following the adjustment of the country's exchange rate policy in mid-August. Weak import and export figures also raised concerns over the strength of the Chinese growth engine. However, the Chinese economy's slowdown is not new and has in fact been going on for a number of years. In 2007, growth still came in as high as 14.2 % whereas it barely reached 7 % by 2015. This box investigates the factors behind this slowing growth and its repercussions for the global economy.

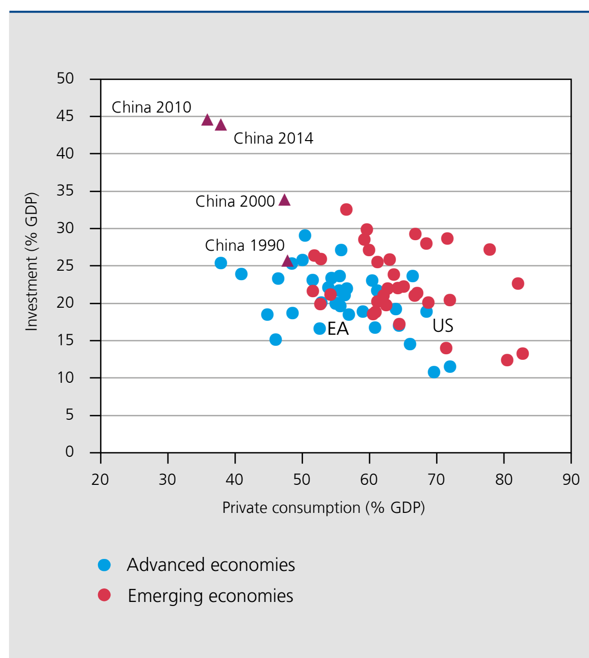
CHINESE ECONOMIC SLOWDOWN



Sources: CEIC, OECD.
(1) Percentage change on the same quarter of the previous year.

Prior to the onset of the global financial crisis, China pursued an export-driven growth model. Admittedly, Chinese export expansion was phenomenal in these years, but net exports were never the biggest contributor to the country's growth, as China initially specialised in assembly operations. What is more, its export growth was underpinned by massive investment in expanding industrial production capacity and its underlying infrastructure, which itself required major imports of capital goods and commodities. Traditionally, capital spending and exports have been the key drivers of China's growth, but over the years this resulted in growing imbalances in the structure of its economy and spending patterns. The constraints of its growth strategy were even more clearly flagged by indicators such as stalling market shares in global trade – albeit at high levels – for specific goods and ever lower returns on investment. In the face of growing doubts, China initially stuck to its investment-based strategy and in fact stepped it up by launching a large-scale fiscal and monetary stimulus programme in the aftermath of the global financial crisis, to avoid too strong a slowdown caused by collapsing export markets. As a result, its high growth continued into 2009 and 2010, running at 10 %. Investment as a percentage of GDP rose from 25 % in 1990 to 45 % in 2010 with the share of private consumption falling to 38 %, making for a pretty exceptional composition of spending compared with other emerging and developed countries. New vulnerabilities emerged, such as a bubble in (some parts of) the residential property market, excess capacity in some heavy industries, a rapid increase in corporate debt ratios and local government financing vehicles, uncontrolled expansion of the country's shadow banks and a growing share of less profitable investment – all adding to doubts about the viability of the existing growth model. The Chinese government and international institutions started to advocate a transition to more moderate but also more balanced growth, with a greater contribution from consumption and services. The stimulus programme was scaled back and economic growth has gradually slowed since 2011.

SPENDING IMBALANCES IN CHINA [1]

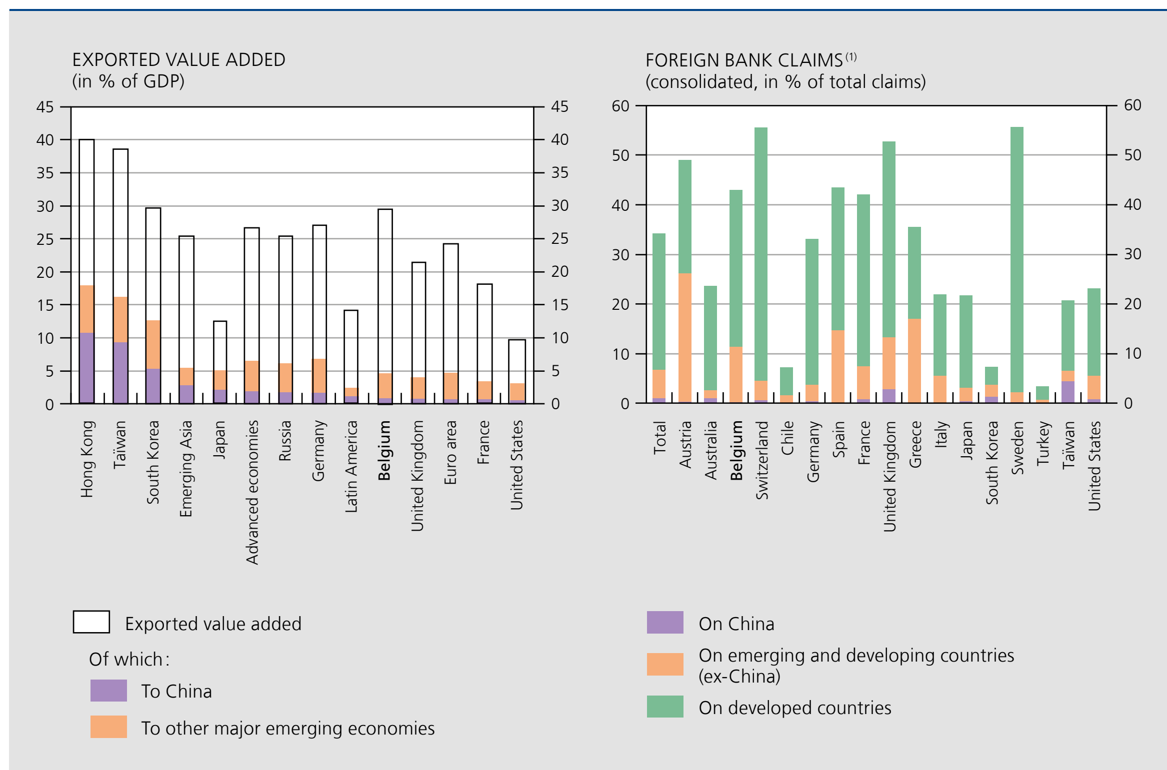


Source: World Bank.
(1) Figures refer to 2014 unless otherwise stated.

Impact on the euro area and Belgium

A complex picture emerges for the potential effects of the Chinese slowdown on the rest of the world, and more specifically on the euro area and Belgium. In addition to the immediate impact through trade and financial relations with China, developments in China have indirect repercussions via other countries, some of which are heavily exposed to China.

TRADE AND FINANCIAL EXPOSURE TO CHINA



Sources: BIS, OECD.
(1) Banks with their head offices in countries featuring in the BIS database.

The above chart captures the degree of openness of a country or region as measured by the exported value added as a percentage of GDP. These are relevant statistics as they factor in re-exports and imported inputs [1] and as they reflect the final destination of the exported value added, including value exported via other countries. This is meaningful information for an impact study given the development of global production chains in recent decades and China's central role in these. The chart only shows the proportion of the value added that ends up in China and the most important other emerging economies. As expected, emerging Asia relies the most heavily on China and other emerging economies. Exports to China, as expressed in value added, account for around 1 % of Belgium's GDP, as for the the euro area as a whole. Around 4 % of Belgian added value ends up in the other major emerging countries, a relatively high exposure – nearly as high as Germany's – that is explained by the Belgian

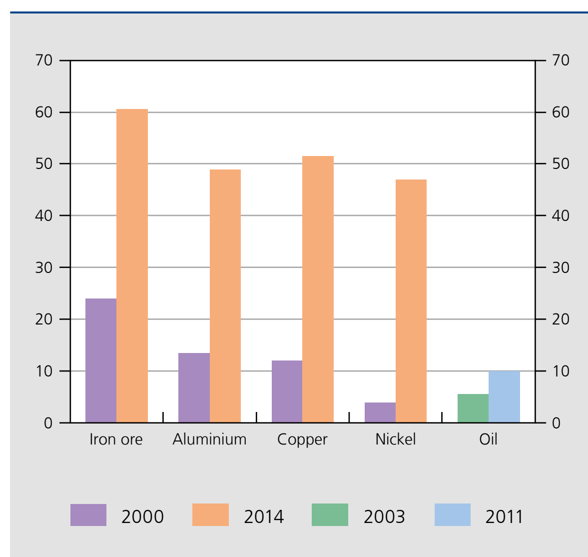
(1) See, among others, Duprez C. (2014), "Value creation in exports", NBB, *Economic Review*, September.

economy's high degree of openness on top of the fact that a key proportion of Belgian exported value added is incorporated in the exports of Belgium's neighbouring countries (mainly Germany) to China and other major emerging economies.

The recent turmoil in the Chinese financial markets and the contagion spreading to global financial markets have sparked concerns over financial exposures, but China's immediate financial linkages with the rest of the world, and with Europe in particular, remain limited. China boasts a major savings surplus and does not really need foreign funding. What is more, it has very strict controls in place governing international financial transactions, investment and banking activities. Direct financial exposure to China can be measured by foreign bank claims on Chinese residents. According to this measure, claims on China are still negligible for all countries, with the exception of the United Kingdom and Taiwan. More generally, the exposures of most developed countries' banks to the group of emerging economies and developing countries not including China is below 10 % of total claims. The transmission of shocks in China to the global financial markets thus occurs mainly through confidence effects.

China's slowdown is also percolating through by means of a third channel: commodity prices. Its enormous appetite for investment has propelled China to the world's number one consumer of commodities such as copper, nickel, aluminium and iron ore. In the immediate aftermath of the global financial crisis, the prices of these commodities stayed at high levels as demand was still shored up by China's massive stimulus programme. With the pace of investment decelerating in China, the metals supercycle came to an end, and producers of these commodities were hit by a combination of falling exports to China and/or lower revenues from commodities and/or depreciating currencies. China's impact on oil prices is less pronounced as its share in final consumption of oil is more modest (11 %) and as abundant supply is a major factor in today's oil market.

CHINESE SHARE OF COMMODITY CONSUMPTION
(in % of global consumption)



Source: UN Comtrade.

Recent OECD[1] calculations suggest that a drop in the growth of Chinese demand by 2 percentage points compared with the baseline scenario for 2016 and 2017 would slow growth in the OECD countries by between 0.1 and 0.2 percentage point in both years, based on the effects of trade only. When its simulations also factor in negative financial shocks, such as a worldwide fall in stock markets and an increase in a range of risk premiums, the OECD puts the growth impact at 0.6 percentage point in 2016 and 0.8 percentage point in 2017 for the euro area, with Germany having a high exposure. The figures for Belgium may be posited to be roughly the same as for Germany. Japan would be hit harder (–0.8 in 2016 and –1 in 2017), as would India (–0.6 in 2016 and –1.2 in 2017) and Russia (–0.7 in 2016 and –1.3 in 2017). If a fall in commodity prices is also taken on board, the impact of the shock would be lessened for both the euro area and particularly for Japan, as these economies are net importers of oil and metals. The reverse would be true for Russia : it would face an even steeper slowdown (–1.8 in 2016 and –1.9 in 2017). As ever, such simulations should be interpreted with due caution as the model structure, its underlying assumptions and the nature of simulated shocks may greatly influence their outcomes.

(1) See OECD (2015), Economic Outlook No. 98, November.

1.2 New monetary easing measures to combat weak inflation in the euro area

Moderate recovery into 2015

The euro area's moderate recovery in economic activity, which had started two years previously, continued into 2015. Average annualised GDP growth even improved slightly to 1.6 % from 0.9 % in 2014.

In the wake of the developments in 2014, the economy's gradual recovery was down to a combination of key factors. At the external end, the euro exchange rate remained relatively low most of the year, benefiting exports chiefly in the first six months of 2015. On top of that, oil prices expressed in euros sank to new lows after having been cut by half between the middle of 2014 and the start of 2015. In the euro area itself, the already highly favourable financing conditions got even slightly better for various economic sectors. Fiscal policies were neutral in 2015, implying an easing on previous years.

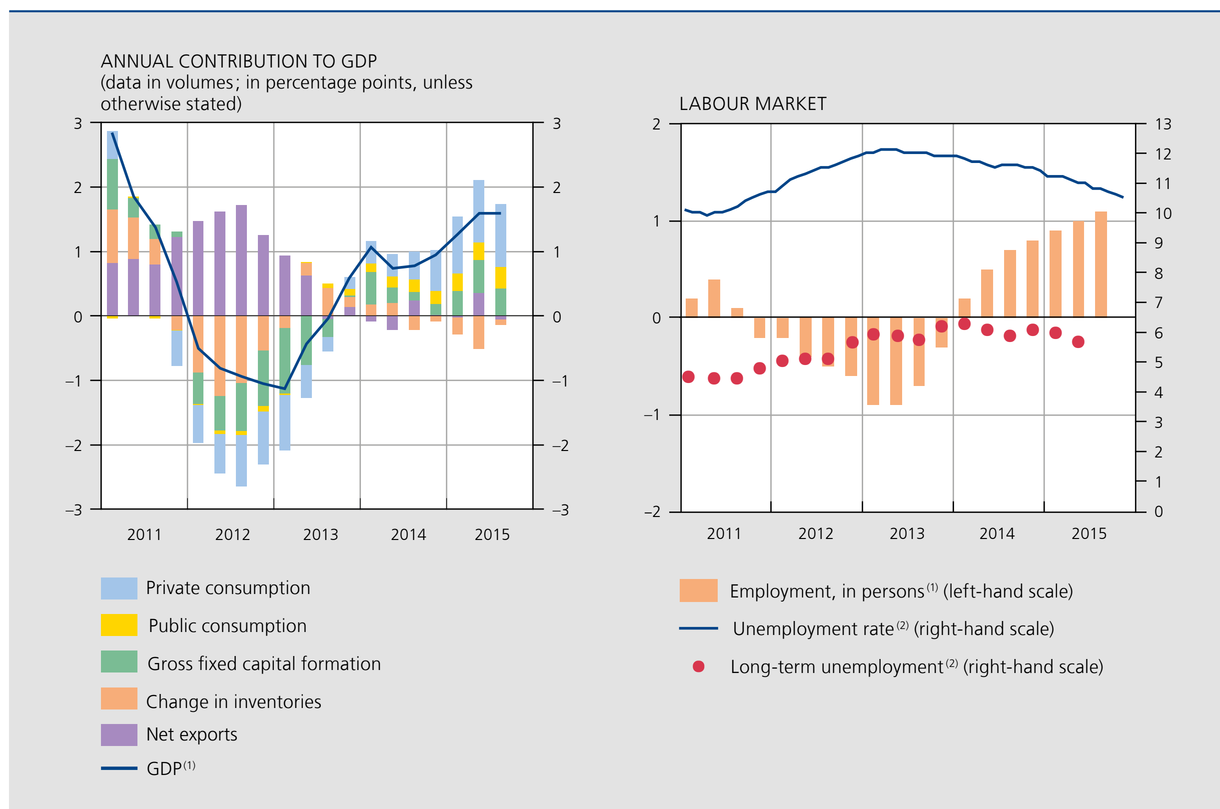
Various signs suggest that the ongoing recovery of economic activity in the euro area has gradually become broader-based. For one thing, it has now expanded to include nearly all Member States. In addition, it is rather more solidly underpinned by domestic demand, chiefly private consumption. Households have not just benefited from low oil prices, but have also seen a significant improvement in the labour market situation. The net job creation seen in 2014 continued into 2015 at a steady pace and supported the ongoing fall in the unemployment rate, which had started in the middle of 2013. Job creation was spurred on even further in a number of countries by efforts to adjust labour costs and reform labour markets. Lastly, bank lending dynamics to non-financial corporations and private individuals was beginning to rebound after a long period of decline, thanks to less weak demand and improved transmission of accommodating monetary policies in the various jurisdictions of the euro area.

On the whole, though, such improvement continued to be rather modest, both in light of the extent of supportive measures and of the achievements in other advanced economies, such as the United States and the United Kingdom. A range of factors continue to get in the way of the euro area economy returning to its production potential.

In 2015, the euro area's rate of unemployment, both long-term and total, remained high despite having come down. European firms have not made full use of their production capacities and corporate investment has likewise been less robust than might have been expected given the improved prospects for domestic demand, increased profitability and better financing conditions. A number of quite substantial adjustments notwithstanding, the great recession of 2008-2009 and the euro crisis of 2011-2012 are still casting a long shadow over the recovery, even if their impact today is more clearly demarcated and specific. In some Member States, investment in residential properties, which had notched up undue gains in the 2000s, is still bumping along the bottom, while in other countries, households or non-financial corporations are still deleveraging their debts.

Having muddled on and failed to take full advantage of supporting factors, and having seen such beneficial factors eroded over time, the euro area saw its economic climate take a turn for the worse over the summer – which

CHART 4 MODERATE GROWTH OF EURO AREA ECONOMIC ACTIVITY AGAINST A BACKDROP OF REVIVING LABOUR MARKET



Source: EC.
(1) Percentage changes on same quarter in the previous year.
(2) Ratio between the number of persons unemployed and the labour force, in %.

is when the effects of weaker foreign demand from China and other emerging economies was beginning to kick in more strongly, if not equally painfully in all countries. Meanwhile, steep declines in the currency values of some emerging economies wiped out the advantages European exporters had enjoyed from the earlier depreciation of the euro. Even ignoring the specific and generally limited impact of the summer's Greek crisis, investor sentiment has turned markedly more cautious and more volatile. Against the backdrop of geopolitical tensions, confidence was shaken on several occasions towards the end of the year by the ever more pressing refugee crisis and later also the terrorist threat in Europe.

Subdued inflation dynamics

As a result of the steep falls in commodity prices – and more specifically oil prices – and an insufficiently robust recovery to make use of production capacity slack, the downward inflation trend that had first beset the euro area in 2012 persisted. Inflation as measured by year-on-year changes in the harmonised index of consumer prices (HICP) declined to an average of 0 % in 2015, compared with 0.4 % in 2014.

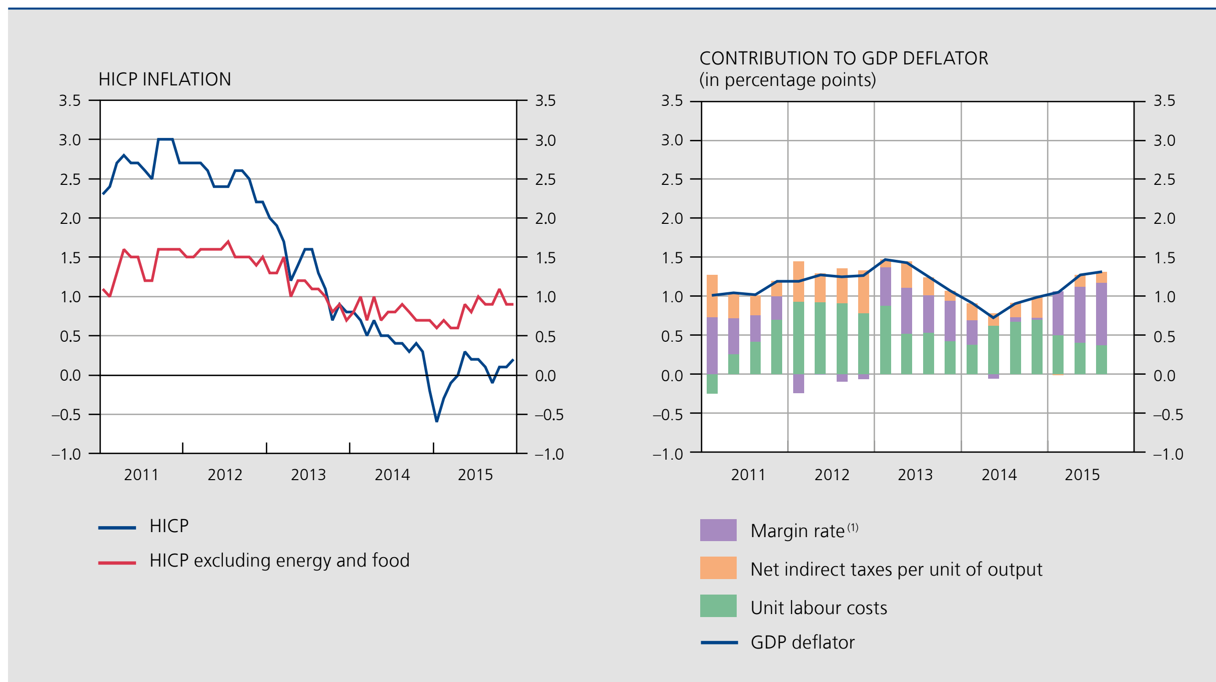
This fall temporarily accelerated towards the end of 2014, when the impact of lower oil prices hit hardest, causing general price levels in January 2015 to dip 0.6 % below the year-earlier figures. A minor upturn in the spring was followed by a steadily slowing inflation rate to barely above 0 % by the end of the year, clearly below the target set by the ECB Governing Council, i.e. an inflation percentage below but close to 2 % over the medium term.

Although the slump in commodity prices was a key contributor to downward price pressures, underlying inflation as measured by changes in the HICP excluding energy and food hovered within a range of 0.6 to 1.1 %. Much like in 2013 and 2014, then, underlying inflation also remained weak.

Domestically driven price pressures edged ahead in tandem with domestic demand, but remained subdued overall. While the rise in unit labour costs reversed from the end of 2014, profit margins contributed to the modest

CHART 5 INFLATION DOWN FURTHER IN EURO AREA AMIDST WEAK DOMESTIC PRICE PRESSURES

(changes on same period in previous year, unless otherwise stated)



Sources: ECB, EC.

(1) The margin rate is defined as the gross operating surplus per unit of output.

rise in domestic price pressures. As a result, the GDP deflator gathered some momentum in keeping with the upward trend from the second half of 2014 – albeit a still fragile recovery.

After a while, the persistent downward inflation trend in the euro area started to depress inflation expectations. Their decline began at the end of 2013, accelerating in mid-2014 and hitting historic lows at the beginning of 2015 over all horizons. That said, monetary action in the course of the year helped to stabilise developments, although by December both the financial markets and professional forecasters were still assuming that inflation would only very gradually return to levels in keeping with the definition of price stability.

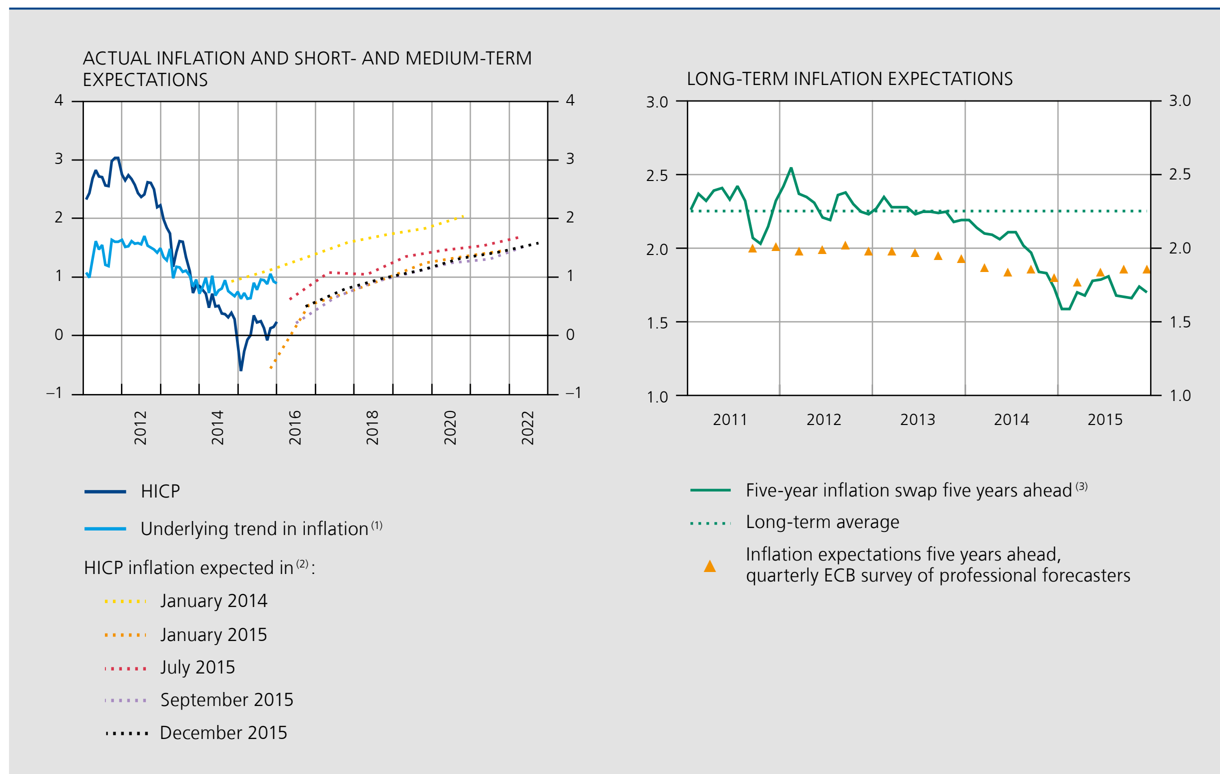
The deterioration in financial-data-based expectations for long-term inflation – i.e. inflation in periods when the impact of shocks currently affecting price trends should have worn off and, with the right policies, should again meet its target – also came to a halt. However, these expectations remained low and the risk of a potential de-anchoring of inflation expectations persisted. To an extent, these concerns were corroborated by survey-data-based inflation expectations for the longer term – these data are stripped of risk premiums and constitute a purer indicator of expectations. After falling back in 2014, the trend turned positive in 2015, but the data did linger below historical averages. Given the modest volatility of this data series, such a deviation – although limited – is cause for some concern. The breakdown of inflation expectations within the next five years (in 2015 these referred to 2020) also pointed to downward risks, as well as a persistently strong asymmetrical interpretation of the price stability definition by private forecasters – a large number of whom continued to predict inflation expectations well below 2 %.

Predominantly downside risks

The ECB's Governing Council takes the view that this fragile economic recovery in the euro area in general, coupled with weak inflation in particular, imply that macroeconomic prospects have not improved, contrary to what might have been expected. Thus, the December projection exercise revised the outlook for inflation in 2016 and 2017 downwards, to 1 % and 1.6 % respectively compared with 1.5 % and 1.8 % in the March projection. What is more, the outlook's downside risks have increased in spite of all the measures taken. These risks include a sharper-than-expected slowdown in the emerging economies due to uncertainty over the Chinese economy's

CHART 6 WEAK INFLATION DYNAMICS IN THE EURO AREA

(year-on-year percentage changes)



Sources: Bloomberg, ECB, Thomson Reuters Datastream.

(1) HICP excluding food and energy.

(2) Measured by the implicit forward rate for an inflation swap. Since consumer price indices are published after some delay, inflation swap contracts reflect the inflation expected in the month three months ahead of their due date. For instance, one-year contracts dated December 2015 reflect inflation rates expected in September in subsequent years.

(3) Implicit inflation rate derived from swaps covering the inflation risk in the euro area, for a period of five years beginning five years after the conclusion of the contract.

transition. In addition, the expected normalisation of US monetary policy could combine with geopolitical tensions to bring new distortions to the emerging markets, as well as to the global financial and commodity markets.

Given that these risks slow down the return of inflation to its mid-term target, they also increase the chances of both a lengthy period of low inflation and a de-anchoring of inflation expectations. Both come at a cost that can be traced back to different forms of downward nominal rigidities, implying that some nominal variables might find it hard – or even impossible – to decline. Nominal interest rates, for one – which equal the sum of expected inflation and real interest rates – stop at a threshold of around nil. As soon as policy rates hit that low, a central bank runs out of options to cut short-term real interest rates. If, for instance, inflation expectations were no longer securely anchored when that happens and were themselves pointing downwards, they would even bring upward pressure to bear on real interest rates, leading to unintended tightening of monetary policy. In addition, a surprise slowdown in inflation would add to the real burden of debt contracted earlier, as most debt contracts are agreed in nominal terms. This would hamper deleveraging and, all other things being equal, typically makes people keener to save, causing (further) reductions in demand. Low inflation figures for the euro area at large imply that Member States needing to bolster their relative competitiveness will also have to slash their wages and prices in absolute terms. For a variety of reasons, neither employers nor employees are keen to go down that route, and this slows down the adjustment process, increases unemployment and further erodes demand. To keep these risks from taking hold and becoming a reality, the Governing Council decided to carry on and step up its accommodating policies as the year progressed, with the continued aim of supporting the economic recovery in the euro area.

Monetary policy measures

End of 2014: instruments deployed prove inadequate

In view of persistently weak inflation prospects, a loss in growth momentum and poor credit developments in the euro area, the Eurosystem implemented a series of accommodating monetary policy measures as early as 2014. Their purpose was to further ease the monetary policy stance and to ensure its effective transmission to both the financial sector and the real economy.

In September 2014, the Governing Council started off by slashing key interest rates to unprecedentedly low levels: the rate on main refinancing operations (MROs) was reduced to 0.05%, that on the marginal lending facility to 0.30% and on the deposit facility to –0.20%. This latter rate means that banks pay interest for holding cash reserves with the Eurosystem. With key rates lower, euro area banks saw their refinancing costs come down. September and December 2014 then saw the first two of eight targeted longer-term refinancing operations (TLTROs), which offer funding to banks at a fixed rate up until the end of September 2018 in return for providing fresh loans to corporations and households (residential mortgages excepted). Lastly, the Governing Council also decided to start buying assets issued by the private sector and on 20 October 2014 launched a third asset purchase programme of euro-denominated covered bonds issued by banks based in the euro area (CBPP3) and on 21 November an asset-backed securities purchase programme (ABSPP), whose underlying assets are receivables from the non-financial sector of the euro area. Both programmes were intended to provide liquidity to the money markets, make markets for these types of securities more dynamic, encourage issuance and support underlying loans.

However, early in 2015, the Governing Council determined that this monetary easing had been insufficient as inflation dynamics had worked out less well than expected. A series of positive supply shocks, i.e. the significant and persistent price falls for oil products, were put forward as the key reason. Although a positive supply shock does not in itself require a monetary policy response, if it proves persistent and if the economy has spare production capacity – which was the case – this may cause economic agents to revise down their inflation expectations, with the latter showing up in prices and wages through second-round effects and so eroding underlying inflation. When this happens, a series of initially positive supply shocks threatens to reverse into negative demand shocks that do require an appropriate policy response. The Governing Council considered the risk of this scenario materialising to be significant and saw its view confirmed in falling inflation expectations. A robust monetary policy response was needed to combat the risks of too long a period of low inflation. With hardly any room left to lower key rates, the Eurosystem's next logical step was to use the size and composition of the central bank balance sheet to establish an appropriate monetary policy stance. So instead of just controlling short-term interest rates, the Eurosystem now attempts to influence the full range of rates by purchasing assets. If these more favourable financing conditions percolate through to households and corporations, they will help to push inflation back up to 2% through consumption and investment. Since the asset purchases show the central bank's determination to preserve price stability, they also encourage a firm anchoring – or rather, in current conditions, a recovery – of inflation expectations. This is an essential prerequisite for effective monetary policy as it allows the central bank to control real interest rates even when nominal rates have reached their lower bound.

2015: additional balance sheet measures

At its meeting on 22 January 2015, the ECB's Governing Council moved to announce an expanded asset purchase programme (APP), combining ongoing programmes such as the ABSPP and CBPP3 with an extensive public sector purchase programme (PSPP). Under the APP, the ECB aims to purchase a total € 60 billion of assets every month. In January, it envisaged the programme running until the end of September 2016, but in December, the programme was extended to the end of March 2017 in light of the downward revision of the price stability outlook. What is more, the Governing Council has always said that the APP would run at least until it noticed a sustainable change in the path of inflation in keeping with its price stability objective. In other words, assets may still be purchased after March 2017. The Governing Council has thus made it very clear that the APP is meant to help it achieve its mandate.

While the euro area economic recovery continued – albeit subdued – into 2015, inflation dynamics were persistently weak and the Governing Council found the downside risks for the inflation outlook still present by the end of the year. To ensure a swift return of inflation to 2%, in December it adopted additional measures to make the asset purchase programme more efficient, on top of its extension. One of these was to reinvest principal repayments of securities purchased at maturity under the APP for as long as needed, extending the horizon of both the favourable liquidity conditions and the accommodating monetary policy stance. Another such measure was a cut in the deposit facility rate by 10 basis points to –0.30% to encourage banks to actually use their surplus liquidity

instead of holding it with the Eurosystem. Other key interest rates were unchanged. Looking ahead, the Council reiterated that it is willing and able to act if necessary, using all instruments available within its mandate, and has pointed out that the asset purchase programme provides sufficient flexibility in terms of adjusting its size, composition and duration.

PSPP features

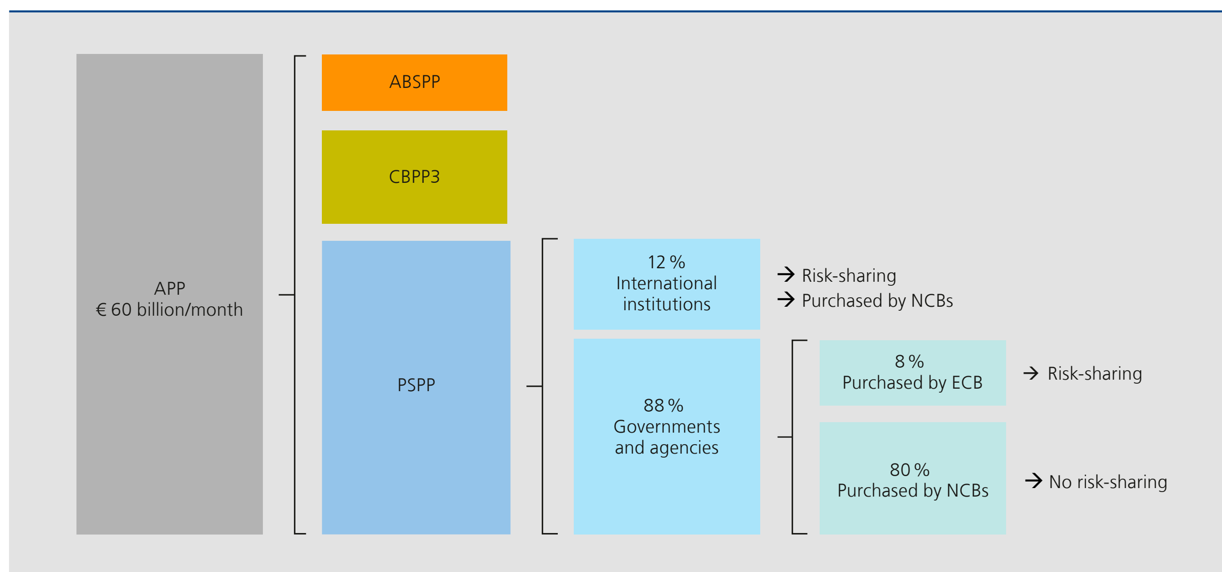
Under the public sector purchase programme (PSPP), the ECB buys euro-denominated securities issued by euro area governments, agencies and European institutions in the secondary market, in return for central bank money or deposits with the central bank. Credit institutions can use these funds to buy other assets and provide loans to the real economy, further easing financial conditions in both cases. (See box 2 for more information on how the APP affects the balance sheets of the central bank and commercial banks.)

These purchases are made across the countries of the euro area in keeping with the ECB's capital key, which reflects their economic and demographic size. Purchases under the PSPP are made both by the national central banks (NCBs) and the ECB (see chart 7 for more details). Although it is implemented at a decentralised level, the PSPP is fully controlled in all its aspects by the Governing Council and the ECB coordinates its purchases, so preserving the unity of Eurosystem monetary policy.

To be eligible for the PSPP, debt securities have to meet a number of conditions: they have to be investment grade and have a minimum remaining term to maturity of two years and a maximum of 30 years. Also, the Eurosystem will not purchase securities with returns below the deposit facility rate. Purchase limits are in place to prevent distortions to market and pricing mechanisms, to keep the Eurosystem from turning into a blocking minority in the event of collective debt arrangements and to curb the risk of the ECB becoming one of the main creditors of euro area governments. Supplementary criteria are in force for countries that are under an EU-IMF adjustment programme.

The Governing Council has decided that any losses incurred on the purchase of securities issued by European institutions by NCBs, and on securities issued by governments and agencies by the ECB, will be shared. This does not apply to any other purchases under the PSPP, implying that only 20 % of PSPP purchases are covered by this arrangement. These constraints on risk-sharing – which contrast with the regime governing other monetary policy operations – reflects the incompleteness of the EMU and the lack of a common fiscal policy at European level. In the current set-up, full risk-sharing would imply that all euro area countries would bear the risks of a default or debt restructuring of one member and would entail fiscal transfers between Member States for which the Eurosystem does not have a mandate. Taking this into account and to ensure that individual Member States are encouraged to devise appropriate fiscal policies, the

CHART 7 SET-UP OF THE EXPANDED ASSET PURCHASE PROGRAMME (APP) (1)



Source: ECB.
(1) The scale of these blocks does not fully reflect the size of the different programmes but does provide an indication.

Governing Council felt compelled to opt for limited risk-sharing. This decision does not detract from the general unity of monetary policy, as the Governing Council makes all the decisions affecting the euro area as a whole.

APP implementation in practice

The expanded asset purchase programme was implemented smoothly in 2015, at volumes matching the announced monthly amount of € 60 billion. The programme purchased an average net € 1 billion in ABSs and € 9 billion in covered bonds every month. Public assets, purchase of which started on 9 March 2015 and which make up the bulk of the APP, added up to a monthly average purchase of € 49 billion.

At the start of the programme, financial market players expressed some doubts as to whether the Governing Council would be able to meet its monthly PSPP purchases targets in quantitative terms. Concerns about a scarcity of government bonds meeting all the requirements were twofold : first, it was assumed that net issuance of debt securities by governments in the euro area would be rather meagre while the programme was running, as fiscal consolidation had been ongoing and Germany was even predicting budget surpluses. And second, it was surmised that banks, pension funds and insurance companies would not be willing to sell government bonds because of regulatory requirements or a lack of attractive investment alternatives. In the event, the feared scarcity never materialised and the proposed purchase amounts were met without difficulty. Besides, the programme has been set up in such a way that it can be adjusted to prevent such risks. As it happens, the Governing Council made use of this flexibility : in September 2015, it decided to raise the purchase limit on an individual security issue from the original 25 % to 33 %, unless such a move gives the Eurosystem a blocking minority, in which case the ceiling would be kept at 25 %. The 33 % ceiling on all of an issuer's outstanding debt was kept unchanged. Meanwhile, the list of agencies whose debt securities are eligible for the programme was extended twice, in April and July, for reasons of monetary policy and risk control. In addition, in December, the Governing Council announced that the APP would from then on also allow purchases of euro-denominated negotiable debt instruments issued by regional and local governments in the euro area. This might help prevent any potential scarcity issues, for example in the German market for government bonds.

As for the implementation of the APP in Belgium, on 9 March, the National Bank of Belgium (NBB) started purchasing OLOs in the secondary market, with net purchases of Belgian government paper under the PSPP amounting to around € 16 billion for full 2015. The scarcity risk for Belgian government bonds was small, as their share in the secondary markets for euro area government bonds (some 5 %) exceeded the NBB's allocation in the ECB's capital key (3.52 %), due to Belgium's rather large gross government debt. What is more, the Federal Debt Agency's funding strategy enables ample liquidity to be generated for the various OLO lines. Lastly, there were no liquidity problems in the secondary markets for OLOs or repos, as shown by the sparse use made of both the NBB's securities lending and the Federal Debt Agency's repo facilities.

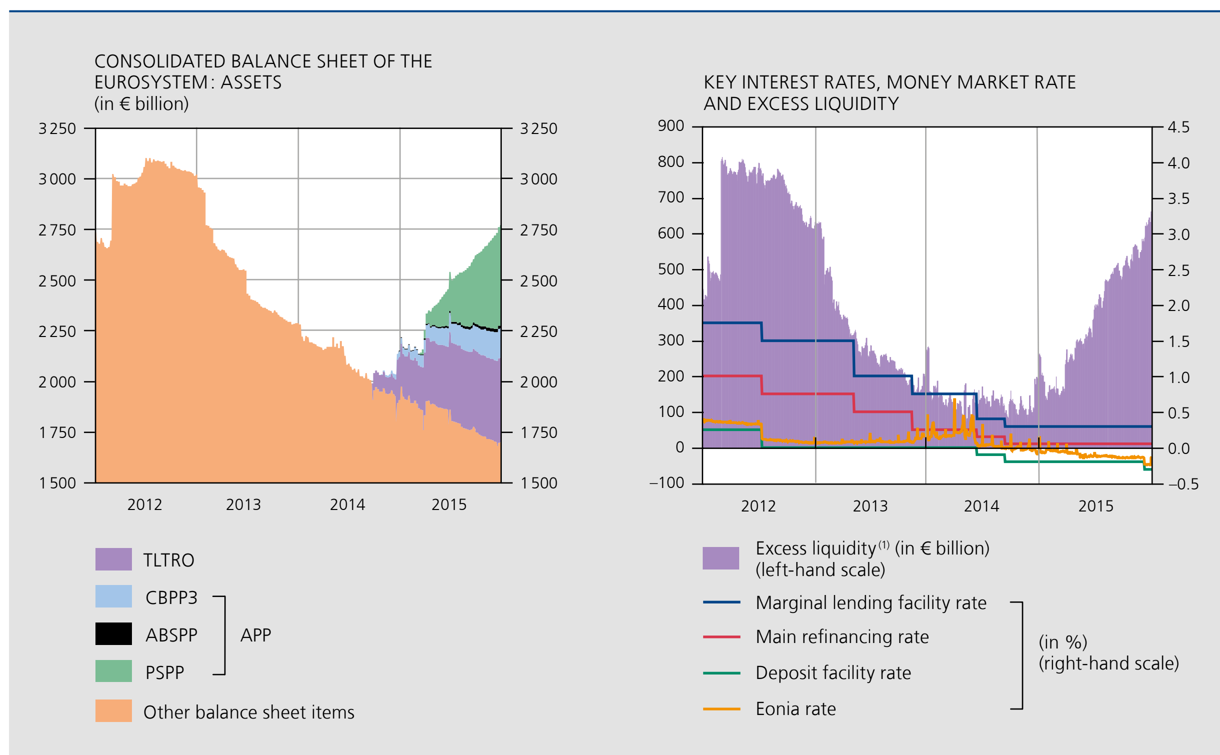
TLTROs face reduced demand but play key role

Long-term funding costs for banks also came down in anticipation of an expanded asset purchase programme run by the Eurosystem and, in January 2015, the Governing Council decided to put the fixed interest rate on future TLTROs on a par with the rate governing main refinancing operations at the relevant time. This put an end to the mark-up of 10 basis points applied on the first two TLTROs in 2014. This particular measure was meant to ensure funding demand from banks via TLTROs as well as a better transmission of monetary easing. It became clear in the second quarter that TLTROs have a key role to play in securing access to cheap funds for banks, particularly when market rates go up. Following two bouts of increased volatility in the euro area bond markets – including bonds issued by banks – demand for the fourth TLTRO in June exceeded expectations. On the whole, the demand for liquidity in 2015's four operations was lower on average than in the first two TLTROs of 2014 (€ 51.4 billion compared with € 106.2 billion). This was in line with expectations in view of the shorter maturities of the new TLTROs as well as the smaller amounts banks were able to borrow compared with the first two operations. Besides, banks were also receiving liquidity under the APP.

Impact on the Eurosystem balance sheet, excess liquidity and Eonia rates

Much as expected, the implementation of the APP and TLTROs significantly increased the Eurosystem's balance sheet total. Under the APP, the Eurosystem takes a more active role in managing its balance sheet compared with previous years, in which the monetary base mainly depended on bank demand for liquidity. And banks typically used to tap the system in times of financial turmoil, turning the size of the balance sheet into an indicator for tensions in the euro area's financial system or for the need for central bank intermediation between financial institutions. Since the launch of the asset purchase programme, however, this interpretation no longer applies.

CHART 8 HIGHER EUROSYSTEM BALANCE SHEET COMES WITH INCREASED EXCESS LIQUIDITY, DEPRESSING THE EONIA RATE



Sources: ECB, Thomson Reuters Datastream.
(1) Excess liquidity equals the sum of the amounts placed in the deposit facility and current account exceeding reserve requirements.

The launch of the TLTROs and the APP – the former offering cheap long-term loans to banks and the latter providing a virtually constant flow of central bank reserves – served to bring down demand for funding by regular monetary policy operations, such as the weekly main refinancing operations and quarterly longer-term refinancing operations.

In line with the expansion of the Eurosystem's consolidated balance sheet, the amount of liquidity that euro area credit institutions kept with the Eurosystem was also up. Excess liquidity, i.e. the central bank reserves that banks hold on top of their required reserves, either in current accounts or in the deposit facility, which command the same return, amounted to € 640 billion by the end of December 2015, compared with € 120 billion in early September 2014, before the start of the various asset purchase programmes and TLTROs.

With banks trying to offload their surpluses onto the markets, the massive excess liquidity has driven the Eonia overnight interest rate tenaciously close to the deposit facility rate – the latter not just serving as the lower limit of the Eonia rate but also as its reference value in the case of excess liquidity. This overnight rate remained negative throughout 2015, implying unprecedentedly low interbank funding rates.

Box 2 – Impact on bank balance sheets of the Eurosystem's expanded asset purchase programme

The Eurosystem's expanded asset purchase programme (APP) does not merely have a lasting impact on the balance sheet of the system itself – which is buying the assets – but also on those of the credit institutions in the euro area, which act as intermediaries when settling the purchases, regardless of who is selling.

On the assets side of the Eurosystem balance sheet, these purchases add to the portfolio held for monetary policy purposes, while on the liabilities side they cause a similar increase in the excess reserves held by credit institutions in the euro area.

APP'S IMPACT ON THE CONSOLIDATED AND SIMPLIFIED BALANCE SHEET OF THE EUROSYSTEM
(in € billion)

Assets	06-03-2015	25-12-2015	Liabilities	06-03-2015	25-12-2015
Refinancing operations	471	542	Banknotes in circulation	1 010	1 083
Securities held for monetary policy purposes ↑	**237**	**805**	Government deposits	56	70
Other assets	1 427	1 421	Reserves held by banks	254	757
			Required reserves	107	113
			Excess reserves ↑	**147**	**644**
			Other liabilities	815	858
Total	**2 135**	**2 768**	**Total**	**2 135**	**2 768**

Source: ECB.

In principle, euro area banks' excess reserves will stay at high levels as long as the assets remain in the Eurosystem's monetary policy portfolio. Use of these generated assets by economic agents – the Eurosystem excepted – can serve to "destroy" this recently issued bank liquidity in three cases: (1) if banks use these new resources to repay open refinancing operations; (2) if this liquidity is converted into banknotes, and (3) if these resources are used to pay euro area governments who subsequently deposit their resources in accounts held by the Eurosystem. These three possible scenarios have materialised relatively infrequently in practice, and excess reserves have typically picked up at the same pace as purchases.

As for the aggregate balance sheet of the euro area's credit institutions, the counterpart of bank liquidity created by APP purchases – an increase in excess reserves on the assets side – will depend on who is the "ultimate" seller of the assets and subsequently on their ultimate use.

If the seller is a euro area bank – a transaction for own account – the purchase on the assets side of the euro area banks' aggregate balance sheet will initially show up as a reduction in the securities portfolio. If the seller is a non-bank resident of the euro area, the Eurosystem will settle the purchase on the liabilities side of the euro area banks' aggregate balance sheet by crediting a deposit account [1]. Lastly, if the seller is a non-resident of the euro area, the euro area banks' aggregate balance sheet will – in light of their increasing reserves – be adjusted by a reduction in their net external assets, i.e. the difference between amounts due from and to non-euro area parties. This reduction is the net outcome of either the payment of the amount received for the securities – into an account held by the non-resident seller with a euro area credit institution – or the debiting of an account held by a resident bank with a foreign bank.

(1) If the depositor belongs to the money-holding sector, the purchase of assets by the Eurosystem should initially prompt an increase in M3 money supply.

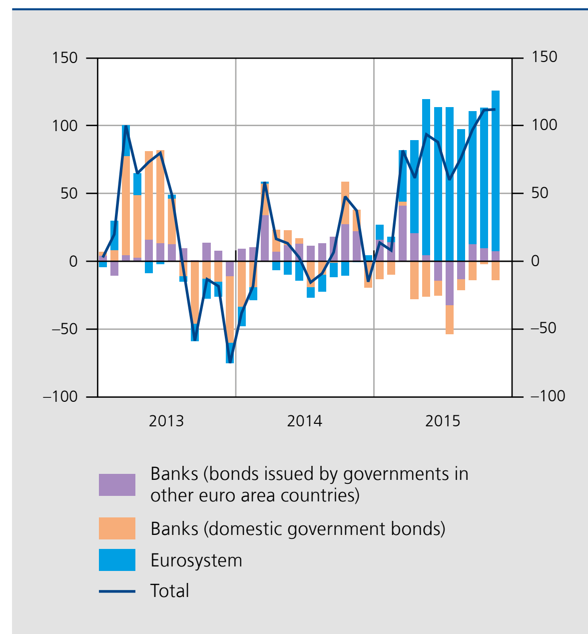
APP'S DIRECT EFFECT ON THE AGGREGATE AND SIMPLIFIED BALANCE SHEET OF EURO AREA BANKS, REPRESENTED BY SELLER

Assets		Liabilities	
Banks' reserves (with the Eurosystem)		Residents' deposits	
Required reserves		APP sellers' deposits	↑
Excess reserves	↑	Other deposits	
Deposits with non-residents	↓	Deposits of non-residents	↑
Securities portfolios		Borrowing from the Eurosystem	
APP-eligible securities	↓	Other borrowing	
Other securities		Equity	
Loans			
Other assets			

Counterpart to the increase in excess reserves:
Seller is a euro area bank
Seller is a non-bank resident of the euro area
Seller is not a resident of the euro area

Source: NBB.

PURCHASES OF EURO AREA PUBLIC SECTOR BONDS BY THE EUROSYSTEM AND BY EURO AREA BANKS
(three-month cumulative net flows, in € billion)



Source: ECB.

Whereas the Eurosystem's portfolio of euro area government paper has kept rising due to the purchases made under the public sector purchase programme (PSPP), euro area banks have seen theirs shrink somewhat since March 2015. This implies that banks have been selling government bonds to the Eurosystem that they had been holding for their own account. Looking at the relevant amounts – and particularly when compared with total PSPP purchase volumes as well as the size of the portfolio of government bonds as held by the euro area banking sector – net sales have remained relatively limited. Obviously, other economic agents – whether resident in the euro area or not – have sold securities to the Eurosystem under the PSPP.

The direct effect of the APP is an increase in liquidity for banks in the euro area, as evidenced both by their ampler reserves with the Eurosystem and an increase in deposit financing. This liquidity can be used in a variety of ways but will invariably impact the balance sheets of the credit institutions. Some banks might tap these resources to grant new loans, causing, on the assets side, an increase in those banks' loan portfolios and, on the liabilities side, higher deposits. If their customers use these deposits to, say, buy goods from customers of other banks in the euro area, the central bank reserves are transferred to another party in the system. At the aggregate level of the banking sector, however, bank reserve volumes should remain unchanged in principle. Liquidity should return to the Eurosystem, in one way or another, as the euro area banking industry as a whole is a closed loop.

Such second-round mechanisms – the above example of which is only one of many possibilities – suggest that the charted direct effect does not neatly capture the APP's eventual impact on euro area credit institutions' balance sheets. It will be difficult to determine in the real world the overall effect of the programme on all balance sheet items of banks in the euro area, because of the different decisions on portfolio rebalancing, at the level of both individual banks and non-bank agents (which, by necessity, will act via banks[1]). Such difficulty will be further compounded by the fact that the trends in the various balance sheet items of resident banks will also be influenced by factors other than the APP.

Since March 2015, growing excess reserves of euro area banks have been moving in tandem with higher deposits by non-bank residents of the euro area, a fall in net external assets and in lending to the public sector in the euro area, and some growth in lending to the euro area's private sector. At the end of the day, the APP's impact on euro area banks' balance sheets may well work out as partially supportive of lending to the real economy. In Belgium too, banks recorded higher reserves coupled with lower net external assets, a decline in net market funding and an increase in deposits by Belgian non-bank residents. Lending to the Belgian non-bank private sector also showed an upward trend, albeit a weaker one.

(1) Portfolio rebalancing decisions refer to decisions on adjusting the composition of their respective balance sheets.

Transmission of the measures to financial conditions and the macroeconomy

The ECB's package of measures would appear to have had a visibly positive effect, even if this is difficult to capture in precise numbers. For one thing, the euro area markets for government bonds experienced increased volatility in the second quarter. Over the summer months, the global economy slowed down and global financial and commodity markets grew increasingly jittery. These external shocks make any correct assessment of these measures a tricky proposition and in fact have sparked a recalibration of the degree of the ECB's monetary accommodation in view of their impact on the inflation outlook. However, it is safe to assume that these shocks would have hit the euro area economy harder if the stimulus package had not been in place.

Signalling on inflation expectations

With its asset purchase programme, the ECB's Governing Council has sent out a strong signal that it is willing to do whatever it takes to meet its price stability objectives. The APP helps the central bank to steer real interest rates appropriately and thus allows it to continue to play its part in stabilising economic activity and inflation. In that sense, its commitment to keeping the APP in place until inflation reaches an expected level of close to 2 % has been crucial.

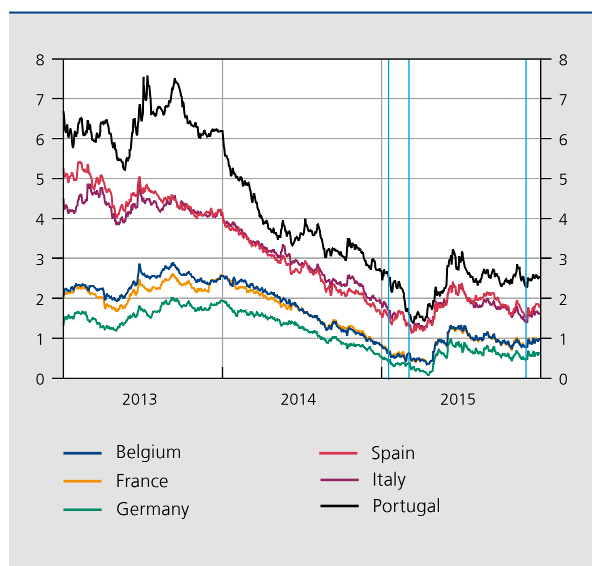
The ECB's measures have kept the strong fall in headline inflation from being a more persistently downward force driving inflation expectations. Following the announcement of the APP, market-based indicators rebounded, while the renewed drop in inflation over the summer of 2015 proved only a temporary blip to inflation expectations. This effect also reflects markets' anticipation of a further APP expansion in December. Meanwhile, survey-based inflation expectations also revived slightly: compared with the end of 2014, the breakdown of the sample respondents in the professional forecasters' survey showed an upward shift. All that said, multiple resources-derived inflation expectations over all horizons were only a little up on their record lows of the beginning of the year, and remained far removed from the requisite level for price stability. A continued accommodating monetary policy stance is therefore justified.

Lower nominal rates across bond maturities

The ECB's quantitative easing programme also had an immediate impact on the returns of purchased assets. Large-scale purchases of government bonds were expected to drive up the prices of such assets and reduce their returns, in line with the law of supply and demand. As rates of government bonds are a reference value – considered as the 'risk-free rate', the stimulus spreads to the rest of the economy in the shape of lower funding costs, encouraging lending and investment.

CHART 9 TEN-YEAR GOVERNMENT BOND YIELDS HISTORICALLY LOW AFTER PSPP LAUNCH, SUBSEQUENT VOLATILITY (1)

(in %)



Source: Bloomberg.

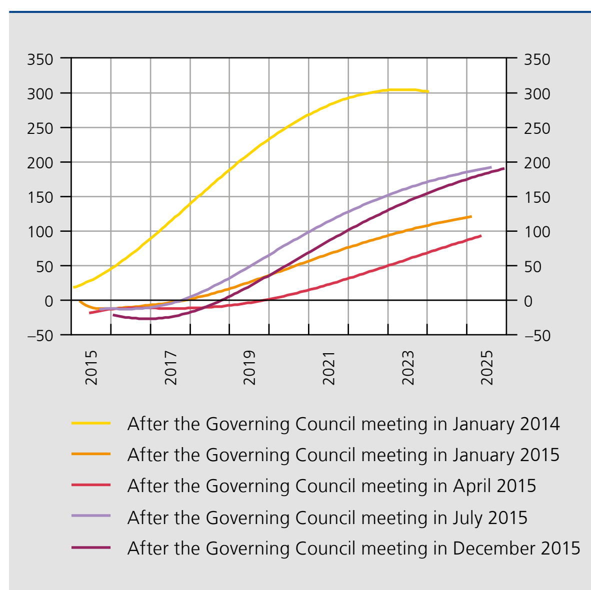
(1) Vertical blue lines show the announcement, start of implementation and extension of the APP (22 January, 9 March and 3 December respectively).

As the markets had already been anticipating additional easing by the ECB since mid-2014, the new measures had already been priced into a wide range of financial assets and yields on government bonds were historically low by the end of 2014 in a great many euro area countries. Nevertheless, yields went down even further after the ECB announced the PSPP in January, and even when its purchases got underway in March. One explanation was that the size of the asset purchase programme was more substantial than had been expected. Debt securities with longer maturities notched up the steepest falls; for instance, the yield on ten-year German Bunds, which acts as a reference value for less risky assets in the euro area, plunged from an average 0.64 % in December 2014 to close to 0 % by mid-April 2015. Meanwhile, returns on maturities up to seven years even turned negative. Belgian government paper recorded a drop from 0.90 % to below 0.40 % for ten-year bonds and negative returns for maturities up to six years. Government bond yields of the more fragile euro area countries also came down, most more strongly so.

The second quarter saw two price corrections (one at the end of April and one in early June), sharply pushing up government bond yields. Ten-year German Bund yields added 67 basis points to 0.83 % (monthly average) in the April-June period. A number of explanations have been put forward for these sudden price corrections. First, they may have been a reversal – a logical one to some degree – of the equally unexpected and steep falls after the purchases started in March. At the same time, long-term nominal rates may have experienced some upside effect from some improving macroeconomic data and rising inflation expectations – neither of which can be separated from the APP. In that respect, higher yields are not necessarily a bad thing: although the APP initially depresses long yields, the eventual objective of the programme may be said to achieve higher long-term yields, as this points to improving growth and inflation prospects in as much as it reflects upward revisions vis-à-vis short-term rates. Lastly, a number of technical factors affecting the markets may have intensified the upward trend: seasonally reduced market liquidity, significant bond issuance by a number of governments as a result of very low yields, and mechanical trading strategies which cause a spiral of volatility sparking even greater volatility. Although these factors' actual contribution to volatility cannot be established, one thing has become plain: bouts

CHART 10 MONETARY POLICY MEASURES FURTHER FLATTEN EXPECTED OVERNIGHT RATE TRENDS[1]

(in basis points)

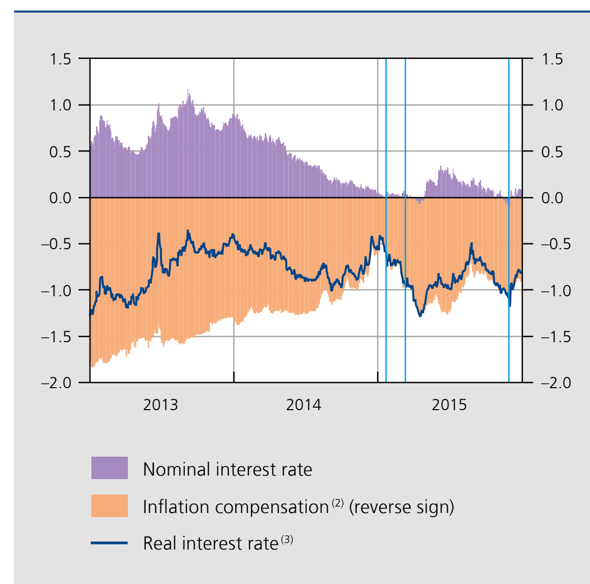


Source: Bloomberg.

(1) Measured on the basis of the implicit overnight interest rate derived from interest rates on Eonia swaps with varying maturities.

CHART 11 REAL INTEREST RATES STAYED AT LOW LEVELS[1]

(in %)



Sources: Bloomberg, Thomson Reuters Datastream.

(1) Vertical blue lines show the announcement, start of implementation and extension of the APP (22 January, 9 March and 3 December respectively).

(2) Measured on the basis of swap contracts covering the inflation risk in the euro area for a 5-year period.

(3) Calculated as the difference between nominal interest rates and inflation compensation.

of increased volatility are integral to a climate of low interest rates. However, the Governing Council intimated it would respond to any unfounded tightening of monetary conditions in such a climate. Yields on government bonds fell again in the second half of the year, as markets discounted expectations of additional monetary policy measures.

Volatility notwithstanding, monetary policy measures have served to further flatten the term structure of interest rates. In keeping with the trend in government bond yields, expectations for money market rates moved up from end-April to early July, and were followed by fresh declines. The steeper slope at the (very) long end of the yield curve compared with early January did stay, which may suggest expectations of more rapid normalisation as soon as key interest rates are raised – positive news in itself. By contrast, the short and middle segments of the yield curve declined further as the year progressed. This shows the impact of forward guidance, of deposit facility rate cuts and of the clear signal about the monetary policy stance sent by the asset purchases – i.e. lower expectations for future risk-free short-term rates. It is assumed that this effect is stronger for short-term rates as the central bank is more reticent about being tied to low interest rates in the far-off future.

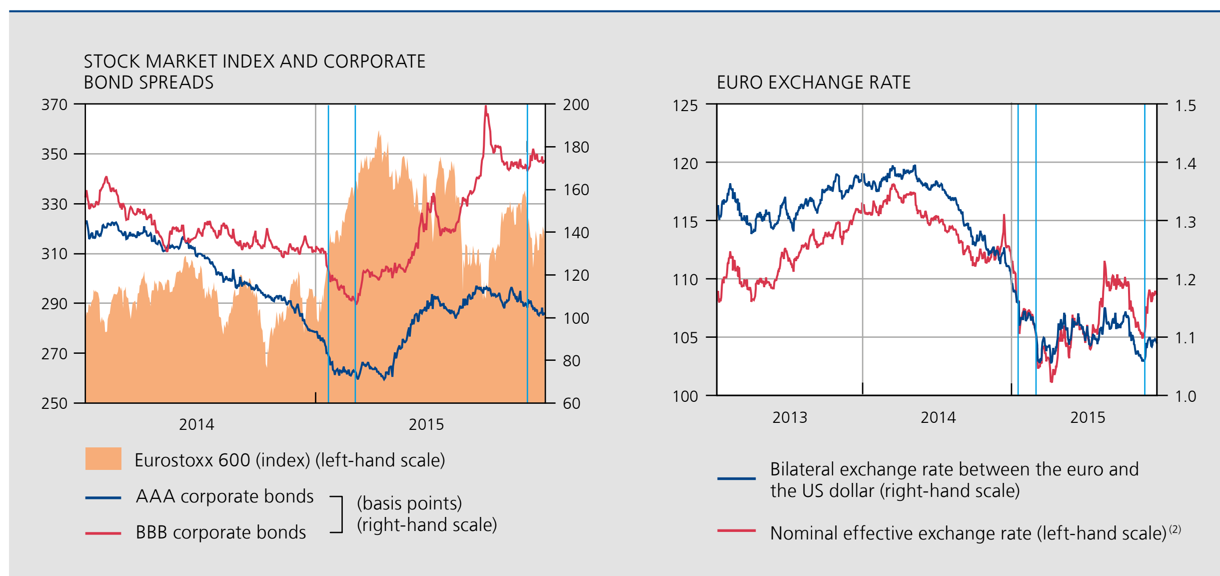
With APP depressing nominal rates but also causing upside pressure to inflation expectations, long-term real interest rates dipped to record lows. The pronounced monetary easing of the first quarter did not last: nominal rates started climbing while inflation expectations fell. October saw an improvement in anticipation of fresh monetary policy measures: real interest rates were low again by the end of the year.

Portfolio rebalancing

In addition to its immediate effect on the nominal rates of the securities it purchases, the asset purchase programme also has an indirect effect on other assets, resulting in lower market funding costs for banks and non-financial corporations.

Initially, the APP did prove a favourable influence on European corporate bonds and equity markets. Corporate bond spreads versus five-year swap rates continued to narrow in the first quarter, a trend that was even more pronounced for lower-rated bonds. Meanwhile, European equity markets notched up gains of around 23 % between the start of the year and their peaks in mid-April. A search for higher-yielding assets outside the euro area ensued

CHART 12 APP CAUSES INVESTORS TO REBALANCE THEIR INVESTMENT PORTFOLIOS (1)



Sources: ECB, Thomson Reuters Datastream.
(1) Vertical blue lines show the announcement, start of implementation and extension of the APP (22 January, 9 March and 3 December respectively).
(2) Nominal effective exchange rate against the 38 main trading partners of the euro area.

and the concomitant adjustment of investment portfolios pushed the euro exchange rate down. Between early January and mid-April, the euro weakened by nearly 10 % in nominal effective terms and by 13 % relative to the US dollar. By the end of April, trends reversed in the wake of, among other factors, renewed volatility in the European markets for government bonds, financial turmoil in the emerging economies in the second half of the year and the delay, in the autumn, of the rate increase by the Federal Reserve, reflecting concerns over the economic recovery in the United States. The disappearance of some of these factors and expectations of intensification of the existing package of stimulus measures again improved broader financial conditions although they were less favourable than in the first half of the year.

Transmission via the banking sector (loan volumes and lending rates)

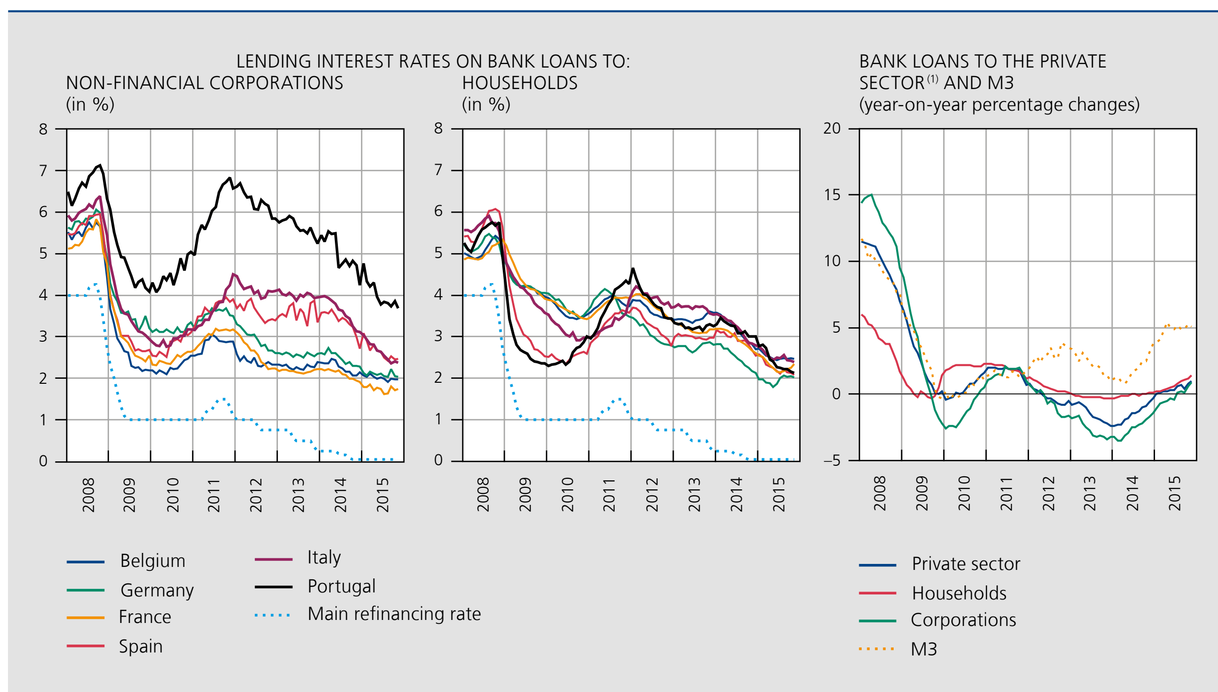
If this quantitative easing is to benefit households and corporations, improved financing conditions also need to be passed on in lending, in terms of both prices and volumes. The ECB's package of monetary policy measures aimed to achieve both and indeed resulted in more attractive financing conditions offered by banks.

Bank lending costs for households and corporations continued to fall in 2015. In addition, lending rates to corporations converged significantly between countries. Corporations in the more fragile economies saw a continuous fall in their bank lending costs, while these remained stable for corporations in the less hard-hit countries from the beginning of 2015 as this group of countries had seen a more rapid and fuller transmission of earlier cuts in key interest rates. The fragmentation of bank financing conditions in the euro area would appear to be clearly reduced. Towards the end of the year, lending rates to the private sector stopped falling, possibly because the cost of financing for banks stabilised or because of banks' attempts to boost their margins.

The bank lending survey (BLS) likewise revealed an ongoing improvement in the lending criteria imposed on the private sector, right across the countries of the euro area. Intensified competition and declining risk perceptions among banks were the main factors contributing to more relaxed lending criteria. Indeed, banks indicated they were primarily using APP-generated additional liquidity as well as TLTRO funding to expand their lending. In terms of the demand from households and corporations for loans, the BLS also noted progress on 2014 thanks to low interest rates, growing financing needs of corporations, firmer consumer confidence and a brighter outlook for housing markets.

With both demand for loans and loan supply improving, lending growth dynamics benefited: bank loans to corporations, for instance, reversed in terms of year-on-year growth and turned slightly positive from July 2015 after

CHART 13 ONGOING IMPROVEMENT IN BANK LOANS TO THE PRIVATE SECTOR IN THE EURO AREA



Sources: ECB, Thomson Reuters Datastream.

(1) All maturities. Data for bank loans to the private sector are adjusted for securitisation over the whole period. Those for bank loans to households and corporations are adjusted from January 2010.

having languished in negative territory since June 2012. Loans to households saw growth accelerate from 0.2 % in January to 1.4 % in November.

Along with the growth in lending, monetary growth picked up even more steeply, with the asset purchase programme obviously being a key contributor. As described in box 2, money supply goes up when residents of the euro area – the banking sector excepted – sell securities to the Eurosystem. Banks acting as financial intermediaries in such transactions between economic agents and the Eurosystem will see increases not only in their reserves with the Eurosystem but also in deposits (included in M3) by economic agents amounting to the value of the securities sold in this way. Also, the asset purchase programme typically triggers portfolio rebalancing, potentially boosting money growth further – if indirectly – as, say, the banking sector decides to use its new-found liquidity to provide new loans or buy assets. Lastly, the opportunity costs of holding assets included in M3 are very small given the flatter risk-free yield curve.

Year-on-year M3 broad money growth continued to accelerate only moderately, from 3.9 % in January to 5.1 % in November. The key driving force was the expansion of the most liquid components of M3, mainly M1 sight deposits.

Interaction with other policy domains

Structural reforms, fiscal policies and financial stability

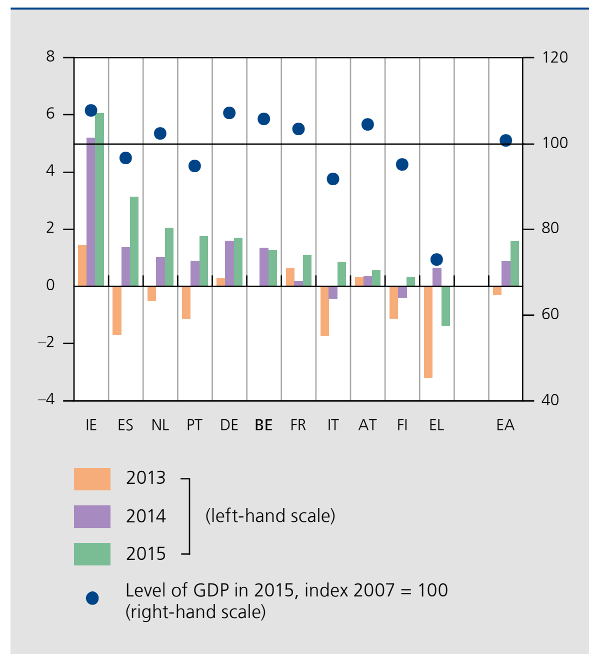
If monetary policy measures are to achieve the best possible effect, they will have to be backed by other domains of economic policy. On the supply side, the Governing Council has repeatedly pointed out that structural reforms are required to turn today's economic upswing into a structural recovery. More smoothly operating labour and product markets, coupled with a more favourable business climate, encourage investment, promote job creation and enhance productivity. As for the demand side, the Council emphasised the importance of growth-friendly fiscal policies that observe the EU's fiscal rules at the same time. After all, compliance with the EU's Stability and Growth Pact is essential if countries are to meet the budgetary costs of ageing populations and create buffers for the future. Greater confidence in public finances, in turn, tends to encourage consumption and private sector investment.

By supporting nominal incomes, monetary policies also have a significantly positive if not immediately visible effect on financial stability. If a deflationary trend were allowed to run its course, this would have devastating

consequences for the sustainability of nominal debt and land the financial sector with permanently lower interest rates even over longer horizons. Aside from such positive interactions, today's highly accommodating monetary policies can also put financial stability in jeopardy. A lengthy and persistent low interest rate environment may spark an exaggerated search for returns, encourage excessive debt accumulation and depress profitability of both banks and life insurers. This last point was cited as a key risk in the National Bank of Belgium's June 2015 Macroprudential Report, the ECB's Financial Stability Review and the Annual Report of the European Systemic Risk Board (ESRB). In identifying and addressing such financial risks, (macro)prudential policies are the first obvious way to go, leaving monetary policies to focus fully on the primary objective of ensuring price stability.

CHART 14 ECONOMIC GROWTH POSITIVE AGAIN IN NEARLY ALL COUNTRIES OF THE EURO AREA

(GDP growth by volume, percentage changes on previous year, unless otherwise stated)



Source: EC.

1.3 Economic activity in euro area countries recovered but languished below potential

Broader and more robust growth

The euro area's economic revival in 2015 was broader-based than in 2014, with domestic demand in a large number of euro area countries given a substantial boost by – to a lesser or greater degree – lower energy and commodity prices, favourable financial conditions, better access to credit, improved labour markets and less stringent fiscal policies. It was not just consumption that gathered momentum – investment also continued the recovery that first started in 2014. Despite slowing global trade growth, exports rode the wave of a depreciated euro and acted as a key engine for growth.

Germany was again the euro area's economic strongman in terms of growth given the size of its economy. The upturn in the Netherlands also proceeded at a strong pace as investment kicked ahead. Economic revival spread increasingly to those countries that had built up major macroeconomic imbalances in the run-up to the financial crisis but that had since largely remedied these imbalances. Following adjustments to their economies, and bolstered by the growth-supporting factors outlined earlier, most of these countries have been experiencing an economic recovery that gathered momentum in 2015. In Spain, for instance, growth in economic activity more than doubled compared with 2014, while Portugal also reported an upturn. Ireland notched up the highest growth in the euro area for the second year running and its exports shot up, as they had done the previous year. Its robust export expansion is related to the key role that multinational corporations play in Ireland's exports, but its economic revival has now also broadened to include firms that focus more on domestic demand and are relatively more labour-intensive. The Irish recovery, which initially leaned heavily on exports, has thus become more broadly based across sectors and spending categories.

In other countries, however, including France and Italy, domestic demand was below the average for the euro area. In France, investment continued to diminish, particularly in construction. That said, exports in both countries benefited from the weaker euro and the economic upturn in Europe and other advanced countries. All in all, their economies recorded moderate growth after having been virtually static in the previous year. In Finland, economic activity picked up in 2015 after three years of decline, but the country's actual growth was still meagre. This was down to persistently weak domestic demand and stalling exports in the wake of the clobbering of its exports to Russia.

All in all, in 2015, nearly all euro area countries made significant contributions to euro area growth – in proportion to their economic weight – whereas more than half of the figure for 2014 had been attributable to the increase in Germany's real GDP. In this regard, Spain and Portugal

have caught up smartly in the past two years, and Ireland can even boast a GDP significantly higher than in 2007.

Greece: the only country still struggling to emerge from the crisis

Greece is the only euro area country that recorded a fall in GDP in 2015 (of 1.4%) after having just returned to the black in 2014. This decline should be seen against the backdrop of the troubles that occurred when the second Greek adjustment programme expired and it was negotiating its third.

After the Greek economy appeared to have turned the corner in the course of 2014, negotiations over the fifth review of the second adjustment programme stalled in the autumn of that year. In the financial markets, the spread on Greek government bonds widened and political instability increased. In addition, the end of the year was marred by swelling deposit outflows, which landed Greece's banks into trouble. The situation remained tense in the first half of 2015, especially in the run-up to the Greek referendum at the beginning of July. Surprisingly, and in the teeth of massive uncertainty and falling confidence, economic growth was still positive, although this can be partially explained by a drop in imports and possibly also advance purchases by consumers fearing loss of savings.

Following an extension of the second adjustment programme, it expired on 30 June 2015 without an agreement between the Troika and the Greek government having been reached about the fifth review and the payment of the final tranche of financial assistance. Subsequently, Greece was unable to pay its debt to the IMF when it was due, and the government in Athens felt compelled by eroding confidence in Greek banks and huge outflows of deposits to impose capital controls at the end of June. Against this backdrop, the Greek economy slid downwards again in the second half of 2015.

Despite the victory for the No camp in the Greek referendum which voted against the provisions of the adjustment programme, the Greek authorities agreed to a range of measures after negotiations with the Eurogroup and the Heads of State or Government of the euro area countries. Greece then received a bridge loan to help it meet its immediate financial obligations. In August, the Greek government and the European Stability Mechanism (ESM) agreed the country's third adjustment programme, paving the way for fresh financial assistance to Greece of up to € 86 billion over a period of three years (from August 2015 to August 2018), € 25 billion of which is earmarked for recapitalising its banks. The average term to maturity of the new ESM loan is 32.5 years. With the agreement, the Grexit threat was averted. The IMF was closely involved in the negotiations and will consider its participation in the new financial assistance once Greece has taken the steps it considers necessary for implementation of the programme and once the country's European creditors have made the necessary decisions on debt relief for Greece.

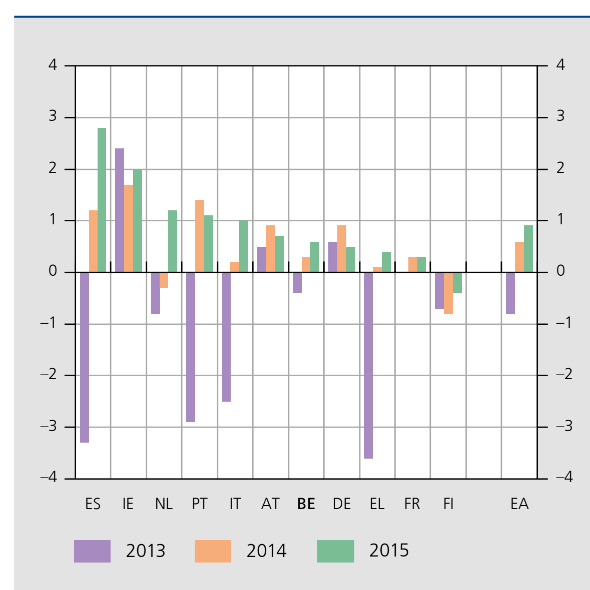
The first tranche of financial assistance amounted to € 26 billion, € 10 billion of which was in the shape of debt issued by the ESM to repair the Greek banking sector. Of the remaining amount, € 13 billion was disbursed in August, € 2 billion in November and € 1 billion in December after Greece had met a number of objectives set down in the adjustment programme's memorandum and had taken measures with regard to the financial sector with the aim of successfully recapitalising the country's banks. The comprehensive assessment of the four main Greek banks that the ECB carried out in the autumn of 2015 initiated their recapitalisation process.

Growth-enhancing factors in the euro area

The economic recovery of the euro area has gone hand in hand with a significant improvement in the labour markets of most euro area countries. Combined with the drivers discussed earlier in this chapter,

CHART 15 EMPLOYMENT GREW FURTHER IN MOST COUNTRIES OF THE EURO AREA

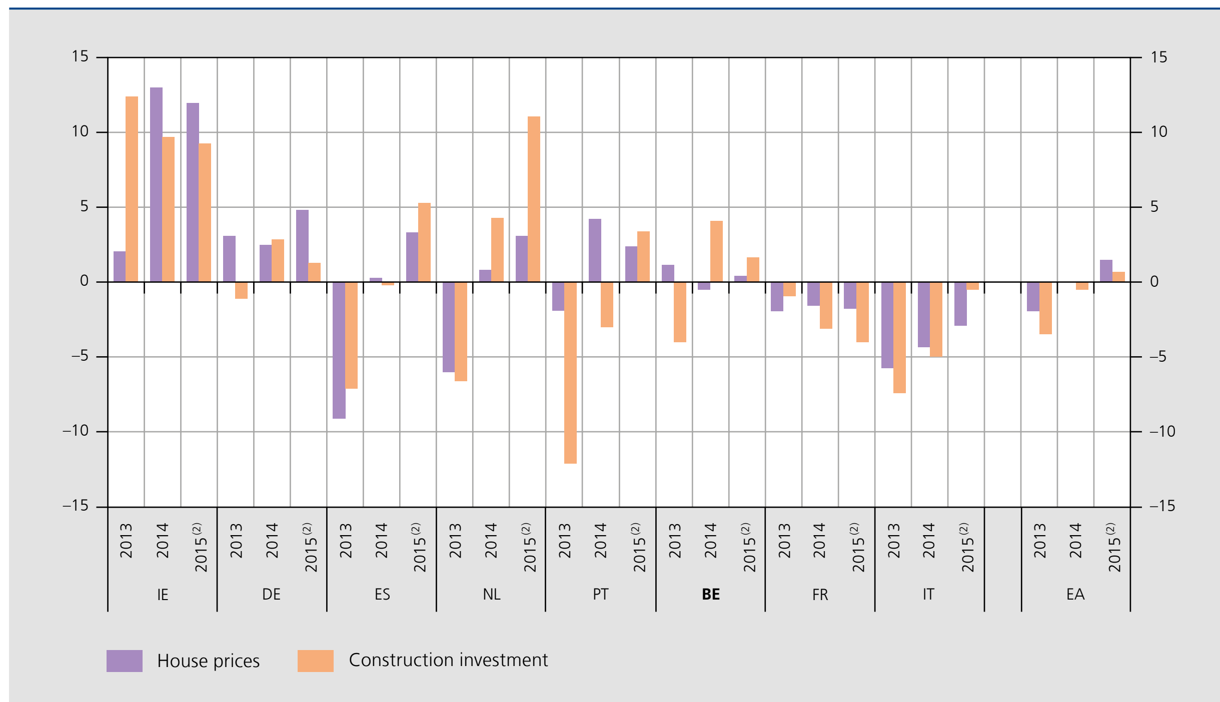
(employment in number of persons, percentage changes on previous year)



Source: EC.

CHART 16 HOUSING MARKET ADJUSTMENTS ENDING IN COUNTRIES HARDEST HIT BY THE FINANCIAL CRISIS (1)

(percentage changes on previous year)



Source: EC.
(1) Countries arranged according to the size of the change in house prices in 2015.
(2) First three quarters for house prices.

this improvement and the related rise in disposable household income have been supportive of domestic demand in the euro area. In the Netherlands and Italy, employment grew significantly after earlier declines; it also picked up sharply in those countries that had seen massive job losses in the aftermath of the crisis. Just like Ireland, both Spain and Portugal – two countries that have reformed their labour markets in the past few years – saw a major amelioration in the jobs situation. In France, by contrast, net job creation was subdued. Incidentally, in most euro area countries unemployment declined, if only slightly in many cases.

Moreover, house prices in the euro area are gradually beginning to revive. After many years of stagnation, the German catch-up in the property sector continued into 2015. Clear recoveries are also noted in certain countries in which residential property markets had been hit hard in previous years: Ireland's house prices have made significant gains, and to a lesser degree so have Portugal's since 2013. Spain's housing market appears to have bottomed out and is making its way back up, as is the market in the Netherlands, which had before also seen house prices slump. The recovery in house prices was often accompanied by a reversal in construction investment; in this regard, Ireland and the Netherlands are reporting strong increases. By contrast, house prices came down further in France and Italy while France in particular suffered further falls in housebuilding investment. Taken as a whole, the euro area recorded a slight recovery in house prices since mid-2014. Construction investment likewise edged up again in 2015 after years of decline.

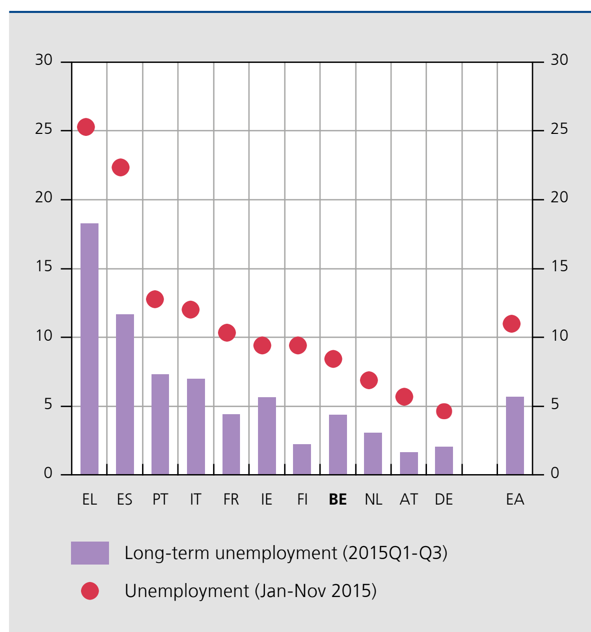
Moreover, it would appear that in a number of euro area countries the legacy of the financial crisis was less of an obstacle to the recovery in economic activity than it had been in previous years. In particular, heavily indebted countries such as Ireland, Spain and Portugal have made considerable progress running down the debt position at the level of both households and non-financial corporations. And this was not only the result of their nominal GDP growth as some countries have also actively deleveraged by reducing the actual size of their debt.

Growth still somewhat squeezed by financial crisis legacy

However, private sector debt ratios remain high in a number of countries, making them vulnerable and hindering spending, particularly investment spending.

CHART 17 UNEMPLOYMENT FELL BUT REMAINED HIGH IN A NUMBER OF EURO AREA COUNTRIES

(in % of the labour force)



Source: EC.

Box 3 explains in some greater detail how the need to deleverage private sector debt has eroded investment dynamics in countries in which debts were steep, obstructing a smooth transmission of monetary policies to lending.

Furthermore, despite recent falls, unemployment has remained high in Greece and Spain, and to a lesser degree also in Portugal and Italy. Labour markets in these countries were all hit deeply by the crisis and the long-term unemployed account for the largest proportion of the joblessness figures. In Ireland too, which has seen its unemployment rate come down to below the average for the euro area, the long-term jobless constitute the largest group. These unemployed people see their skills atrophy over time, something which harms potential growth.

Fiscal policies no longer restrictive

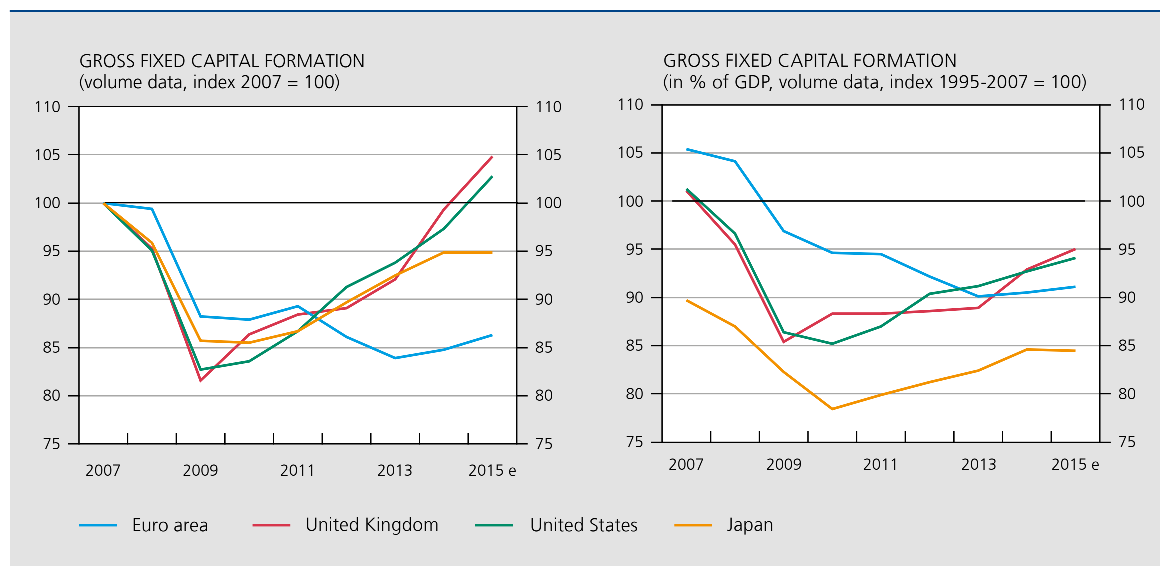
The euro area has made further progress in running down nominal budget deficits and reducing government debt ratios. As in the euro area as a whole, which saw the budget deficit narrow from 2.6 % of GDP in 2014 to 2 % of GDP in 2015, the government budget

Box 3 – Fragile recovery of investment in the euro area

Investment in the euro area took a real beating in the financial crisis and has yet to return to its pre-2008 levels seven years on. Capital spending is an essential and highly cyclical element of demand, and the investment slump and subsequent weak dynamics to a large degree explain the seriousness of the recession and the challenging economic recovery in the euro area. Low capital spending levels do not just depress demand, they undermine the long-term growth potential of the euro area economy, as they impede the expansion of capital stock as well as the spread of innovative technologies. Low investment puts the brakes on the creation of employment and wealth. This box compares recent investment dynamics in the euro area with those in a number of other major advanced economies. It then assesses whether the euro area's subdued capital spending trends are a purely cyclical matter or whether legacy factors persist in bringing a downward influence to bear, particularly on business investment.

The financial crisis initially appeared to have less of an impact in the euro area than in a number of other major advanced economies; in the United States and the United Kingdom, investment volumes collapsed more dramatically in 2009. However, with the latter countries' capital spending bouncing back just as rapidly in the following two years, the differences were minor in this first phase of the crisis. In 2012 and 2013, euro area investment sank deeper as the sovereign debt crisis bit and pushed the euro area back into recession. Recovery has been fragile since. Investment volumes have been on an upward trajectory since the end of 2014 but the EC's latest autumn projections still put them way below their pre-crisis high. In contrast, the United States, the United Kingdom and Japan have seen recovery kick off much more quickly and in the first two countries investment in real terms now exceeds pre-crisis levels.

INVESTMENT SINCE 2007 – AN INTERNATIONAL COMPARISON



Source: EC.

However, this pre-crisis level is only a snapshot of the state of play at that particular time. Taking as our reference the average ratio of investment to GDP, which is measured over a longer period of time, i.e. 1995-2007, this ratio in the euro area happened to be higher than its long-term average in the year before the financial crisis broke, unlike in the United States and the United Kingdom, whose investment as a percentage of GDP was around their average in 2007. Japan's ratio was even below average at the time, a reflection of years of decline after its asset bubble burst in the early 1990s. In view of this, the fall in the euro area's investment ratio may be argued to be persistent in as much as it is a correction on previously excessive capital spending. Besides this, investment-to-GDP still languishes well below its long-term average, while US and UK ratios are drawing closer.

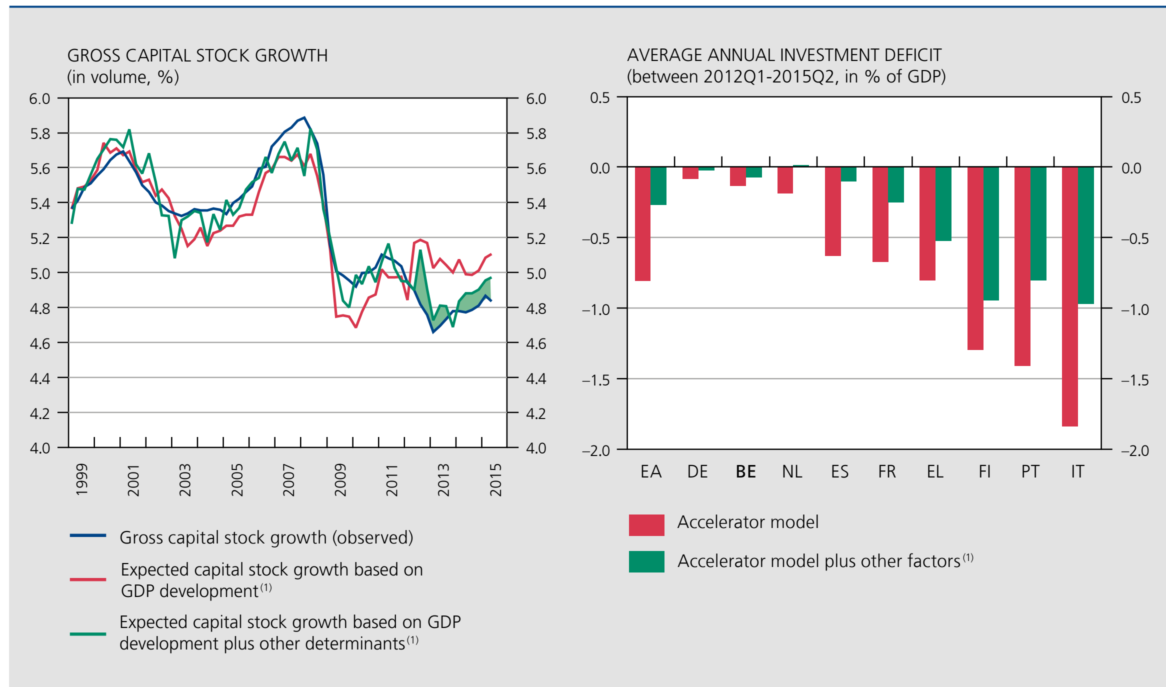
Weak economic growth and the accelerator model

Our analysis now focuses on non-residential investment, the largest element of which is business investment [1], using an econometric model – i.e. the accelerator model – to better assess investment dynamics. This simple model assumes that companies are guided chiefly by their expectations as to demand, and in empirical research it typically provides a fairly solid explanation of investment trends. It is predicated on the assumption that changes in desired capital stock are proportional to those in GDP. And it is this desired capital stock – including its depreciation – that determines the dynamics of the gross investment.

The accelerator model broadly explains capital spending dynamics since 1999, confirming the unusual nature of investment growth in the run-up to the financial crisis (2004-2008) as well as the fiscal stimulus – including spending on infrastructure – that supported economic activity in the 2009-2010 period. The model also finds

(1) Only nominal data and no volume data are available for business investment, and various proxies have been proposed in the literature. A number of researchers have deflated nominal business investment using the total investment deflator. Others, such as the EC's European Economic Forecast of November 2013, use real non-residential investment, as this consists primarily of business investment given its small proportion of public investment. This box has adopted the latter approach.

LAGGING INVESTMENT DYNAMICS IN THE EURO AREA – AN EMPIRICAL EXPLANATION



Source: NBB calculations.
(1) Expected capital stock growth is the outcome of an estimate by the so-called accelerator model, with the inclusion of additional factors if relevant. Additional factors in this instance: real bank lending rates, corporate debt ratios, credit restrictions on production and political uncertainty.

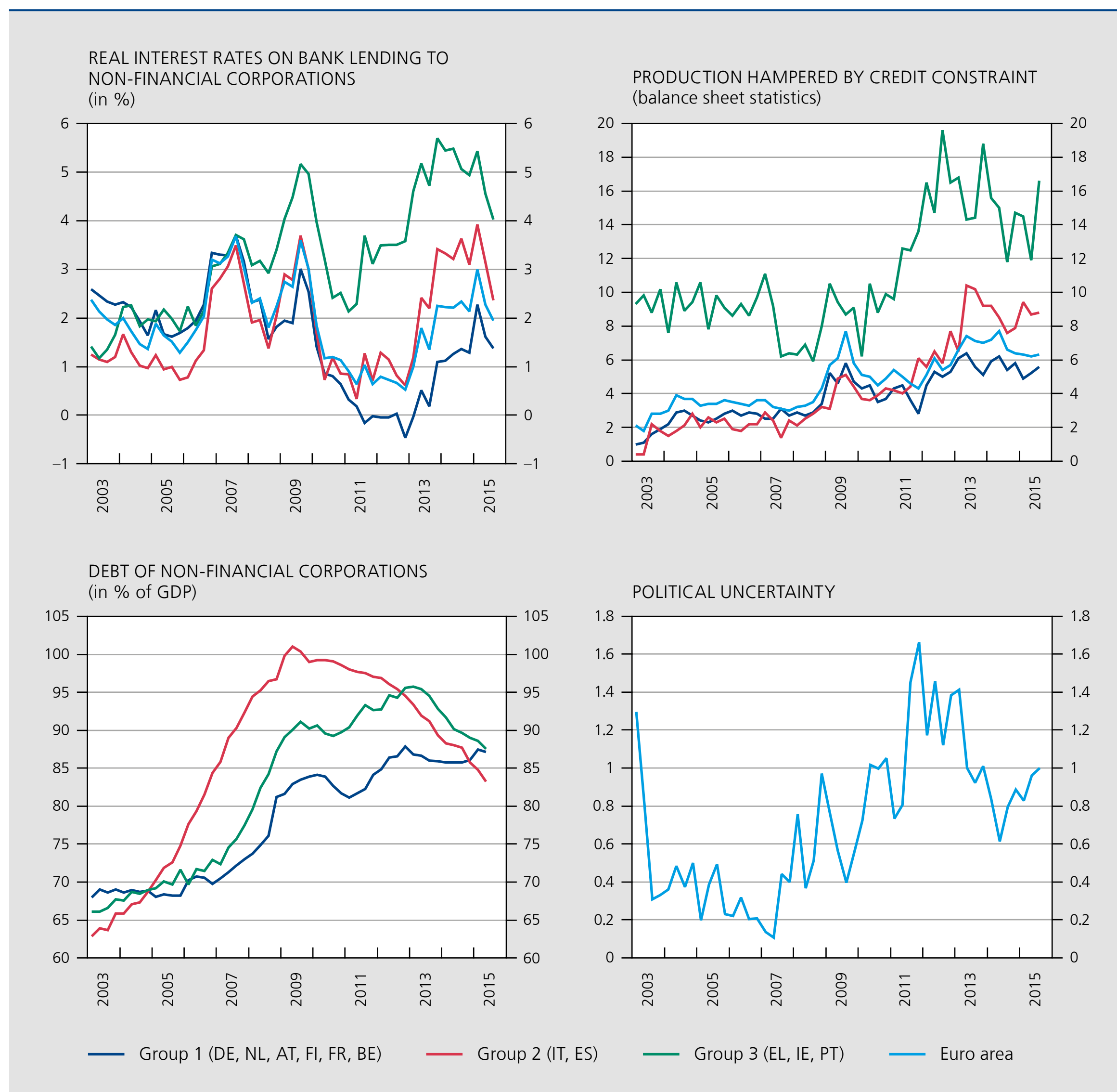
investment to be lower than might be expected based on economic growth since the beginning of 2012. These findings are equally applicable to the euro area at large and to most of its individual Member States. Expressed as a percentage of annualised GDP, this investment deficit is deepest in Greece, Italy, Portugal and Finland, while being very minor in Belgium and Germany.

As it is impossible to explain these weak investment volumes since 2012 using GDP developments only, our analysis requires additional determinants. Factors that may have recently played a part in euro area investment dynamics include the way external funding costs have developed, the need for deleveraging, any credit constraint and increased uncertainty. These factors will be added to the standard specification of the accelerator model.

The model uses real bank lending rates as a proxy for external funding costs. Differences between the euro area countries remained significant in this period, despite historically low key interest rates in the Eurosystem and a wide range of additional measures to remedy financial fragmentation. These differences reflect the diverging credit risks applicable to the various countries and the solvency of their banks. On top of this, real interest rates have been on the rise since 2013, due to lower inflation and inflation expectations.

Another explanatory factor is the way corporations themselves rate their funding options. A key indicator may be derived from the EC's business confidence survey: although there was less mention of credit constraint by corporations across the euro area, clear differences between countries remained, and corporations in the programme countries in particular continued to cite borrowing as a problem. And even for core countries, the situation has not quite returned to pre-crisis levels.

ADDITIONAL DETERMINANTS OF INVESTMENT



(1) Sources: EC, ECB, OECD, Thomson Reuters Datastream, NBB calculations.

Post-crisis, a number of countries embarked on a process of deleveraging, as shows up in the debt ratios of non-financial corporations compared with their peak levels. Corporations may decide to restructure their balance sheets so as to be better prepared when new shocks hit. In fact, they may well have shelved their capital spending plans against the background of economic recession and moderate recovery. All that said, debt ratio reduction has been limited to date and accounts for only a fraction of the pre-crisis increase.

Uncertainty is often cited as an important explanation of the euro area's weak investment dynamics. Economic research has found that corporations typically put off their capital spending decisions until they have more information available to them. Uncertainty is hard to quantify and it is not quite clear what indicator best explains the development of business investment. This analysis includes political uncertainty only and adopts

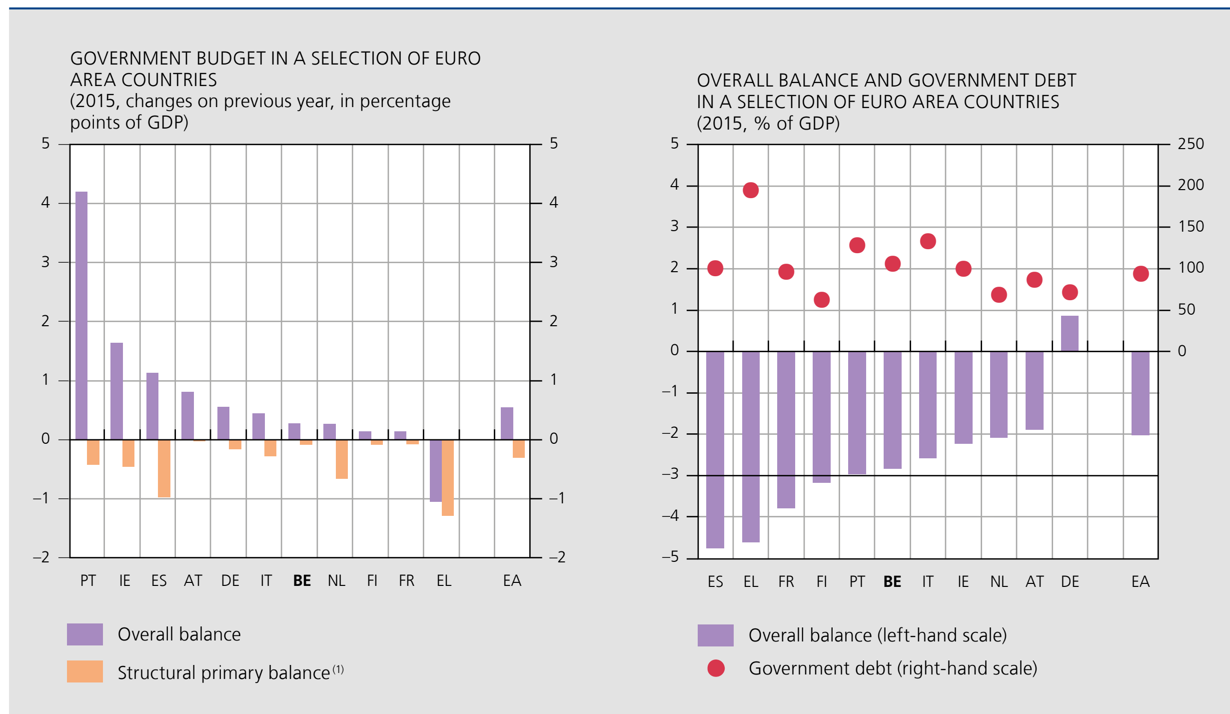
current research practice by using the Economic Policy Uncertainty Index (EPUI), compiled by Baker, Bloom and Davis (2013)[1] and based on news reports.

When real bank lending interest rates, corporate debt ratios, the credit constraint indicator and the political uncertainty index are added to the standard specifications, the model sees a major improvement in its ability to explain the situation, particularly in Spain and France. Uncertainty, credit restrictions, deleveraging and real interest rates are shown to have had a major impact on the investment dynamics in these countries. Other studies have produced comparable findings, including IMF (2015)[2]. In so far as these factors still hold back capital spending, there would seem to be a role for policy-makers here.

(1) Baker S., N. Bloom and S. Davies (2013), "Measuring economic policy uncertainty", Chicago Booth Research Paper, 13–02.
(2) Barkbu B., P. Berkmen, P. Lukyantsau, S. Saksonovs and H. Schoelermann (2015), "Investment in the Euro Area: Why Has It Been Weak?", IMF Working Paper 15/32.

balance has improved in most euro area countries. Such improvement reflected lower interest charges, the beneficial effects of the cyclical upturn – a very pronounced feature in Spain and Ireland, among others – and the impact of one-off and other temporary measures, such as in Portugal. However, nearly all euro area countries experienced a reduction in their structural primary balance – which excludes all of these factors – even if this was often minor. This reflects the fact that, after several years of restrictive fiscal policies, a number of euro area countries eased their fiscal policies to some extent. Considered for the euro area as a whole, fiscal policies in 2015 may be described as more or less neutral. Together with the pick-up in economic activity, the improvement in fiscal balances resulted in a slight fall in general government debt as a percentage of GDP in the euro area as a whole, from 94.5 % of GDP to 94 % of GDP – the first such decline, albeit a minor one, since the outbreak of the financial crisis. General government debt came down noticeably in a number of countries

CHART 18 FISCAL POLICIES NO LONGER RESTRICTIVE



Sources: EC, NBB.
(1) Overall balance excluding interest charges and adjusted for cyclical influences and one-off and other temporary factors.

such as Ireland, Germany and Portugal and remained the same or increased in others. Taken together, general government debt in the euro area is still very high, combining with private sector debts to structurally depress the growth capacity of the euro area.

In Greece, public finances charted a different course. Following an unmistakeable improvement in 2014, the country's government deficit widened again in 2015 ; the structural primary government surplus that it had accrued since 2011 declined in 2015 for the second year running. General government debt shot back up to around 195 % of GDP.

According to the EC's autumn projections, 2015 government deficits in Spain, Greece, France and Finland were still expected to exceed 3 % of GDP, while Portugal's was forecast to come in at exactly 3 %. With the one exception of Finland, all these countries were subject to excessive deficit procedures at the end of 2015, as were, in the euro area, Cyprus, Ireland and Slovenia. In July 2015, the EC investigated whether France had taken effective action to comply with the Council's recommendations under the excessive deficit procedure and decided that the procedure should continue to be held in abeyance.

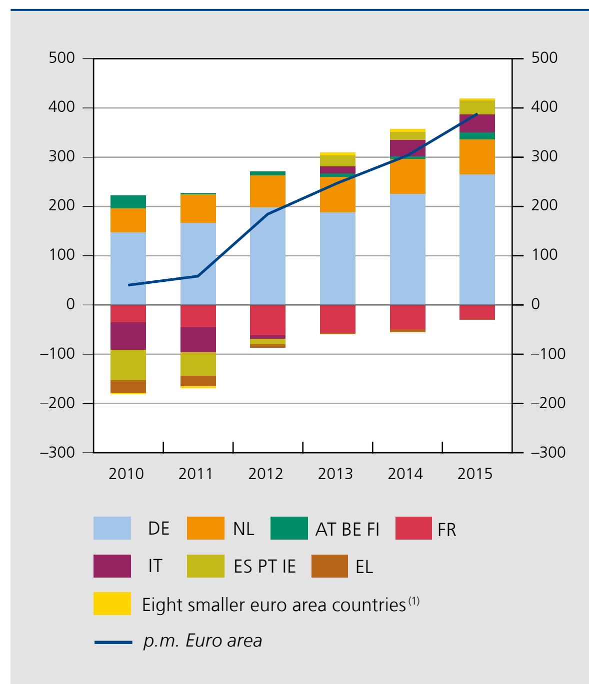
In accordance with the preventive arm of the Stability and Growth Pact, EU Member States are also required to meet a medium-term budgetary objective. This is a country-specific target value for each Member State, expressed in structural terms. The relevant chart in the chapter on public finances of this Report will demonstrate that several euro area countries still have significant consolidation efforts ahead of them before they achieve that objective. Meanwhile, Germany has exceeded its objective.

New governance and structural reforms in the euro area continued

The move towards better governance in the EU was continued in 2015, if sometimes haltingly. It had started in 2010 as a response to the challenges that emerged from the financial crisis. On the issue of public finances, the European Commission presented in January 2015 a Communication on making the best use of the flexibility within the existing rules of the Stability and Growth Pact to further growth-friendly fiscal policies. Its aim is to encourage effective implementation of structural reforms, to stimulate investment, specifically in the context of the new European Fund for Strategic Investments, and to take better account of the economic cycle in the individual Member States.

In addition to public finances, surveillance of the risks of macroeconomic imbalances was another arena in which the new governance continued, in keeping with the macroeconomic imbalance procedure. As it turns out, significant adjustments have been made in the euro area countries forced to deal with major macroeconomic imbalances after the crisis. They have sharply reduced the current acccount deficits that had often surged in the run-up to the crisis, with most of them even having reversed into surpluses. Ireland, for one, is looking at a current account surplus of nearly 6 % of GDP ; Spain's and Portugal's were smaller but still at 1.4 % and 0.5 % of GDP respectively. Although Greece still has a current account deficit of nearly 1 % of GDP, this is a major improvement on its 2008 nadir of 16 % of GDP. Meanwhile, a number of other countries, particularly Germany and the Netherlands, are consistently recording steep current account surpluses, of nearly 9 % and 11 % of GDP respectively. All of this has combined to take the euro area as a whole onto a path of increasing current account surpluses post-crisis, adding up to a total of nearly 4 % of GDP in 2015. Initially, the increase in the current account in financial crisis-torn countries was largely down to contracting domestic demand, but more recently exports have also become a contributor, which in turn is attributable to their improved labour cost competitiveness. Nevertheless, these same countries still tend to have steep

CHART 19 INCREASED CURRENT ACCOUNT SURPLUS IN THE EURO AREA
(annual data in € billion)



Source : EC.
(1) Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, Slovakia and Slovenia.

net external debt exposures, which continue to be just as much a source of fragility as the high debt ratios of their domestic sectors.

Incidentally, structural reforms have mostly been implemented more rapidly in the economies that bore the brunt of the financial crisis than they were in the rest of the euro area. Structural reforms are crucially important to a smoothly operating monetary union as these strengthen the adaptability of economies and can bolster their potential growth. Differences between the Member States and the complexities of their institutional environments require reforms to be tailored to the specific needs of individual countries, while not losing sight of potential complementarities between reforms in the various policy domains. In the past couple of years, Spain, Portugal and Ireland have implemented a range of reforms in several domains, including – to a lesser or greater degree – the labour and product markets, public finances and the government sector, and the financial sector. In addition to the countries that have implemented macroeconomic adjustment programmes or bank restructuring programmes, Italy also saw structural reforms gather momentum. To increase productivity and boost its business climate, the country has tabled an ambitious structural reform programme encompassing a range of domains such as its labour and product markets, its institutional framework and its tax system.

Completion of the institutional structure of Economic and Monetary Union

The absence of an agreement between Greece and its European creditors until mid-July 2015 once again fanned fears of a possible Greek exit from the euro area. Repeated doubts as to the irreversibility of euro area membership, which eventually also boil down to a debate about the integrity of the common currency, gave yet another – and impossible to ignore – signal that the construction of the Economic and Monetary Union, unique in its institutional structure, remains incomplete, despite major progress on governance and the banking union.

Observing that, institutionally, the euro area still does not function at its full potential, the five Presidents – of the European Commission, the European Council, the Eurogroup, the European Central Bank and the European Parliament – published their Five Presidents' Report in June 2015. This announced their plans to deepen EMU and complete it by 2025 at the latest. Their aim is to build on the rapid and unprecedented steps that have been taken since 2010 to ensure cohesion in the euro area and use these to create a sustainable basis for the future.

These are ambitious plans focusing on – rightfully – ambitious goals. Given the slow execution of earlier decisions in some domains, such as the banking union and the Capital Markets Union, on which the five Presidents are now tabling new proposals, it is clear that such proposals also need fleshing out and implementing. Their plans are to be put into operation in three stages, the first of which started on 1 July 2015 and is envisaged to be complete by 30 June 2017.

In this first stage, existing instruments and current Treaties should be used to encourage competitiveness and structural convergence, to achieve responsible fiscal policies at national level and at the level of the euro area, to complete financial union and to strengthen democratic accountability. The Five Presidents' Report envisages the completion of EMU in the second stage by launching more far-reaching actions to make the convergence process more binding. In the final stage, by 2025 at the latest, all steps should be fully in place.

The report mentions four domains that require progress. First, the euro area is to develop into a real economic union. In the first stage, this will involve setting up a euro area system of Competitiveness Authorities, a more rigorous implementation of the macroeconomic imbalance procedure, a greater emphasis on employment and social performance, and improved coordination of economic policies within a revamped European Semester. In the medium term, in the second stage, the convergence process should be made more binding through a set of commonly agreed standards defined in the EU legal framework, covering such areas as labour markets, competitiveness, business climate and public administration, including certain aspects of tax policy. Secondly, progress should be made towards financial union, enabling the financial system to diversify risk across countries. More concretely, banking union should be completed. The report envisages agreements on an adequate bridge financing mechanism and on a credible common backstop for the single resolution fund during the transition period to the final creation of this fund. In this context, the launch of a European Deposit Insurance Scheme should also come into its own ; concrete steps in this direction should be taken as early as the first stage and within the scope of the current legal framework. The Capital Markets Union should become a priority alongside the banking union. Third, the euro area should develop towards fiscal union. By enhancing the governance framework at the first stage, and more specifically by creating an advisory European Fiscal Board, the euro area should make responsible fiscal policies one of the cornerstones of Economic and Monetary Union. In the longer term,

in the second stage, as the culmination of a process of convergence and of further pooling of decision-making on national budgets, the euro area could develop a common macroeconomic stabilisation function and so become better equipped to handle shocks that cannot be managed at national level alone. Fourth and lastly, the euro area needs to take steps towards strengthening democratic accountability, legitimacy and institutional strengthening. As the euro area develops into a true Economic and Monetary Union, certain decisions will increasingly need to be taken collectively, while ensuring democratic accountability and legitimacy. A euro area treasury could in future be the place for such collective decision-making, which would however not mean that all aspects of budget revenue and spending will need to be centralised.

In October 2015, the European Commission approved a range of measures and released recommendations. This package includes a review of the approach to the European Semester, paying greater attention to employment and social aspects. It also aims to improve the tools for economic governance. The EC recommended setting up National Competitiveness Boards and has established an advisory European Fiscal Board. It is also proposing more unified euro area representation in international financial institutions, in particular the IMF. Its proposed set of measures also envisages steps towards completion of the banking union. To this end, the EC tabled a legislative proposal in November on the first steps towards a European Deposit Insurance Scheme. It has also confirmed its prioritisation of the Capital Markets Union in addition to the banking union.