

# PART I

EA and EU outlook



## MODEST GROWTH IN CHALLENGING TIMES

Differences still large across the euro area

*The euro area economy continues to grow modestly but remains burdened by legacies from the crises and high uncertainty. While real GDP has surpassed its pre-crisis level, the economy is still growing more slowly than it did before the crisis. Jobs are being created at a robust pace, but employment is lower and unemployment higher than a decade ago. Inflation has recently moved up, amid rather limited domestic price pressures. This suggests that there is still slack in the economy, providing scope for a further expansion of demand and activity.*

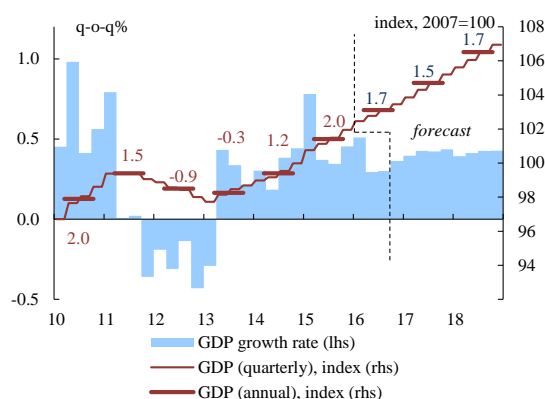
*Exceptionally favourable tailwinds originating from low commodity prices, euro depreciation, and very accommodative monetary policy are fading. Weak global growth and slow global trade have already hit the economy. So far, the euro area economy seems to have shrugged off the UK's referendum on EU membership, but 'Brexit' is an unfolding process where the main impact will depend on the outcome of exit negotiations which have yet to begin and which therefore cannot yet be pencilled into the central scenario of this forecast. What has already been observed is a sharp increase in uncertainty, which is expected to hamper economic dynamics primarily in the UK but also in the EU.*

*Amid new challenges, the euro area economy has completed the first three quarters of 2016 roughly as expected. Private consumption has remained a strong driver of growth as the improving labour market and low inflation pushed real disposable incomes. Investment has over the past year taken up the baton of growth as the fastest growing domestic demand component. The mainly domestically based expansion is fuelling the rise in employment. Headline inflation remains dominated by the energy component, while subdued wage growth and low core inflation hint at the persistence of slack in the labour market.*

*GDP growth over the forecast horizon is expected to remain fairly constant in the euro area at 1.7% in 2016, 1.5% in 2017, and 1.7% in 2018. Private consumption is set to continue benefiting from employment growth that helps offsetting the negative impact of rebounding inflation on the purchasing power of households. Many of the preconditions for stronger investment growth remain in place and construction investment is set to finally end a long period of decline, but elevated uncertainty is expected to exert a dampening impact. The weakness of global trade and the decline in exports to the UK, compounded by the depreciation of sterling, are limiting factors for export growth. Unemployment rates are expected to fall further and the unwinding of oil price effects is set to raise euro area headline inflation from 0.3% in 2016 to 1.4% in both 2017 and 2018. GDP is set to grow in all Member States, however, their position in terms of recovery and expansion remains quite different.*

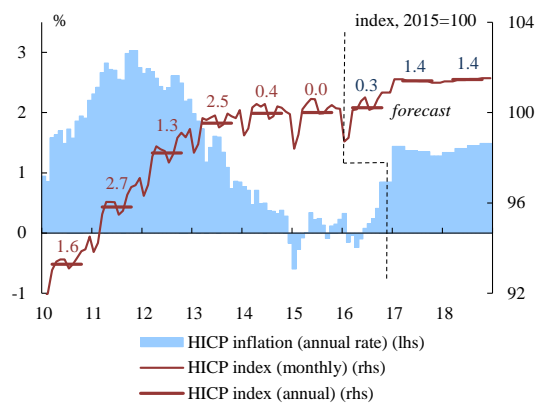
*Risks to the growth outlook have recently intensified, mainly in the wake of the UK leave vote, which could be seen as an indicator of a new 'backlash against globalisation' and trends towards protectionism, nationalism and isolationism in Europe and globally. Risks to the growth outlook are also associated with the economic rebalancing in China, the normalisation of monetary policy in the US, geopolitical conflicts, European crisis legacies (e.g. NPLs) and delayed structural reforms. Overall, risks remain predominantly on the downside. Risks to the inflation outlook remain broadly balanced.*

Graph 1.1: Real GDP, euro area



Figures next to horizontal bars are annual growth rates.

Graph 1.2: HICP, euro area



Figures next to horizontal bars are annual inflation rates.

## 1. PUTTING THE FORECAST INTO PERSPECTIVE: THE 'NEW BACKLASH AGAINST GLOBALISATION' AND THE EURO AREA OUTLOOK

Globalisation and in particular strong growth in the international trade of goods and services has been a key driver of economic growth over the past few decades. The recently observed increase in protectionism and, more generally, growing scepticism about further internationalisation of economic activity, often coined as the 'new backlash against globalisation' could put this growth driver at risk.<sup>(1)</sup> Against this background this section looks at recent evidence of this 'backlash', examines the role of increasing inequality in advanced economies among its determinants, and finally discusses the implications for this forecast.

Frequently, scepticism about globalisation is linked to an unequal sharing of its benefits. Anaemic growth in the aftermath of the economic and financial crisis ('Great Recession') is furthermore likely to have acted as a catalyst for globalisation discontent.<sup>(2)</sup>

This matters for the current forecast for two reasons. First, the new backlash against globalisation may further dampen already slow international trade growth. Second, the backlash has increased policy uncertainty that in turn is likely to dampen domestic demand.

### Discontent with globalisation has become more acute

Globalisation has been one of the main drivers of global growth. It has lifted economic activity across large parts of the world. Strong growth of foreign trade has been the most visible element of globalisation, but it has also impacted on the location of economic activity, jobs, incomes and many other elements of daily life. Accordingly, there has never been agreement as to whether

globalisation is welcome, and attacks against 'globalisation' have frequently been observed. The first wave of globalisation in the second half of the 19<sup>th</sup> century provoked a backlash well before two World Wars dislocated it. The 1990s saw the emergence of anti-globalisation movements and protests against international summits.<sup>(3)</sup>

In the past decade, the debate on globalisation has to some extent been overshadowed by the global economic and financial crisis and the sovereign debt crisis in the euro area. However, recent years have seen a renewed strengthening of protests. New regional trade deals (such as TTIP, TPP and CETA) are vibrantly contested, and new trade restrictions among the G20 are being imposed.<sup>(4)</sup> In parallel, the increased use of labour mobility options within the EU and large numbers of asylum seekers from outside the EU have added the issue of cross-border migration to the globalisation debate. For instance, immigration was one of the key factors in the UK debate on whether or not to stay in the EU.

Surveys of attitudes towards globalisation<sup>(5)</sup> have depicted support for trade in general, but less so in advanced economies than in developing and emerging markets. Many respondents were sceptical about the concrete benefits of trade such as job creation and lower prices (see Table I.1), and they voice concerns about inequality, consumer protection, environmental standards and perceptions of cultural erosion.

The economic profession has reacted to the swing in the public mood with increased scrutiny of the

<sup>(1)</sup> E.g. *The Economist*, 20 Sept. 2016; *The Financial Times* 4 Sept. 2016. Lagarde, C. (2016). 'Boosting Growth and Adjusting to Change'. Remarks at Northwestern University, September 28. Mann, C. and K. Ash (2016). 'Achieving and sharing the benefits of globalisation'. posted on September 22 by [oecdscope](http://oecdscope.org).

<sup>(2)</sup> E.g.: <http://bruegel.org/2016/05/the-rebellion-of-globalizations-losers/>. Roubini N. (2014). 'The Great Backlash'. *Project Syndicate*, 31 May 2014.

<sup>(3)</sup> O'Rourke, K. and J. Williamson (1999). 'Globalization and History, The Evolution of a nineteenth-century Atlantic Economy'. MIT Press. C.F. Bergsten: 'The Backlash Against Globalisation', speech given before the Trilateral Commission, Tokyo, Japan, May 9, 2000, Peterson Institute for International Economics. See also the introduction of J. Bhagwati (2004). 'In Defence of Globalization'. Oxford University Press, New York.

<sup>(4)</sup> WTO (2016). 'Report on G20 Trade Measures, mid-October 1015 to Mid-May 2016'. [https://www.wto.org/english/news\\_e/news16\\_e/trdev\\_21jun16\\_e.htm](https://www.wto.org/english/news_e/news16_e/trdev_21jun16_e.htm)

<sup>(5)</sup> Pew global survey Spring 2014 <http://www.pewglobal.org/2014/09/16/faith-and-skepticism-about-trade-foreign-investment/>; A. Kohut and R. Wike (2008). 'Assessing Globalization: Benefits and Drawbacks of Trade and Integration' <http://www.pewglobal.org/2008/06/24/assessing-globalization>. A Eurobarometer study in 2003 also showed that respondents had a positive view of globalisation in general, but a majority expected a negative impact on jobs. Taylor Nelson Sofres and EOS Gallup Europe (2003). 'Globalisation'. *Flash Eurobarometer* 151b.

benefits and side-effects of globalisation. As of the early and mid-1990s, the distributional consequences of integration, across and within countries, have come to the fore.<sup>(6)</sup> Economists have also had a closer look at globalisation's political and social consequences, finding the economic, political and social dimensions to be interdependent. If e.g. globalisation increases inequality substantially, economic and possibly political instability may ensue. It has been argued that deep international economic integration, national sovereignty and democracy form an impossible trinity.<sup>(7)</sup> According to this view, the pursuit of open markets while maintaining full sovereignty can clash with democratic principles. Put differently, among democratic states, economic integration can only be advanced by sharing some aspects of sovereignty, as is notably the case in the EU.

Table I.1:

## Attitudes towards trade and FDI

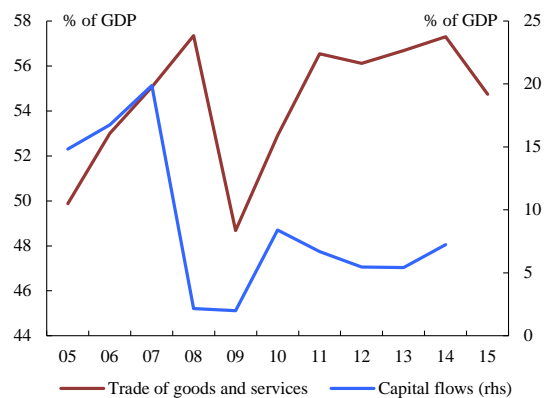
	Percentage of survey respondents agreeing that ...				
	Trade is good	Trade increases wages	Trade creates jobs	Trade lowers prices	Foreign companies buying companies is good
ES	91	28	56	22	43
DE	90	28	43	26	19
UK	88	34	50	24	39
EL	79	21	44	35	31
PL	78	38	51	26	40
FR	73	14	24	28	32
US	68	17	20	35	28
IT	59	7	13	22	23

Source: Pew Research Center, Spring 2014 Global Attitudes Survey

In this context, the trend increase in inequality within advanced economies in recent decades has received much attention,<sup>(8)</sup> even though globalisation has not been the only contributory factor. Inequality developments may, however, not

be able to explain why discontent with globalisation appears to have surged particularly in recent years.<sup>(9)</sup> By contrast, the 'Great Recession' and the sluggish recovery since may have exacerbated globalisation discontent.<sup>(10)</sup>

Graph I.3: World trade and cross-border capital flows



Source: IMF.

## Inequality contributed to globalisation discontent

The benefits of globalisation are not evenly distributed across or within countries. In what follows, the possible distributional impact of the different dimensions of globalisation is discussed focussing on developments in advanced economies. Income inequality has increased in advanced economies over the past decades (see Graph I.4), and empirical studies confirm that the various dimensions of globalisation have contributed to this increase, without necessarily being its main driver.

Turning first to *trade*, its primary economic impact stems from specialisation according to comparative advantage. When markets are competitive, removing trade barriers reduces the price of imported goods, which benefits consumers. To the extent that goods of daily consumption like food and clothing are traded, low-income citizens (whose budget share of such items is high) may, all else equal, be the prime beneficiaries of trade as consumers. Exposure to competition through international trade is also seen

<sup>(6)</sup> E.g. Krugman P. and A. Venables (1995). 'Globalization and the Inequality of Nations'. *Quarterly Journal of Economics* 110(4), pp. 857–80; Feenstra R. and G. Hanson: (1996). 'Globalization, Outsourcing, and Wage Inequality'. *American Economic Review* 86(2), pp. 240–45. Leamer, E. (1996). 'Wage Inequality from International Competition and Technological Change: Theory and Country Experience'. *American Economic Review* 86(2), 309–14.

<sup>(7)</sup> Osberg, L. (2013). 'Instability implications of increasing inequality: Evidence from North America'. *Economic Modelling* 35, pp. 918–30. Rodrik D. (2011). *The Globalization Paradox: Democracy and the Future of the World Economy*. New York and London.

<sup>(8)</sup> Keeley, B. (2015). 'Income Inequality: The Gap between Rich and Poor'. OECD Publishing, Paris.; See also chapter I.1 of the spring forecast and the sources quoted therein European Commission (2016). *European Economic Forecast Spring 2016, European Economy Institutional Papers* 25.

<sup>(9)</sup> Gros, D. (2016). 'Is Globalization Really Fuelling Populism?'. *Project Syndicate*, 6 May. <https://www.project-syndicate.org/commentary/understand-factors-behind-rising-populism-by-daniel-gros-2016-05?barrier=true>

<sup>(10)</sup> Cf. Roubini (2014) op. cit. Already Bergsten (2000) op. cit. had warned that a crisis would exacerbate the criticism of globalisation.

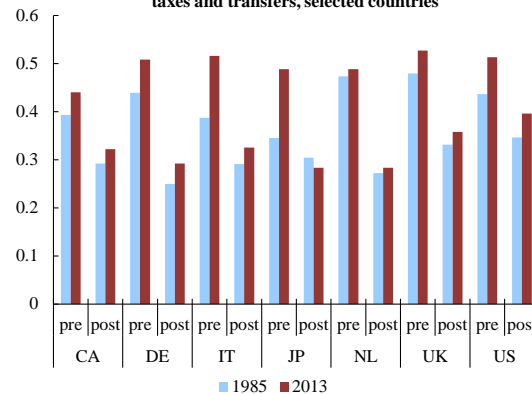
as a factor increasing productivity growth.<sup>(11)</sup> However, the standard Heckscher-Ohlin model of trade according to comparative endowments suggests that trade affects the wage shares of different groups of workers. In advanced economies that specialise on production requiring high skills, the wage share of low-skilled workers is reduced. The picture is more complex for intra-industry trade, but the literature also points to the possibility of the high-skilled benefitting disproportionately.<sup>(12)</sup> Other analyses have pointed to the possibility of wage and skill polarisation: the low-skilled perform jobs catering for local markets with little competition from trade, the high-skilled benefit from the specialisation induced by trade, while the medium-skilled who produce industrial goods subject to trade competition stand to lose (at least in relative terms).<sup>(13)</sup> In terms of political economy, this hypothesis of a ‘hollowing-out’ of the middle class may be highly relevant for the discontent with globalisation.

For the other main dimensions of globalisation, similar mechanisms apply. The literature on *capital account opening* points to institutional thresholds: countries with developed institutions stand to benefit more e.g. from risk diversification, and are less exposed to the potential drawbacks of free flows of finance, in particular in terms of sudden stops and financial crises.<sup>(14)</sup> Also in advanced economies, however, capital account liberalisation is associated with increases in income inequality.<sup>(15)</sup> *Outward FDI* (offshoring) puts pressure on wages of low- and medium-

skilled workers in advanced economies in a similar to trade. Finally, the economic impact of *labour immigration* on advanced host countries is generally found to be positive but small. The distributional impact largely depends on the differences between the skills set of the immigrants and the native population, complementarities and substitution effects.<sup>(16)</sup>

In light of this review of the likely distributional impact of globalisation, it is not surprising that market-income inequality in advanced economies has increased. However, as long as there are aggregate gains from trade, compensating those particular groups who lose is at least theoretically possible. Indeed, market incomes are generally modified by redistribution through the tax and transfer system. It is therefore important to look at developments in inequality after redistribution through taxes and benefits. In all G7 countries, incomes post taxes and transfers are much more equally distributed than market incomes (Graph I.4). They still display an increase in inequality in most countries, but it is generally only a fraction of the increase in market income inequality.

Graph I.4: Gini coefficients on income before and after taxes and transfers, selected countries



Source: OECD, own calculations

But globalisation has not been the only driver of the observed increase in income inequality. Technological change works in the same direction if it is ‘skills-biased’, i.e. if a new technology

<sup>(11)</sup> Ahn, J., E. Dabla-Norris, R. Duval, B. Hu and L. Njie (2016). Reassessing the Productivity Gains from Trade Liberalization, *IMF Working Paper* 16/77.

<sup>(12)</sup> E.g. Matsuyama, K. (2007). ‘Beyond Icebergs: Towards a Theory of Biased Globalization’. *Review of Economic Studies* 74(1), pp. 237–53 makes the point that trade may lift the wages of those whose skills are needed to organise it.

<sup>(13)</sup> See e.g. Blanchard, E. and G. Willmann (2016). ‘Trade, Education and the shrinking Middle Class’. *Journal of International Economics* 99, pp. 263–78. D. Autor et al., 2013 look at the geographical dimension of import competition. Autor, D. H., D. Dorn and G. H. Hanson (2013). ‘The China Syndrome: Local Labor Market Effects of Import Competition in the United States’. *American Economic Review* 103(6), pp. 2121–68. See also Nigai, S (2016). ‘On measuring the welfare gains from trade under consumer heterogeneity’. *Economic Journal* 126(593), pp. 1193–237, and Fajgelbaum P D and A K Khandelwal (2016). ‘Measuring the unequal gains from trade’. *Quarterly Journal of Economics* 131(3), pp. 1113–80.

<sup>(14)</sup> Kose, A. M., E. S. Prasad and A. D. Taylor (2011). ‘Thresholds in the process of international financial integration’. *Journal of International Money and Finance* 30(1), pp. 147–79.

<sup>(15)</sup> Furceri D. and P. Lungani (2015). ‘Capital Account Liberalization and Inequality’. *IMF Working Paper* 15/243.

<sup>(16)</sup> Kerr S. P. and W. R. Kerr (2015). ‘Economic Impacts of Immigration: A Survey’. *Finnish Economic Papers*, Finnish Economic Association, 24(1), pp. 1–32; Blau, F. and L. Kahn (2015). ‘Immigration and the Distribution of Incomes’. *Handbook of the Economics of International Migration*. Amsterdam: Elsevier. Chiswick, B. and P. Miller, pp. 793–843; European Commission (2016). ‘An Economic Take on the Refugee Crisis - A Macroeconomic Assessment for the EU’. *European Economy Institutional Paper* 33.

complements the tasks of high-skilled workers (as information technology may do) and/or substitutes the tasks of low-skilled workers (e.g. though the automation of formerly manual production processes). Skills-biased technological change thus reduces the relative wages of the low-skilled. Empirical analyses point to roughly similar contributions of skills-biased technological change and globalisation to the observed increase in income inequality.<sup>(17)</sup> A 2007 report by the European Commission (2007) also found that the negative impact of openness on the labour share was concentrated on medium-skilled workers, while the low- and the high-skilled were broadly unaffected.

### The crisis as a catalyst of discontent with globalisation

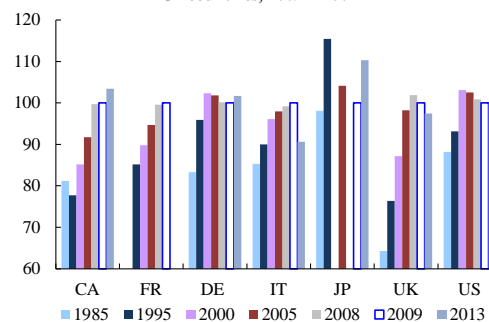
Long-standing and relatively slow changes in the distribution of incomes are not sufficient to explain why the criticism of globalisation has become much more acute in recent years. One plausible explanation could be that the stagnation of real disposable median incomes<sup>(18)</sup> during and after the economic and financial crisis has acted as a catalyst by increasing the income concerns of larger swathes of the population. Moreover, ‘income concerns’ in a large sense may stem not only from realised absolute drops in real disposable incomes, but also from (the perception of) loss in relative income or the risk of such losses.

Real disposable incomes of the median household in advanced economies have increased in recent decades, though not steadily (see Graph I.5). It is noticeable that the median real disposable income has stagnated or fallen in a number of advanced economies in recent years (in Japan already from the mid-1990s). The global economic and financial crisis was not a direct consequence of ‘globalisation’. Nonetheless, by affecting the real income of large parts of the population it may have reinforced the concern that a trend increase in real incomes cannot be taken for granted and thereby acted as catalyst for the observed backlash against globalisation.

<sup>(17)</sup> International Monetary Fund (2007). ‘Globalization and Inequality’. *World Economic Outlook*, chapter 4, Washington D.C., October. European Commission (2007). ‘The labour income share in the European Union’. *Employment in Europe*, chapter 5, Brussels.

<sup>(18)</sup> Other relevant indicators include poverty and deprivation indices. The median income is of particular interest because of its link to the median voter and thus political economy considerations.

Graph I.5: Median household real disposable income  
G7 countries, 2009 = 100



Source: OECD, own calculations

Notes: observations for the following years instead of the indicated: 1984 (IT, US); 1994 (UK); 2004 (DE); 2006 (JP); 2012 (JP, US)

### Consumption externalities, inequality perceptions and loss aversion

Income inequality and the risk of falling real incomes may affect consumers’ well-being and thus their attitudes towards the causes of such income developments more strongly than measured income data suggest. First, social consumption norms (a pattern where a household’s utility depends positively on its own consumption but negatively on the consumption of others, also dubbed ‘keeping up with the Joneses’) have been shown to be a powerful motivator for consumers.<sup>(19)</sup> A relative decrease in income is therefore likely to reduce households’ utility even if the absolute real income remains stable. Second, consumers’ perceptions of relative income may be biased. If consumers over-estimate prevailing income inequality,<sup>(20)</sup> misgivings about the causes of the presumed inequality, including about globalisation, may be amplified. The third mechanism is related to loss aversion. Economic actors have been found to value the risk of losses higher than an equal chance of gains.<sup>(21)</sup> By highlighting the risk of income losses, the experience of stagnating real incomes and the sluggish recovery in the aftermath of the crisis

<sup>(19)</sup> Veblen T. (1924). ‘The Theory of the Leisure Class: An Economic Study of Institutions’. George, Allen and Unwin, London; Clark, A., P. Frijters, and M. A. Shields (2008). ‘Relative income, happiness, and utility: An explanation for the Easterlin paradox and other puzzles’. *Journal of Economic Literature* 46(1), pp. 95–144.

<sup>(20)</sup> Kuhn, A. (2015). ‘The Individual Perception of Wage Inequality: A Measurement Framework and Some Empirical Evidence’. *IZA Discussion Paper* 9579.

<sup>(21)</sup> Kahneman, D. and A. Tversky (1979). ‘Prospect Theory: An Analysis of Decision under Risk’. *Econometrica* 47(2), pp. 263–92. Boyce, C.J., A.M. Wood, J. Banks, A. E. Clark and G. D. A. Brown (2013). ‘Money, Well-Being, and Loss Aversion: Does an Income Loss Have a Greater Effect on Well-Being Than an Equivalent Income Gain?’. *Psychological Science* 24(12), pp. 2557–62.

might thus have had a larger impact on households' attitudes than actual income developments would indicate.

### Considering the 'backlash' in the forecast: the risk of protectionism and political uncertainty

The above discussion points to two mechanisms that need to be considered in the context of the present forecast: the recent trend towards increasing protectionism<sup>(22)</sup> and increased uncertainty related to the possible political consequences of the backlash, which in turn could have major economic implications.

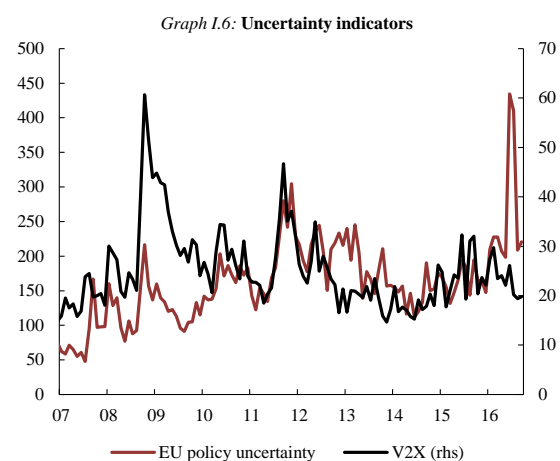
Rising inequality has been discussed here as a likely determinant of discontent with globalisation. The impact of inequality on the near-term outlook was discussed in the spring 2016 forecast. The defence of globalisation by economists often abstracts from how the aggregate gains are distributed. Inequality stemming from globalisation creates the challenge of designing policies for a fairer sharing of the fruits of globalisation in a way that would make globalisation sustainable while preserving its aggregate benefits.<sup>(23)</sup>

Increasing *protectionism* would reduce GDP growth by diminishing the benefits of globalisation discussed above. The downward revision to world trade growth in this forecast is partly driven by this. The main drivers of the trade slowdown so far are however cyclical effects and shifts in the structure of trade. A more sizeable impact of protectionist measures could nonetheless occur in the medium term beyond the forecast horizon.

The most immediate growth impact from the backlash against globalisation stems from heightened *political uncertainty*. For instance, a major concern in the UK referendum debate was immigration (see Box I.5 on how the outcome of the referendum is reflected in this forecast). Discontent with globalisation could also play a role at a number of electoral milestones in the

coming quarters. Moreover, the backlash may feed populism and reduce the chances of economic reforms.

The literature identifies at least three channels through which uncertainty affects GDP growth.<sup>(24)</sup> First, firms postpone investment and hiring decisions that are costly to reverse. The downward revisions to private investment, in particular equipment investment, in this forecast partly reflect this increased uncertainty (in addition to lower expectations for GDP growth and sales). Second, households may postpone the purchase of durable consumer goods and increase precautionary savings. Third, higher asset risk premia increase the cost of financing. This is taken up in the forecast through technical assumptions (see Box I.6).



<sup>(24)</sup> Overview in Baker, S. R., Bloom, N. and S. Davis (2016). 'Measuring economic policy uncertainty'. *Quarterly Journal of Economics* 131(4), pp. 1593–1636. Balta, N., I. Valdés Fernández and E. Ruscher (2013). 'Assessing the impact of uncertainty on consumption and investment'. *Quarterly Report on the Euro Area* 12(2), 7–16.

<sup>(22)</sup> International Monetary Fund (2016). 'Global Trade: What's behind the Slowdown?'. *World Economic Outlook* October, chapter 2. European Commission (2016). 'Report from the Commission to the Council and the European Parliament on Trade and Investment Barriers and Protectionist Trends 1 July 2014 - 31 December 2015'. COM(2016) 406 final, Brussels.

<sup>(23)</sup> cf. Rodrik, D.: 'There is no need to fret about deglobalisation, Politicians should focus on restoring the domestic social contract'. *Financial Times* of 5 October 2016.

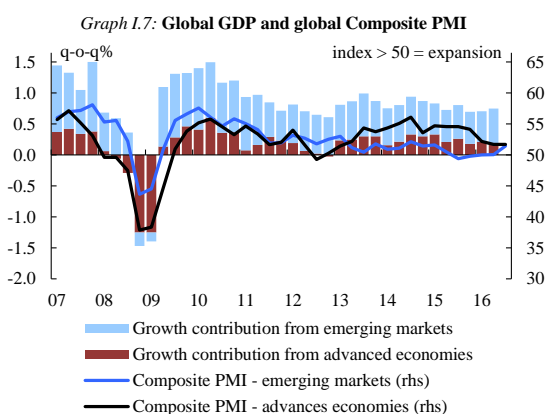


## 2. EXTERNAL ENVIRONMENT

The outlook for the external environment remains moderate and subject to heightened uncertainty and risks. Global GDP growth has slowed further and is projected to fall to its slowest pace since 2009, followed by a pick-up over the forecast horizon. This pick-up reflects the bottoming out of the downturn in many emerging market economies, but overall economic growth there is expected to remain below past trends. Growth in advanced economies outside the EU is expected to stabilise just below 2%, following the soft patch in the first half of this year. In all regions, the outlook comprises considerable differences between countries, linked to factors such as commodity-price developments, geopolitical tensions, and aggravated domestic problems.

### The momentum of the global economy and trade has been weak so far in 2016...

Recent data confirm the weak momentum of the global economy in the first half of 2016, relative to 2015, with forward looking indicators pointing to possible firming in the second half of the year. Global GDP growth slowed to 0.7% (q-o-q) in the first and second quarter, as emerging markets' growth remained stable at around 1% (q-o-q) (unchanged from 2015), and advanced economies slowed to 0.4% (q-o-q), down from 0.5% on average in 2015.



Source: OECD, IMF, EUROSTAT, and national statistical institutes for GDP, JPMorgan/Markit for PMI.

Forward looking indicators such as the Global Purchasing Managers' Indices (PMIs) suggest some pick-up in the pace of expansion in the remainder of the year, largely driven by improvements in emerging markets (Graph I.7). Composite PMIs across many emerging market

countries recovered over the summer with the emerging markets average rising from around 50 in spring to 51.5 in the third quarter. PMIs for the group of advanced economies have stabilised just below 52 since early 2016, as a gradual pick-up in the US offsets mild deterioration in Japan and in the euro area (until September). Flash PMIs hint at improvements in October, in particular in the US where manufacturing and services PMIs rose strongly.

### ...but the outlook suggests a gradual pick-up over the forecast horizon...

Global growth (excluding the EU) is projected to reach 3.2% in 2016, marginally less than in 2015 and the lowest rate since 2009. Over the forecast horizon, global growth is set to pick up modestly to 3.7% in 2017 and to 3.8% 2018 as the downturn in many emerging markets is bottoming out.

The rebound in commodity prices eased some of the distress across commodity exporters, improving the outlook for Latin America and the CIS and making them a key contributor to the expected acceleration in economic activity next year. Supported by the increase in commodity prices, improvement in financing conditions and a return to positive growth in the most distressed economies, Brazil and Russia, growth in emerging markets is forecast to strengthen over the forecast horizon. Support is expected to come from the recent shift in sentiment, recovering capital inflows, as well as the slower-than-expected normalisation of US interest rates. However, for other regions (e.g. the Middle East and Northern Africa and Sub-Saharan Africa) this is being offset by a rise in geopolitical tensions and aggravated domestic problems. The gradual acceleration in emerging market economies, accompanied by a stabilisation of expansion in advanced economies just under 2%, will underpin the expected firming of global growth (Graph I.8).

World trade is set to strengthen gradually over the forecast horizon after an exceptionally weak performance in 2016 when it was pulled down by low demand in advanced economies. Growth in non-EU trade is expected to reach 1.1% in 2016, little changed from 2015, and to recover to 2.9% and 3.2% in 2017 and 2018 respectively. This reflects the assumption of a gradual pick-up in global import elasticity underpinned by a cyclical rebound in advanced economies, fading of temporary factors that weighed on trade in 2015

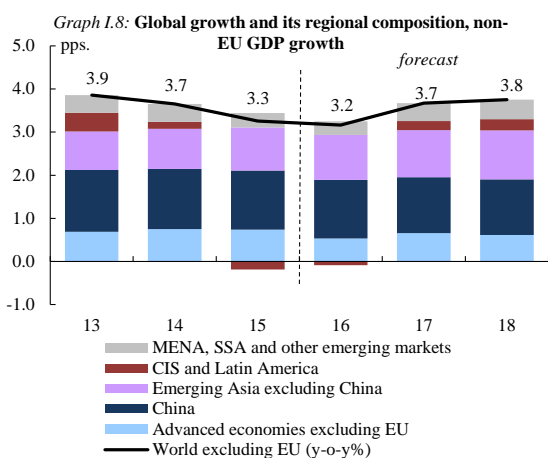
Table I.2:

**International environment**

	(a)				Autumn 2016 forecast			Spring 2016 forecast	
	2013	2014	2015	2016	2017	2018	2016	2017	
	(a)								
<b>Real GDP growth</b>									
USA	15.8	1.7	2.4	2.6	1.6	2.1	1.9	2.3	2.2
Japan	4.3	1.4	0.0	0.5	0.7	0.8	0.4	0.8	0.4
Emerging and developing Asia	31.5	6.8	6.6	6.5	6.4	6.2	6.1	5.8	5.7
- China	17.1	7.8	7.3	6.9	6.6	6.2	6.0	6.5	6.2
- India	7.0	6.3	7.0	7.2	7.4	7.4	7.5	7.4	7.4
Latin America	8.3	2.9	1.0	-0.1	-0.6	1.7	2.0	-0.4	1.4
- Brazil	2.8	3.0	0.1	-3.8	-3.1	0.9	1.5	-3.7	0.3
MENA	6.8	2.1	2.5	2.2	2.6	3.3	3.4	2.9	3.4
CIS	4.6	2.1	0.9	-2.9	-0.6	0.9	1.3	-1.1	1.1
- Russia	3.3	1.3	0.6	-3.7	-1.0	0.6	0.8	-1.9	0.5
Sub-Saharan Africa	3.2	5.1	4.9	3.5	2.1	3.2	3.9	3.3	3.9
Candidate Countries	1.6	4.0	2.7	3.8	2.7	3.0	3.3	3.4	3.6
World (incl. EU)	100.0	3.2	3.3	3.1	3.0	3.4	3.5	3.1	3.4
<b>World merchandise trade volumes</b>									
World trade		3.4	3.8	2.8	1.9	3.2	3.6	2.7	3.8
Extra EU export market growth		4.2	3.3	1.3	1.3	2.8	3.1	1.9	3.1

(a) Relative weights in %, based on GDP (at constant prices and PPS) in 2015.

and 2016, combined with a modest recovery in import demand from China.



### ...benefitting from the global policy mix.

Given the moderate outlook for the global economy, the G20 has committed to use all economic policy tools earlier this year – monetary, fiscal and structural – individually and collectively to address the legacies of the economic and financial crisis and strengthen growth, investment and financial stability.

In particular, monetary policies continue to support economic activity and ensure price stability, including in some emerging markets (e.g. India) where easing inflationary pressures provide space

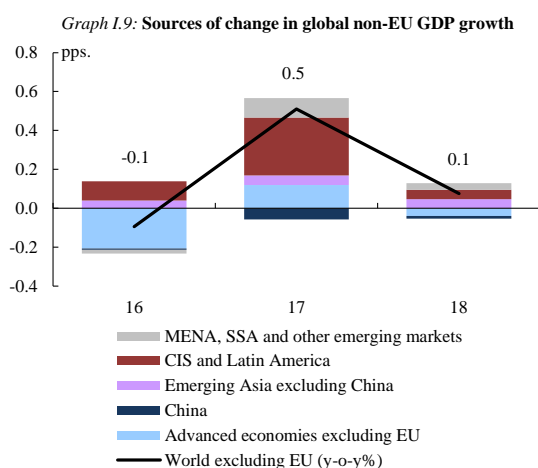
to lower interest rates. In the United States, despite the initiating of the tightening cycle in December 2015, normalisation has been very slow and monetary policy is set to remain very supportive in the near term.

Fiscal strategies are increasingly being used to support growth and job creation, while enhancing resilience and ensuring that debt ratios are on a sustainable path. In Canada, the government used the existing fiscal space to implement targeted tax reductions and increase spending, including for infrastructure projects. Fiscal policies in Canada and elsewhere also increasingly aim at the quality and composition of public finances to support economic growth, productivity and inclusiveness, which is particularly important for countries with fiscal constraints.

To increase the effectiveness of macroeconomic policies and raise potential output, ambitious structural reforms are at the centre of the policy mix. They can strengthen the impact of the pursued macroeconomic policies, but also strengthen confidence, thereby supporting demand and growth in the short-term. The focus now is to foster implementation, which varies across reform areas and countries.

### While advanced economies are going through a soft patch in 2016...

Growth turned out weaker than expected in many advanced economies outside the EU in the first half of this year. This soft patch was partly due to transitory factors, such as the wildfires dragging down growth in the second quarter in Canada, and did not call for any major reassessment of the underlying growth momentum. However, as a result, the expansion of non-EU advanced economies this year is now projected to slow to 1.6%, the slowest pace since 2009, before rebounding to 2.0% in 2017 and slowing again to 1.9% in 2018, somewhat below the 2010-2015 average. This limits the contribution of advanced economies to global GDP growth (Graph I.9).



In the US, real GDP disappointed in the first and second quarter (rising by a mere 0.2% and 0.4% q-o-q, respectively), as a drawn-out inventory correction coincided with prolonged weakness in business investment. The latter reflects ongoing retrenchment in the energy sector and softer activity in manufacturing, which has borne the brunt of the stronger dollar and weak external demand. Following GDP growth of 0.7% (q-o-q) in the third quarter (advance estimate), overall, activity is expected to rebound in the second half of 2016 and to continue at a relatively robust pace in 2017, as the drag from destocking, past dollar appreciation and low energy prices gradually fades. Further ahead, expansion is set to gradually moderate, in line with the maturing economic cycle even as monetary and fiscal policies remain supportive.

In Japan, the outlook for 2016 remains broadly unchanged from the spring with real GDP

expected to grow by 0.7%, underpinned by recovery in domestic demand and supportive macroeconomic policies. The postponed fiscal consolidation, additional fiscal stimulus and continued monetary accommodation are expected to boost growth temporarily in 2017 (to 0.8%), before some of these effects unwind and growth slows again in 2018 (to 0.4%).

### ...emerging market economies are bottoming out with the outlook remaining subdued and uneven.

Economic activity in emerging markets as a whole remains subdued. After several years on a downward trend, GDP growth appears to have bottomed out in 2015 (at 3.8%, the weakest since 2009) and is set for a mild recovery in 2016 (to 4.0%) and some further strengthening in 2017 and 2018 (to 4.6% and 4.7%, respectively). This recovery, which drives the pick-up in the global economy over the forecast horizon, depends to a large extent on the assumption of a continued gradual increase in commodity prices, a 'soft landing' and orderly rebalancing in China, and progressive improvements in economies currently affected by economic, political and geopolitical stress.

Growth prospects for emerging markets have again become more differentiated. Higher commodity prices have lifted the outlook for most commodity exporters, including Russia and Brazil, where a certain normalisation of the political situation is also contributing to improvements. Moreover, many countries have recently benefitted from the positive shift in sentiment, recovery in capital inflows, rising equity prices, and stronger exchange rates, linked to prospects of slower-than-previously assumed normalisation of monetary policy in the United States. At the same time, for some regions, notably the Middle East and Northern Africa and Sub-Saharan Africa, the outlook is still dragged down by deteriorating domestic and geopolitical problems, including armed conflicts, major fiscal consolidation to address the sharp fall in oil revenues, and the impact of regional uncertainty weighing on investment and tourism.

These recent developments come on top of some long-standing forces shaping the outlook for emerging markets, including concerns over spillovers from the slowdown and rebalancing in China. In China, growth is expected to slow to

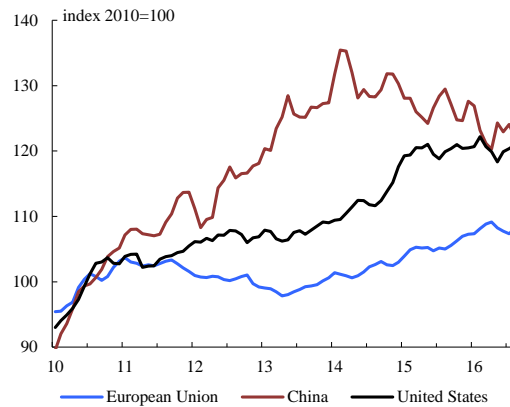
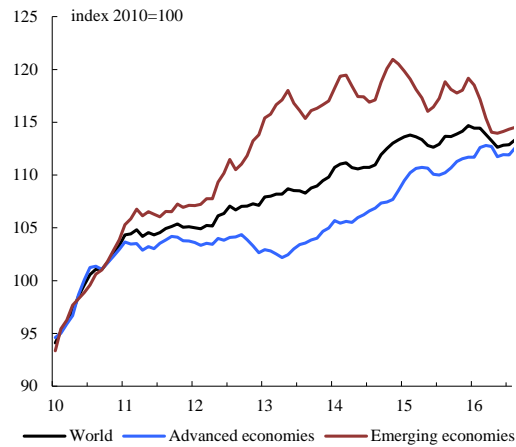
around 6.6% this year, 6.2% in 2017, and 6.0% in 2018. This profile is underpinned by the assumption that policy will continue to offer all the necessary support in 2017 and 2018 to keep growth in the order of 6%, and that current financial fragilities will remain under control. However, this outlook remains subject to significant and predominantly negative risks. Current stimulus measures to maintain short-term growth are not only adding to China's high corporate leverage and thereby increasing financial vulnerabilities, but are also increasingly aimed at countering a renewed slowdown in private investment. These developments could signal increasingly diminishing returns to policy stimulus which would heighten the risk of an abrupt slowdown in the medium term.

#### Global trade had a weak start into 2016...

Following the sharp deceleration which began in late 2014, global trade flows of goods have shown no sign of strengthening, raising concerns about the outlook for global trade and, more generally, the future of globalisation (see Section I.1). In the first eight months of this year, global import volumes were flat compared to the same period in 2015. Emerging markets remained a major drag on world trade with goods import volumes falling 2.6% in the first eight months as compared to the same period last year (+1.8% for advanced economies in the same period), largely reflecting the negative spillovers from the slowdown and rebalancing in China,<sup>(25)</sup> the demand squeeze in commodity exporters and the economic downturn in other emerging market regions. Trade in advanced economies, remarkably resilient throughout 2015, also began to exhibit signs of weakness in early 2016, with import volumes contracting in the US, Japan and EU in the first months of the year and followed only by a modest recovery since June (see Graph I.10).

<sup>(25)</sup> See e.g. Hong, G.H. et al. (2016). 'China and Asia in global trade slowdown'. *IMF Working Paper* 16/105.

Graph I.10: Merchandise import volume (3-month moving average)



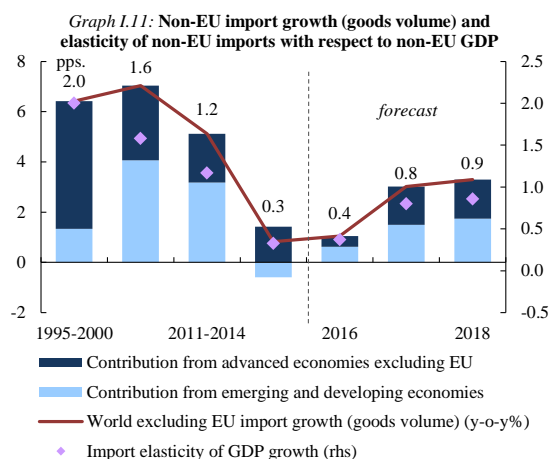
Source: CPB

While the slowdown in global trade since 2014 has been exceptionally severe, trade has been slowing for over a decade now,<sup>(26)</sup> with signs of gradual weakening visible even before the crisis (Graph I.11). There is increasing evidence that this slowdown has both cyclical and structural components.<sup>(27)</sup> Cyclical factors were weighing on trade flows particularly during the crisis and early recovery, as demand weakened sharply in highly-trading advanced economies, dragged down by investment, the most trade-intensive GDP component. The recent weakness, however, is largely due to emerging markets and China in particular, highlighting the relevance of other factors at play, including structural changes in the

<sup>(26)</sup> For an overview see also DG ECFIN (2015). 'Understanding the weakness in global trade'. European Economic Forecast – Winter, *European Economy* 1, Box I.1.

<sup>(27)</sup> See IMF (2016) 'Global trade: What's behind the slowdown'. *World Economic Outlook*, October, chapter 2; Haugh, D. et al. (2016). 'Cardiac arrest or dizzy spell: why is world trade so weak and what can policy do about it?'. OECD Policy Paper 18; and IRS Trade Task Force (2016). 'Understanding the weakness in global trade – What is the new normal?'. *ECB Occasional Paper* 178.

global economy. Spillovers from the rebalancing in China intensified in recent years, weighing heavily on the country's demand for imports of goods, particularly commodities, intermediate and capital goods. Other relevant structural forces at play are the ongoing retrenchment in global value chains with negative implications for gross trade flows, as well as a broad-based rise in protectionism.



### ...lowering the import elasticity of growth further...

Since late 2014 these forces coincided with the unwinding of the commodity price boom and the aggravation of political and geopolitical problems in many emerging market economies (including Brazil and Russia), which added significantly to pressures on global import demand. As a result, global trade decelerated sharply, while the elasticity of imports with respect to GDP fell to new lows (0.3 in 2015 from 1.2 over 2011-14 and 2.0 over 1995-2000). The trade slowdown impacts negatively on productivity growth through less specialisation, lowered technology diffusion, and weaker competition.<sup>(28)</sup>

In 2016, two opposing factors are expected to keep the elasticity low. On the one hand, imports in some emerging markets are set to recover, particularly in the CIS and Latin America. On the other hand, imports in advanced economies outside the EU are set to decelerate sharply, lowering their contribution to global non-EU import growth from 1.4 pps. in 2015 to 0.5 pps. in 2016, the lowest level since 2009. The main reason is the

<sup>(28)</sup> For an analysis of the impact of the trade slowdown see Constantinescu, C., Mattoo, A. and M. Ruta (2016). 'Does the global trade slowdown matter?'. *Journal of Policy Modeling* 38, pp. 711-22.

exceptional weakness in the US, where the softness in business investment due to a sharp contraction in the energy sector and the broad-based weakness in manufacturing where exports suffered from the strong dollar and weak external demand. This weighed heavily on import demand, in particular for durable industrial supplies and capital goods. A contraction in import volumes in 2016 is expected in Canada, Japan, Hong Kong and Singapore, due to a combination of country-specific and global factors, including spillovers from China and low commodity prices.

### ...before rebounding somewhat in 2017, helping to firm global trade.

The trade outlook depends on the assumption of a rise in the elasticity of imports from their current lows (see Graph I.11). Although the levels assumed over the forecast horizon remain well below past averages, they are consistent with a certain rebound in global trade flows following two years of exceptional weakness. Trade is expected to bottom out in 2016 with non-EU import growth projected to rebound from 1.0% this year to 3.0% in 2017 and 3.3% in 2018.

The assumption about trade elasticity is underpinned by the projected cyclical rebound in advanced economies, including some modest pick-up in investment; combined with the gradual fading of temporary factors that weighed on trade in 2015 and 2016, such as the impact of a severe terms-of-trade shock on many emerging markets economies, due to the fall of commodity prices, and the contraction in commodity-related investment across the world. Additional support to global imports is likely to come from China, where trade is expected to firm modestly over the forecast horizon, as demand for goods imports normalises gradually amid the continued buoyancy in services imports consistent with the ongoing rebalancing.

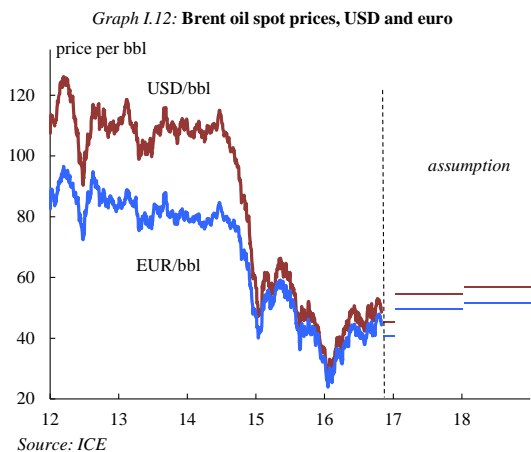
### Commodity prices recover somewhat but remain at low levels

After several years of declines, commodity prices seem to be bottoming out and recovering somewhat in 2016.

The most recent oil market developments suggest that supply overhangs remain. In the third quarter of 2016, supply exceeded demand, driven by record production in OPEC and new additions from Russia. The re-balancing of the oil market

remained hampered by high inventories and decelerating oil demand growth in developed and emerging economies, including the US and China. Nevertheless, in October, Brent spot prices passed the mark of 50 USD/bbl, reflecting the agreement OPEC reached in September on limiting its production. The details of this agreement, including individual country allocations and timelines, are yet to be finalised at an OPEC meeting in November.

Over the forecast horizon the International Energy Agency projects a slowdown in global oil demand growth due to some demand saturation in advanced countries, subsidy cuts, a very gradual recovery in emerging market economies, and the rebalancing in China. The supply overhang is set to persist unless producers such as OPEC members and Russia reach an agreement to cut production. However, the potential for oil prices to rise is also limited by shale supply which could respond flexibly to price hikes. These factors are captured in the market-based oil price assumptions of 45.2 USD/bbl in 2016 and 54.7 USD/bbl in 2017, which are 10% and 19% higher than in spring. Futures suggest oil prices rising to USD 56.8/bbl in 2018 (see Graph I.12).



The prices of other raw materials are adjusting at different speeds. For many industrial commodities, the rebalancing process is expected to advance gradually in 2017 and 2018, reflecting subdued demand in China and a sluggish supply response to the low price environment as producers cut costs and try to maintain output to preserve market share. Following the damage of adverse weather conditions to crops in South America, food prices increased over the summer. Further price gains are likely to be moderate due to downward pressures from subdued demand, record-high inventories

following several bumper harvests in recent years; and sufficient production this season for a number of crops in the Northern hemisphere (US, EU, Russia).

#### Balance of risks to the outlook for the external environment deteriorates

Risks to the global outlook have increased in the recent period and remain firmly tilted to the downside. In the current situation they largely relate to heightened political and geopolitical uncertainty in both advanced and emerging market economies. The global impact of the outcome of the UK referendum together with possible policy shifts following upcoming elections outside the EU, have increased political uncertainty. Furthermore, risks of aggravating geopolitical tensions in many emerging market regions (e.g. Middle East) remain very high.

Other significant risks include possible disruptions associated with US monetary policy normalisation, including a renewed bout of financial market gyrations, deterioration in market sentiment and tightening of financing conditions for emerging markets. In addition, persisting domestic imbalances, delays in implementation of structural reforms as well as political tensions in a number of emerging market economies accentuate the risk of a prolonged period of weak growth.

Risks of a disorderly adjustment in China are rising, as measures to sustain short-term growth continue to add to financial fragilities. Materialisation of these risks, or even a reassessment by financial markets of the sustainability of existing trends, could reignite concerns over a more protracted slump in emerging market economies, which could combine in some cases with domestic balance sheet problems.

There is also a risk that the weakness in the United States could last longer than expected. This could jeopardise the rebound in US import demand and weigh on the near term growth outlook for a number of emerging and advanced economies.

### 3. FINANCIAL MARKETS

Financial markets endured a period of additional volatility after the results of the UK referendum in June had taken them mostly by surprise. Following an initial drop, financial asset prices and investors' risk attitude generally recovered. After a bout of heightened volatility immediately after the referendum, markets quietened over summer; but the sensitivity to economic and political news from the UK appears to have increased. The resilience that financial markets have shown over recent months can be associated with very accommodative monetary policy.

#### Continued very accommodative monetary policies in advanced economies...

Monetary policies of major central banks in advanced economies have remained accommodative since spring.

While the ECB has kept its very accommodative monetary policy unchanged since March 2016 (see also Section I.9). Market expectations of additional monetary stimulus via cuts in euro area policy rates have diminished in recent months amid concerns that they could be counterproductive and lead to a tightening of credit conditions instead of supporting bank lending. Nevertheless, some form of more unconventional monetary easing via an extension of the ECB's Asset Purchase Programme (APP), continues to be expected by some market participants, as the ECB's Governing Council gave a 'full mandate' to the relevant ECB committees to evaluate options that ensure a smooth implementation of the current programme and announced that it would re-evaluate their results in the light of the December 2016 Eurosystem Staff macroeconomic projections at its December meeting.

Following the fallout of the UK's referendum on EU membership, the Bank of England announced a package of monetary easing measures in August 2016. The package consisted of a cut in the policy rate (by 25 bps), which was lowered to 0.25% for the first time since 2009; the expansion of quantitative easing through additional purchases of GBP 10bn of corporate bonds and GBP 60 bn of government bonds, as well as of a new Term Funding Scheme aimed at providing cheap financing to banks. Monetary policy has remained

accommodative in the other EU Member States outside the euro area.

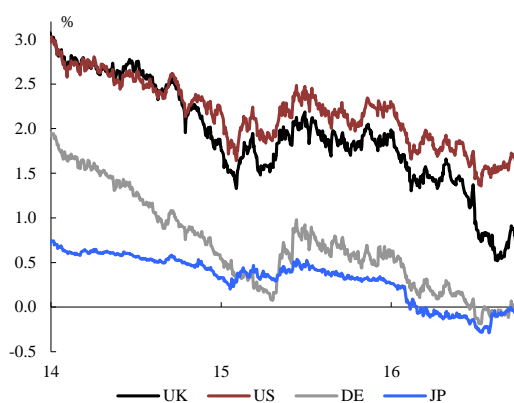
The Bank of Japan decided to introduce several changes to its monetary policy framework at its meeting in September 2016. While policy rates were left unchanged, the central bank announced a commitment to exceed its inflation target in a 'stable manner' with the aim of raising long-term inflation expectations. It also modified the focus of its 'Quantitative and Qualitative Monetary Easing (QQE) with Yield Control' programme from quantity (i.e. increase in the monetary base) to the yield curve, committing to cap the 10-year Japanese government bond yield at 0%.

Monetary policy of the US Federal Reserve has been kept on hold since the end of last year amid concerns about the possible negative impact of foreign economic and financial developments on US economic activity. However, the Federal Reserve stated at its meeting in September 2016 that the case for a rate hike in 2016 had strengthened, as US labour market indicators improved further and household spending grew strongly.

#### ...affected financial markets...

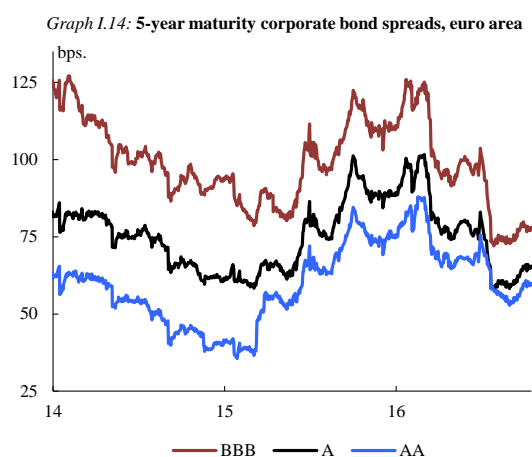
In Europe, the sustained support of the ECB and further safe-haven flows have, over the summer, driven yields of an increasing part of longer term euro area top-rated sovereign bonds into negative territory (Graph I.13). Since mid-September, euro area sovereign bond yields have faced some upward pressure as investors reconsidered their expectations on future path of monetary policy. Euro area sovereign bond spreads of peripheral Member States were broadly stable.

Graph I.13: 10-year maturity sovereign bond rates, selected countries



Ten-year UK gilt yields dropped significantly over the summer, amid a downward revision to the macroeconomic outlook and the launching of a comprehensive easing package by the Bank of England following the UK's leave vote. In the UK, gilt yields moved up again as market participants became more optimistic about the UK economic outlook.

Corporate bond spreads (against Bunds) have tightened significantly (Graph I.14), amid the implementation of the ECB's Corporate Sector Purchase Programme (CSPP) on the secondary markets, which was announced on 10 March and started on 8 June. The CSPP has incentivised credit investors to rebalance their bond portfolios. This is particularly visible in the spread of BBB-rated corporate bonds, which have fallen to a level not seen since 2007.



Most EU equity markets were initially hit quite strongly by the outcome of the UK referendum, but recovered quickly within a few weeks and moved sideways thereafter. Bank stocks were a major exception as they did not recover as quickly as other equity indices after the shock. This reflected a reassessment of the profitability of some euro area banks in a low-interest rate/yield environment, the anticipation of central banks' response to the UK leave vote, and increased balance-sheet concerns in a few economies. In some Member States, concerns about the situation of banks aggravated the profit outlook already weighed down by a flatter yield curve. This is seen as putting further pressure onto the already weak profitability of large parts of the banking sector (see Box I.2).

...but had little impact on the external value of the euro.

The euro's exchange rate remained broadly unchanged in nominal effective terms over the first three quarters of 2016. However, this stability masks significant swings in bilateral exchange rates, notably vis-à-vis the pound sterling and the Japanese yen on the back of political uncertainty and changing expectations about the future path of monetary policy in the UK and Japan. While the euro did not show a clear trend against the US dollar, fluctuating within the USD 1.08-1.14 range over the last five months, the euro strengthened against a number of other European currencies and most emerging market currencies.

ECB's policies are supporting bank lending...

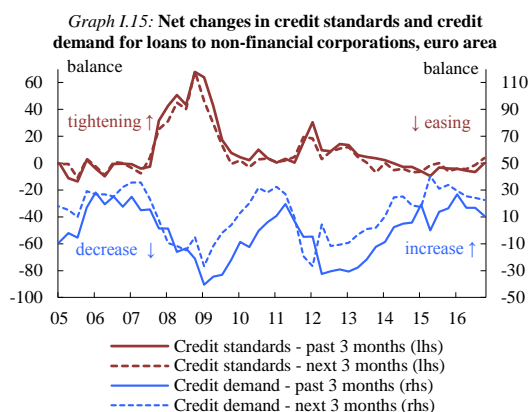
Net lending flows to households and non-financial corporations stayed positive over the last few months. This led to a gradual rise in the annual growth rate of loans to the private sector. For the whole euro area, the annual growth rate of bank loans to the private sector (adjusted for loan sales and securitisation) increased to 1.7% in September, from 1.8% in April. In particular, annual growth of adjusted loans to households increased to 1.8% in September from 1.5% in April and that to non-financial corporations to 1.9% in September, from 1.2% in April.

The upward trends in bank lending were confirmed by two surveys. The ECB's October 2016 Bank Lending Survey pointed to unchanged credit standards on loans to enterprises, after nine consecutive quarters of easing, and to a further easing of credit standards on loans to households (Graph I.15). The survey also indicated increasing demand across all loan categories. The general level of interest rates and mergers and acquisition activity were reported to be important positive contributors to the demand for loans to enterprises.

The June 2016 Survey on the Access to Finance of Enterprises (SAFE), which covered the period from October 2015 to March 2016, contained information about how corporates consider their lending perspectives and was in line with the views banks expressed in the BLS. It signalled a further improvement in the availability of external sources of finance and in particular, an increased willingness of banks to provide credit at lower interest rates. As in previous survey rounds, SMEs in the euro area considered that finding customers remains the dominant concern while access to



finance the least important problem that they faced. Also larger corporations assessed access to finance as a problem of minor importance, less a concern than finding customers, regulation and the costs of production and labour.<sup>(29)</sup> These survey results points to an aggregate demand problem rather than credit constraints.

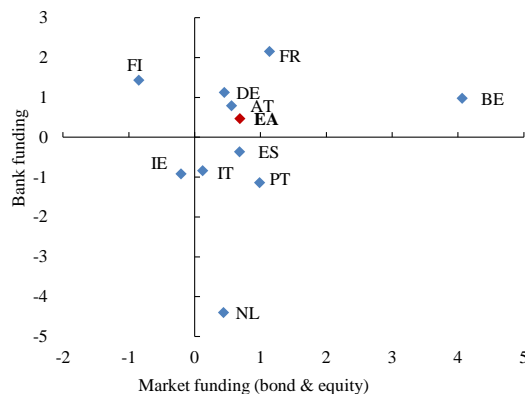


The positive trends in bank lending were supported by further declining interest rates for non-financial corporations and households across euro area Member States. This suggests a more efficient transmission of the ECB's accommodative monetary policies through the euro area banking system. Interest rates declined rather similarly in all Member States, suggesting a less fragmented euro area lending market. However, the recovery in lending volumes has been less even with a still negative annual growth rate of lending to non-financial corporations for instance in Italy, Spain and Portugal (see Graph I.16). Positively though, lower interest rates for corporates enabled many businesses to take new loans or refinance existing loans at lower rates as suggested by the rapidly rising business volumes in some countries – including in some vulnerable Member States – and for smaller loans.

The development of bank lending will depend on both credit demand and supply. While the economic cycle impacts both, the situation in the banking sector may appear determinant for credit supply in some countries (see Box I.2). A number of banks are facing internal and external pressures and their access to capital markets is constrained by weak profitability prospects and hence a lack of investor appetite. In the current context of high equity cost and low returns on equity, many banks

could react by further deleveraging, which may adversely impact on credit growth prospects. Furthermore, facing growing competition from non-bank sectors, banks could engage more in riskier activities.

**Graph I.16: Bank lending vs market funding, NFCs**  
(yearly net flows in % of 2015 GDP, Sept. 2015 to Aug. 2016)

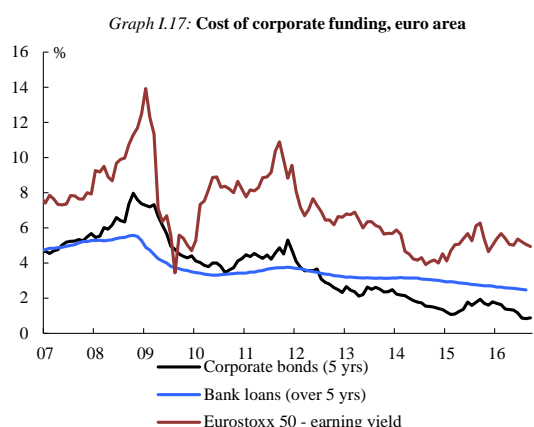


...while market funding continues growing at a high pace.

Flows of net issuance of corporate bonds and equity stayed positive overall over the last few months. The yearly growth rate of debt securities to non-financial corporations trends currently at above 5%; while that of equity issuance slowed down slightly at 0.7%. Such positive developments, particularly in the corporate bond markets, were facilitated by the downward trend in yields since the beginning of this year. While the earning yield has stabilised at close to 5%, the cost of corporate funding using 5-year maturity bonds is currently below 1% (Graph I.17). This is largely due to two factors: the further decline of the risk-free rate and the ongoing ECB's Asset Purchase Programme, which has started to include investment-grade corporate bonds into its range of purchasable assets. The latter left a clear trace in the narrower spreads of corporate bonds relative to the risk-free rate.

Market funding flows continue to contribute more than bank lending flows to the overall external funding of non-financial corporations. A cross-country perspective also suggests that market funding is on a positive trend in most euro area Member States, including in those with still shrinking bank lending volumes, such as Italy, Spain and Portugal. Core euro area Member States, except the Netherlands and Finland, have an expansion of both bank and market funding.

<sup>(29)</sup> See ECB (2016). 'Survey on the Access to Finance of Enterprises'. June, chapter 22.



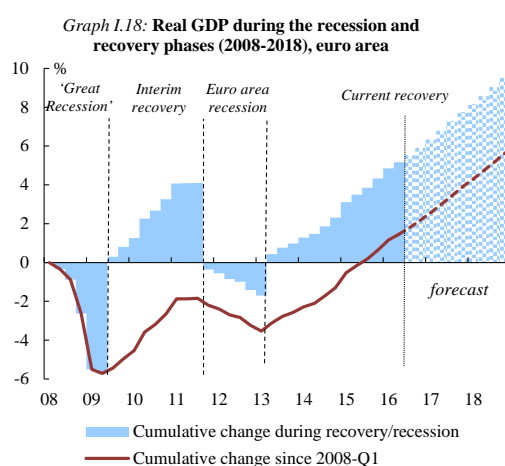
All in all, funding conditions should remain supportive for both bank and market funding thanks to an exceptionally accommodative monetary policy stance. Meanwhile, as the investment expansion continues over the forecast horizon, non-financial corporations' internal funds may become gradually insufficient and thus firms may increasingly tap external funding sources. For this reason it is expected that overall external corporate funding will increase further.

#### 4. GDP AND ITS COMPONENTS

The European economy maintained its course of moderate economic growth in the first half of the year. This added to an expansion that had started in the second quarter of 2013 and that has lifted real GDP in the euro area above the levels seen before the economic and financial crisis in 2008-09 ('Great Recession') (see Graph I.18). Economic growth has been benefiting from a number of favourable factors, including low oil prices, the lagged effects of the euro's past depreciation, the start of very accommodative monetary policy and a more growth-supportive fiscal policy stance. Other policy measures, such as the Investment Plan for Europe and refugee-related expenditures in several Member States, have also contributed. At the same time, past reforms have been paying off. Previous forecasts have presented these supportive factors ('tailwinds') in greater detail.<sup>(30)</sup>

<sup>(30)</sup> See the analysis in European Commission (DG ECFIN) (2015). 'Putting the winter forecast into perspective: lower oil prices and the EU economy'. In European Economic Forecast – Winter 2015, *European Economy* 1/2015, Section I.1, pp. 10–17. On the ECB's quantitative easing, see European Commission (DG ECFIN) (2015). 'Putting the spring forecast into perspective: The ECB's quantitative easing and the euro area economy'. In

Despite these supportive factors, the pace of economic growth in the euro area has remained far from exceptional, which can, at least to some extent, be explained by hindrances to growth such as non-performing loans in several Member States, high private and public debt and deleveraging processes and balance sheet repair in the banking sector, all of which are legacies from the crisis. Elevated uncertainty (including policy uncertainty), and external factors, including slowing growth outside the EU (particularly in several emerging market economies), and slowing global trade, are also having a dampening effect.



The rich set of supportive and disruptive factors complicates the assessment of the pace of the economic recovery. They also limit the usefulness of comparisons to past (or typical) recoveries, pointing to the question of whether this time is different. At the current juncture, previous answers that relied on the exceptional impact of a deep financial and banking crisis may need to be supplemented by references to long-term trends that have come to the fore in the context of discussions about the secular stagnation hypothesis.<sup>(31)</sup> There is evidence that slower trend growth had already emerged before the crisis and could be related to a long-term downward trend in productivity, related to factors such as hours worked per employee and demographic change

European Economic Forecast – Spring 2015, *European Economy* 2/2015, Section I.1, pp. 10–15. On refugees, see European Commission (DG ECFIN) (2015). European Economic Forecast – Autumn 2015. *Institutional Paper* 11, Section I.1 and Box I.1.

<sup>(31)</sup> For a recent review of these arguments, see Stock, J.H. and M.W. Watson (2016). 'Why has GDP growth been so slow to recover?'. Paper presented at the Federal Reserve Bank of Boston Conference on 'The Elusive "Great" Recovery: Causes and Implications for Future Business Cycle Dynamics', October 14-15.

Table I.3:

## Composition of growth - Euro area

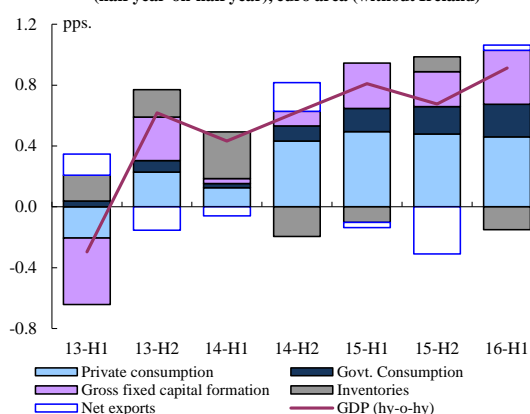
			Autumn 2016 forecast							
			2011	2012	2013	2014	2015	2016	2017	2018
2015			Real percentage change							
bn Euro	Curr. prices	% GDP								
Private consumption	5744.0	54.9	0.0	-1.1	-0.6	0.8	1.8	1.7	1.4	1.5
Public consumption	2163.9	20.7	-0.1	-0.3	0.3	0.6	1.4	1.9	1.3	1.3
Gross fixed capital formation	2063.1	19.7	1.6	-3.5	-2.5	1.4	3.2	3.3	3.1	3.5
Change in stocks as % of GDP	11.8	0.1	0.8	-0.2	0.0	0.3	0.1	-0.1	-0.1	-0.1
Exports of goods and services	4831.5	46.2	6.5	2.7	2.1	4.5	6.5	2.7	3.3	4.1
Final demand	14814.3	141.7	2.3	-0.9	0.2	2.2	3.3	2.1	2.2	2.6
Imports of goods and services	4357.0	41.7	4.4	-0.8	1.4	4.9	6.4	3.2	4.0	4.7
GDP	10455.8	100.0	1.5	-0.9	-0.3	1.2	2.0	1.7	1.5	1.7
GNI	10467.1	100.1	1.6	-0.9	-0.3	1.0	1.7	1.8	1.5	1.7
p.m. GDP EU	14702.1	126.2	1.7	-0.5	0.2	1.6	2.2	1.8	1.6	1.8
			Contribution to change in GDP							
Private consumption			0.0	-0.6	-0.3	0.5	1.0	0.9	0.8	0.8
Public consumption			0.0	-0.1	0.1	0.1	0.3	0.4	0.3	0.3
Investment			0.3	-0.7	-0.5	0.3	0.6	0.7	0.6	0.7
Inventories			0.4	-0.9	0.2	0.3	-0.1	-0.2	0.0	0.0
Exports			2.5	1.1	0.9	2.0	2.9	1.2	1.5	1.9
Final demand			3.2	-1.2	0.3	3.2	4.7	3.0	3.2	3.7
Imports (minus)			1.7	-0.3	0.6	2.0	2.6	1.3	1.6	2.0
Net exports			0.9	1.4	0.4	0.0	0.3	-0.1	-0.1	-0.1

(see Box I.4). Also the role of economic policies in supporting the recovery has been questioned.<sup>(32)</sup> Moreover, the impact of income inequality has been seen as one factor explaining the observation of inadequate demand. Finally, medium-term growth prospects are transmitted to the near-term outlook through expectations, thereby further complicating the short-term business cycle forecast. What can be said, however, is that there remains substantial slack in the economy right now and that there is a lot of scope for further expansion (see Box I.4).

### Economic activity accelerated in the first half of the year...

Economic activity had a relatively strong start to the year. Private consumption and investment were the main drivers. In terms of the half-year on half-year figures, the expansion in the first half of 2016 was the strongest since the start of the recovery (see Graph I.19).

Graph I.19: Real GDP growth and its components (half year-on-half year), euro area (without Ireland)



The quarterly profile of growth, however, looks less rosy. Quarter-on-quarter GDP growth in the euro area was 0.5% q-o-q in the first quarter of 2016, but just 0.3% in the second. These figures suggest that the remarkable rigour of the first quarter waned. This slowing was seen across all domestic demand components, except for investment, which was pushed up by exceptional investment growth in Ireland following a strong decline in the first quarter that was due to substantial statistical revisions in the Irish national accounts.<sup>(33)</sup>

<sup>(32)</sup> See for a discussion for the US, Taylor, J. B. (2016). 'Slow economic growth as a phase in the policy performance cycle'. *Journal of Policy Modeling* 38, pp. 649–55.

<sup>(33)</sup> On 12 July 2016, the Irish Central Statistical Office (CSO) published revised national account data that Eurostat integrated into the euro area aggregates on 21 October

Table I.4:

**Composition of growth - EU**

(Real annual percentage change)

	2015			2011					Autumn 2016 forecast		
	bn Euro	Curr. prices	% GDP	2011	2012	2013	2014	2015	2016	2017	2018
				Real percentage change							
Private consumption	8057.3		56.4	0.1	-0.5	-0.1	1.2	2.1	2.1	1.6	1.5
Public consumption	2950.3		20.5	-0.1	0.0	0.4	1.0	1.4	1.8	1.2	1.3
Gross fixed capital formation	2813.2		19.5	1.9	-2.5	-1.5	2.6	3.5	2.8	2.5	3.1
Change in stocks as % of GDP	37.1		0.3	0.7	0.0	0.1	0.4	0.3	0.1	0.1	0.0
Exports of goods and services	6367.5		43.8	6.6	2.3	2.2	4.4	6.2	3.0	3.5	4.2
Final demand	20222.3		140.5	2.3	-0.4	0.6	2.6	3.4	2.3	2.3	2.5
Imports of goods and services	5866.6		40.5	4.3	-0.2	1.7	5.0	6.2	3.6	3.9	4.3
GDP	14702.1		100.0	1.7	-0.5	0.2	1.6	2.2	1.8	1.6	1.8
GNI	14646.6		99.6	1.7	-0.6	0.2	1.3	1.9	1.9	1.6	1.8
p.m. GDP euro area	10455.8		66.7	1.5	-0.9	-0.3	1.2	2.0	1.7	1.5	1.7
<b>Contribution to change in GDP</b>											
Private consumption				0.0	-0.3	-0.1	0.7	1.2	1.2	0.9	0.8
Public consumption				0.0	0.0	0.1	0.2	0.3	0.4	0.3	0.3
Investment				0.4	-0.5	-0.3	0.5	0.7	0.5	0.5	0.6
Inventories				0.4	-0.7	0.3	0.4	-0.1	-0.2	0.0	0.0
Exports				2.5	1.0	0.9	1.9	2.7	1.3	1.6	1.9
Final demand				3.2	-0.5	0.8	3.6	4.7	3.3	3.2	3.6
Imports (minus)				1.6	-0.1	0.7	2.0	2.5	1.5	1.6	1.8
Net exports				0.9	1.1	0.2	-0.1	0.2	-0.1	0.0	0.1

The data for the euro area without Ireland show that investment also slowed markedly in the second quarter (from 1.6% q-o-q in 2015-Q4 and 0.9% in 2016-Q1 to 0.3% in 2016-Q2). Temporary factors added to the change in the pace of GDP growth, such as the extremely mild weather in the last quarter of 2015 and the first quarter of 2016, which might have been incompletely captured in the seasonal adjustment ('residual seasonality').

#### ...but the positive impact of supportive factors is diminishing.

In the second half of 2016, however, economic growth will not be able to rely on the previously identified supportive factors, as the strength of their support will have substantially diminished.

- The euro remains at a relatively low level but its depreciation in early 2015 should have already exerted most of its positive impact on exports and economic growth. While euro area exports made strong market share gains in 2015, the outlook for 2016 is flat and a marginal decline is expected for 2017. Moreover, there is increasing evidence that the exchange rate impact on the real economy

2016. Despite the relatively small weight of the Irish economy in the euro area and EU aggregates, the differences were substantial.

might have become lower due to the globalisation of value chains and the increasing importance of non-price factors.<sup>(34)</sup>

- The fall in oil prices started more than two years ago and led to relatively low levels. But prices have started to recover and oil price assumptions have been revised higher. This means that the main boost to disposable incomes is likely to have already taken place and that most of the impact on economic growth might already have been seen.<sup>(35)</sup> In the euro area the improvement in the terms-of-trade of goods was substantial in 2015 (3.2%), and is now expected to fall to 1.7% this year, before reverting in 2017 (-0.2%) and remaining flat in 2018.<sup>(36)</sup>

<sup>(34)</sup> A recent study based on data up to mid-2015 confirmed the incomplete pass-through for the euro area aggregate and the five largest Member States; see Özyurt, S. (2016). 'Has the exchange rate pass through recently declined in the euro area?'. *ECB Working Paper Series* 1955.

<sup>(35)</sup> An ECFIN study on the impact of oil prices on GDP presented a negative impact in the second year after the negative oil price shock had hit the euro area, reflecting a rebound in oil prices. See Raciborski, R., Theofilakou, A. and L. Vogel (2015). 'Revisiting the macroeconomic effects of oil price changes'. *Quarterly Report on the Euro Area* 14(2), pp. 19-27.

<sup>(36)</sup> The fading of past demand support from the oil prices and the exchange rate is confirmed in the model-based decomposition of euro area growth in 2017, see Box I.1.

- Monetary and financing conditions remain supportive to economic growth. The monetary policy measures taken by the ECB over the last two years have been successful in lowering market interest rates and improving borrowing conditions for both households and enterprises. This has supported economic growth,<sup>(37)</sup> but the main impetus from these policy measures might have already been seen, in particular in connection with the euro depreciation that set in when the policy was announced. Besides, the longer favourable financing conditions persist, the more relative importance moves to other determinants for investment decisions (e.g. demand outlook, risks).
- The fiscal stance in the euro area moved from restrictive towards neutral in 2015 and is expected not to turn restrictive again over the forecast horizon. Refugee-related public expenditures had been added to previously planned measures in several Member States in 2015, when the inflow of asylum seekers into the EU peaked. The decline in the number of arrivals in 2016 suggests a smaller growth contribution of refugee-related expenditures.

At the same time, key growth impediments stemming from the legacies of the crisis remain in place. These continue to include high private and public debt and high unemployment rates in some Member States, and a high burden of non-performing loans among banks which could hold back lending and thereby weigh on investment (see Box I.2).<sup>(38)</sup>

In addition, external headwinds have been dampening the economic activity in recent months. The slowing of growth outside the EU and the low momentum of global trade are impediments to faster GDP growth in Europe. The expected acceleration of global activity is good news for European exporters but the positive impact will be

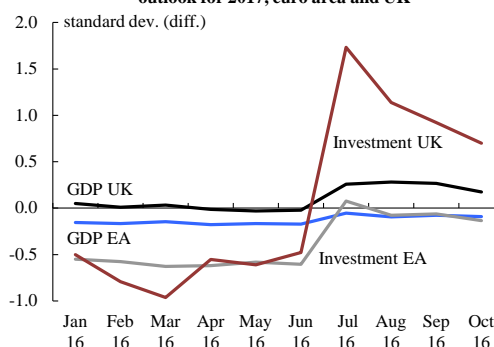
<sup>(37)</sup> Wieladek and Pascual estimate that in the absence of the first round of the ECB's quantitative easing, real GDP would have been 1.3% lower; see T. Wieladek and A. G. Pascual (2016). 'The European Central Bank's QE: A New Hope'. *CESifo Working Paper* 5946. For an in-depth discussion of the impact of QE see Deutsche Bundesbank (2016). 'The macroeconomic impact of quantitative easing in the euro area'. *Monthly Report* 68(6), pp. 29–53.

<sup>(38)</sup> Recent research has pointed to this link as a feedback loop with weak macroeconomic performance playing a significant role for NPLs, see Anastasiou, D., Louri, H. and M. Tsionas (2016). 'Determinants of non-performing loans: Evidence from Euro-area countries'. *Finance Research Letters* 18, pp. 116–9.

dampened by the fact that trade elasticities remain relatively low.

An additional headwind that came to the fore is the UK's vote to leave the EU, which caused policy uncertainty to spike to highs at the time. The immediate impact of the referendum result on financial markets was disruptive, involving high volatility and abrupt exchange rate changes. Since then, however, financial markets have recovered and the impact of increased uncertainty has been somewhat attenuated by sterling's depreciation and the monetary easing decisions taken by the Bank of England in August. In the first months since the UK's EU referendum, the euro area economy seems to have shrugged off the result, but the 'Brexit' process is an unfolding one whose main impact is expected to be seen in the medium to long-term (see also Box I.5).

Graph I.20: Disagreement among forecasters about the outlook for 2017, euro area and UK



Difference between standard deviations of forecasts included in Consensus surveys in 2016 and the average of standard deviations in the corresponding months in the four years before.

In that regard, the bout in short-term uncertainty that is captured in measures such as the European Policy Uncertainty Index<sup>(39)</sup> needs to be distinguished from long-run uncertainty. The short-term metric indicated the increase in uncertainty about the economic conditions in the near term and here the concerns of many market participants were belied by data releases in subsequent weeks. But the long-term uncertainty about economic conditions over the next years persists, which is for instance evident in disagreement among macroeconomic forecasters (see Graph I.20).<sup>(40)</sup> It is this long-term

<sup>(39)</sup> See Baker, S. R., Bloom, N. and S. Davis (2016). 'Measuring economic policy uncertainty'. *Quarterly Journal of Economics* 131(4), pp. 1593–636.

<sup>(40)</sup> see Rossi, B. and T. Sekhposyan (2015). 'Macroeconomic uncertainty indices based on nowcast and forecast error distributions'. *American Economic Review* 105(10), pp. 650–5.

uncertainty that is expected to weigh on economic activity over the entire forecast horizon.

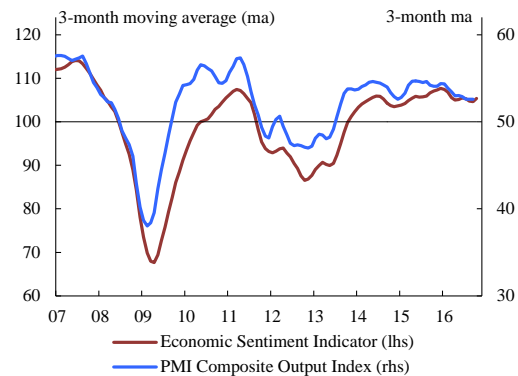
### Growth is expected to remain moderate in the short term...

Eurostat's preliminary flash estimate of real GDP growth in the euro area in the third quarter of 2016 and provisional data from a few Member States hint on a continuation of economic growth at an unchanged pace. The preliminary flash estimates of 0.3% GDP growth (q-o-q) in the euro area and 0.4% in the EU are exactly the same as in the second quarter. According to provisional data Spain continued to outperform the euro area (0.7% q-o-q, down from 0.8% in the second quarter), whereas in France growth returned (0.2%) after the decline in the second quarter (-0.1%). Estimates for the other large euro area Member States were not yet available by the cut-off date of this forecast, but estimates from some smaller Member States have already been incorporated. Outside the euro area, GDP growth in the UK (0.5% q-o-q) was slightly lower than in the second quarter (0.7%).

Early information for the fourth quarter suggests that modest economic dynamics continued in October (Graph I.21). There are very few hard data from the fourth quarter, but a number of survey data. Markit's Flash Eurozone PMI Composite Output Index increased markedly in October (53.7, up from 52.6 in September) and reached a ten-month high, driven by higher readings in the manufacturing and the services component. The less favourable element of this year's PMI releases is that the index has been range-bound (52.5-54.0 since January 2016), underscoring the fact that growth has been neither increasing markedly nor decreasing.

Information from the Commission surveys was also rather positive. In October, the Economic Sentiment Indicator increased markedly (+1.4 pts.) in both the euro area and the EU (to 106.3 and 106.9 respectively). Moreover, the increase was broad-based involving industry and services sectors. The increased optimism of survey respondents included important forward-looking assessments such as production expectations and order books, which bodes well for economic growth in the fourth quarter.

Graph I.21: Economic Sentiment Indicator and PMI Composite Output Index, EU



Source: EC, Markit Group Limited

The survey data on capacity utilisation in the fourth quarter (based on responses in October) point to a substantial increase in both manufacturing and services. In the euro area, the increase in manufacturing (0.7 pps.) is the highest since the first quarter of 2014 and lifts capacity utilisation to 82.3%, which is the highest level since the third quarter of 2008. This assessment is compounded by an increase in the share of managers who find that the current capacity is not sufficient. In the euro area services sectors, the increase in the capacity utilisation rate (0.4 pts.) raised the level to 89.4, which is the highest level in the history of the series (since 2011).

The most recent survey data suggest that the growth patterns have not changed in any significant way from that observed in previous quarters. Overall, this points to a continuation of an unspectacular expansion, possibly slightly more dynamic than in the third quarter. National indicators (e.g. Ifo Business climate, NBB Sentiment), published in October, were also sending upbeat messages.

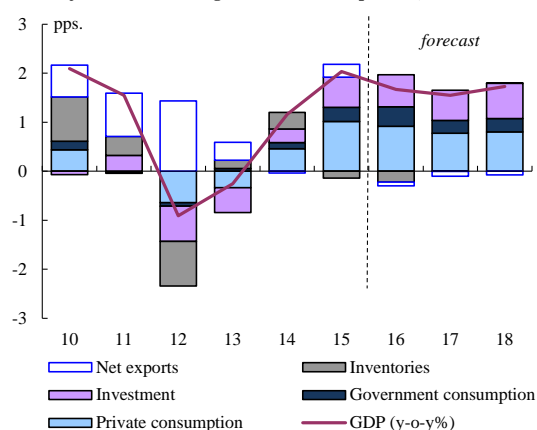
Given the carry-over from the stronger-than-expected growth in 2015 and considering the so far limited short-term impact of the UK leave vote, GDP growth in the euro area in 2016 has been revised slightly higher since the spring. After having grown by 2.0% in the euro area (2.2% in the EU) in 2015, the strongest growth since 2010, GDP is expected to grow by 1.7% in 2016 (1.8% in the EU).

### ...and to be modest and fragile over the rest of the forecast horizon...

In 2017, euro area GDP is expected to decelerate further on the back of slowing growth in private

consumption (in the euro area from 1.7% to 1.4%), government consumption (from 1.9% to 1.3%) and investment (from 3.3% to 3.1%). Positive base effects in energy prices are expected to drive up headline inflation and to impact negatively on households' real disposable incomes. Investment is expected to be held back by the moderate demand outlook and the high uncertainty related to the 'Brexit' process.<sup>(41)</sup> Companies, but also consumers, may delay or abandon spending decisions, particularly in the UK (see also Section II.28), but also in other Member States.<sup>(42)</sup> Also, the support from low oil prices, a weak euro and fiscal policy is expected to diminish further in 2017. On the euro area's external side, the less favourable outlook for the UK economy is set to limit the positive impact of the gradual strengthening in global activity on euro area exports. Over the whole forecast horizon, the expansion is expected to be led by domestic demand (see Graph I.22).

Graph I.22: Real GDP growth and its components, euro area



In 2018, economic activity is set to accelerate slightly but to remain fragile. Investment growth is expected to increase benefitting from still low financing costs, some pent-up demand and the improving global demand outlook. The Investment Plan for Europe is also expected to provide some additional stimulus as more projects move to the implementation phase.<sup>(43)</sup> Private consumption growth is projected to move up marginally.

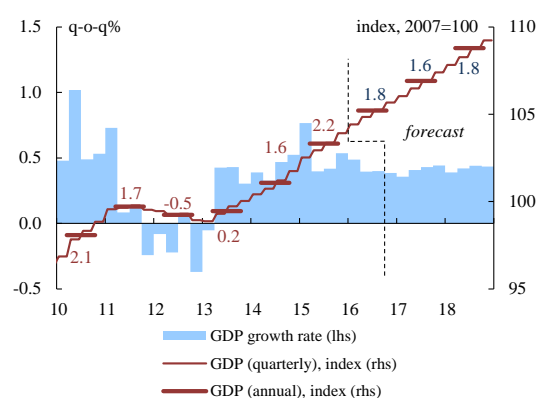
<sup>(41)</sup> For details on how the 'Brexit' issue is dealt with in this forecast see Box I.5.

<sup>(42)</sup> See European Commission (DG ECFIN) (2016). 'The Economic Outlook after the UK Referendum: a first assessment for the Euro Area and the EU'. *Institutional Paper 32*, July.

<sup>(43)</sup> The operations approved under the Plan by 12 October 2016 represent a total financing volume of EUR 24.8 bn. They are located in 27 Member States and they are

In conclusion, growth is expected to remain modest and fragile in the euro area over the forecast horizon (Graph I.1 for the euro area, and Graph I.23 for the EU). After having grown by 1.7% in 2016 in the euro area (1.8% in the EU), economic activity is expected to decelerate to 1.5% in 2017 (1.6% in the EU) and to slightly accelerate in 2018, to 1.7% in the euro area (1.8% in the EU).

Graph I.23: Real GDP, EU

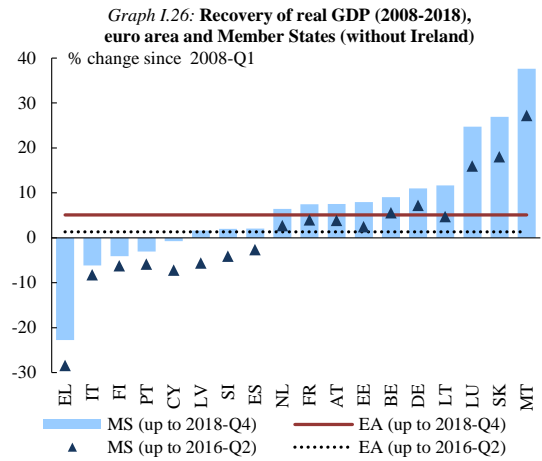
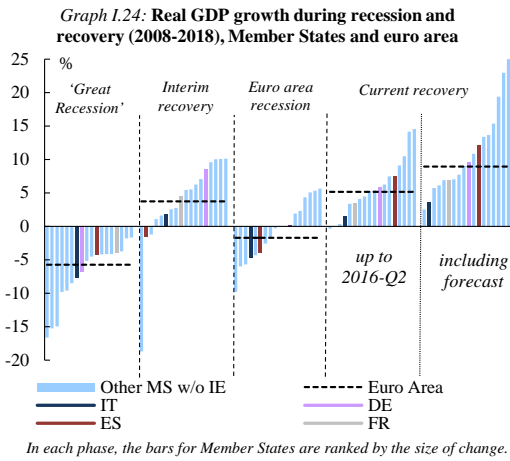


Figures next to horizontal bars are annual growth rates.

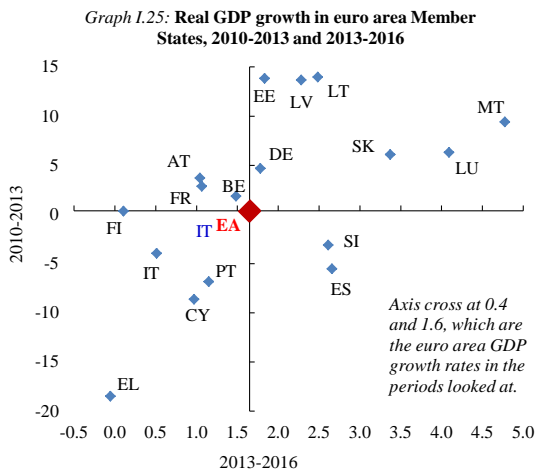
...with all Member States joining the euro area expansion, but in rather different ways.

The recovery from the crisis has been rather different across EU Member States, ranging from deep and lasting scars in some countries to economies that had not even faced periods of economic contraction. The picture is more homogeneous in the euro area, where in most cyclical phases the Member States moved into the same direction during the periods of contraction and expansion as the bars for single economies (ranked in order of size in each phase) indicate (see Graph I.24). The recession in the euro area between 2011 and 2013 marked a difference as only about half of the euro area Member States suffered from a GDP contraction, mostly those that were strongly hit by the sovereign debt crisis. The current recovery benefits all economies, but the size of the growth dividend is rather different ranging from below 5% to more than 10% in terms of change of real GDP between the onset of the recovery in 2013 and mid-2016. Over the forecast period the growth dividend of the recovery is expected to increase in all Member States.

expected to trigger total investment of EUR 138.3 bn. The target is to trigger EUR 315 bn in investment across the EU by 2018 in terms of approved financing.



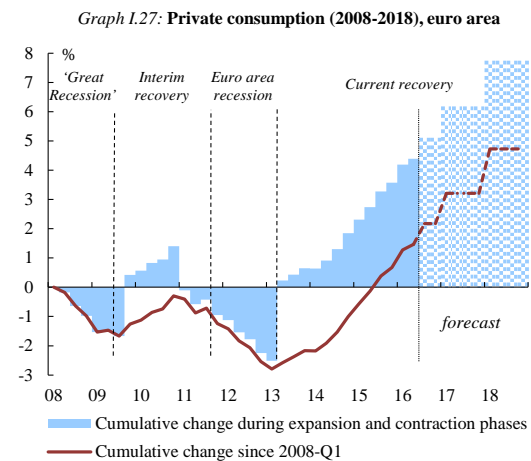
A closer look at economic growth in the euro area Member States during the current recovery reveals some of the growth differences (see Graph I.25). Many of those countries that fared rather well during the interim recovery (2009-2011) and the euro area recession (2011-2013), are again among those which are growing faster than the euro area average.



While the outlook for GDP growth looks favourable for all euro area Member States, the success in coping with the losses incurred during the recession phases in 2008-09 and in 2011-13 differs (see Graph I.26). By mid-2016 about half of the Member States had fully recovered the losses and surpassed the real GDP level seen in early 2008. The continuation of the expansion over the forecast horizon is set to increase this group of countries by 2018 so that by then a majority of Member States would have passed the crises troughs.

**Private consumption as the main driver of the recovery...**

Private consumption has been the main driver of the economic recovery since its beginning in 2013 (see Graph I.27), contributing almost half of the GDP growth in the euro area, but less than the share of private consumption in GDP (about 55%) would have suggested. Over time, the pace of private consumption growth has varied markedly, as for instance in the first half of this year, when a rather strong first quarter was followed by a weaker second quarter.



The expansion of private consumption reflects the continued growth of real disposable incomes and an almost unchanged aggregate household saving rate. Nominal disposable incomes benefit from further improvements in the labour market situation (see Section I.6), mainly from higher employment and less from nominal wage growth. The purchasing power of households gets support from low energy prices and, more generally, from the relatively low rate of consumer price inflation over the last two to three years. Moreover, (net)



savers can be expected to have a lower marginal propensity to consume than (net) borrowers, so the impact of low interest rates on consumer credit and finally on private consumption is expected to be positive in net terms. <sup>(44)</sup>

The overall household saving rate has remained fairly stable over recent years. The fall in nominal interest rates has not yet left any clearly visible mark in the aggregate saving rate, confirming that saving decisions are the result of a complex set of factors, including demographic factors, saving habits, housing wealth, and the outlook for pensions. <sup>(45)</sup> The stability of the household saving rate seems, at first sight, difficult to reconcile with the observation of increased income inequality (see Section I.1) and a larger share of incomes earned by households with a relatively high saving rate which would then depress demand. However, an increased propensity to consume of poor and middle-class households in times of increased awareness of inequality (trickle-down consumption) could offset the higher savings of high-income earners. <sup>(46)</sup>

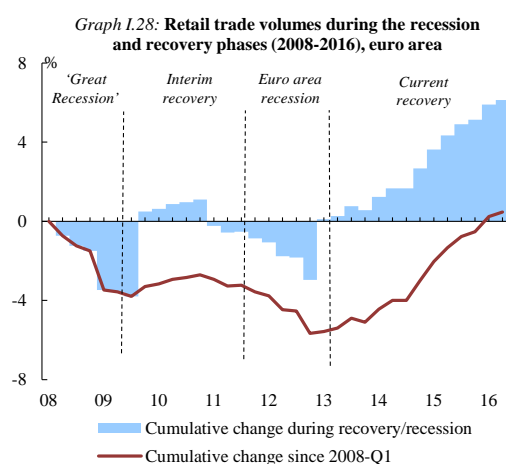
**...is expected to continue benefitting from labour market improvements...**

In the short term, private consumption is expected to continue growing at a solid pace making it the backbone of the continued recovery. Hard data even suggests that private consumption may have accelerated in the third quarter. In July and August 2016, euro area retail sales stood, on average, 0.4% above the average recorded in the second quarter and at their highest level in the history of the series (see Graph I.28). New passenger car registrations in the euro area increased on average by 0.5% in the third quarter compared to the second quarter and remained roughly unchanged in October. In line with these developments, loans to households continued to expand in the past months at annual rates of close to 2%.

<sup>(44)</sup> See ECB (2016). 'Low interest rates and households' net interest income'. *Economic Bulletin* 4, Box 3, pp. 38–40.

<sup>(45)</sup> Moreover there are substantial differences across euro area countries as for instance documented in J. Le Blanc et al. (2016). 'Household saving behaviour in the euro area'. *International Journal of Central Banking* 12(2), pp. 15–69.

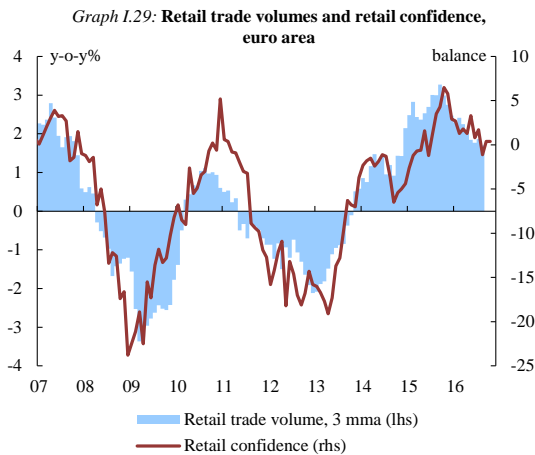
<sup>(46)</sup> See P. Bofinger and P. Scheuermeyer (2016). 'Income distribution and aggregate saving: a non-monotonic relationship'. *CEPR Discussion Paper* 11435.



Survey data gives a somewhat less bright message but may have been negatively swayed to some extent by the UK leave vote.

The Commission's Consumer Confidence Indicator, while remaining above its long-term average, declined slightly in both the euro area and the EU in the third quarter of 2016 compared to the previous quarter and was almost unchanged in October. This mainly reflected higher unemployment fears as well as a more pessimistic assessment of the expected general economic situation, which could be associated with higher uncertainty following the UK leave vote. The especially sharp declines observed in July in the UK and Ireland support this view. However, in August, the pick-up in both countries as well as in the euro area and the EU provides some reassurance that the initial impact of the vote has been short-lived. The Commission's Retail Trade Confidence Indicator decreased rather strongly in the euro area (and the EU) in the third quarter compared to the second one. In contrast and more in line with the hard data, the PMI for retail sales in the euro area increased in the third quarter compared to the previous one (see Graph I.29).

Overall in 2016, private consumption is expected to benefit from strong employment growth and the rise in real gross disposable income. The latter is the result of higher labour income and gains in purchasing power due to low inflation. Private consumption is expected to grow by 1.7% in the euro area in 2016 (2.1% in the EU), after having grown by 1.8% in 2015 (2.1% in the EU).



...but to lose momentum over the forecast horizon.

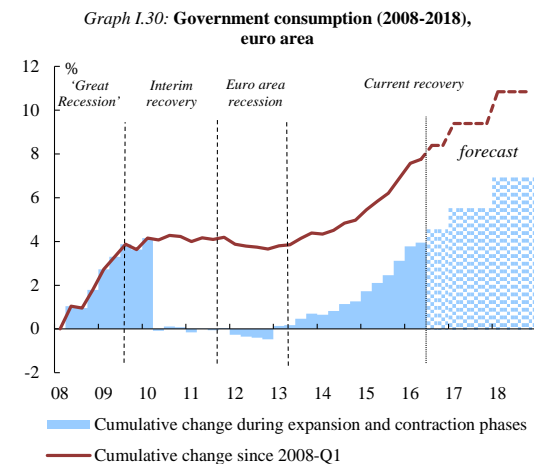
Over the forecast horizon, the expansion of private consumption should remain underpinned by the acceleration of nominal disposable income. The growth of labour incomes is expected to benefit relatively more from wage and salary increases than in the past and less from increases in headcount employment, as employment growth in the euro area is expected to slow somewhat to 1.0% in 2017 and in 2018. Non-labour incomes are expected to accelerate over the forecast horizon, growing in the euro area by 1.4% in 2016, 2.4% in 2017, and 2.6% in 2018. The expected increase in consumer price inflation will dampen the impact on real disposable incomes in 2017 and 2018. Meanwhile, improving bank lending conditions and, in some Member States, progressively lower deleveraging needs should support private consumption growth. Finally, the same holds for wealth effects from increases in housing wealth, reflected in recent increases in house prices. The household saving rate is expected to fall slightly in the euro area in 2017 and 2018.

All in all, these factors suggest a continuation of the expansion of private consumption but with some moderation in 2017, mainly due to slower growth of real disposable incomes. Private consumption is expected to increase by 1.4% in the euro area in 2017 and by 1.5% in 2018 (1.6% and 1.5% in the EU).

**Public consumption expected to keep pace with GDP**

Government consumption has been a strong contributor to economic growth in recent years, having increased by more than any other domestic

component, in percentage terms (see Graph I.30). Following five quarters with quarter-on-quarter growth of about 0.5%, the second quarter recorded a deceleration in both the euro area and the EU. In some Member States, refugee-related expenditures remain a determinant of public consumption growth, whereas in others security related expenditures have recently gained importance. Moreover, consolidation needs differ across countries, which also contributes to the rather heterogeneous development that is expected across countries for this year.

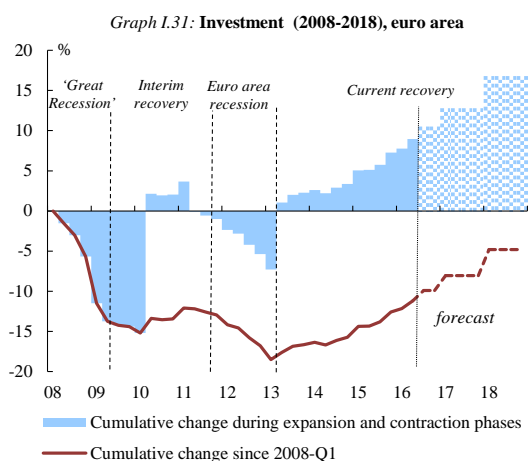


In 2016, aggregate public consumption is expected to grow by 1.9% in the euro area and by 1.8% in the EU, up from 1.4% in both areas in 2015. A deceleration is expected in 2017 (to 1.3% in the euro area and 1.2% in the EU) that mostly reflects developments in Germany, France, Italy and the Netherlands, whereas public consumption is projected to continue contracting in Greece. Growth in public consumption is expected to remain constant in the euro area in 2018 based on a no-policy change assumption, according to which consolidation measures are only factored into the forecast if they have been adopted and presented to national parliaments or are known in sufficient detail. So overall, government consumption should expand less than GDP in 2017 and in 2018.

**Investment has continued to grow faster than GDP...**

Accelerating investment growth is an indispensable ingredient for any sustained economic recovery. Since the onset of the current recovery, the relative weakness of investment has been a key factor for the subdued pace of growth. This is true even if taking into account that a comparison of total investment in early 2008 and

developments in subsequent years points to larger movements, as the base period then includes the boom in construction investment in some Member States (see Graph I.31).<sup>(47)</sup>



The pace of investment growth continues to reflect hindrances from expected low demand growth, heightened economic and policy uncertainty (including the extra layer of uncertainty added by the UK's leave vote), and, in some Member States, ongoing corporate deleveraging, which more than offset the positive impact of improving financing conditions in the wake of more than two years of very accommodative monetary policy. Moreover, financial frictions may not only operate through the balance sheet channel (deleveraging), but also through the bank lending channel related to the lending behaviour of banks (see Box I.2). More recently, the slowing economic growth in emerging market economies and some advanced economies outside the EU, and the slower growth of exports have also weighed on investment growth in Europe.

The assessment of recent trends in investment on the basis of quarterly developments is complicated by the volatility of the series. A clearer picture emerges from the analysis of half-year data. Since the beginning of 2015, investment has grown faster than the other domestic components of euro area GDP, but this is still relatively slow compared to a typical recovery. In the first half of 2016, at a rate of 1.8% (half-year on half-year), investment grew twice as fast as GDP (0.9%). This is also true when the extremely volatile investment growth in Ireland

<sup>(47)</sup> For an in-depth analysis of euro area investment, see ECB (2016). 'Business investment developments in the euro area since the crisis'. *Economic Bulletin* 7, pp. 48–70.

is excluded.<sup>(48)</sup> Since the beginning of the recovery in 2013, the strength of investment has mainly rested on machinery and equipment investment, which in the euro area grew faster than construction investment. In the first half of 2016, machinery and equipment investment was 2.5% higher than in the second half of 2015 (2.8% without Ireland), whereas construction investment increased 1.5% (1.4%).

...and the conditions reducing the gap with pre-crisis levels seem to be in place...

The short-term outlook for investment remains complicated by mixed signals from survey indicators and hard data. Confidence increased in the industry and the construction sectors in the third quarter compared to the previous quarter while confidence in the services and retail sectors decreased. Nevertheless, all indicators remain above their long-term averages.

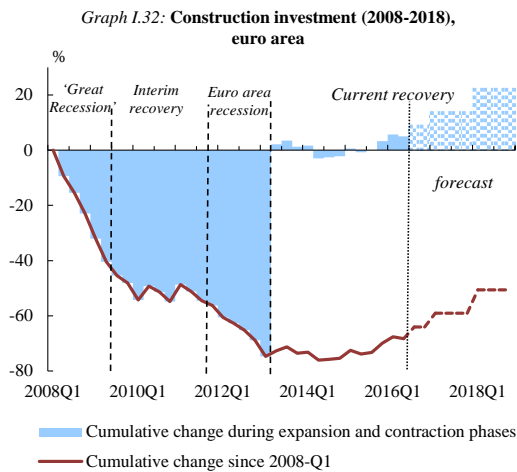
The first hard data for the third quarter of 2016 bode well for both equipment and construction investment. The production of capital goods, a key series for predicting future equipment investment, increased on average by 0.2% in July and August from the average of the second quarter while industrial new orders increased on average by 0.2% over the same period compared to the second quarter.

As regards construction, the sector's output rose by 1.3% in average in July and August compared to the second quarter.<sup>(49)</sup> The strong growth in the number of permits in the second quarter of 2016 (and also in 2016-Q1 and 2015-Q4) should also support construction investment. In line with this, the annual rate of growth in loans for house purchases in September increased to 2.4%, the highest rate since end-2011. House prices in the euro area in the second quarter of 2016 increased by 1.4% compared to the previous quarter (0.4% in 2016-Q1). This supports the expectation that the adjustment in the housing sector finally comes to an end (see Graph I.32), driven by residential investment. In that regard, the outlook for further

<sup>(48)</sup> The statement on half-year-on-half year growth also holds for developments that exclude investment growth in Ireland. In terms of quarter-on-quarter growth, in the second quarter of 2016 investment in the euro area expanded by 1.1%, but only by 0.3% if Ireland is excluded. These differences are caused by Irish investment growth of -14.4% in 2016-Q1 and 38.9% in 2016-Q2.

<sup>(49)</sup> See also ECB (2016). 'Recent developments in euro area construction activity'. *Economic Bulletin* 5, Box 4, pp. 26–28.

expansion and interest expectations may be supportive.<sup>(50)</sup>



In 2016, investment growth in the euro area is expected to increase slightly from 3.2% to 3.3% (without Ireland from 2.6% in 2015 to 3.0%), the highest growth rate since 2007. The increase in the growth rate of investment in construction is set to be offset by a decline in the growth rate of equipment investment. For the EU, the picture is somewhat different with total investment expected to decelerate in 2016 compared to 2015 (2.8% after 3.5%) mainly due to the projected sharp deceleration in construction investment in the UK (from 3.7% to 0.4%) and the strong contraction in Poland in 2016 (from 6.5% to -4.1%). These developments at the aggregate level hide substantial differences across Member States. Among the largest euro area countries, investment is expected to accelerate in Germany, France and Italy. In France and Italy, construction investment is set to turn positive for the first time since 2011 and 2007 respectively. In Spain and the Netherlands, growth in total investment seems to have peaked in 2015 and is expected to slow in 2016, on the back of lower growth in both construction and equipment investment. In many of the Member States that acceded the EU in 2004-2007, investment in 2016 is set to contract strongly as a result of the sharp fall in both private and public investment after years of exceptionally high investment at the end of the last financing period of EU funding.

The Investment Plan for Europe, launched at the end of 2014, is expected to contribute to

<sup>(50)</sup> See L. Lambertini, C. Mendicino and M. T. Punzi (2017). 'Expectations-driven cycles in the housing market'. *Economic Modelling* 60, pp. 297–312.

investment over the forecast horizon with projects gradually moving from the signature to the implementation phase. As projects co-financed with EU funds from the new programming period 2014-2020 enter the implementation phase in some Member States, investment will receive a significant boost that should reverse the exceptional declines seen more recently.

### ...but heightened uncertainty is set to continue weighing on investment.

Over the forecast horizon, the balance of factors driving investment remains favourable. On the positive side, financing conditions are expected to remain in place that appear to be more favourable than in previous years, with bank lending to firms supported by low levels of interest rates and by less tight bank lending standards. However, low funding costs alone cannot be expected to have a strong impact on corporate investment decisions. The scope for capacity-enhancing investment can be expected to be more limited in a set-up with relatively low returns, as for instance suggested by estimates of a declining equilibrium real interest rate.<sup>(51)</sup> Low financing costs can also result in activities that do not support investment, such as corporate stock buybacks.

Moreover, the expected strengthening of external demand should raise euro area export growth and, as a result, equipment investment. Capacity utilisation in the manufacturing industry is relatively high and above its long-term average.

On the negative side, the moderate pace of domestic demand growth is expected to remain a limiting factor, particularly in 2017 but also to some extent in 2018. Related to this, expectations of weaker potential growth may also discourage investment intentions. Moreover, the declining but still high level of corporate and household debt in some Member States is expected to continue acting as a drag on investment.

<sup>(51)</sup> Recently lower estimates of the euro area natural rate of interest (the rate at which the economy operates at full employment without inflationary pressures) have been presented (e.g. 2.4% in 1990, 2.0% in 2000, 0.5% in 2015; see e.g. Holston, K., Laubach, T. and J.C. Williams (2016). 'Measuring the natural rate of interest: international trends and determinants'. *Finance and Economics Discussion Series* 2016-073. Washington: Board of Governors of the Federal Reserve System); these estimates confirmed the decline found in earlier studies, e.g. Mésonnier, J.-S. and J.-P. Renne (2007). 'A time-varying natural rate of interest for the euro area'. *European Economic Review* 51(7), pp. 1768–84.

Finally, the high uncertainty level of both economic and political nature is set to continue weighing on investment growth and diminish productivity growth because the relocation of resources from low to high productivity companies is hampered.<sup>(52)</sup> The period of elevated uncertainty includes the ‘Brexit’ negotiations over the new terms that will guide economic relations between the UK and the EU. As these terms remain unknown, some investments are likely to be cancelled or at least postponed, both in the UK and in the rest of Europe. Especially cross-border flows (e.g. foreign direct investment) are expected to be negatively affected.<sup>(53)</sup> As heightened uncertainty has already been identified as an obstacle for some time, the number of investment projects that might be launched once uncertainty dissipates could be substantial.

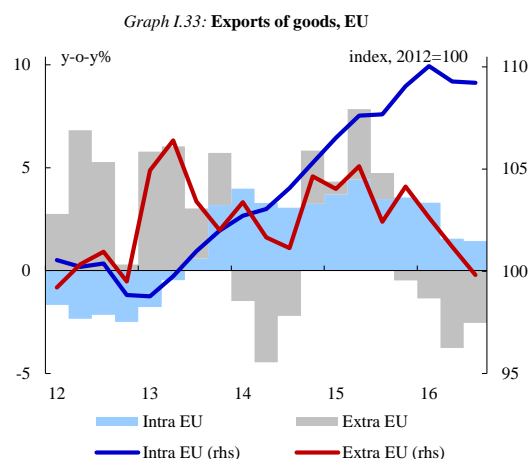
All in all, total investment is projected to increase in the euro area by 3.1 in 2017 and 3.5% in 2018 (2.5% and 3.1% respectively in the EU).

#### Net exports have contributed slightly to economic growth in the first half of the year...

The relatively slow growth outside the EU and the weakness of global trade are weighing on euro area foreign trade. In the first half of 2016, the average growth rate of the euro area’s imports and exports of goods and services fell to their lowest rate since the start of the recovery in the first half of 2013, with a particular weakness observed in the first quarter of the year. The persistence of some lagged effects from movements in the nominal effective exchange rate of the euro has only partially mitigated the weakness in the external environment. Another factor that helped to cushion the impact on total euro area export volumes has been the resilience of intra-euro area exports. The difference between trade among Member States and trade with other economies is even more striking when looking at the difference between EU exports of goods within the EU and outside the EU, with the former increasing by 1.2% in the first half of the year and the latter contracting by 1.3% compared to the second half of last year (see Graph I.33), which also gives an indication of the importance of the internal market for EU companies.

<sup>(52)</sup> See Bloom, N. (2009). ‘The impact of uncertainty shocks’. *Econometrica* 77(3), pp. 623–85.

<sup>(53)</sup> On the link between (election) uncertainty and FDI, see B. Julio and Y. Yook (2016). ‘Policy uncertainty, irreversibility, and cross-border flows of capital’. *Journal of International Economics* 103, pp. 13–26.



Imports of goods and services remained rather subdued in the first half of this year, growing by 1.0% in the euro area after 3.5% in the first half of last year and 2.3% in the second half. Extra-euro area imports grew stronger than intra-euro area imports. All this added up to a small positive contribution of net exports to economic growth in the first half of this year.

#### ...but slowing global trade hampers the outlook for exports...

The impact of the headwinds stemming from the slowdown in emerging markets and some advanced economies is expected to continue affecting trade in the near term, though gradually fading. After having deteriorated in the two previous quarters, the assessment of export order books in the Commission’s manufacturing survey for the third quarter of 2016 improved in the euro area (and the EU) compared to the previous quarter. In line with this, the manufacturing PMI new export orders index also increased in the third quarter. The first hard data for merchandise trade in the third quarter pointed to a stagnation of euro area exports in July and August (average of the two months) as compared to the monthly average in the second quarter (CPB data) and an increase in euro area imports (0.8%). The merchandise trade growth momentum remained negative (up to August). Some lagged effects from the euro’s depreciation in 2015 may have continued to exert a positive impact on euro area exports but their contribution would likely have been small. Overall, on the back of the slowdown in global activity, euro area export growth is set to drop significantly in 2016 and grow by just 2.7% (3.0% for the EU), well below pre-crisis rates. In the near-term, imports are expected to follow a similar pattern to that of exports, given the high import

content of many export goods. In 2016, imports of goods and services are expected to decelerate to 3.2% (3.6% in the EU), from 6.4% in 2015 (6.2% respectively).

The heightened uncertainty concerning the future trading relations between the UK and the EU, but also increased protectionist sentiment is expected to weigh on trade during the forecast years. The Member States with the largest UK trade exposure are set to be the most affected (Ireland, Germany, the Netherlands, and Belgium) while others could be hurt at the margin, for instance by lower numbers of tourists from the UK.

**...and the contribution of net exports to euro area growth is set to remain negative.**

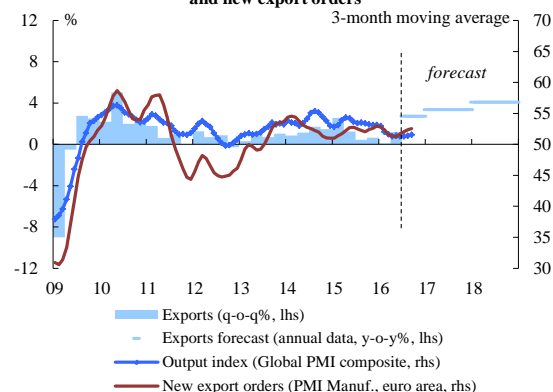
Over the forecast horizon, foreign demand for euro area exports is expected to rise as economic activity in emerging market economies gradually strengthens. However, the weakening of the outlook for the UK since the spring has contributed to a strong downward revision in the projected growth rate of foreign demand for euro area exports. To the extent that exchange rate factors affect export performance,<sup>(54)</sup> the sizeable depreciation of the sterling vis-à-vis the euro is expected to dampen import demand in the UK with an adverse direct impact on euro area exports to the UK, which is one of the largest trading partners of the euro area. Moreover, the deteriorated price competitiveness of euro area companies vis-à-vis their UK competitors could trigger small indirect effects through trade with third countries.

Market shares of euro area exports are expected to remain almost flat in 2016 after gaining considerable ground in 2015 thanks to the significant depreciation of the euro. In 2017, they should marginally decrease and hold steady in 2018. All in all, euro area exports of goods and services are expected to gather some momentum over the forecast horizon (Graph I.34). They are projected to accelerate to 3.3% (3.5% in the EU) in 2017 and to 4.1% (4.2% in the EU) in 2018. Imports are again forecast to continue following a similar pattern to those of exports, while growing stronger, accelerating to 4.0% in the euro area (3.9% in the EU) in 2017 and to 4.7% (4.3% in the

<sup>(54)</sup> Recent studies suggest that non-price/non-exchange rate factors play a critical and often predominant role in shaping trade developments; for an overview see Di Mauro, F. et al. (2016). 'Fighting 'currency wars' with blanks: The limited role of exchange rates in export competitiveness'. *VoxEU*, June 29.

EU) in 2018. Overall, the past positive contribution from net exports to economic growth is expected to fade away, resulting in a small negative contribution in 2016-2018. For the EU, the net trade contribution is expected to be nil in 2017 and slightly positive in 2018, given the strong positive contribution of net exports to UK GDP growth in 2017 and 2018.

Graph I.34: Global demand, euro-area exports and new export orders

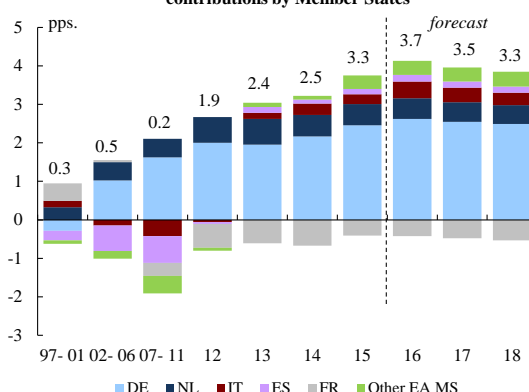


Source: EC, Markit Group Limited

**5. THE CURRENT ACCOUNT**

The adjusted current account surplus of the euro area gradually rose over the last decade. The largest contributions to the surplus continues to come from Germany and the Netherlands, while the contributions from Spain, Italy and other Member States are relatively small and France continues to exhibit current account deficits (see Graph I.35).

Graph I.35: Current account, euro area, contributions by Member States



Figures above bars are unadjusted euro-area balances (% of GDP).

In 2015, favourable conditions such as low commodity prices, a lower external value of the euro, and relatively weak domestic demand pushed

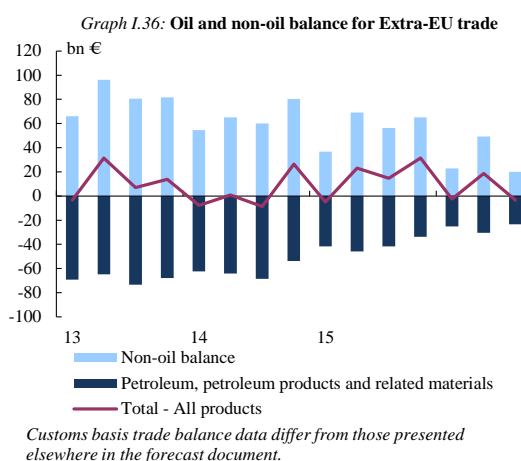
the surplus to 3.1% of GDP. This year, the improvement of the adjusted current account balance is expected to culminate and reach 3.5% of GDP. As commodity prices have been rebounding this year and extra-euro area exports are expected to grow only modestly from the second half of 2016 onwards, the adjusted current account surplus should gradually decline over the forecast horizon.

#### Low commodity prices and a depreciated currency mitigating exceptionally weak foreign demand in 2016...

The low price of most commodities helped push the euro area's adjusted trade surplus even wider in 2015, most notably by affecting nominal imports. Despite bottoming-out in 2016, commodity prices remain relatively low and are still expected to be the main factor boosting the trade surplus even slightly further this year. This is evident from the euro area's oil balance (see Graph I.36). Moreover, the strong depreciation of the euro in nominal and real effective terms helped significantly to gain export market shares in 2015. Until October 2016, the currency has remained relatively weak but its positive impact on gaining additional export market shares has been fading away.

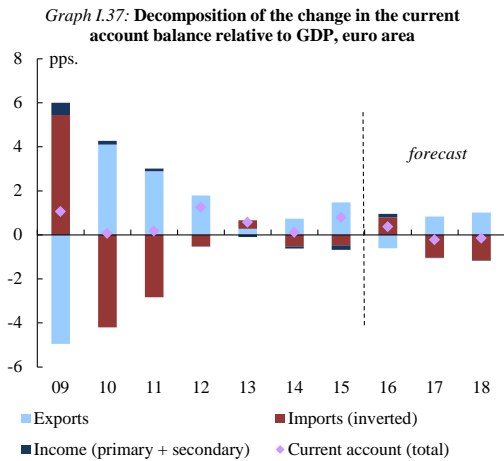
By contrast, the weakness of global economic activity recently (including in many advanced economies outside the EU) and the weak momentum of global trade have been weighing on the expansion of the euro area's merchandise exports this year. The weakness of foreign demand has also shown itself in the significant decrease in the elasticity of global imports. Moreover, the geographical composition of exports does not seem to be beneficial, since the growth of the euro area's export markets is expected to be weaker (2.8%) than the growth of GDP outside the euro area (3.2%) in 2016.

Altogether, the euro area's adjusted merchandise trade surplus is expected to increase from 3.4% of GDP in 2015 to 3.5% in 2016, whereas the adjusted current account surplus is expected to increase from 3.1% of GDP to 3.5%. The increase in both trade and adjusted current account surpluses reflected the improved price competitiveness stemming from low commodity prices, the slight decrease in relative unit labour costs and the weak euro mitigating the negative impact of worsened foreign demand. As a result, the euro area's export performance is expected to remain broadly stable in 2016.



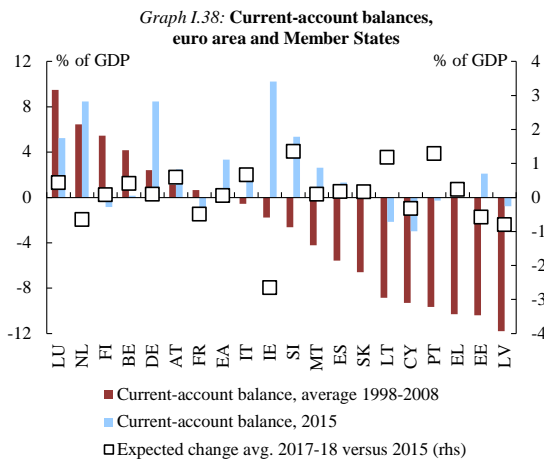
#### ...with gradual shrinking of the current account over the forecast horizon...

The euro area's trade balance surplus is expected to gradually recede in 2017 and 2018. Over the forecast horizon, global economic activity is expected to strengthen modestly, mainly on the back of the recovery in emerging market economies and the expected gradual increase in the elasticity of global imports and exports. As foreign demand increases, export markets are projected to grow in line with GDP growth outside the euro area in 2017 and slightly faster in 2018. Export and import prices in the euro area are projected to be influenced mainly by the slight gradual increase of commodity prices and the modest appreciation of the euro, resulting in a negative and zero growth in terms of trade of goods in 2017 and 2018 respectively. Moreover, domestic demand is projected to remain rather subdued. Overall, exports are expected to grow at lower pace than imports, resulting in the slight deterioration of the euro area's adjusted trade surplus. More specifically, the surplus is expected to decrease to 3.3% of GDP in 2017 and 3.2% of GDP in 2018. The adjusted current account surplus (see Graph I.37) is expected to reach 3.2% and 3.1% of GDP in the euro area in 2017 and 2018 respectively.



...while asymmetric adjustment is expected to continue.

The projected shrinking of the adjusted current account surplus in the euro area over the forecast horizon compounds an asymmetric adjustment among Member States (see Graph I.38). Several Member States, which experienced a rebalancing of their current accounts from large deficits to growing surpluses, are expected to further improve or stabilise their current accounts over the forecast horizon (e.g. Ireland, Slovenia and Hungary). On the other hand, the current accounts of some other countries (e.g. Lithuania and Romania) are projected to lapse back into deficit after a short period of rebalancing in 2013 and 2014. A deepening of deficits over the whole forecast horizon is expected in France, Cyprus, Latvia and Romania. The current accounts of the UK, Finland and the Czech Republic are projected to remain in deficit over the forecast horizon as well, but gradual improvement is expected.

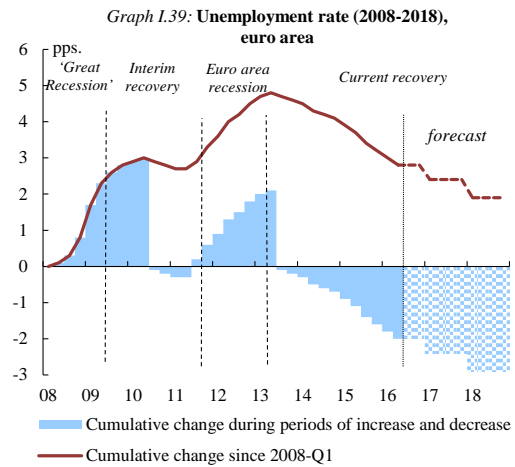


By contrast, large current account surpluses are expected to be registered over the forecast horizon

in Ireland, Germany, the Netherlands, Slovenia and Denmark. Over the forecast horizon, the surpluses of these countries are expected to stabilise or recede but to remain at very high levels (as a percentage of GDP).

## 6. THE LABOUR MARKET

The euro area labour market continues to recover, as visible in increasing employment and declining unemployment. However, the strong increases in unemployment rates during the ‘Great Recession’ of 2008-2009 and the euro area recession in 2011-2013 have not yet been reversed (see Graph I.39), which suggests that slack persists in the labour market. Behind these headline figures, the recent improvement in the labour market situation has seen some features that can be expected to shape labour market developments over the forecast horizon. They include for instance the observed dynamics of job creation, the unabated trend towards a higher share of part-time work, and receding cross-country differences.



Labour market conditions have improved further on the back of strong job creation...

Employment has risen uninterruptedly since the third quarter of 2013 with the rebound being somewhat stronger than economic growth would have suggested, making the current recovery relatively job-rich. In the EU and the euro area, employment grew by 1.3% in the four quarters up to mid-2016, the best performance since mid-2008. However, in the euro area these developments have not yet been enough to make up for the large losses seen in the level of hours worked during the recession years (see Graph I.40), while in the EU



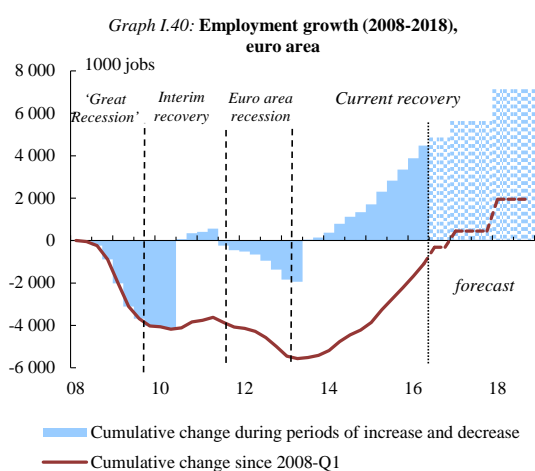
Table I.5:

## Labour market outlook - euro area and EU

(Annual percentage change)	Euro area						EU					
	Autumn 2016 forecast				Spring 2016 forecast		Autumn 2016 forecast				Spring 2016 forecast	
	2015	2016	2017	2018	2016	2017	2015	2016	2017	2018	2016	2017
Population of working age (15-64)	0.1	0.3	0.4	0.2	0.3	0.2	0.1	0.3	0.3	0.2	0.3	0.2
Labour force	0.2	0.6	0.5	0.5	0.4	0.5	0.2	0.6	0.5	0.4	0.4	0.5
Employment	1.1	1.4	1.0	1.0	1.1	1.0	1.2	1.4	0.9	0.8	1.0	0.9
Employment (change in million)	1.5	2.0	1.5	1.5	1.6	1.5	2.6	3.1	2.0	1.9	2.2	2.0
Unemployment (levels in millions)	17.5	16.3	15.6	14.9	16.6	16.0	22.9	21.1	20.3	19.5	21.7	20.9
Unemployment rate (% of labour force)	10.9	10.1	9.7	9.2	10.3	9.9	9.4	8.6	8.3	7.9	8.9	8.5
Labour productivity, whole economy	0.9	0.3	0.5	0.7	0.5	0.8	1.1	0.4	0.7	0.9	0.8	1.0
Employment rate (a)	59.6	60.2	60.6	61.0	60.0	60.4	59.8	60.5	60.8	61.2	60.2	60.6

(a) Employment as a percentage of population of working age. Definition according to structural indicators. See also note 6 in the Statistical Annex

headcount employment has already passed the pre-crisis level.



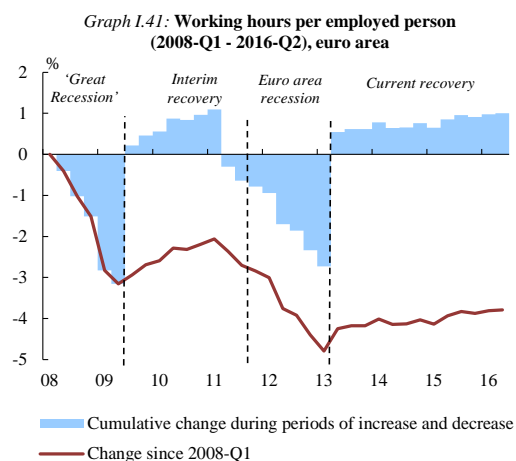
Net job creation in the EU and the euro area has been supported by the ongoing economic expansion, modest wage growth, structural reforms, as well as short-term fiscal measures in some Member States. In the euro area, the ratio between employment and GDP growth has increased from an average of about 0.55 in the pre-crisis period (1999-Q1 to 2008-Q1) to about 0.65 in the current recovery (up to 2016-Q2). This increased responsiveness of employment to economic growth suggests that the capacity of the economy to create jobs at a given growth rate has increased in recent years and suggests a change in the underlying relationship between GDP growth and employment.<sup>(55)</sup>

One reason for this development is the ongoing transition from manufacturing to services ('de-industrialisation'), which are traditionally more labour intensive.<sup>(56)</sup> A second reason is that

<sup>(55)</sup> See also ECB (2016). 'The employment-GDP relationship since the crisis.' *Economic Bulletin* 6, pp. 53–71.

<sup>(56)</sup> An empirical study by the OECD concluded that the goods producing sector accounted for most of the jobs lost during the recession, while the services sector accounted for

service sectors tend also to be those where the part-time work ratio is typically higher than in other sectors. A third reason can be found in structural reforms undertaken in several Member States, which may also have contributed to making the current recovery relatively job-rich, for example by decreasing excessive employment protection and/or making wages more responsive to activity in specific sectors.



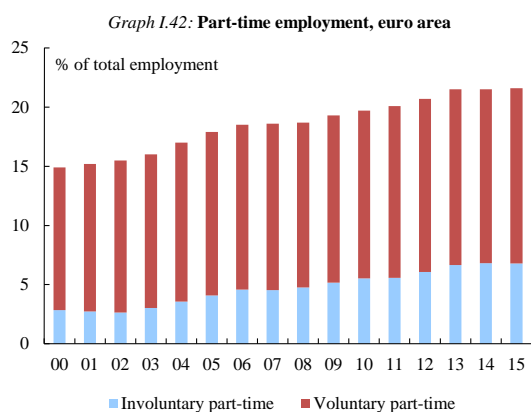
...while hours worked remained lacklustre...

The increase in headcount employment has not been mirrored in the development of hours worked by employees. In the euro area, average hours worked of employed persons have remained broadly flat in recent years and remained about 4% below the pre-crisis level in the second quarter of 2016 (see Graph I.41). This can be related to the shift in the composition of labour towards sectors

essentially all of the jobs added during the recovery; see OECD (2016). 'OECD Employment Outlook 2016', OECD: Paris, chapter 1.

with a higher share of part-time contracts such as market services (see also Box I.4).<sup>(57)</sup>

In the euro area, the share of part-time workers has increased from 18.6% at the onset of the ‘Great Recession’ to 21.6% in the second quarter of 2016 (see Graph I.42). Almost in parallel, the share of involuntary part-time work in all part-time work has increased from 24.4% in 2007 to 31.4% in 2015. At the same time, significant shares of jobs have temporary contracts, which hint at structural reasons behind the increase in part-time employment. The more recent increase is consistent with a high level of economic and policy uncertainty as such contracts offer more flexibility to employers to adjust their staff to business activity.



### ...and the unemployment rate continued its gradual descent.

Reflecting rather strong net job creation, unemployment rates have continued their downward trend. By August 2016, the unemployment rate had fallen to 10.1% of the labour force in the euro area and 8.6% in the EU, which are the lowest levels since July 2011. The recent standstill in the decline in the unemployment rate may reflect a larger pool of individuals entering the labour force in line with the recent positive developments in participation for female and older workers.

Falling unemployment rates were also observed for young workers and for those experiencing a long unemployment spell. Youth unemployment has continued to decline faster than the overall unemployment but stands at still high level (18.6%

<sup>(57)</sup> See ECB (2016). ‘Factors behind developments in average hours worked per person employed since 2008’. *Economic Bulletin* 6, Box 6, pp. 49–52.

in August in the EU). The comparatively high unemployment rate of young persons could be linked to the over-representation of low-skilled potential workers in this age group, because many young persons have not yet completed their education and are thus not participating in the labour force that enters the calculation of the youth unemployment rate. Looking at the share of youth unemployed in their age group, the “unemployment” rate goes down to close to 8%.<sup>(58)</sup>

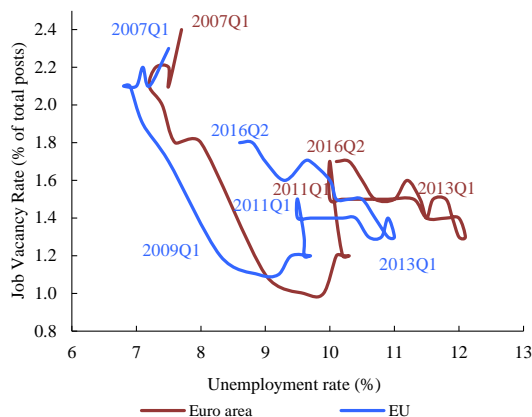
Long-term unemployment has continued to fall gradually over the course of 2016, following the ongoing recovery in labour markets with a lag. However, the proportion of people unemployed for 24 months or more remains high and far above pre-crisis levels. The persistence of a high level of long-term unemployment can be expected to continue weighing on the efficiency of labour market matching in the EU and the euro area and increase the risk that high levels of unemployment could become entrenched.

The still relatively high unemployment rate in the euro area is somewhat puzzling given the increase in the vacancy rate from 1.3% in mid-2013 to 1.7% in the first half of 2016. Developments in matching efficiency and unemployment as depicted in the Beveridge curve for the euro area (which shows the unemployment rate for a given level of labour demand i.e. the availability of job vacancies) continue to point to problems in the labour market matching (see Graph I.43). For a given level of job vacancies, the unemployment rate in the euro area was still higher in 2016 than it was before the crisis, in line with the rise in structural unemployment. However, the further inward shift of the curve during the current recovery points to a small decrease in labour market mismatching. This moderate improvement can be partly explained by the slower pace of job destruction in some countries as well as higher job-finding rates and the declining share of long-term unemployment. Still, structural unemployment in the euro area remains high, also reflecting skill mismatches, notably among low-skilled workers.<sup>(59)</sup>

<sup>(58)</sup> The rate of young persons that are being neither in education, employment nor training (NEET) is slowly receding. It stood at 12% in 2015 in the EU, 1 pp. below its 2013 peak.

<sup>(59)</sup> Anderton, R. et al. (2015). ‘Comparisons and contrasts of the impact of the crisis on euro area labour markets’. *ECB Occasional Paper Series* 159.

Graph I.43: Beveridge curve, euro area and EU



### Labour market conditions should continue improving but job creation will be unspectacular...

Labour market conditions are projected to improve further, reducing gradually the amount of labour market slack. Employment creation is set to continue benefitting from the sustained domestic-demand driven expansion, still moderate wage growth, as well as fiscal policy measures and structural reforms implemented in some Member States. On the positive side, the increased recourse to part-time working should also benefit job creation going forward. On the negative side, the slow recovery of hours worked back to pre-crisis levels is expected to act as a drag on stronger employment increases over the forecast horizon.

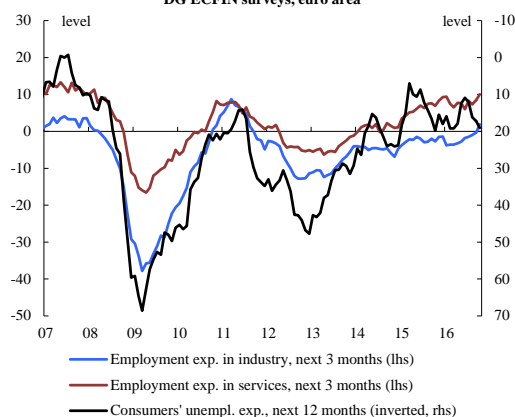
In addition, some country-specific factors are at play. They include fiscal measures such as temporary reductions in social security contributions in Italy, active labour market policies in Spain and the impact of the *CICE* in France.<sup>(60)</sup> They also include more cyclical factors such as the maturing of the economic cycle in Spain, where job creation should remain dynamic but lose momentum and the fact that labour supply shortages are likely to become more binding in Germany, where labour market conditions are becoming tight.

In the short-term, the Commission's survey data on employment expectations continue to point to further net job creation (see Graph I.44). Overall, in both the EU and the euro area, the hiring intentions of firms remain above their long-term

<sup>(60)</sup> Tax Credit for Encouraging Business and Jobs. The *CICE* is intended to finance improvements in the competitiveness of businesses through investment, research, innovation, but also recruitment and training.

averages in all sectors. With the exception of the construction sector, employment expectations in the third quarter have improved in the EU industry, retail trade and service sectors. In October, hiring intentions increased again in the EU in all sectors suggesting continuous job creation at the beginning of the fourth quarter. The employment component of the euro area's Composite PMI also increased in October to a third-month high. Meanwhile the difference between employees' (consumers') fears of unemployment versus employers' (industry, retail, services, construction) employment expectations increased. Consumers' unemployment fears rose slightly in the third quarter of 2016, possibly due to heightened economic and policy uncertainty in the aftermath of the UK's referendum outcome.

Graph I.44: Employment expectations, DG ECFIN surveys, euro area



All in all, headcount employment is set to grow by 1.4% in the euro area and the EU in 2016, faster than previously expected due to the dynamism of job creation in the first half of the year. This would indicate the strongest momentum since 2008. In 2017 and in 2018, employment growth is set to moderate somewhat but to continue growing by 1.0% in the euro area. In the EU, employment growth should continue slowing in 2018 (to 0.8%, down from 0.9% in 2017), due to specific developments in the UK economy.

### ...and a slight moderation in the further decline in unemployment.

Developments in the labour force and in unemployment are expected to remain closely linked. The expected annual increase in the labour force of around 0.5% between 2016 and 2018 (up from 0.2% in 2015) reflects a larger working-age population due to net migration (including refugees that enter the labour force), higher

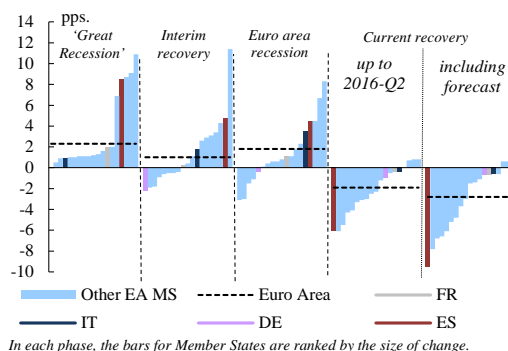
participation rates in line with long-term trends observed already before the crisis for women and older workers, and the effects of an improved labour market situation ('the encouraged worker effect'). Nevertheless, unemployment rates in both the euro area and the EU are set to decline relatively quickly. In 2018, the unemployment rate is projected to reach 9.2% of the labour force in the euro area and 7.9% in the EU, the lowest levels since 2008.

The Non-Accelerating Wage Rate of Unemployment (NAWRU) is expected to continue falling over the forecast horizon. As actual unemployment is set to decline faster than the estimated NAWRU, the unemployment gap is projected to narrow. Labour productivity growth (output per person employed) is expected to reach a trough in 2016 before gradually recovering in 2017 and 2018, reflecting the normalisation in job creation and in line with the pro-cyclicality of labour productivity. It is set to reach 0.7% in the euro area in 2018 (0.9% in the EU), which remains relatively low compared to the decade preceding the crisis (1997-2007) reflecting a continued trend-slowdown in the wake of a shift towards low-productivity services sectors.

**Labour market disparities should remain high and recede only slowly**

Labour market responses to the crisis have differed substantially across Member States and so have responses to the ongoing expansion. While most Member States recorded increasing unemployment rates during the 'Great Recession' (2008-09), the interim recovery (2009-2011), and the euro area recession (2011-2013), the current recovery has already by now lowered unemployment rates in almost all countries. The expected continuation of the recovery and the accompanying further improvement in the labour market situation is projected to allow for a further decline in unemployment rates (see Graph I.45).

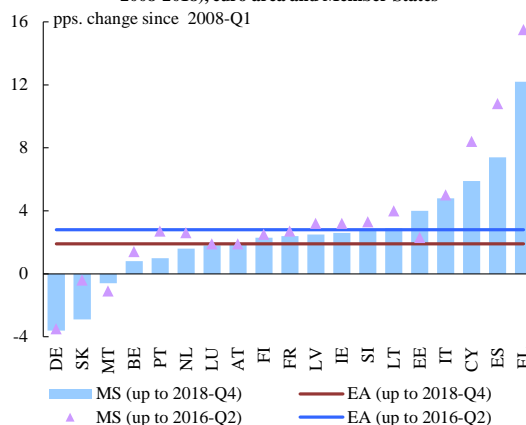
Graph I.45: Unemployment rate changes (2008-2018), Member States and euro area



Despite the marked decline in unemployment rates during the current recovery, many countries have still not returned to the unemployment levels observed before the crisis. Substantial declines in unemployment rates in Portugal, Greece and Spain, have been accompanied by smaller reductions in countries where the labour market has already become tight (Germany, Austria and to a lesser extent the Netherlands). Employment growth was positive in the majority of Member States and accelerated in some in the first half of the year, notably in France and Italy where improvements had so far been timid.

The projected further decline of unemployment rates helps reducing the crisis legacy in terms of unemployment but will not be sufficient to return to pre-crisis levels (see Graph I.46).

Graph I.46: Unemployment rate changes (2008-2016, 2008-2018), euro area and Member States



Labour market disparities across countries are set to continue receding gradually over the forecast horizon. This reflects differences in the initial conditions prior to the crisis but also differences in the adjustment mechanisms, such as prevailing labour market institutions, but also the impact of structural reforms put in place by Member States.

Structural measures may notably have contributed to an increase in the responsiveness of employment to GDP during the recovery in several euro area countries. These include measures which increase labour market flexibility by decreasing excessive employment protection, for example by reducing severance payments or making wages more flexible. At the same time, other factors, such as sectoral differences in growth rates and job creation, as well as differences in rebound rates due to previous (substantial) job losses during the crisis may also play a role in explaining the differences in unemployment rates.

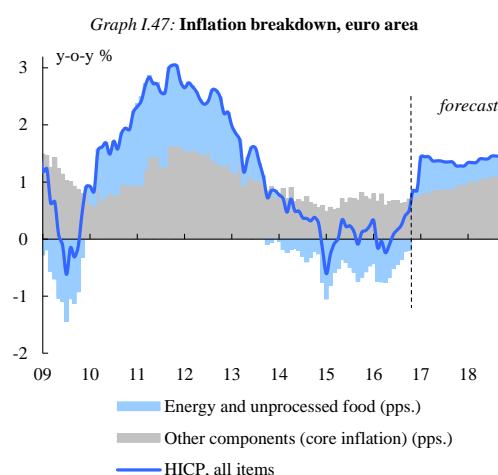
## 7. INFLATION

Inflation in the euro area was very low in the first ten months of 2016, dragged down by falling energy prices. However, it picked up in the third quarter as the impact of negative base effects in energy inflation began to unwind. As the assumed path of energy commodity prices imply, the inflation profile until the second half of 2017 will be strongly shaped by positive base effects in energy inflation. Thereafter, overall inflation is expected to remain above 1% and to gradually increase as stronger economic activity will be reflected in higher underlying price pressures.

### Inflation slowly picking up...

The Harmonised Index of Consumer Prices (HICP) in the euro area picked up in the third quarter of 2016 after inflation had been negative in the second quarter, which was strongly dragged down by negative energy inflation (see Graph I.47). HICP inflation in the euro area averaged 0.0% and -0.1% in the first and second quarters of 2016, respectively, and picked up in the third quarter to 0.3%. Headline inflation in the third quarter was lifted by less negative energy inflation, and unprocessed food inflation, which also tends to be very volatile, averaged 2.2%, up from 1.4% in the second quarter.

Core inflation (excluding energy and unprocessed food) in the third quarter of 2016 remained unchanged at 0.8%, with services inflation ticking up to 1.1%, while non-energy industrial goods and processed food declined somewhat. Core inflation so far in 2016 has hovered around 0.8%, the same level as the average in 2015, and showed no discernible trend yet.



In October (flash estimate), headline HICP in the euro area increased to 0.5%, from 0.4% in September, as the impact of negative base effects in energy inflation continued to diminish. Energy inflation in October was -0.9%, up from -3.0% in September and -8.5% in October 2015. Given the oil price rebound since the start of the year, developments in energy prices suggest an effect that is lagged by a few months between the pass-through of actual energy prices to the energy inflation subcomponent. Services inflation remained at 1.1% in October, reflecting subdued domestic demand pressures. Non-energy industrial goods inflation also remained unchanged compared to September (at 0.3%), but food inflation dropped to 0.4%.

### ...while global inflation is moving up.

Meanwhile, there is increasing evidence that global inflation is moving up, in part uplifted by increasing energy prices. Headline and core inflation rates in the US and China, for example, increased recently while the global PMI input prices and output charges indices indicate some uptick in price pressures. While the information content of global inflation for euro area inflation may be more limited in times of relatively stable trends,<sup>(61)</sup> producer prices measures have a direct link to euro area producer prices. Producer prices in China, which until January were falling markedly, posted the first increase in almost five years in September. Slowly increasing pipeline price pressures may improve the pricing power of businesses and in turn should help lift corporate profit growth and business investment. Given the

<sup>(61)</sup> See Mikolajun, I. and D. Lodge (2016). 'Advanced economy inflation: the role of global factors'. *ECB Working Paper Series* 1948.

Table I.6:

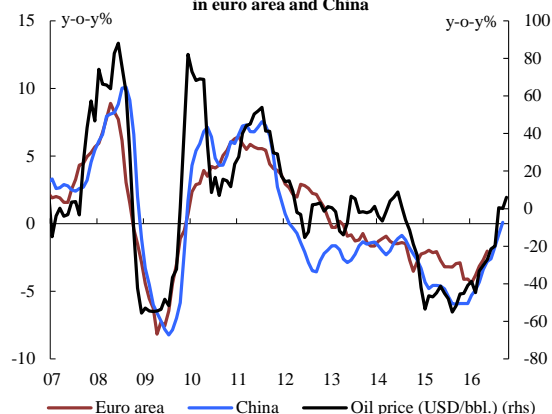
## Inflation outlook - euro area and EU

(Annual percentage change)	Euro area						EU					
	Autumn 2016 forecast				Spring 2016 forecast		Autumn 2016 forecast				Spring 2016 forecast	
	2015	2016	2017	2018	2016	2017	2015	2016	2017	2018	2016	2017
Private consumption deflator	0.1	0.4	1.3	1.4	0.4	1.3	0.2	0.5	1.6	1.7	0.5	1.4
GDP deflator	1.1	1.0	1.2	1.5	1.2	1.3	1.0	1.0	1.4	1.7	1.3	1.5
HICP	0.0	0.3	1.4	1.4	0.2	1.4	0.0	0.3	1.6	1.7	0.3	1.5
Compensation per employee	1.2	1.2	1.7	2.0	1.5	1.9	1.2	1.6	2.0	2.3	2.0	2.4
Unit labour costs	0.3	1.0	1.2	1.3	0.9	1.1	0.3	1.2	1.3	1.4	1.3	1.3
Import prices of goods	-3.6	-3.2	1.5	1.3	-2.7	1.1	-3.6	-1.6	2.3	1.6	-2.1	1.1

globalised supply chains of European companies this is also expected to translate into higher pipeline pressures in the euro area (see Graph I.48).

The latest data on industrial import prices in the euro area show that they are still declining on a year-on-year basis, as in August they fell at an annual rate of 2.9%. However, the rate is quickly recovering from a trough of -7.1% in April. This decline in industrial import prices also contributed to subdued producer price developments in the euro area, which fell at an annual rate of 2.1% in August. However, the monthly change has been positive since spring - except for August - which also signals an upward turn in the producer price cycle. The recent uptick in energy prices and the projected further increase of energy prices may help to further stabilise both import and producer prices once the impact of base effects runs its course towards the end of the year. Yet the eventual pick-up in pipeline pressures is set to pass-through to retail prices only very slowly in 2017.

Graph I.48: Oil prices, industrial producer prices in euro area and China



### The profile of headline HICP is expected to be dominated by energy base effects...

Headline inflation is expected to pick up noticeably towards the end of this year and the first half of 2017, with the profile of headline HICP inflation expected to be shaped by the reversal of energy prices taken on a year-on-year basis. Indeed, the latest positive developments in oil prices signal that the period of negative inflation rates is past, as oil prices have recovered from their January lows of around 30 USD/bbl to their current level of around 50 USD/bbl. As October 2016 levels are already above October 2015 levels, the negative impact of energy inflation is expected to fade away with some delay and then turn noticeably positive by early next year. The inflation path in the next months will therefore be shaped by rather strong positive base effects in energy inflation. While the pass-through to energy inflation of this percentage increase in oil prices will only be partial and broadly proportional, it is expected to lift inflation to above 1% already in the first quarter of 2017 and then to filter gradually into the other inflation components.

### ...before core inflation picks up...

As the expected positive base effects are expected to fade away by the second half of 2017 given the current market expectations about the future price of oil, the outlook for a gradual uptick in inflation rests on an expected increase in underlying price pressures. Signs of a pick-up in underlying price pressures are still very rare. Core inflation is expected to increase only very gradually, and mainly towards the second half of 2017, reflecting a prolonged delay after a long period of declining headline inflation below core inflation. While the two variables move similarly, core inflation tends to lag headline inflation.<sup>(62)</sup> This is because oil

<sup>(62)</sup> The ECB found the lag between headline and core measures to have become shorter in recent years. ECB (2016). 'The relationship between HICP inflation and

price or weather shocks, for example, are quickly passed-through to energy or food prices but the impact of these on services is less immediately evident. This is expected to be the case also once headline inflation moves above core inflation in 2017. This expected reversal will reduce the risk of second-round effects.

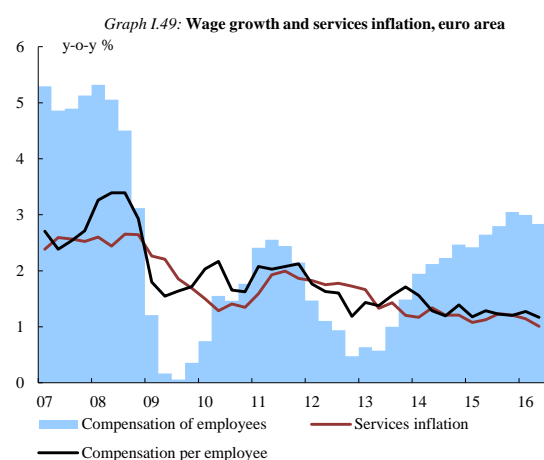
Core inflation in the euro area has also been fairly impervious to the improvement in economic activity for the past year. This could be for several reasons. First, the strong decline in energy inflation over the past year has had an indirect depressing impact on other components of core inflation like transport, which is energy-intensive. Second, another important factor has been the global disinflationary trend evident in producer prices, associated with falling oil prices and industrial over-capacity, especially in China, which drag the non-energy industrial goods component of core inflation. Third, wage growth has been subdued. Fourth, the output gap for the euro area remains in negative territory and, while the link is non-linear, it tends to restrain the increase in underlying price pressures until remaining slack in the economy clears. All these factors are expected to turn supportive of an uptick in core inflation next year, including and especially the expected reduction in the output gap.

### ...but only very gradually...

Looking further into the detail of the main components of core inflation, there are several developments that support the expected slow uptick over the next two years. First, the increase in energy prices and the upswing in global producer prices are expected to be positive for non-energy industrial goods inflation. The uplift in companies' pricing power is, however, expected to remain feeble and gradual considering the weakness in aggregate demand in times of high uncertainty.

Inflation in services, which makes up about two thirds of the euro area core inflation index, tends to be closely related to wage growth and wage growth per employee has been subdued in the light of still relatively high unemployment. Wages and salaries per hour grew at an annual rate of just 0.9% in the second quarter of 2016, down from 1.6% in the first quarter, although this sudden

decline partly reflects some base effects in Germany and the Netherlands. The growth rate of nominal compensation per employee was also subdued at 1.2% in the second quarter of 2016. At the same time, the decline in this rate can be strongly attributed to the increase in part-time employment as the growth of total nominal compensation has been increasing steadily in line with employment growth.<sup>(63)</sup> This is especially so in the services sector, where short-term employment schemes are more important and where a structural increase in labour force participation is expected to continue exerting a downward pressure on this measure. On the other hand, wage growth per hour in the construction sector has been stronger, attesting more clearly to the impact of the cyclical upswing. Therefore, while growth in compensation per employee for the whole economy is expected to remain relatively low due to structural aspects of the labour market, the increase in total compensation, as also reflected in higher employment and lower unemployment rates, are supportive of the expected increase in private consumption and services inflation (see Graph I.49).



Indeed, as expected growth in nominal incomes continues to exceed inflation, changes in the real wage rate and the purchasing power of households are set to remain positive over the forecast horizon. In fact, the growth rate of real compensation per employee increased further to 1.0% in 2015, substantially up from 0.6% in 2013 and 0.8% in 2014. With inflation remaining very low again in 2016 and the growth of nominal compensation per employee expected to remain broadly stable, the real compensation growth per employee is expected to remain positive at 0.8% in 2016. This

HICP inflation excluding energy and food'. *Economic Bulletin* 2, Box 7, pp. 54–56.

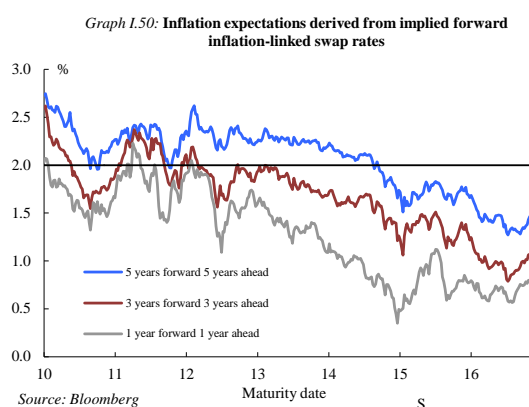
<sup>(63)</sup> See also ECB (2016). 'The employment-GDP relationship since the crisis'. *Economic Bulletin* 6, pp. 53–71.

could imply some pent-up demand that will eventually add upward pressure on domestic prices.

Furthermore, monetary policy is expected to support an increase in underlying price pressures through its usual transmission channels. One noticeable aspect of this is the increase in credit for house loans and the upswing in house prices. House prices are recovering very strongly in a number of Member States, especially in Germany where this increase is expected to be translated into higher rents and housing-related prices which have a substantial weight in the consumption basket.

#### ...in line with slowly recovering inflation expectations.

Market-based measures of inflation expectations have recovered somewhat since the spring forecast, providing further evidence of the close link between oil prices and recent inflation developments. Market-based indicators fell to their lowest levels in February 2016. At the cut-off date of this forecast, inflation-linked swap rates at the one-year forward one year ahead horizon stood at 0.8% (see Graph I.50). Swap rates at the three-year forward three-year ahead horizon imply an average inflation rate of 1.1%. On a longer horizon, the widely watched five-year forward five-year ahead indicator suggests inflation of 1.5%. This indicates that market participants are reversing slowly their inflation outlook and consider it likely that inflation will pick up soon, but very gradually.



Survey-based measures of inflation expectations have remained unchanged or been revised down since spring. The monthly mean of market forecasters calculated by Consensus Economics stood in October at 0.2% in 2016 (latest revision in July from 0.3%) and 1.3% in 2017 (unchanged from 1.3%). This slower path, despite the upward

revision in GDP growth in 2016, can be linked to the larger role of lagged inflation under persistently low inflation.<sup>(64)</sup> The ECB's October 2016 Survey of Professional Forecasters includes inflation forecast means of 0.2% in 2016 (down from 0.3% in the July survey), 1.2% in 2017 (1.2%), and 1.4% (1.5%) in 2018. The longer-term inflation expectations (for 2020) stood unchanged at 1.8%. According to the Commission's surveys, selling price expectations in the retail and services sectors have remained positive although the level remains subdued. The euro area PMI index for input prices increased to a 15-month high in October, whereas selling prices increased for the first time since August 2015.

#### The outlook for inflation remains broadly unchanged...

In 2016, headline inflation in the euro area is projected to come in at 0.3%, which is only 0.1 pps. higher than forecast in spring, reflecting mainly the upward revision in oil price assumptions. In 2017, and as described above, the impact of higher nominal wages and domestic demand, the further narrowing of the output gap, and the assumed moderate increase in oil prices should start feeding into underlying price pressures towards the second half of the year. Headline inflation in 2017 is projected to stand at 1.4%. The impact of the upward revision in oil price assumptions on headline inflation is set to be partly offset by a weaker-than-previously expected gradual increase in the components of core inflation. With upward price pressures remaining subdued well into 2018, inflation is projected to remain at an annual rate of 1.4%.

#### ...while inflation differentials are expected to narrow.

Aggregate HICP inflation rates mask substantial differences between euro area Member States. In 2015, HICP inflation rates in the Member States ranged from -1.5% in Cyprus to 1.2% in Malta. In 2016, inflation rates are expected to range from -1.1% in Cyprus to 1.7% in Belgium; and in 2017, from 0.7% in Cyprus to 2.6% in Estonia. In 2018, all euro area countries are expected to have inflation rates between 1% and 2%, with the exception of Estonia and Lithuania which are expected to have higher inflation rates. The

<sup>(64)</sup> See M. Ehrmann (2015). 'Targeting inflation from below: how do inflation expectations behave?'. *International Journal of Central Banking* 11(Supplement), pp. 213–49.



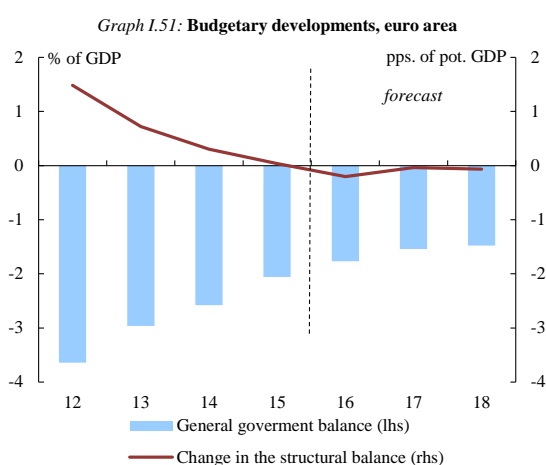
variation in inflation rates is thus expected to narrow after substantial rebalancing and price adjustments after the crisis, with remaining differences reflecting several country-specific factors including differences in real GDP growth, wage growth pressures, convergence in price levels, and the different impact of exchange rate and commodity price movements, which in turn depend on the composition of consumption and industrial structures.

## 8. PUBLIC FINANCES

The general government deficit-to-GDP and gross debt-to-GDP ratios in the euro area continued to decline in 2016, on the back of the ongoing economic expansion and historically low interest rates. Over the forecast horizon, both government deficit and debt ratios are projected to remain on a downward path, albeit at a slower pace than in previous years.

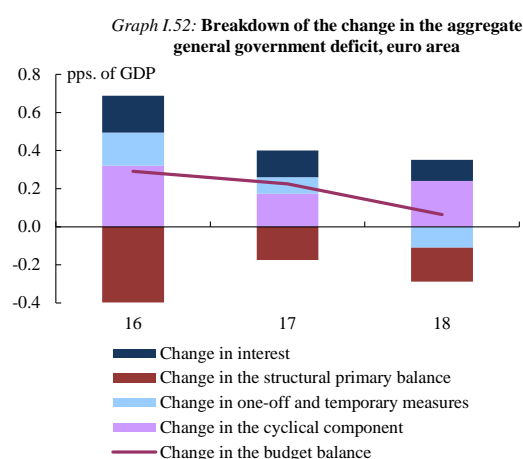
### The government deficit is expected to continue to fall but at a slower pace

In 2016, the aggregate general government deficit in the euro area is expected to fall to 1.8% of GDP (2.0% in the EU), 0.3 pps. of GDP (0.4 pps. in the EU) lower compared to the previous year. It is expected to continue to decline in both areas in 2017 and 2018, albeit at a slower pace than in previous years. In the euro area, the aggregate deficit (see Graph I.51) should fall to 1.5% in 2017 and, under a no-policy-change assumption, remain unchanged in 2018 (compared to 1.7% and 1.6% respectively, in the EU) (see Table I.7).



Several factors are at play when breaking down the change in the headline budget balance for the euro

area on aggregate into its main components (see Graph I.52). More specifically, the ongoing economic expansion as reflected in the change in the cyclical component is expected to make a positive contribution of somewhat more than 0.3% of GDP to the reduction of the aggregate euro area deficit this year. The contribution of the business cycle is projected to fall below 0.2% of GDP in 2017 on the back of the expected slight deceleration of the euro area economy, and to edge up again above 0.2% of GDP in 2018 as economic activity gathers some momentum.<sup>(65)</sup> In some Member States, the unwinding of one-off budgetary factors, in particular associated with support to the financial sector, are also expected to help lower the government deficit in 2016.



After several years of increases in the euro area structural balance, in 2015 the balance remained broadly unchanged. It is projected to fall by 0.2 pps. of GDP in 2016 and around 0.1 pps. in 2017 while remaining broadly unchanged in 2018 (see Section I.9).<sup>(66)</sup> The reduction in interest expenditure continues to have a positive impact on the structural balance, although this effect is expected to decrease over the forecast horizon, from close to 0.2% of GDP in 2016 to around 0.1% in 2018. The decline in interest expenditure reflects depressed long-term interest rates amid negative policy rates, subdued GDP growth expectations but also non-standard monetary

<sup>(65)</sup> For an explanation of the EU methodology for adjusting the budget balance for the business cycle, see Mourre, G., C. Astarita and S. Princen (2014). 'Adjusting the budget balance for the business cycle: the EU methodology'. European Commission, *European Economy Economic Papers* 536.

<sup>(66)</sup> The structural balance corrects the headline balance for both cyclical and one-off and other temporary budgetary factors, and hence isolates the impact of autonomous government policy action and interest expenditure.

Table I.7:

## General Government budgetary position - euro area and EU

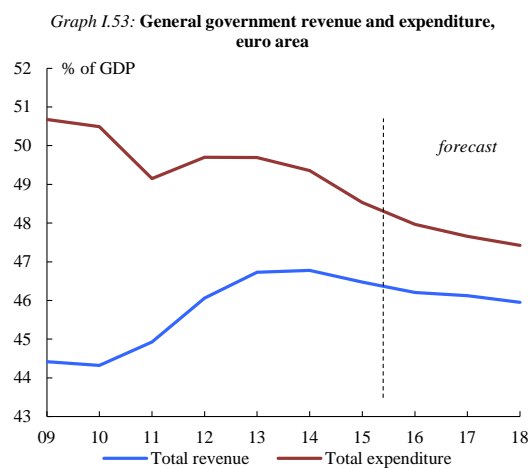
(% of GDP)	Euro area						EU					
	Autumn 2016 forecast				Spring 2016 forecast		Autumn 2016 forecast				Spring 2016 forecast	
	2015	2016	2017	2018	2016	2017	2015	2016	2017	2018	2016	2017
Total receipts (1)	46.5	46.2	46.1	45.9	46.1	46.0	44.9	44.9	44.9	44.7	44.8	44.7
Total expenditure (2)	48.5	48.0	47.7	47.4	48.0	47.6	47.3	46.9	46.6	46.3	46.9	46.5
Actual balance (3) = (1)-(2)	-2.1	-1.8	-1.5	-1.5	-1.9	-1.6	-2.4	-2.0	-1.7	-1.6	-2.1	-1.8
Interest expenditure (4)	2.4	2.2	2.1	1.9	2.3	2.2	2.3	2.1	2.0	1.9	2.2	2.1
Primary balance (5) = (3)+(4)	0.3	0.4	0.5	0.5	0.4	0.5	-0.1	0.2	0.3	0.3	0.0	0.3
Cyclically-adjusted budget balance (a)	-1.2	-1.2	-1.2	-1.3	-1.3	-1.4	-1.7	-1.6	-1.5	-1.5	-1.7	-1.6
Cyclically-adjusted primary balance (a)	1.2	1.0	0.9	0.6	1.0	0.8	0.5	0.5	0.5	0.4	0.5	0.4
Structural budget balance (a)	-1.0	-1.2	-1.3	-1.3	-1.3	-1.4	-1.7	-1.6	-1.6	-1.5	-1.7	-1.7
Change in structural budget balance (a)	0.0	-0.2	0.0	-0.1	-0.3	-0.1	0.1	0.0	0.1	0.0	-0.1	0.1
Gross debt	92.6	91.6	90.6	89.4	92.2	91.1	86.6	86.0	85.1	83.9	86.4	85.5

(a) as a % of potential output. The structural budget balance is the cyclically-adjusted budget balance net of one-off and other temporary measures estimated by the European Commission.

policy measures (see also Section 9).<sup>(67)</sup> The structural primary balance, which excludes interest expenditure, is expected to fall by 0.4 pps. of GDP in 2016 and around 0.2 pps. of GDP in 2017 and 2018.

### Expenditure driving the headline deficit reduction...

The reduction in the aggregate general government deficit-to-GDP ratio over the forecast horizon is expected to be driven by the fact that the general government expenditure-to-GDP ratio is falling somewhat faster than the respective revenue ratio, both in the euro area and the EU (Graph I.53).



The government expenditure-to-GDP ratio in the euro area is expected to decline over the forecast horizon from 48.0% in 2016 to 47.4% in 2018, under a no-policy-change assumption. This decline reflects factors including the reduced expenditure

<sup>(67)</sup> An increase in the average maturity of debt has also been associated with a reduction in the long term interest rate. See, Beetsma, R., M. Giuliadori, and I. Sakalauskaite (2016). 'Long-term interest rates and public debt maturity'. *Economica* (forthcoming).

(as a percentage of GDP) on social transfers as a consequence of the economic recovery and falling unemployment, wage bill moderation in the public sector and lower interest expenditure.

The public investment-to-GDP ratio for the euro area as a whole is set to stabilise at about 2.7% over the forecast period, still standing below the pre-crisis average. In some Member States, positive contributions to total investment growth are expected over the forecast horizon, as projects from the new programming period of EU funding enter the implementation phase. Also, the revamped Investment Plan for Europe should have a positive impact on public investment, notably in the outer years of the forecast horizon. Increases in public investment could boost demand and have positive spillover effects on other Member States.<sup>(68)</sup>

The government revenue-to-GDP ratio is expected to decline as well but to a lesser extent than the government expenditure ratio. The revenue-to-GDP ratio in the euro area is set to continue its gradual decrease from its peak of 46.8% in 2014 to 45.9% in 2018, under a no-policy change assumption. This decrease reflects factors including a reduced weight (as a percentage of GDP) of income taxes and social contributions, stemming from measures to reduce the tax burden on labour.

### ...while government debt is set to continue to decline from a high level.

In 2016, the general government debt-to-GDP ratio is expected to continue its downward trend to

<sup>(68)</sup> For an analysis for surplus countries, see In 't Veld, J. (2016). 'Public investment stimulus in surplus countries and their euro area spillovers'. *European Economy Economic Brief 16* (European Commission – DG ECFIN).

91.6% in the euro area (86.0% in the EU). Over the next two years, the government debt ratio is projected to continue declining gradually. In the euro area, the general government debt-to-GDP ratio is forecast to decline to 90.6% in 2017 (85.1% in the EU) and, under a no-policy-change assumption, to 89.4% in 2018 (83.9% in the EU). Debt reduction finds its roots both in higher primary surpluses and in a more favourable snow-ball effect driven by reduced interest expenditure, modest real GDP growth and the expected uptick of inflation (Table I.8).

## 9. MACROECONOMIC POLICIES IN THE EURO AREA

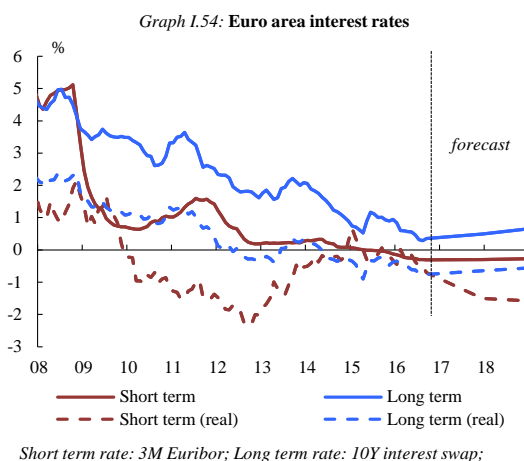
Monetary conditions in the euro area are accommodative, with low financing costs and credit supply conditions that have been easing. Based on the customary assumptions,<sup>(69)</sup> monetary conditions are set to remain accommodative over the forecast horizon. The fiscal policy stance turned broadly neutral in 2015 and is not expected to turn restrictive again over the forecast horizon. These developments should be seen against a backdrop of the fragile and uneven global recovery that is subject to considerable political and economic risks.

### Monetary conditions are expected to remain accommodative

The full implementation of the set of monetary policy measures introduced in recent years is expected to maintain downward pressure on both bank lending rates and bond yields and thus to ensure that monetary conditions remain accommodative. The ECB's asset purchases under the corporate sector purchases-programme (CSPP) that started in June 2016 should additionally ease financing conditions for non-financial corporations directly as well as indirectly through portfolio rebalancing effects, e.g. by freeing up space in bank balance sheets for lending to SMEs. At the same time, the effects of the negative deposit facility rate on money markets and lending conditions should be reinforced by the growing excess liquidity generated through the asset purchases, thereby exploiting the synergies between the different policy instruments in the

transmission of the effects of the ECB's asset purchases to the real economy through both banks and financial markets.

In the money market, the overnight rate (EONIA) has adjusted smoothly to the latest cut in the ECB's deposit facility rate and is expected to remain close to current levels over the forecast horizon, as indicated by EONIA forward rates. Since spring, the three-month Euribor gradually declined further while the three-month Euribor-OIS spread, a measure of interbank market stress, narrowed. While real short-term interest rates in the euro area have been below zero for most of the past six years, the decline in inflation rates drove them temporarily above zero in 2015, before decreasing back into negative territory since March 2016 (Graph I.54)<sup>(70)</sup>. Reflecting the flattening of the yield curve, real long-term interest rates derived from inflation and interest rate swaps also became negative in mid-2014. Forward rates suggest that both nominal short- and long-term rates will only increase gradually over the forecast horizon, which taken together with the expected pick-up in inflation, implies that real interest rates should remain in negative territory over the forecast horizon.



Monetary policy uses a variety of (standard and non-standard) tools, affecting various economic variables with different and time-varying lags. Any indicator reflecting the monetary policy stance or monetary conditions therefore bears the risk of oversimplifying a complex reality.

<sup>(69)</sup> The interest rate assumptions underlying the forecast are market-based; nominal exchange rates are assumed to remain constant with respect to a base period. For details, see Box I.6 in this document.

<sup>(70)</sup> Real rates are derived from the respective short or long-term rate minus annual HICP inflation and expected average inflation according to 10-year inflation swaps, respectively. Forecasts are derived from forward interest rate swaps deflated by the inflation forecast and market-based measures of inflation.

Table I.8:

## Euro-area debt dynamics

	Average 2004-11	2013	2014	2015	2016	2017	2018
General government gross debt ratio <sup>1</sup> (% of GDP)	73.4	93.7	94.4	92.6	91.6	90.7	89.4
Change in the ratio	2.3	2.2	0.7	-1.8	-1.0	-0.9	-1.2
Contributions to the change in the ratio:							
1. Primary balance	0.4	0.2	-0.1	-0.3	-0.4	-0.5	-0.5
2. "Snow-ball" effect <sup>2</sup>	0.9	1.9	0.8	-0.5	-0.3	-0.4	-0.8
Of which:							
Interest expenditure	2.9	2.8	2.7	2.4	2.2	2.1	2.0
Growth effect	-0.8	0.2	-1.1	-1.9	-1.5	-1.4	-1.5
Inflation effect	-1.1	-1.2	-0.8	-1.0	-1.0	-1.1	-1.3
3. Stock-flow adjustment	1.0	0.2	0.0	-1.0	-0.3	0.0	0.1

<sup>1</sup> End of period.

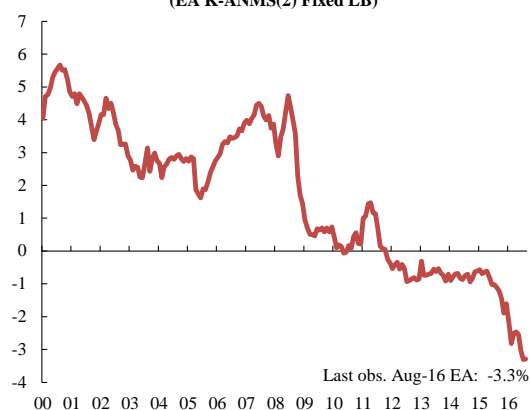
<sup>2</sup> The "snow-ball effect" captures the impact of interest expenditure on accumulated debt, as well as the impact of real GDP growth and inflation on the debt ratio (through the denominator). The stock-flow adjustment includes differences in cash and accrual accounting, accumulation of financial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

Note: A positive sign (+) implies an increase in the general government gross debt ratio, a negative sign (-) a reduction.

Two indicators are looked at. A shadow interest rate <sup>(71)</sup> is displayed as an approximate measure of the monetary policy stance in times when the policy rate is restricted by the lower bound on interest rates (see Graph I.55). While the overall level of the shadow rate should be interpreted with caution, <sup>(72)</sup> its change over time nonetheless illustrates the support provided by ECB actions and in particular the accommodative effect of the public sector asset purchase programme that started in March 2015. The latter is reflected in the steep downward movement in the shadow interest rate.

The transmission of these developments to the financing conditions in the non-financial private sector is captured by the decline in the composite credit cost indicators (CCCI) <sup>(73)</sup> for non-financial corporations and households (see Graph I.56). Credit costs for both non-financial corporations and households decreased further on balance since the beginning of the year.

Graph I.55: Euro area shadow rate  
(EA K-ANMS(2) Fixed LB)

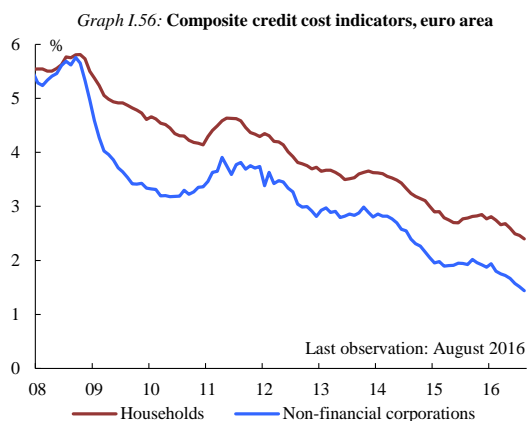


Moreover, a considerable amount of the easing packages introduced by the ECB over the past year have yet to be implemented, as two targeted long-term refinancing operations (TLTRO-II) have yet to be carried out and the asset purchases of EUR 80 billion per month are set to be running at least until March 2017. This feeds market expectations that the Eurosystem balance sheet is likely to stay at an elevated level over the forecast horizon. In the light of the inflation forecast for the euro area, this seems consistent with the ECB's forward guidance to keep interest rates at low levels well past the end of the asset purchases. Therefore, monetary conditions are expected to remain very accommodative over the forecast horizon.

<sup>(71)</sup> The shadow interest rate is a hypothetical estimated short term rate that would be consistent with the OIS curve term structure in the absence of a lower bound on interest rates. The estimates presented here are based on the methodology of Krippner, L. (2013). 'Measuring the stance of monetary policy in zero lower bound environments'. *Economics Letters* 118(1), pp. 135-8. There are considerable uncertainties in particular surrounding the level of shadow rate estimates, which should therefore be interpreted cautiously.

<sup>(72)</sup> See, Carnot, N., Clemens, U., Larch, M. and B. Vasicek (2016). 'The macroeconomic policy mix in the euro area, when monetary policy is at the zero lower bound (ZLB)'. European Commission, *Quarterly Report on the Euro Area* (forthcoming).

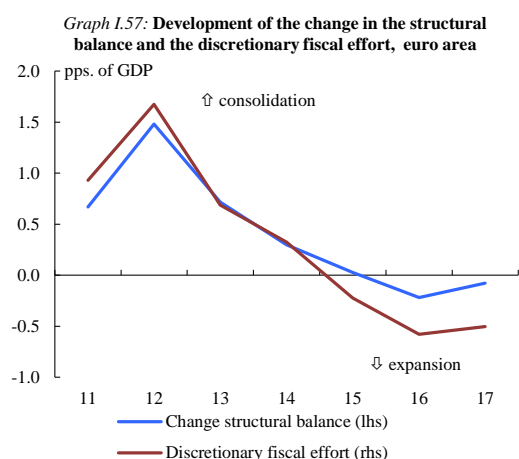
<sup>(73)</sup> The CCCIs are calculated as weighted averages of interest rates on different types of bank loans and corporate bonds (in case of non-financial corporations).



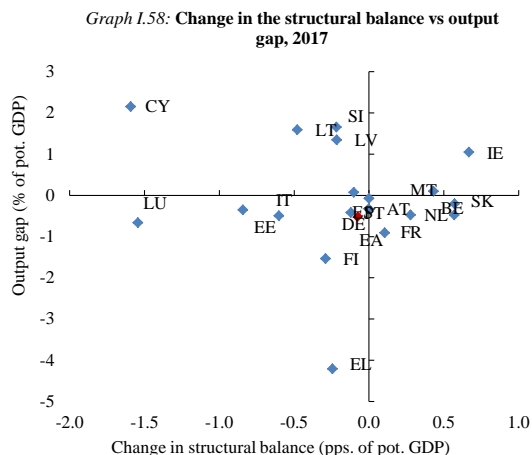
Sources: ECB, Bloomberg, own calculations

**Fiscal policy is no longer restrictive**

The fiscal stance in the euro area, as measured by the change in the structural balance, stopped being restrictive in 2015 and is not expected to turn restrictive again over the forecast horizon (see Graph I.57). The discretionary fiscal effort, which is an alternative measure of the size of discretionary fiscal policy (computed by adding up discretionary measures on the revenue side and by measuring the gap between potential growth and expenditure growth on the expenditure side) signals the same departure from the strong fiscal consolidation efforts undertaken in previous years (see Graph I.57).

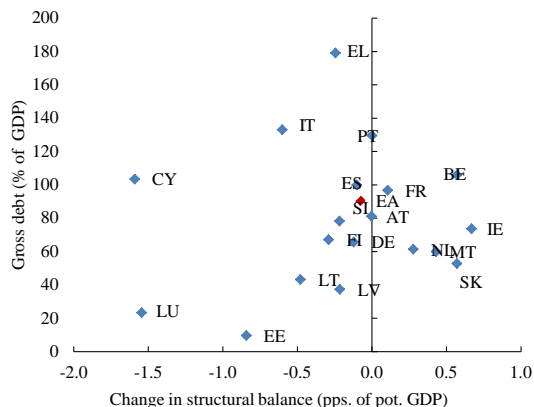


The picture varies significantly in individual Member States. Considering Member States' output gaps, individual countries are widely dispersed in terms of the change in their structural balance in 2017 (see Graph I.58). The output gap has been negative for several years in some Member States.



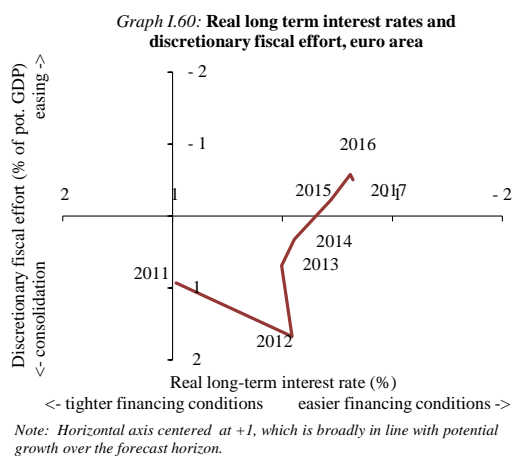
At the same time, national fiscal stances seem to give more attention to the economic stabilisation aim. There is not always a relation between the expected fiscal effort (in terms of the change in the structural balance) and the level of debt-to-GDP (Graph I.59). Given that debt ratios are still high in many Member States, there remains a risk that the snowball effect – currently dampened by low interest rates – could turn less favourable again, weighing on the budget balance.

Graph I.59: Change in the structural balance vs government debt, 2017



This year and next, the policy mix in the euro area is reflected at the interplay between financing conditions and fiscal policy (see Graph I.60). The additional measures taken by the ECB since the end of 2014 have exerted continued downward pressure on nominal long-term rates. However, monetary easing was only partially transmitted to real rates as long-term inflation expectations remained subdued. For 2016, real long-term rates (derived from the 10-year swap rate deflated by inflation expectations) are expected to decline further. Looking ahead to 2017, financing conditions are expected to remain easy. At the same time, as illustrated by the discretionary fiscal

effort, fiscal policy has significantly eased over the past years and is not forecast to become restrictive.



Overall, the policy mix in the euro area should be considered in the context of the fragile and uneven global recovery and heightened uncertainty. Given this backdrop, the G20 committed earlier this year to use all economic policy tools individually and collectively to address the legacies of the financial crisis and strengthen growth, investment and financial stability (see Section I.2).

## 10. RISKS

Risks to the growth outlook remain tilted to the downside. Both upside and downside risks have intensified in recent months, mainly in the wake of the UK vote on EU membership in June. The standard upside and downside risks accompany the assumptions underlying this forecast (e.g. monetary policy, interest rates, exchange rates, commodity prices, global trade elasticity). For instance, a renewed fall in oil prices but also a faster rebound would impact on the pace of economic growth and the projected rebound in inflation.

### 'Brexit'-related risks are predominantly on the downside...

With the long-term set-up of relations between the UK and the EU still unknown (e.g. trade regimes, migration and labour mobility), risks to the growth outlook have become more prominent on both sides. However, studies on the impact of 'Brexit' overwhelmingly suggest that the risks are predominantly to the downside. Depending on the exit negotiations, consumers, corporations, or governments could already respond to changes

during the forecast years. An extended period of uncertainty could magnify the negative impact. Decisions on the free movement of UK and EU citizens could impact on labour markets in both the UK and the countries of origin. Upside risks relate in some Member States to the possible relocation of financial services from the UK or the redirection of FDI flows. All these aspects remain unknown and are therefore not incorporated in the central scenario of the forecast. The 'Brexit' vote has highlighted and probably further increased risks to the continuation of globalisation and free trade arrangements and thereby to the outlook for global trade. The leave vote could also be seen as an indicator of increased political risks deriving from trends towards protectionism, de-globalisation, nationalism and isolationism in Europe and globally.

Although very short-term risks associated the referendum have not materialised, all risks related to the negotiation process, the future situation (steady state), and the adjustment towards it, are likely to play out gradually and are unlikely to fully materialise until beyond the forecast horizon.

### ...adding to pre-existing risks on the external and the domestic side...

On the external side, several downside risks already identified in spring remain relevant. First, emerging market related risks remain a concern. A hard landing for China in its transition or sudden stops in capital flows to vulnerable emerging market economies would affect global activity and impact negatively on the euro area. Second, the rebound in advanced non-EU economies that reported low economic growth in the first half of the year could be weaker than currently envisaged, as cycles may already be more mature than thought. Third, discussions of free-trade agreements and election campaigns have pointed to risks related to possibly increasing protectionism. Fourth, geopolitical risks remain intense. The conflict between Ukraine and Russia is still ongoing and military action in Syria and Iraq has intensified in 2016. In Europe, security threats remain elevated following the recent attacks in several Member States.

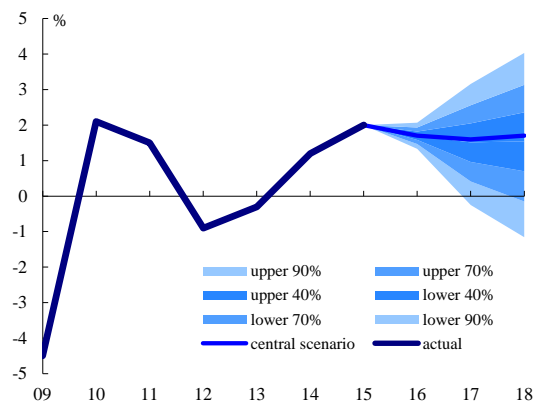
On the domestic side, risks have also increased. First, the capacity of the banking sector to accompany an expansion of investment might be more limited than expected in view of the banking sectors' low profitability (against the backdrop of a

flat yield curve, and, in several Member States, overbanked markets and high NPLs) and upcoming capital requirements. The profitability outlook for banks could further unsettle investor confidence. Second, the pace of structural reforms may have slowed more than already documented. In a context of heightened financial and economic policy uncertainty, there is also a risk of the reversal of the process of structural reforms and adjustment of imbalances, which is still not complete, and of paralysis of the process of European integration. Third, a return of problems in vulnerable economies cannot be ruled out. Fourth, the risk of becoming stuck in a low-growth, low inflation equilibrium due to self-fulfilling expectations remains.

...which paint overall the picture of more fragile economic growth...

Recent developments in risks to the euro area growth outlook are visible in the fan chart (see Graph I.61), which depicts the probabilities associated with various outcomes for euro area economic growth over the forecast horizon and shows the most likely development in the darkest area. While the intensification of risks results in the widening of the confidence bands for given probabilities, the prevalent dominance of downside risks is visible in the asymmetry of these bands

Graph I.61: Euro area GDP forecast - Uncertainty linked to the balance of risks



...and higher risks surrounding the inflation outlook.

Risks to the inflation outlook have intensified, but remain broadly balanced. The 'Brexit'-related risks to the growth outlook have an equivalent impact on the inflation side, as any materialisation that slows economic activity would lower price pressures and weigh on consumer price inflation.

On the domestic side, the long period of relatively low shorter term inflation expectations could increasingly de-anchor also long-term inflation expectations and impact on wage and price setting. However, several of these downside risks, if they were to materialise, could be expected to trigger a depreciation of the euro, which would then partly offset the initial impact on consumer prices.

**Box 1.1: Main drivers of growth in 2017 - shock decomposition from an estimated model**

This box uses an estimated multi-region structural macro model <sup>(1)</sup> in order to provide a model-based quantification of the main drivers of euro area (EA) GDP growth in 2017. The model has been estimated on historical quarterly data for the period since 1999-Q1 and extended with forecast data from the European Commission's forecast for the set of available variables. The methodology allows decomposing deviations of real GDP growth from the long-run trend into the underlying shocks that drive the short- and medium-term dynamics. Hence, the decomposition provided in this box takes the European Commission's forecast as an input to recover the factors that explain the forecast in a model-consistent way. In other words, the analysis presents the exogenous factors ("shocks") that provide a model-consistent interpretation of the GDP growth forecast.

The advantage of using an estimated structural macroeconomic model to decompose economic dynamics is that the former uses all information in the dataset. Notably, the size of shocks to the model economy (e.g., financial, savings, and productivity shocks) is determined in such a way that these shocks fit not only the movement of GDP, but also the dynamics of other variables (including investment, consumption, the exchange rate, and employment) and the correlations between them (e.g., the correlation between GDP and inflation, or the correlation between employment and wages).

It should be noted, however, that the model-based decompositions are not necessarily identical with the impact that the same factors have in the European Commission's forecast. The driving factors recovered in the model-based analysis are conditioned on the structure of the model and the estimated parameter values, which have been obtained by fitting the model on seventeen years of quarterly data.

Not all estimated shocks can be interpreted directly in the sense of recovering the fundamental "causes" of fluctuations (behavioural, policy, etc.) within a model of tractable size. For instance, changes in financial risk premia and financing costs that affect interest-sensitive domestic demand, notably investment, and the exchange rate in the model can emanate from various sources that are not further analysed in the model, including regulatory policies

<sup>(1)</sup> These results are based on the Global Multi Country (GM) model developed by DG ECFIN and the Joint Research Centre of the European Commission.

and non-standard monetary policy measures (QE). The simplified structure of the multi-region macro model and most other dynamic stochastic general equilibrium models alone does not identify the specific "events" behind the shock in such cases.

The estimated persistence of variables in the model, which is related, e.g., to price and wage stickiness, habit persistence, inertia in adjusting the capital stock and labour demand, and gradual adjustment of monetary and fiscal policies, implies that past events affect future economic outcomes together with current news and expectations about future developments.

Table 1 presents a decomposition of EA real GDP growth for 2017 as projected by the European Commission's forecast (1.5%) into its principal drivers based on the estimated multi-region model. The table summarises the large number of shocks in main groups of supply- and demand-side drivers and separates the contribution of past and future shocks. The first column ("historical") shows the contribution of shocks that occurred up to 2015-Q4 to the outlook for EA GDP growth in 2017, a contribution that is based on the persistence in the transmission channels in the model. The second column ("forecast") shows the contribution of shocks over the 2016-18 horizon. Shocks over the 2016-18 horizon are additional innovations in exogenous variables that the model requires to fit the forecast given the historical data and estimated shocks. The contribution of historical and forecast-horizon shocks adds up to the total impact of the various supply and demand forces, shown in the third column ("total"). Other factors, i.e. exogenous determinants outside the listed groups of supply- and demand-side drivers, are summarised in the "others" group.

The trend component (1.4%) in Table 1 is the attainable long-run growth rate if the euro area economy were to grow with the average growth rates of total factor productivity (TFP) and the population of working age as observed over the period since 1999. Real GDP growth is forecast to exceed trend growth by 0.2 percentage points (pps.) in 2017 due to positive shocks that outweigh negative factors.

The decomposition in Table 1 shows that there are positive and negative contributions from supply- and demand-side factors alike. The overall impact of past supply-side developments ("historical") on the deviation of GDP growth from trend is neutral,

*(Continued on the next page)*



Box (continued)

whereas the impact of new shocks over the forecast horizon (“forecast”) is slightly negative.

Table 1:  
Shock decomposition for real GDP growth in 2017

	Historical	Forecast	Total
<b>Supply:</b>			
Long-run trend			1.4
TFP	-0.2	-0.2	-0.4
Labour & goods market adjustment	0.2	0.0	0.2
Oil	0.0	0.0	0.0
<b>Demand:</b>			
<i>Domestic:</i>			
Consumption	0.1	0.0	0.1
Investment	-0.1	0.0	-0.2
Fiscal spending	-0.1	0.0	0.0
Monetary policy	0.5	0.0	0.5
<i>Foreign:</i>			
World demand and int. trade	0.5	-0.5	0.0
Exchange rate	-0.1	0.0	-0.1
<b>Others</b>			-0.1
<b>Real GDP growth (from forecast)</b>			<b>1.5</b>

Note: The contributions of historical shocks and shocks over the forecast horizon do not add up to total in some cases due to rounding to the first digit.

The decomposition finds negative contributions of TFP in previous years and over the forecast horizon (-0.2 pps. each) to the forecast for EA real GDP growth, which suggests that TFP growth remains subdued and below the long-run trend over the forecast horizon. Deducting the negative impact of the slowdown in TFP on 2017 GDP growth (-0.4 pps.) from long-term trend growth (1.4%) gives a growth rate of 1.0%, which coincides with the current-vintage estimate of EA potential growth in 2017.

Labour and goods market adjustment in the past (0.2 pps.) has made a positive contribution on the supply side. The positive contribution is driven by wage developments. In particular, the model interprets moderate real wage growth compared to labour productivity growth, accompanied by declining unemployment, as structural adjustment of wages in the EA labour market, i.e. as positive labour supply shock that strengthens employment and economic activity. The contribution of product market factors is slightly negative. In particular, the GDP deflator increases more strongly than unit labour costs on average over the 2016-18 period, which the model interprets as increase in the price mark-up.

Falling oil prices, which reduce firms’ production costs and boost household real disposable income, have been an important stimulus to EA GDP growth in previous years. For 2017, the positive contribution disappears in light of the recent recovery of oil prices and the further recovery that is embodied in the forecast’s external assumptions.

On the demand side, one can distinguish between domestic and foreign factors. Among the domestic-demand factors, the model-based decomposition points to a small positive contribution (0.1 pps.) of the evolution of household savings in past years, namely a saving rate below the sample average, to private consumption and real GDP growth. The contribution of shocks to consumption behaviour over the forecast horizon is zero in light of the stabilising of the savings rate.

Investment growth in 2017 is strong compared to consumption growth, but it is still held back by estimated investment risk premia (financing costs, access to finance) in the model. The decomposition attributes -0.1 pps. of GDP growth to the delayed impact of elevated risk premia (financing costs) in the recent past, without significant contribution of new investment shocks over the forecast horizon.

While a -0.1 pps. negative contribution to 2017 EA real GDP growth is recorded for historical shocks to fiscal spending (government consumption and investment), the discretionary fiscal expansion that is embedded in the fiscal forecast does not make a significant positive contribution to GDP growth. It should be stressed, however, that the fiscal shock in Table 1 measures the impact of deviations of fiscal policy from estimated patterns of fiscal behaviour over the sample period. These deviations are not identical to the fiscal impulse as measured by the primary government balance.

A strong positive impact (0.5 pps.) is assigned by the model to monetary policy shocks that occurred before 2016. Monetary policy has been tighter than prescribed by the model’s estimated Taylor rule and this partly reflects the fact that the zero bound has prevented a further reduction of short-term policy rate. The constraint on interest rates has negatively affected EA output in recent years, leading to a lower level of economic activity and a more negative output gap. Together with the assumption of a closing of the output gap this negative past impact on activity, however, implies a positive effect on GDP growth during the forecast horizon.

Robust growth of foreign demand and trade until 2014 has contributed to EA GDP growth and remains a positive factor (0.5 pps.) for GDP growth in 2017 due to the estimated persistence in demand and price adjustment. World demand and trade growth have slowed down in 2015-16, however. The forecast includes a pick-up of external demand and trade in 2017, but the dynamics remains weaker than over the sample average and the recent

(Continued on the next page)

*Box (continued)*

past. The weaker external demand over the forecast horizon, in particular in 2016, has the consequence that external demand no longer contributes positively to the gap between EA GDP growth and trend growth in 2017. Exchange rate assumptions for the forecast horizon, which imply limited real effective euro appreciation, do not imply competitiveness gains that could mitigate the impact of external demand.

Summarising the picture of growth drivers in Table 1, the overall GDP growth contribution of new shocks on the listed supply and demand factors over the forecast horizon is clearly negative (-0.7 pps.), with a strong downside contribution from external factors. The downside impact of developments within the forecast horizon can be interpreted as a slowdown of the recovery in 2017.

**Box 1.2: The shape of the euro-area banking sector and implications for the economic outlook**

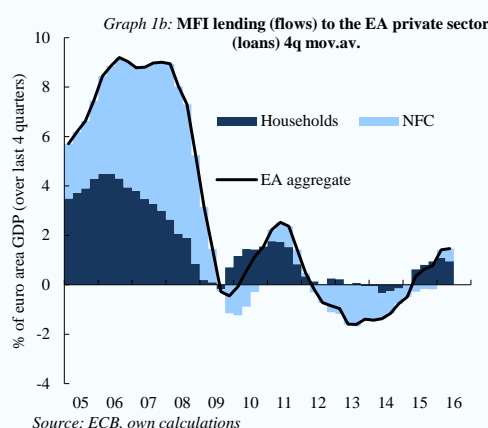
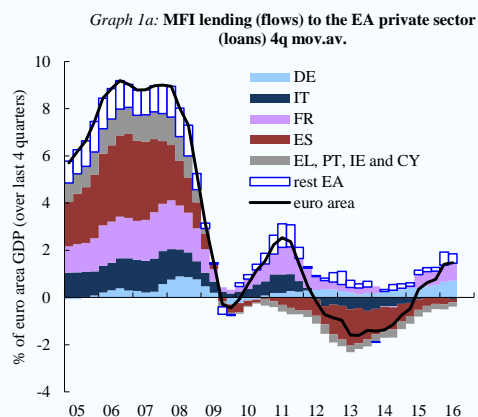
Credit plays a crucial role for the allocation of capital in an economy, especially in the euro area where the bulk of it is provided by the banking system. Empirical research confirms the importance of credit not only as a driver of the business cycle and inflation, but also for long-term growth.<sup>(1)</sup> Credit flows have a leading and causal impact on investment, growth and growth multipliers (even if the causality sometimes runs both ways).

Credit in the euro area started recovering only recently. Lending decreased during 2012-14, partly due to a further episode of tightening in credit standards which took place in the broader context of the prolonged period of unprecedented tightening which followed the 2008 financial crisis. But since early 2015, overall credit standards have been easing noticeably promoting loan expansion in the Member States less affected by the crisis, and reducing credit pressure in the majority of the most affected Member States (Graph 1a). The easing in lending conditions may have helped to halt the decline of investment as a share of GDP (an increase to 20% of GDP is projected for 2016).

The recovery of euro area lending has mostly rested on expanding mortgages, while lending to the non-financial corporate sector (NFCs) remains weak (Graph 1b).

New loans to households are expanding and are matching their 2011 growth rates, partly due to mortgage growth in Germany. In contrast, lending to NFCs remains weak despite some improvement. After averaging minus 1% of GDP p.a. during 2012-14, new NFC loans amount to 0.5% of GDP since mid-2015. While flows have returned to 2011 levels in most Member States, some countries defy that trend. For instance, credit contraction in Italy remains particularly severe. Monetary policy has helped to halve nominal interest rates on new loans to Italian NFCs since 2012, and stabilize household loans. But NFC loans continue to decline, and remain 12% below their 2011 level. As a result, private investment has fallen to a low of 14.2% of GDP in 2015, 4.5 percentage points below its (already sub-par) 2007 level.

<sup>(1)</sup> Much of this research is based on the seminal work by Levine, Loayza and Beck (2000) *Financial intermediation and growth: Causality and causes*. While it is financial development, not credit *per se*, which is the focus of the analysis, the former is usually measured by credit to the private sector as a share of GDP.



Source: ECB, own calculations

Going forward, the prospects for more dynamic bank lending will be determined *inter alia* by the banking sectors' health and in particular its current and prospective capital position. Thanks to years of monetary accommodation, the availability of liquidity is unlikely to pose a constraint in the foreseeable future. However, the capital position of the euro area banking system faces a set of challenges which warrant close monitoring. Its capacity to weather shocks has greatly improved and continues to do so, making stability risks less of a concern for policy makers. But the system's capacity and readiness to support credit and growth going forward will critically depend on the extent to which banks expect their capital buffers to comfortably cover the risk related to new lending.<sup>(2)</sup>

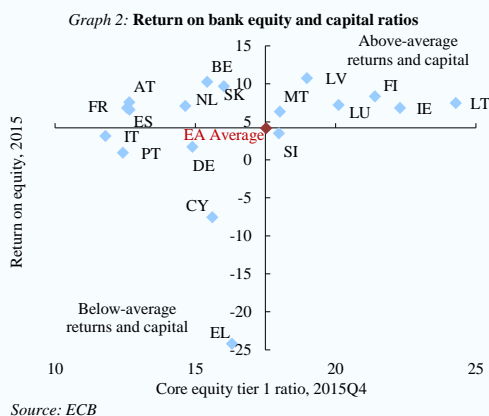
<sup>(2)</sup> Concerning the link between bank capital and lending, see *inter alia* Gambacorta and Shin (2016): *Why bank capital matters for monetary policy*. BIS Working Papers No 558 as well as Cohen and Scatigna (2014): *Banks and capital requirements: channels of adjustment*. BIS Working Papers No 443.

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Box (continued)

Since retaining earnings is the easiest way to strengthen capital positions, profitability remains under scrutiny in this context. In 2015, bank profitability in the euro area improved. This was due to receding losses from non-performing exposures in some banking systems as well as increasing asset prices also thanks to the effects of financial asset purchases from monetary authorities. However, going forward bank profitability is likely to get under pressure.

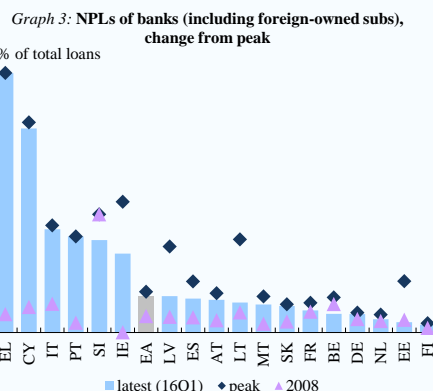
Importantly, these nuanced dynamics take place against the backdrop of persistently low levels of profitability as highlighted by many observers (ECB, OECD, IMF). Low profitability levels and subdued prospects are mainly driven by three factors, which apply to the different Member States in different degrees (see Graph 2). First, legacy issues from previous stages of the cycle such as high levels of non-performing exposures and/or provisioning needs for legal costs; second, a fractionalized sector with high overhead and operational costs; and third, business models that are challenged by the low yield environment, technological change and competition from non-banks. Given the outlook described above, already low profitability in combination with a relatively weak capital position (SW quadrant in Graph 2) constitutes an important concern.



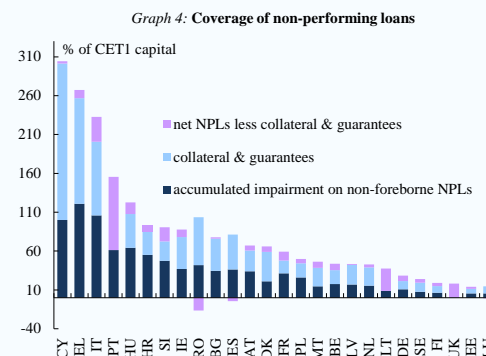
In addition to directly limiting bank's sources of capital, low profitability also makes alternative sources of capital less accessible. In combination with the unfavourable prospects indicated above, it already translated into a noticeable stock market underperformance when compared with the broader economy, accentuated since late 2015. From beginning of 2016 until August, when the results of the EBA stress tests were revealed, the market capitalisation of euro area banks declined by close to a quarter of their total value. When compared with US peers, European banks continue to trade at

a significantly smaller fraction of their book value. As a consequence, banks have little incentive to issue new shares for capital-raising purposes.

As for the underlying causes of low profitability, the prevalence of non-performing loans in Italy has lately received much attention in the media. However, the issue is of importance for a number of banking systems (Graph 3).



While the level of NPLs has fallen from its post-crisis peak in nearly all of them, it still remains exceptionally elevated in several countries when compared with pre-crisis levels. The degree to which NPLs are covered by provisions and collateral also varies across banking systems (see Graph 4).



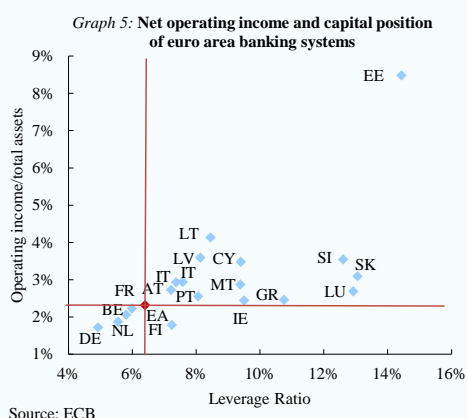
Situations where the amount of NPLs is neither covered by sufficient provisioning nor by a realistic assessment of the value of the underlying collateral are of particular concern. In these cases, banks need to be particularly wary to ensure that their NPL portfolio does not further impinge on their capital positions. Thus, they can be expected to be particularly cautious concerning new lending.

(Continued on the next page)

Box (continued)

In addition, the European banking sector is still characterised by national specificities and different degrees of competition in different segments of the market (e.g. financial institutions of different client base and/or size). In some segments and Member States, banks still carry particularly high overhead and operational costs which is coming under increasing pressure with a view to make better use of synergies and economies of scale.

Finally, the shift away from trading activities, growing competition from alternative advisory service providers (i.e. putting pressure on fee income), the increasing need for technology investment (including addressing competition from fintechs) and costs of safeguarding against higher operational risks are limiting banks' capability of exploiting alternative sources of income in a situation where the low yield environment is starting to eat into profits from traditional maturity transformation. Operating profits are already very low in a number of banking systems (Graph 5).



Interestingly, those systems where deposit funding is relatively important, fare particularly bad in this respect. This could be because banks are reluctant to reduce deposit rates too significantly<sup>(3)</sup> either as they account for a large part of funding (Germany, Belgium) or, conversely, they are relatively scarce entailing upward price competition (Netherlands, France). High market fragmentation and high costs further add to the pressure in some banking systems.

These developments may not have an immediate visible impact on the capital position, but given the underlying problems, persistence of low yields will increase their severity over time. As low operating

income margins are observed to be associated with low regulatory capital relative to assets (leverage ratio), capital constraints could quickly become binding in some banking systems, especially if hitherto unaccounted risks for the solidity of balance sheets materialise.

While required for ensuring financial stability at all times, new regulatory requirements will need to be managed going forward. The upcoming review of Regulation (EU) No 575/2013 (CRR) and of Directive 2013/36/EU (CRD IV) will introduce some regulatory innovations. While these are the outcome of international and European discussions and as such already mostly anticipated, those banks that have not already adjusted their balance sheets will be required to do so over the coming years. Most importantly, this is expected to include implementation of limits to banks' leverage as well as strengthened loss absorption capacity through the internationally agreed to "Total Loss Absorption Capacity" (TLAC) requirement and the minimum requirement for bail-in-able liabilities ("MREL") required by Directive 2014/59/EU (BRRD). Moreover, transitory regimes for regulatory capital requirements, in particular concerning the gradual build-up of a capital conservation buffer of 2.5% of risk weighted assets, will completely fade out by 2018.

All of these observations are supportive of a nuanced picture concerning the capital position of banks in the euro area and their capacity to support or even promote economic growth by means of new lending. Subdued profitability appears to result from a number of factors and is a relatively widespread phenomenon, and the low-yield environment makes it less sustainable biting ever more the longer it persists. Member States where banks already suffer from low profitability given structural features, may hence relatively soon add to those facing difficulties today. As NFC loans in particular bear higher capital and surveillance costs than investment-grade bond purchases or household loans, such difficulties have the potential to mutate into an important bottleneck for wider economic developments relatively soon. Also for this reason, efforts to create a European Capital Markets Union as priority are geared towards opening up more diverse sources of funding to the economy.

<sup>(3)</sup> Cœuré (2016): *Assessing the implications of negative interest rates*. Speech at the Yale Financial Crisis Forum, Yale School of Management, New Haven, 28 July 2016

### Box 1.3: What survey data tell us about Inequality

Advanced economies have registered a trend increase in inequality over recent decades, as documented prominently by T. Piketty's (2014) 'Capital in the Twenty-First Century'. The 2008-09 financial crisis and ensuing sovereign debt crisis have added to the resulting distributional concerns. While relevant from a point of view of social justice, inequality developments also have a number of possible effects on growth, as discussed, with a particular focus on short-term developments, in the EC Spring Forecast 2016 (Part I, chapter 1).

This box presents an indicator of developments in financial inequality among households based on consumer surveys. This indicator has the advantages of timely availability, long and complete time series and broad coverage of EU Member States and candidate countries.

After describing the construction of the indicator, the box embarks on a preliminary analysis of developments in selected Member States.<sup>(1)</sup>

In spite of its topicality, the analysis of inequality developments arguably (still) suffers from a scarcity of appropriate indicators which, on top, suffer from a number of shortcomings:

- (i) they mostly focus on income inequality (after taxes and transfers), while (net) wealth inequality is arguably at least equally important to grasp societal differences in economic well-being<sup>(2)</sup> and seems to be more pronounced than income inequality;<sup>(3)</sup>
- (ii) income and wealth surveys are conducted rather infrequently and irregularly;<sup>(4)</sup>
- (iii) the history of most income/wealth studies is short, making it impossible to track inequality developments over longer periods;
- (iv) given a lack of methodological harmonisation, cross-country comparisons have limited meaning;
- (v) relatively high-income/wealthy respondents are prone to underreport their income/wealth, leading to downward-biased inequality indicators.<sup>(5)</sup>

This box describes an innovative, alternative way of getting an indication of inequality developments which could complement the existing indicators.<sup>(6)</sup> The idea is to extract information on inequality from the results of the Joint Harmonised EU Consumer Survey Programme, which collects every month qualitative assessments of some 40,000 consumers across Europe in respect of their personal finances, consumption plans, etc. The survey question particularly useful for the purpose is the following: "How has the financial situation of your household changed over the last 12 months?" The responses are summarised in a so-called balance, i.e. the share of replies indicating an improvement minus the share of those reporting a deterioration. The annual<sup>(7)</sup> inequality indicator is constructed as the difference between the balance statistics of the highest and the lowest income quartile reflecting the difference between "rich" and "poor" households.<sup>(8)</sup> As lower-income households show a generally more pessimistic reporting behaviour than richer households, irrespective of the question concerned, the indicator is adjusted for such differences.<sup>(9)</sup>

The resulting inequality indicator provides an indication of whether (i) inequality is increasing or decreasing (depending on which of the two balance series is larger) and (ii) the speed at which the two categories approach each other or drift apart

<sup>(1)</sup> The indicator is at this stage still experimental. Results should therefore be seen as preliminary, further analysis being required in particular to better understand country-specific developments.

<sup>(2)</sup> The ECB's Eurosystem Household Finance and Consumption Survey (HFCS) is the only (euro-area wide) wealth study with a single wave released so far. Own calculations on the basis of HFCS data show that households' wealth is 7-15 times larger than their annual income.

<sup>(3)</sup> See OECD (2015). *In it together – Why less inequality benefits all*. Paris: OECD.

<sup>(4)</sup> There is, e.g., a 5-year gap between the last wave of the European Community Household Panel and its successor, the European Union Survey on Income and Living Conditions.

<sup>(5)</sup> The ECB finds indications of such a phenomenon, when comparing its HFCS results with mean wealth levels per person, as derived from national accounts; see ECB (2013). 'The eurosystem household finance and consumption survey – results from the first wave'. *Statistics Paper Series No 2 / April 2013*.

<sup>(6)</sup> An earlier version was published by the EC (2016). 'What survey data tell us about inequality'. *European Business Cycle Indicators – 2<sup>nd</sup> Quarter 2016*.

<sup>(7)</sup> To distil meaningful, long-term tendencies, the difference is built on an annual basis. The annual balance series are derived from the originally monthly data by taking their average over the last three months of a year (i.e. the average of the values in October, November and December 2015 represent the value of the balance series in 2015).

<sup>(8)</sup> With income and wealth highly correlated, differences between responses of the highest/lowest income quartile can be interpreted, more broadly, as differences between the "rich" and the "poor"; see ECB (2013). 'The eurosystem household finance and consumption survey – results from the first wave'. *Statistics Paper Series No 2 / April 2013*.

<sup>(9)</sup> More precisely, a proxy of the 'genuine' differences in reporting habits of the rich and the poor is subtracted from the indicator. For each country, the proxy is the mean difference between "rich" and "poor" households' replies to the question "How has the general economic situation in the country changed over the past 12 months?". The rationale is that the general (macro-) economic situation is the same for all so that mean differences in the groups' answers are likely to reflect systematic differences in their optimism.

(Continued on the next page)

Box (continued)

(depending on the absolute magnitude of the difference between them).

At the same time, the new indicator addresses many of the above-described shortcomings of existing inequality measures: (i) derived from a survey question about households' financial situation, the indicator does not only reflect changes in the level of income, but also encompasses changes in wealth. It is assumed that "financial wealth" is understood as a broad concept, including residential property; (ii) the indicator can be constructed for a comparatively long time-period (for some countries, going back to 1985) and has no gaps; (iii) trends are fully comparable across countries, since the underlying survey data are generated by the same, harmonised methodology;<sup>(10)</sup> (iv) since respondents to the survey indicate qualitative changes in their financial situation, underreporting of income/wealth developments is unlikely.

Given the space constraints of this box, the inequality indicators are presented for eight EU countries only. The countries were chosen with a view to the quality of their national survey series and so as to cover both 'core' (Germany, France, Netherlands, Sweden) and 'periphery' (Italy, Spain, Portugal, Ireland) Member States.<sup>(11)</sup>

#### Inequality is increasing across Europe

Graphs 1a and 1b show a widespread increase in inequality across Member States (the indicators are mostly in positive territory).<sup>(12)</sup>

Among the 'core' countries, relatively high readings for the Netherlands (throughout the observation period) and Sweden (since about 2005) could surprise at first sight, given generally low inequality of incomes (post taxes and benefits) in these countries. They are, however, plausible considering that households take wealth into account when responding to the survey.<sup>(13)</sup>

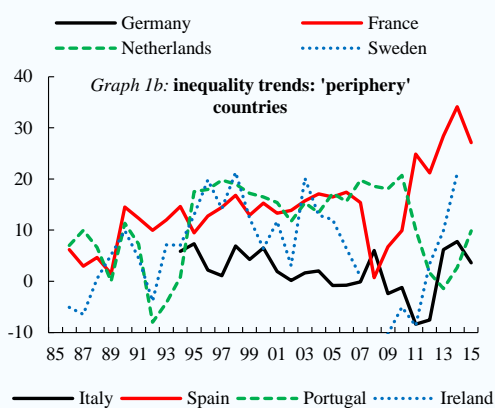
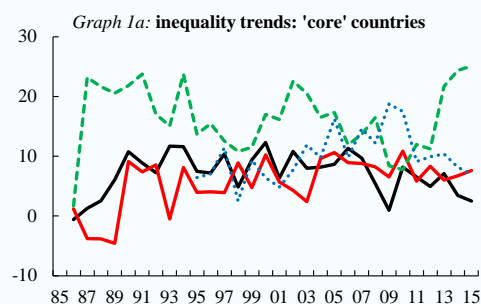
<sup>(10)</sup> The indicator measures changes in inequality, not their level; it does not allow to conclude that "Society in country A is less equal than in country B".

<sup>(11)</sup> Note that there are no Irish data-series for 2008/15.

<sup>(12)</sup> This is in line with available evidence from other sources. See, e.g., OECD (2015), which reports on wealth and income inequality, as well as T. Piketty (2014), who shows wealth concentration to have increased in France, Sweden, the UK and the US.

<sup>(13)</sup> Skopek et al. (2011) in 'Wealth inequality in Europe and the delusive egalitarianism of Scandinavian countries' find that Scandinavian welfare states are successful in reducing income inequalities by progressive taxation but are less successful in reducing wealth inequalities. The OECD (2015) points to high wealth inequality in the Netherlands.

Turning to the 'periphery' countries and focussing on developments from the mid 1990s onwards, the level of inequality growth tends to be higher than in most 'core' countries in Spain and Portugal. The Italian level, by contrast, appears particularly low, while Ireland is a (volatile) case in between.



#### The effect of the financial crisis...

To enable a thorough interpretation of the dynamics of the inequality indicators during the financial and sovereign debt crisis, Graph 2 plots the inequality indicators (black line), and also indicates how the underlying balance series reflecting households' assessments of their financial situation have changed. Red bars indicate that the financial situation has deteriorated, while green bars reflect an improvement. The bars in the upper half of the graph refer to the assessments made by households belonging to the 4th quartile (rich), the ones in the lower half to those made by households in the first quartile (poor).

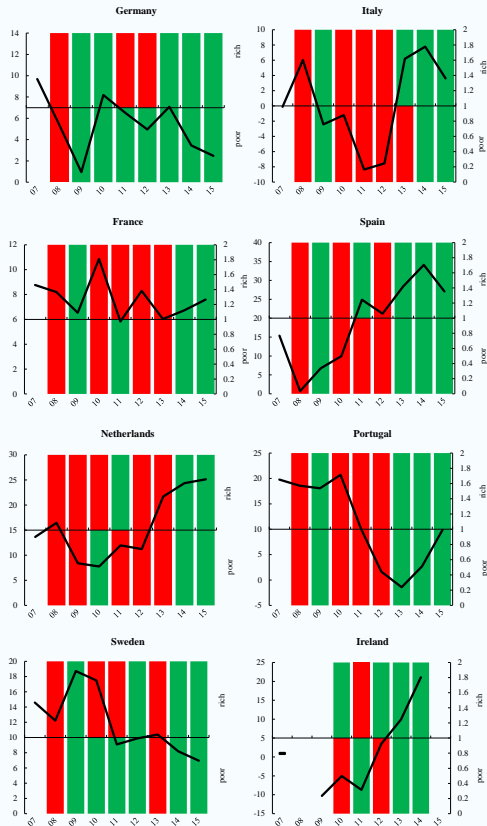
Compared to the sovereign debt crisis (2010-13) and ensuing recovery, the effect of the financial crisis on inequality was limited. Overall, in five out of seven countries, 2008 combined a general deterioration in households' financial situation with a moderation of the inequality indicator. The deteriorating assessments of the financial situation across the board could be linked to the flood of worrying economic/financial news and the rise in

(Continued on the next page)

Box (continued)

unemployment having inclined all households to make more cautious assessments of their financial situation. The reason why the assessments of the more affluent households deteriorated more strongly than those of the low-income households (inequality decreased) may relate to the massive losses of global stock markets in the aftermath of the Lehman Brothers collapse, which can be assumed to have mainly hit the richer layers of society.

Graph 2: Inequality indicators and households' assessments of their financial situation



The year 2009 seems to have improved the financial situation of European households (see green bars in six out of seven countries with available data). This could be linked to the implementation of large stimulus packages targeted to households at the EU level and in most Member States during that period. Contrary to 2008 though, there is no uniform picture across countries as to whether the general improvement is more pronounced among the wealthier or poorer households.

... e sovereign debt crisis...

The sovereign debt crisis apparently had sweeping and persistent (i.e. so far non-reversed) effects on all national inequality trajectories, as measured by the survey based indicators (exceptions are

Germany/France). In most of the six countries showing a strong reaction (Netherlands, Italy, Spain, Ireland), the period 2010-13 brought, on balance, large increases in the national inequality indicators. That is quite intuitive, considering, i.a., the record levels of unemployment caused by the crisis which almost mechanically<sup>(14)</sup> drove up the inequality indicator. At the same time, plummeting house prices are likely to have taken their toll on the financial situation of home-owners.

...and the uneven recovery.

Another finding worth highlighting is the role that the recovery following the sovereign debt crisis has played in some countries, notably Portugal and Ireland, where the years 2014/15 coincided with substantial increases in the inequality indicator. In the remaining six countries, the recovery was socially more equitable, i.e., on average, the national inequality indicators in 2015 stand close to their 2013 levels. What is more, as the recovery got more entrenched (2015), the inequality indicators either dropped or remained (broadly) flat in all countries observed, except for Portugal.

Connection to the Autumn Forecast

Inequality affects growth in various ways.<sup>(15)</sup> For the near-term cyclical analysis, poorer households' lower savings rate plays a prominent role. Accordingly, the degree to which private consumption helps sustaining the current recovery critically hinges on the relative degree to which per-capita increases in GDP benefit the less- rather than high-earning households.

In view of the forecast, the timely availability of the proposed indicator is particularly valuable (data from income surveys that are comparable across countries are now generally available up to 2013/14 for OECD countries). As the indicator shows, inequality still increased in some Member States in 2014-15, but at a slower pace. Moreover, the financial situation of both the "poor" and the "rich" has improved. In that sense, the last finding of the previous section, notably a rather equitable distribution of the effects of the 2015 recovery, arguably increases the chances of sustained private consumption in the short-term.

<sup>(14)</sup> When people get unemployed, they are likely to (i) move to a lower income group, driving up the share of unemployed in the lowest quartile and (ii) report a worsened financial situation. Rising unemployment thus tends to increase the share of respondents reporting deteriorating personal finances in the lowest income quartile, driving up the inequality indicator.

<sup>(15)</sup> See, e.g., F. Cingano (2014). 'Trends in Income Inequality and its Impact on Economic Growth', *OECD Social, Employment and Migration Working Papers, No. 163*.

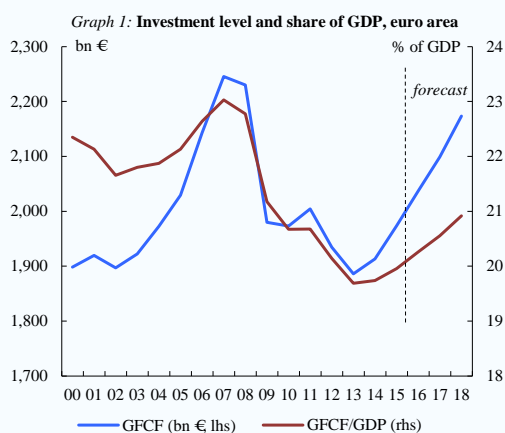


### Box I.4: How is the recovery proceeding in the euro area?

Now that GDP in the euro area has passed its pre-crisis level is a good moment to take stock of the state of the recovery again. Previous assessments of the recovery have pointed to its subdued pace, the weakness of domestic demand, in particular investment, the drop of potential growth and the slow closure of the output gap.<sup>(1)</sup> This analysis shows that in late 2016, the recovery is still incomplete in several important respects and economic slack is still significant.

#### Domestic demand still weak, mostly due to investment

Private consumption has been a steady and robust contributor to the recovery of GDP. Like GDP, private consumption is now past its pre-crisis peak. By contrast, the contribution from investment to GDP growth has been more volatile and, until recently, weaker. The level of investment is still about 9% from its peak. More meaningfully (considering that the investment level was affected by a boom in some Member States in the run-up to the crisis), the share of investment in GDP is about 2 pps. lower than in the early 2000s (see Graph 1).



A corollary to weak investment is the savings-investment imbalance that has led to an increase of the euro-area current-account surplus from close to balance in the early 2000s to 3.5% in 2016. Looking at imports and exports separately, the picture of weak domestic demand<sup>(2)</sup> persists: The

<sup>(1)</sup> A detailed analysis was done by E. Ruscher and B. Vasicek (2015). 'The euro area recovery in perspective'. *Quarterly Report on the Euro Area* 14(3), 6-18.

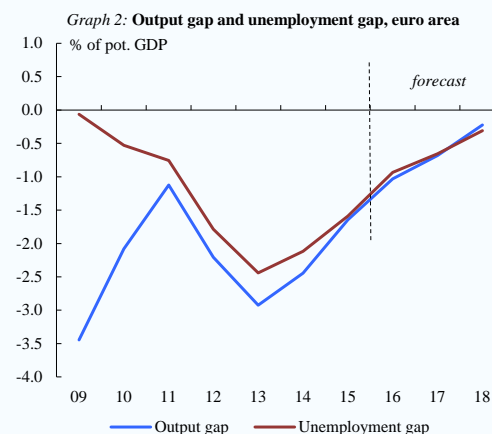
<sup>(2)</sup> For a more formal analysis see the box on 'The cyclical component of current-account balances' in European Commission (DG ECFIN) (2014). 'European Economic Forecast – Winter 2014'. *European Economy* 2.

increase of the euro area's trade surplus in recent years was driven by slow import growth, while exports grew at a rate similar to that of the pre-crisis period.

Furthermore, the euro-area economy is not catching up with the US economy in terms of per-capita GDP or potential growth. GDP per capita in the euro area has stagnated at about 75% of the US level since the mid-1990s, losing further ground in 2011-15. Potential GDP growth in the US has recovered to about 2% in 2016 against 1% in the euro area. Over the medium term it is projected at 1.8% in the US by 2021 and 1.1% in the euro area.

#### The pace of output-gap closure is set to slow down

From -3.4% in 2009, the euro-area output gap (i.e. the difference between actual and potential GDP) has been reduced to -1.0% in 2016.<sup>(3)</sup> The projected GDP expansion over the forecast horizon is set to reduce the output gap further without closing it completely (-0.2% in 2018). However, the pace at which this reduction occurs is now slowing down considerably compared to previous years (see Graph 2). In 2016, the output gap narrowed by 0.6 pps.; in 2017 the gap is expected to be reduced by only 0.3 pps. in a context of diminishing growth drivers (see also box 1).



<sup>(3)</sup> On the methodology for estimating the output gap and the NAWRU see Havik, K., K. Mc Morrow, F. Orlandi, C. Planas, R. Raciborski, W. Röger, A. Rossi, A. Thum-Thysen, V. Vandermeulen (2014). 'The Production Function Methodology for Calculating Potential Growth Rates & Output Gaps'. *European Economy Economic Paper* 535.

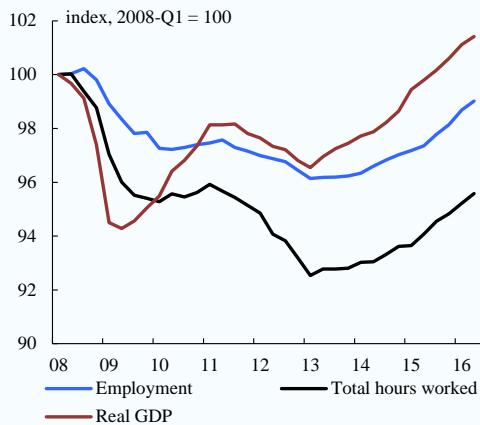
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Box (continued)

**Still substantial slack in the labour market...**

Unemployment stood at 10.1% in the euro area in August 2016. This is 0.9 pps. above the estimated non-accelerating wage rate of unemployment (NAWRU). Employment has been increasing faster than past performance of labour markets would have suggested in view of the moderate GDP growth. However, employment so far remains below pre-crisis levels: The pre-crisis number of 154 million jobs in the euro area is only set to be reached again in 2017. In the meantime, labour supply has increased on the back of population growth and a further expansion of labour-market participation. Moreover, the recovery in headcount employment contrasts sharply with hours per worker, which dropped by about 3% between 2008 and 2013 and have not shown any signs of increasing since (see Graph 3).

Graph 3: Employment, total hours worked and real GDP, euro area

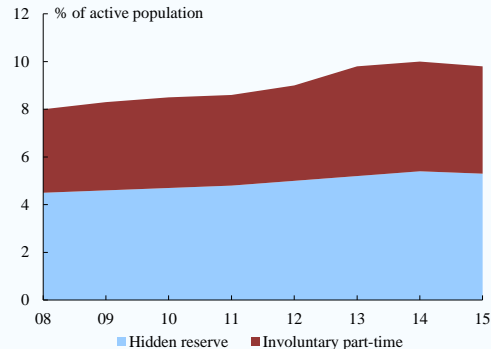


The corollary of increasing employment and flat hours per worker is increased part-time employment, which does not always reflect workers' preferences. The share of those in involuntary part-time work (those who work part-time would prefer a full-time job if one was available) rose by 7 percentage points to 31% of part-time workers in the euro area between 2007 and 2015.<sup>(4)</sup> This suggests that total hours worked could be expanded significantly to accommodate an increase in demand, without resulting in higher headcount employment or lower unemployment figures. The hidden employment reserve is also still substantial. The number of persons who were either looking for a job but not immediately available, or available but not actively searching increased from 3.3% of the labour force in 2008 to 4.3% in 2015

<sup>(4)</sup> European Commission (2016): Labour market and wage developments in Europe.

(see Graph 4). In sum, the slack present in the labour market is likely to be substantially higher than suggested by the unemployment rate.

Graph 4: Hidden reserve and involuntary part-time work, euro area

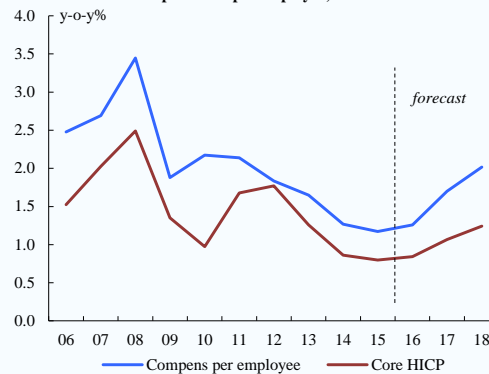


Source: Eurostat. Hidden reserve: people seeking work but not immediately available plus people available for work but not seeking.

**...contributes to low core inflation.**

Labour-market slack is one reason why wage growth and core inflation are not picking up more strongly.<sup>(5)</sup> Compensation per employee has increased by 1¼% in each of the past three years and is expected to pick up only gradually to 2% in 2018. Core inflation was 0.8% in September 2016, having evolved in a range of 0.6-1.0% over the past two years. It is projected to increase very gradually to 1.3% in 2018 (see Graph 5).

Graph 5: Core inflation and compensation per employee, euro area



**Potential growth dropped during the crisis...**

Potential growth has fallen from 1.9% in 2000-08 to 0.5% in 2009-14 as investment collapsed, unemployment surged and total factor productivity (TFP) growth further slowed.

<sup>(5)</sup> Jarocinski M. and M. Lenza (2016). 'An inflation-predicting measure of the output gap in the euro area'. *ECB Working Paper*, 1966.

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Box (continued)

Lower investment in the crisis and its aftermath has been attributed to low (expectations of) aggregate demand, adverse financing conditions, deleveraging needs, and uncertainty. Another reason for a decline in total investment has been public expenditure cuts primarily directed towards public investment. Productivity growth declined as companies have pulled back on investment and the adoption of new technologies during the recession, <sup>(6)</sup> this impacts productivity growth in a longer-lasting way. Capital misallocation in the run-up to the crisis may also have contributed to the slowdown in TFP growth. In the labour market, the NAWRU increased due to sectoral mismatch and hysteresis stemming from the cyclical increase in unemployment amid wage and price rigidities.

...but the crisis impact is expected to fade gradually.

As shown in Table 1, the estimated individual contributions from capital and labour to potential growth do not recover to pre-crisis levels, and TFP growth is estimated to remain subdued. However, pre-crisis potential growth of 2% is also clearly not attainable. The capital contribution before the crisis was inflated by unsustainable over-investment in a number of Member States. The labour contribution is structurally reduced by population ageing, and its dampening impact on labour force growth will become more stringent in the coming years.

This leaves the question of how much potential growth can be recovered, and under what conditions. The baseline scenario for the medium term is a gradual recovery of investment rates, a declining trend of the NAWRU on the back of

structural reforms undertaken in many Member States and a stabilisation of TFP growth.

This baseline is subject to the downside risk that expectations of slow growth feed back into firms' sales expectations and lead them to hold back on investment, thus perpetuating the weakness of capital formation and probably preventing a recovery of TFP growth at the same time. This can be understood as a form of hysteresis.

On the upside, policies that increase TFP growth (e.g. supporting private and public R&D, product market reforms) could reverse its long-standing trend decrease. Moreover, in the presence of hysteresis, demand-side policies may increase medium-term supply as recently suggested by Federal Reserve Chair Janet Yellen. <sup>(7)</sup> A temporary boost to aggregate demand might draw discouraged workers back into the labour market and stronger demand could potentially yield productivity gains by prompting higher levels of research and development spending and increasing adoption rates of new technologies. Moreover, as low demand expectations are at present the strongest impediment to investment, higher demand in the short run could accelerate capital accumulation and increase the growth potential.

Table 1: Potential growth trends: past, present and future

	2000-08	2009-14	2015-21
Potential GDP growth	1.9	0.5	1.1
Contributions from:			
Total labour	0.4	-0.1	0.3
Capital	0.8	0.3	0.4
TFP	0.7	0.4	0.5
NAWRU	9.1	9.5	9.0

<sup>(6)</sup> see Anzoategui, D., D. Comin, M. Gertler and J. Martinez (2016). 'Endogenous Technology Adoption and R&D as Sources of Business Cycle Persistence'. *NBER Working Paper* No. 22005. Varga, J., W. Roeger and J. in 't Veld (2016). 'Financial crisis and TFP growth in the Euro Area'. *European Economy Economic Paper*, forthcoming.

<sup>(7)</sup> <https://www.federalreserve.gov/newsevents/speech/yellen20161014a.htm>

### Box 1.5: The treatment of the impact of the UK's leave vote in the current forecast

*This box focuses on the technical treatment of the consequences of the leave vote in the autumn 2016 forecast, to the extent they can be perceived today. It describes the judgement about the short-term impact embedded in this forecast. The box also briefly recalls the available economic assessments of medium and long term impacts of different scenarios, but without attempting new original analysis at this stage. As events unfold, the impact of both the process of leaving and that of a future regime will become clearer and will have to be revisited in future forecast rounds. In the meantime, uncertainty is likely to remain high.*

The UK referendum on leaving the EU has produced political and economic uncertainty around the future economic relationship between the UK and the EU, and over the path to new arrangements. The future regime (for e.g. trade in goods and services and migration) is at this stage uncertain, and uncertainty also surrounds the available assessments of the long-term impact of various possible regimes.

#### A moderate near-term impact of the UK leave vote

In line with assessments of the short-run impact of the UK leave vote that were prepared prior to the referendum, the Commission's scenario analysis in July focussed on increased uncertainty.<sup>(1)</sup> Economic and policy uncertainty is expected to affect demand (investment and consumption) and increase asset risk premia. A dampening of housing demand has also been identified as a possible channel.

So far, growth in the UK following the 23 June referendum has been resilient. Third-quarter growth in 2016 is estimated by the UK's Office for National Statistics at 0.5%. Financial-market volatility in the aftermath of the referendum quickly abated, though the initial depreciation of sterling has been followed by further falls. The monetary easing by the Bank of England in early August appears to have supported financial markets and domestic demand. Survey indicators have rebounded after sharp losses in July, but remain consistent with a coming softening of growth. The depreciation of sterling is likely to help exporters while increasing consumer prices and thus decreasing purchasing power.

A drop in investment driven by heightened uncertainty is expected in the coming quarters. It is set to weigh heavily on UK growth in 2017, and to a lesser extent in 2018. Real household income growth and private consumption are set to soften

<sup>(1)</sup> European Commission (2016). 'The Economic Outlook after the UK Referendum, A first Assessment for the Euro Area and the EU'. *European Economy Institutional Paper* 32, July 2016. See also UK Treasury (2016). 'HM Treasury analysis: the immediate economic impact of leaving the EU'. London. IMF (2016). 'United Kingdom: Selected Issues.' *IMF Country Report* No. 16/169.

through the forecast period as a response to higher inflation and a weaker labour market. In the present forecast, GDP growth for the UK has therefore been revised down to 1.0% in 2017 and 1.2% in 2018. The impact on other EU Member States is assessed to be small in the baseline forecast, but there are downside risks, in particular for Member States with sizeable trade exposures.

#### The longer-term impact of the end of the UK's EU membership is not yet clear

Beyond the short-run impact of the referendum result, the end of the UK's membership of the EU (the actual 'Brexit') could affect the UK economy's trend growth. This will be dependent on the future relationship between the UK, the EU and the rest of the world. While any supply-side effects will largely be felt after 2018, anticipation effects could start to materialise within the forecast horizon and constitute a downside risk to the forecast.

Ex-ante assessments of the longer-term implications of Brexit have used different methodologies, but have mostly centred on the direct and indirect supply-side implications of potential barriers to trade, foreign direct investment, competition and labour mobility.<sup>(2)</sup> A general conclusion is that the looser the UK's future economic relationship with the EU, the larger the likely negative impact on the UK economy.

The absolute and relative impact of these different factors crucially depends on the regime for trade, migration etc. that the UK will eventually set up outside the EU. At this stage, this future regime is unknown.

Although it is likely that the shape of the future regime will start gradually emerging over the forecast horizon, the present forecast is not the right place to speculate about it. In the autumn 2016 forecast, the longer-term economic impact of the leave vote is therefore captured mostly through the macroeconomic impact of increased uncertainty on demand.

<sup>(2)</sup> IMF (2016) op. cit. appendix 3 offers an overview. See also OECD (2016). 'The economic consequences of BREXIT: A taxing decision'. *Economic Policy Paper* 16, April 2016. UK Treasury (2016). 'HM Treasury analysis: long-term economic impact of EU membership and the alternatives'. London.

### Box 1.6: Some technical elements behind the forecast

The cut-off date for taking new information into account in this European Economic Forecast was 31 October. The forecast incorporates validated public finance data as published in Eurostat's News Release 204/2016 of 21 October 2016.

#### External assumptions

This forecast is based on a set of external assumptions, reflecting market expectations at the time of the forecast. To shield the assumptions from possible volatility during any given trading day, averages from a 10-day reference period (between 7 and 20 October) were used for exchange and interest rates, and for oil prices.

#### Exchange and interest rates

The technical assumption regarding exchange rates was standardised using fixed nominal exchange rates for all currencies. This technical assumption leads to an implied average USD/EUR rate of 1.11 in 2016, and 1.10 in 2017 and 2018. The average JPY/EUR is 119.35 in 2016, 114.56 in 2017 and 2018.

Interest-rate assumptions are market-based. Short-term interest rates for the euro area are derived from futures contracts. Long-term interest rates for the euro area, as well as short- and long-term interest rates for other Member States are calculated using implicit forward swap rates, corrected for the current spread between the interest rate and swap rate. In cases where no market instrument is available, the fixed spread vis-à-vis the euro area interest rate is taken for both short- and long-term rates. As a result, short-term interest rates are assumed to be -0.3% in 2016, 2017, and 2018 in the euro area. Long-term euro area interest rates are assumed to be 0.1% in 2016, and 0.2% in 2017, and 0.3% in 2018.

#### Commodity prices

Commodity price assumptions are also, as far as possible, based on market conditions. According to futures markets, prices for Brent oil are projected to be on average 45.21 USD/bbl in 2016, 54.73 USD/bbl in 2017, and 56.82 USD/bbl in 2018. This would correspond to an oil price of 40.61 EUR/bbl in 2016, 49.58 EUR/bbl in 2017, and 51.47 EUR/bbl in 2018.

#### Budgetary data and forecasts

Data up to 2015 are based on data notified by Member States to the European Commission before 1 October and validated by Eurostat on 21 October 2016.

Eurostat is expressing a reservation on the quality of the data reported by Cyprus in relation to a series of technical issues, such as the recording of EU flows, the basis for the working balance of central government, incomplete use of source data for accrual reporting and the absence of reporting of statistical discrepancy in EDP tables, which were not clarified in a satisfactory manner during the October 2016 data assessment. Eurostat will investigate these issues with the Cypriot statistical authorities.

Eurostat is maintaining the reservation on the quality of the data reported by Belgium in relation to the sector classification of hospitals. Eurostat considers that, in line with ESA 2010, government controlled hospitals in Belgium should be classified inside government. This is currently not the case. A future reclassification will most likely result in a limited increase in government debt.

Eurostat is maintaining the reservation on the quality of the data reported by Hungary in relation to the sector classification of Eximbank (Hungarian Export-Import Bank Plc). Eximbank needs to be reclassified inside the general government sector which will result in an increase in government debt. Moreover, Eurostat is discussing with the Hungarian statistical authorities the possible rerouting of operations carried out by the Hungarian National Bank, deemed to be undertaken on behalf of government.

Eurostat is withdrawing the reservations on the quality of the data reported by France in relation to (1) the classification of the French Deposit Guarantee and Resolution Funds (Fonds de Garantie des Dépôts et de Résolution - FGDR), as the entity has been reclassified by INSEE inside government and (2) the recording chosen by INSEE of settlements costs related to the restructuring of complex debt instruments issued by local government, pending the results of ongoing consultations on this issue at EU level.

Eurostat has made no amendments to the data reported by Member States.

*(Continued on the next page)*

*Box (continued)*

The public finance forecast is made under the ‘no-policy-change’ assumption, which extrapolates past revenue and expenditure trends and relationships in a way that is consistent with past policy orientations. This may also include the adoption of a limited number of working assumptions, especially to deal with possible structural breaks.

EU and euro area aggregates for general government debt in the forecast years 2016-18 are published on a non-consolidated basis (i.e. not corrected for intergovernmental loans, including those made through the European Financial Stability Facility). To ensure consistency in the time series, historical data are also published on the same basis. For 2015, this implies an aggregate debt-to-GDP ratio which is somewhat higher than the consolidated general government debt ratio published by Eurostat in its news release 204/2016 of 21 October 2016 (by 2.2 pps. in the euro area EA19 and by 1.6 pps. in the EU).

#### ESA 2010

The current forecast is based on the ESA 2010 system of national accounts for all Member States, the EU and the euro area aggregates.

#### Calendar effects on GDP growth and output gaps

The number of working days may differ from one year to another. The Commission’s annual GDP forecasts are not adjusted for the number of working days, but quarterly forecasts are.

However, the working-day effect in the EU and the euro area is estimated to be limited over the forecast horizon, implying that adjusted and unadjusted annual growth rates differ only marginally (by up to  $\pm 0.1$  pps.). The calculation of

potential growth and the output gap does not adjust for working days. Since the working-day effect is considered as temporary, it should not affect the cyclically-adjusted balances.

#### Change to the NAWRU methodology used in the potential growth rate calculations for the autumn 2016 forecasts

Following the approval of the Member States, the Commission has introduced a change to the existing NAWRU methodology, which forms part of the overall production function methodology used for calculating potential growth and output gaps. The revised NAWRU approach, in essence, involves using additional long run information, specifically the structural unemployment rate from the T+10 calculations, to anchor the short and medium term NAWRU estimates. This change will result in methodological improvements, essentially less pro-cyclical NAWRU estimates. In addition, the previous model had a tendency to show a delayed reaction of the NAWRU to improvements in the labour market and was showing little reaction of the NAWRU in the current juncture, thereby resulting in the actual unemployment and NAWRU series tending to track each other too closely. With the new approach, this pro-cyclicity problem will be significantly alleviated. Moreover, by integrating the structural unemployment estimates from the T+10 exercise into the calculations for the short and medium term NAWRU estimates, a more comprehensive recognition will be given to the efforts of the Member States to implement structural reforms in their respective labour market. Since there will be more work done over the coming months on the NAWRU anchor estimate itself, a total of eight countries asked that the old NAWRU methodology would be retained as a short term measure for the autumn 2016 forecast. These countries are: Estonia, Ireland, Latvia, Lithuania, Malta, Poland, Romania and Slovakia.