



BANK OF FINLAND BULLETIN

BANK OF FINLAND ARTICLES ON THE ECONOMY

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Growth overshadowed by hard-to-quantify risks

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Euro area monetary policy has been eased significantly in recent years. The most important of the measures applied are the expanded asset purchase programme (EAPP), targeted longer-term refinancing operations and the introduction of a negative interest rate on the deposit facility. The Governing Council of the ECB has emphasised its commitment to securing a sustained adjustment in the path of inflation consistent with its inflation target, i.e. a level below, but close to, 2%. The asset purchase programme has proceeded as planned and has led to reductions across a broad spectrum of euro area interest rates.



In the Bank of Finland's September 2016 forecast for the global economy, the most significant change concerns the Brexit vote in the United Kingdom. Particularly in 2017, UK growth will be markedly more subdued than projected prior to the EU referendum. Despite Brexit, euro area internal economic fundamentals continue to be supportive of growth. Monetary policy will remain accommodative for an extended period. The private sector's debt-servicing burden will diminish, near-term fiscal policy will be broadly neutral and the labour market will continue to improve. In these respects, the favourable trend in the euro area is projected to continue.

Euro area inflation has entered positive territory, but the pace of increase in prices continues to be very slow. Inflation is still weighed down by the low price of oil. The underlying inflation rate (which excludes energy and food price changes) has also persisted below 1%, as a reflection of limited price pressures on the domestic markets. The improved economic outlook and the ongoing accommodative stance of monetary policy will gradually begin to boost inflation.

The risks to the forecast for the global economy are predominantly on the downside. A potential upside risk relates to improved productivity. However, the outlook for the United States and the global economy as a whole could also weaken significantly, especially if the protectionism-related discussion that has already flared up were to extend to political decisions. Chinese growth will continue its strong momentum, but debt-driven growth will also expose the Chinese economy to financial market disruptions.

A factor posing one obvious risk to euro area economic activity is the departure of the United Kingdom from the EU, the effects of which are shrouded in a substantial degree of uncertainty. Brexit negotiations are only just being launched, with unknown objectives, and are likely to last a long time.

Monetary policy to remain accommodative for an extended period

Euro area consumer price inflation has remained around zero for about three years, but it is expected to accelerate in the next few years, supported by the accommodative monetary policy. The inflation rate will also accelerate during the next 12 months on the back of an expected moderate rise in the price of oil. The Governing Council of the ECB has emphasised its commitment to securing a sustained adjustment in the path of inflation consistent with its inflation target, i.e. to a level below, but close to 2%.

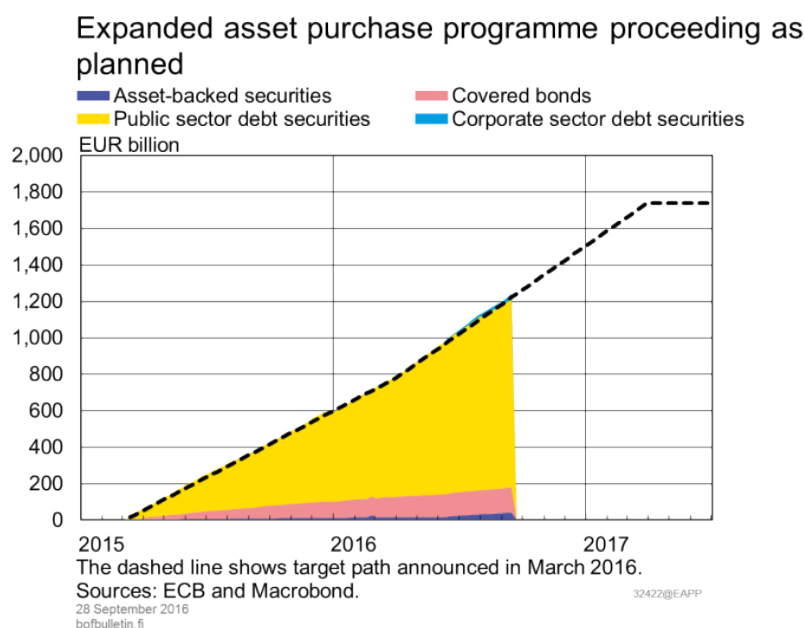
The Governing Council has significantly eased monetary policy since mid-2014 in order to maintain price stability in the euro area. The most important of these measures are the expanded asset purchase programme (EAPP), targeted longer-term refinancing operations and the introduction of a negative interest rate on the deposit facility. As part of this package of measures, the transmission of monetary policy is strengthened by forward guidance. Forward guidance provides the Governing Council with an opportunity to convey information on the duration of the asset purchase programme and the low interest rate environment. The main message is that the ECB is committed to continuing these measures for as long as necessary for maintaining price stability. With a strong commitment to price stability, inflation expectations remain anchored, thereby enhancing the effectiveness of the purchase programme and credit operations.

At its September 2016 meeting, the Governing Council decided that the interest rate on the main refinancing operations and the rates on the marginal lending facility and the deposit facility will remain unchanged at 0.00%, 0.25% and -0.40% respectively. The Governing Council has also indicated that these rates will remain at their present or lower levels well past the horizon of net asset purchases. In addition, the Governing Council continued to emphasise that the monthly asset purchases of EUR 80 billion, which belong to the non-standard monetary policy measures, are intended to run until the end of March 2017, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation target.

The EAPP has proceeded as planned and has led to reductions across a broad spectrum of euro area interest rates. The expanded programme consists of purchases of debt

instruments issued by the euro area public sector, covered bank bonds, asset-backed securities and, since June 2016, also corporate bonds. [Box: ECB purchase programme expanded to include corporate sector debt instruments] Monthly asset purchases since March 2015 amounted to EUR 60 billion, from which the amount was raised to EUR 80 billion in April 2016. Purchases totalling around EUR 1,230 billion had been effected within the framework of the EAPP by the end of August 2016. Of these, the public sector purchase programme accounted for about EUR 1,000 billion. In September, the Governing Council of the ECB announced the Eurosystem's intention to evaluate different options to ensure smooth implementation of the asset purchase programme going forward.

Chart 1.



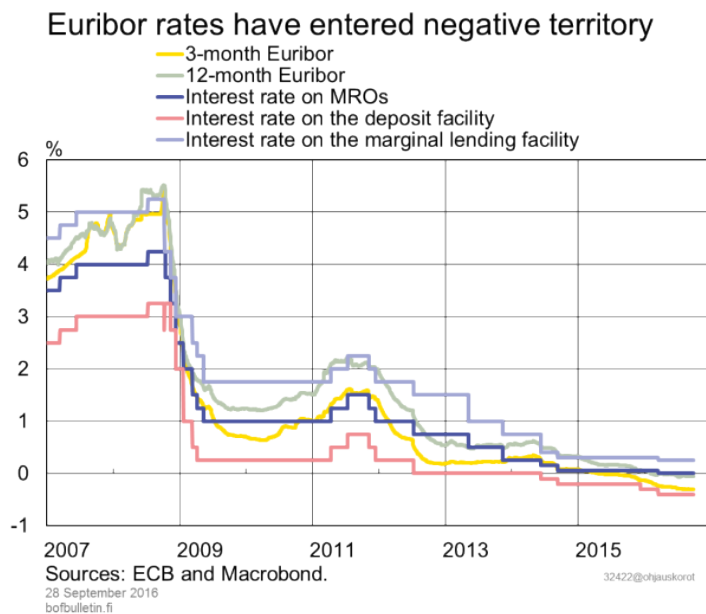
In addition to asset purchases, a second series of targeted longer-term refinancing operations (TLTRO-II) is under way, on which the Governing Council decided in March 2016. Operations are to be conducted from June 2016 to March 2017 at a quarterly frequency.^[1]

These operations are designed to increase bank lending to non-financial corporations, in particular, and thereby to support the recovery of the real economy. In these operations, banks are able to borrow with a four-year maturity at the interest rate on the main refinancing operations, which is currently 0.0%. However, at its lowest, the interest rate may fall to the level of the interest rate on the deposit facility at the time of take-up (currently -0.4%), provided that the bank has increased its lending to non-financial corporations and households (excl. housing loans). As banks are thus offered attractive long-term funding conditions for several years, they will be able to lower their interest rates on household and corporate lending.

1. The amount borrowed in the June TLTRO II operation totalled about EUR 400 billion, of which a significant proportion was due to the fact that banks were allowed to roll over amounts borrowed under the previous TLTRO I programme into TLTRO II.

Of the key ECB interest rates, the interest rate on the main refinancing operations was decreased to zero in March 2016. A negative interest rate on the deposit facility was introduced for the first time in June 2014. The Governing Council has subsequently lowered the interest rate on the deposit facility stepwise, in September 2014 (to -0.2%), December 2015 (to -0.3%) and March 2016 (to -0.4%). Given that owing to the EAPP, in particular, there is an abundance of excess liquidity in the banking system, short-term money market interest rates follow the development of the interest rate on the deposit facility rather than the interest rate on the main refinancing operations. The negative deposit facility interest rate has brought short-term money market interest rates down into negative territory. This benefits e.g. mortgage borrowers, whose bank loans are tied to short-term money market interest rates. The negative deposit facility interest rate also has a downward impact on longer-term interest rates, thus underpinning economic recovery.

Chart 2.



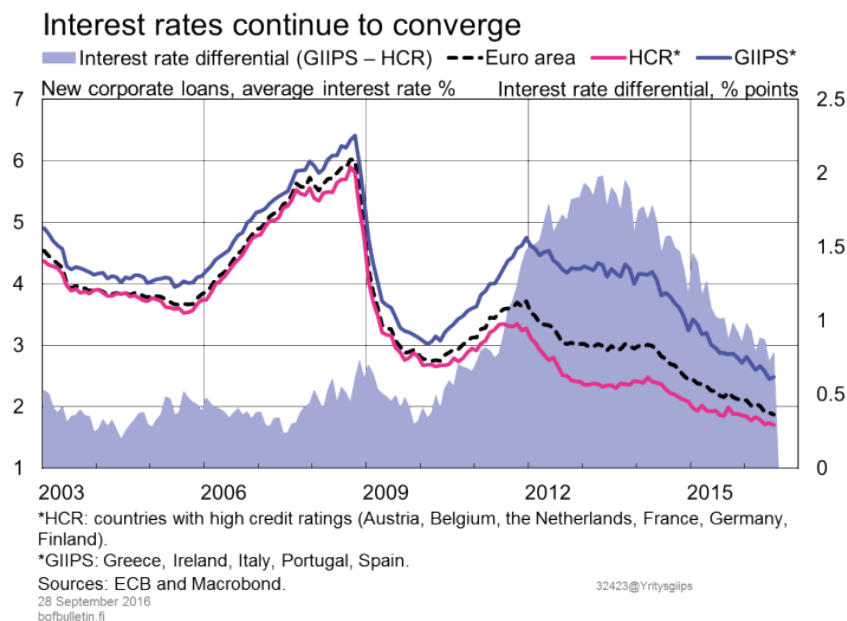
Monetary policy measures constitute a comprehensive response, aimed at ensuring a broad-based easing of financial conditions (cutting long-term interest rates and interest rates for households and non-financial corporations on their bank loans and maintaining asset prices). An accommodative monetary policy keeps inflation expectations anchored to the price stability objective even if actual inflation for the present is still below the targeted level.

Cost of finance declined further

Average interest rates on new corporate loans granted by banks continued to fall during the course of summer 2016 in Greece, Ireland, Italy, Portugal and Spain, which the debt crisis hit the hardest. Spain, in particular, has witnessed significant cuts in these interest rates. In countries with high credit ratings (here, the Netherlands, Belgium, Austria, France, Germany and Finland) the decline has been considerably more subdued. Convergence of interest rate levels between these two groups of countries continues. The

interest rate differential has narrowed by more than one percentage point during the last three years and is currently almost as small as in spring 2011, i.e. prior to the onset of the euro area debt crisis.

Chart 3.



Apart from bank loans, market-based funding, too, has become cheaper for non-financial corporations. Corporate bond yields have decreased markedly since the beginning of 2016 in response to the ECB’s announcement of the inclusion of investment-grade corporate bonds in the purchase programme. Interest rate differentials among investment-grade debt instruments have also narrowed discernibly since the beginning of the year.

The average interest rate on new housing loans has fallen by approximately 0.3 of a percentage point in the euro area since early 2016 and was 1.9% in July. Of large euro area countries, France in particular has seen a significant decline of more than ½ of a percentage point during the last six months. By contrast, Spain has witnessed considerably more moderate cuts.

Interest rates pass through to the economy faster via variable-rate loans

Interest rates brought down by the accommodative monetary policy are transmitted more rapidly to the economy for households and non-financial corporations the shorter the interest rates are to which bank loans are tied. Lower debt-servicing costs boost domestic demand, thereby supporting economic growth and a return of inflation rates towards the target.

Chart 4.

Structure of banking sector balance sheets varies clearly by country

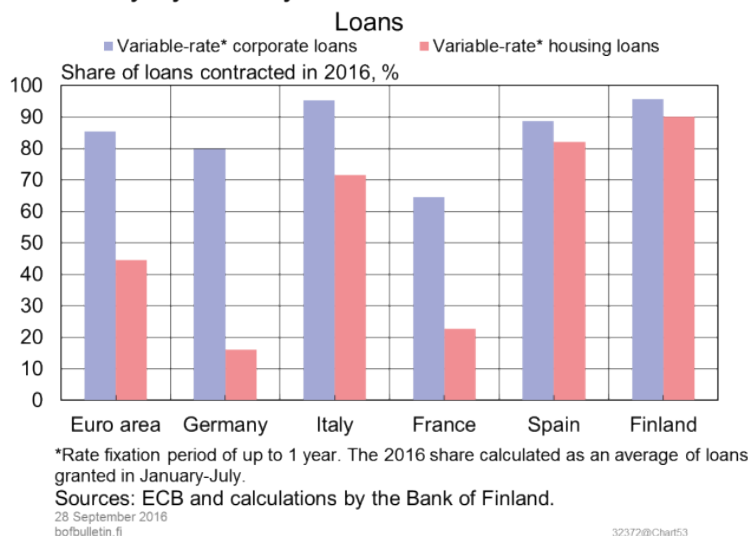
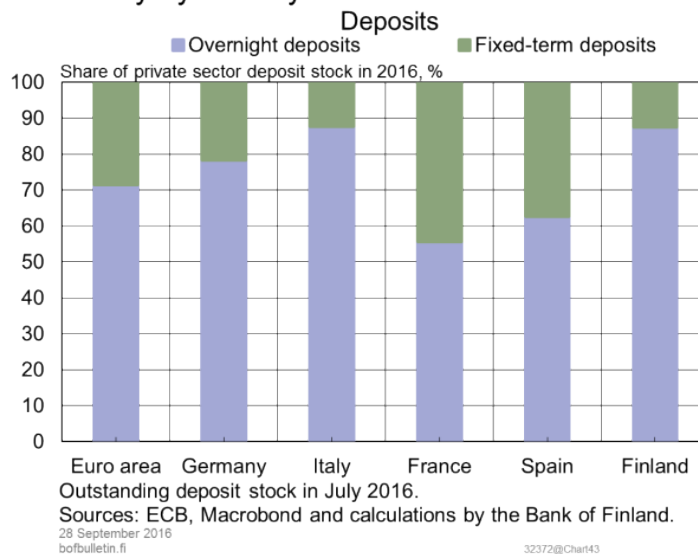


Chart 5.

Structure of banking sector balance sheets varies clearly by country



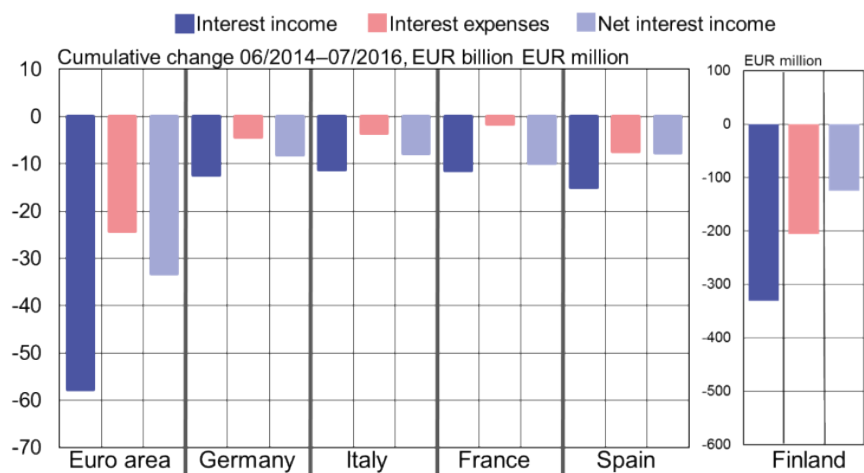
Of new housing loans granted in the euro area in 2016, 45% are tied to market interest rates of up to one year. This share has grown over the years, with only a fifth of new housing loans being granted at variable interest rates as recently as the early years of the new millennium. With corporate loans, there has been no corresponding change. A total of 85% of new loans contracted in the euro area in 2016 are variable-rate loans; this share was already almost equally large just after the turn of the millennium. Among large euro area countries, the lowest levels of loans granted at variable rates in relative terms are observed in France and Germany.

Banks traditionally make use of maturity transformation, i.e. acquire short-term debt at low interest rates and lend it further at higher interest rates as long-term loans. When the difference between short- and long-term interest rates in the economy narrows; in other words, when the yield curve flattens, the interest margin received by banks declines. Although short-term market interest rates have entered negative territory, banks have not been able to pass these negative interest rates on in full to their customers. Hence, the interest rate differential has narrowed further still. Interest revenues generated by banks in net terms are affected not only by loans and deposits but also by other interest expenses and interest income, arising e.g. from various debt instruments, derivatives and debt instruments issued by banks themselves.

Net interest income from traditional retail banking (the difference between interest charged on the stock of loans to the private sector and interest paid out on deposits) received by the euro area banking sector from traditional retail banking has declined in recent years. The difference calculated in euro terms between interest income from loans to the private sector and interest paid out on deposits from the private sector has narrowed by more than EUR 30 billion in the euro area since mid-2014 (10%).

Chart 6.

Net interest income on retail banking has declined



Interest income calculated on the basis of interest income on lending to the private sector, interest expenses on the basis of interest paid out on deposits from the private sector. Net interest income calculated as a difference between interest income and interest expenses.

Sources: ECB, Macrobond and calculations by the Bank of Finland.

28.9.2016
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Of large euro area countries, Spain has suffered most, witnessing a fall of approximately EUR 8 billion (15%) in net interest income since mid-2014. Interest income in Spain has dropped by nearly EUR 15 billion on account of both a smaller stock of loans and lower interest rates. At the same time, however, interest expenses have also fallen, driven by lower deposit rates. Germany and France have experienced almost equally large cuts in interest income in relative terms. The interest rate level is higher in Germany, but the impact of a lower interest rate level in France is compensated for by a faster-growing loan stock. Interest expenses have not fallen in France by as much as in other countries, due to the large share of fixed-term deposits remunerated at relatively high interest rates. Net interest income has thus declined in France in relative terms by more (13%) than in Germany (8%).

Over the long term, however, the very low level of interest rates also contributes to bank profitability. Low interest rates bolster activity in the real economy, thus adding to credit demand in the private sector. Growing lending volumes increase interest income, and a contraction in loan losses reduces the resultant costs incurred by banks. The reduction in the overall interest rate level has also made market-based funding more favourable for banks. In addition, the particularly attractive terms of the ECB's targeted longer-term refinancing operations continue to bring down banks' funding costs.

Banking resilience improved

The European Banking Authority (EBA) published EU-wide stress test results at the end of July. There were 51 participating banks, covering around 70% of assets in the EU banking system. Of these, 37 are banks subject to direct ECB supervision. The ECB also conducted the same stress test for an additional 57 banks under its supervision, as an internal supervisory measure. The results for these banks are not published, but the banks themselves may disclose the results, if they so wish.

The banks' ability to absorb shocks was tested in an adverse scenario extending over a three-year period. The adverse scenario envisaged markedly weaker-than-forecast economic activity and serious financial market disruptions. The banks' starting point capital position was an average Common Equity Tier 1 (CET1) capital ratio of 13.2%. In the adverse scenario, European banks saw an average reduction of 3.8 percentage points in the capital ratio, bringing it to 9.4% at the end point of the adverse scenario, i.e. at the end of 2018.

Although the banks passed the test well on average, there were major differences among bank results. However, with the exception of one bank, all banks' CET1 capital clearly exceeded the reference value of 5.5% applied in the adverse scenario of the 2014 stress test.

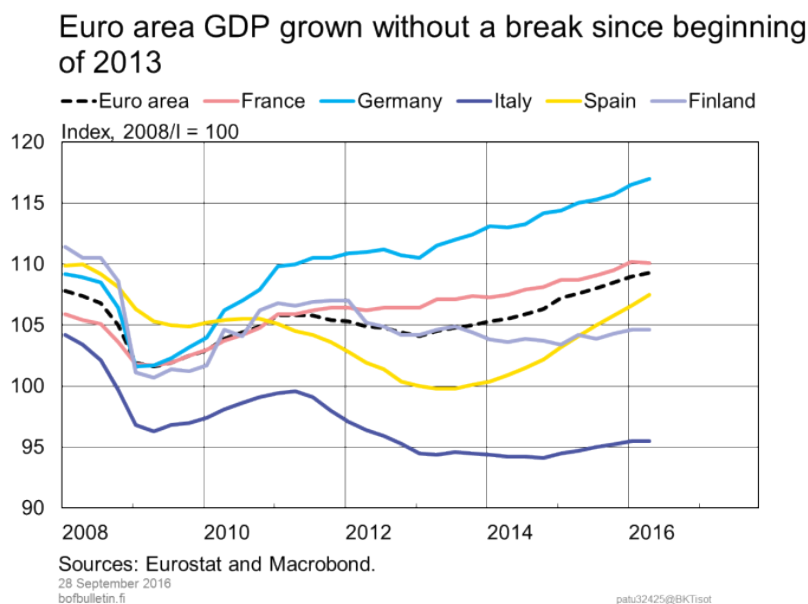
Despite the stress test results, the European banking sector's significant structural problems are still unresolved. The bulk of European banks continue to struggle with profitability problems caused by the low growth and low interest rate environment and by other factors. The causes underlying weak profitability vary across countries and banks. Bank profitability in distressed countries is impaired as a legacy from the crisis by high amounts of non-performing loans that weaken their operational capacity and role in financial intermediation. In some countries, the banking sectors suffer from over-capacity and inefficiency. In large investment banks, profitability is eroded, in particular, by the unstable market situation and the adjustment of operations to match revised financial market regulation. Banks struggling with profitability challenges must be capable of adapting to tighter regulation and reforming their operations in order to ensure that profitable business models will be in place in the future, too.

Brexit will dampen growth in Europe

Euro area GDP growth in the first half of 2016 was slightly faster than foreseen previously. Private consumption, in particular, has grown at a brisk pace, but export performance has been weaker than expected. Soft indicators for the real economy point

to ongoing growth in the immediate quarters ahead at the same pace as in the second quarter.

Chart 7.



Euro area internal economic fundamentals have not changed during the past six months and are supportive of growth. The accommodative stance of monetary policy will continue, the private sector’s debt-servicing burden will diminish, fiscal tightening will abate and the employment situation will improve. In this respect, the favourable trend that commenced in the euro area in 2013 is projected to continue throughout the forecast horizon.

In the June referendum in the United Kingdom, about 52% of voters supported the country’s departure from the EU. As an immediate consequence of the voting result, an across-the-board repricing on the financial markets took place, accompanied by an overall increase in uncertainty and depreciation of the pound sterling relative to key currencies. After the initial surprise, the stock markets have partly recovered and financial market uncertainty has receded. However, the lower level of the pound sterling appears to be more permanent. But the final outcome of the Brexit process – what kind of economic relationships the United Kingdom will conclude with the EU – will remain an open question for some time to come. See [Three months after the Brexit vote – the current state of play](#).

At this stage, the economic implications of the Brexit vote for the euro area can mainly be assessed via trade channels. The Bank of Finland forecast assumes [Global economy slowly gathers pace](#) a Brexit-induced contraction in UK imports in line with the Bank of England’s projection and foresees no change in euro area exporters’ market share in the United Kingdom, nor any shift in the ratio of investments to exports. More reliable statistical data on the effects of the Brexit vote are not likely to be available until the end of the year. A further assumption in the Bank of Finland forecast is that any new spikes

in uncertainty that may be experienced on the financial markets with regard to Brexit negotiations will remain short-lived.^[2]

Another factor dampening future growth in the euro area real economy to some extent is the weak economic situation in Italy. Problems related to the country's banking sector will erode corporate and household confidence in the economy. The performance of retail sales and industrial output has been weak in the first part of the year.

Domestic demand still a driver of euro area growth

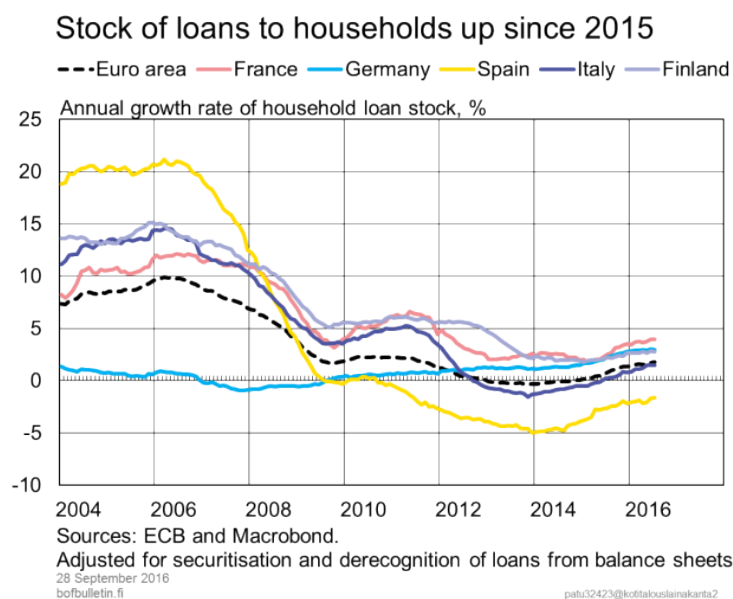
Private consumption and private investment were the components of aggregate demand that made the strongest contribution to euro area growth in 2015 and early 2016. The composition of growth will be similar throughout the forecast period. The average contribution of net exports to growth will be slightly negative.

Private consumption will be bolstered by an increase in households' disposable income amid a steadily improving employment situation and higher labour income per employee. With the ratio of total household debt to disposable income continuing to decline and interest rates remaining very low, households' debt-servicing costs will decrease.

Annual average growth in the stock of loans to euro area households continued on a moderate upward trajectory during the first half of 2016. In July, the stock of loans to households was 1.8% up on a year earlier. Differences across countries are also significant in this segment. In France, annual growth is already approaching 4%, while, of large euro area countries, Spain is still experiencing negative annual growth rates in the stock of loans to households.

2. See also Hukkinen, Juhana – Kortela, Tomi (2014) Kriisien vaikutus euroalueen talouteen ('Impact of crises on the euro area economy'). BoF Online 15 December 2014.

Chart 8.



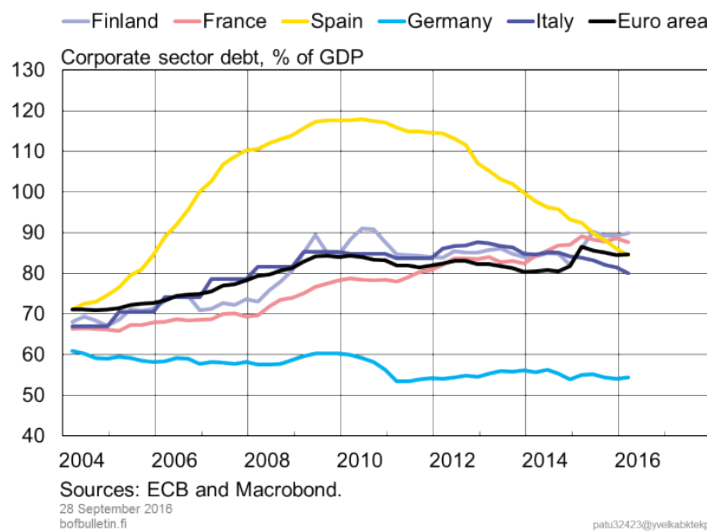
Household indebtedness in France has continued to grow. However, on the back of low interest rates, the increase in debt-servicing costs relative to income has flattened out. In Italy, total debt to income has remained relatively stable in recent years, but in the low interest environment debt-servicing costs relative to income have declined, approaching their long-term average. German households will continue to reduce their debt levels, and lower debt-servicing costs will sustain private consumption. In Spain, the household sector balance sheet adjustment will continue, debt-servicing costs relative to income are falling and the new positive trend in housing prices will increase household wealth, thereby strengthening domestic demand.

Growth in private **fixed investment** picked up in the euro area to 2.7% in 2015, and growth continued at an almost equally strong average pace in the first half of 2016. This reflects an increase in the capacity utilisation rate, better access to finance and temporary tax reliefs for investment in France and Italy. Investment growth will be buttressed by the very low interest rate environment, the improved availability of finance, the need to renew the capital base after weak investment activity in 2008–2013 and the lower level of the capital ratio for corporate sector debt. Even so, investment growth will be held back by Brexit and the uncertainty related to its consequences and, in part, also by labour and commodity market rigidities. Nevertheless, the contribution of investment to growth will be significant in the forecast period.

Average annual growth in the euro area corporate loan stock has strengthened in 2016 and was 1.9 % in July. The euro area aggregate, however, conceals a large degree of volatility across countries. See [Why are euro area corporate loans growing so slowly?](#)

Chart 9.

Big differences in euro area corporate sector debt across countries



According to the Survey on the Access to Finance of Enterprises in the euro area, published in June 2016, the amount of rejected loan applications by small and medium-sized enterprises in the latter half of 2015 was the smallest since the crisis. Similarly, more loan applications were approved in full than at any time since 2008. The low level of interest rates is also reflected in the debt-servicing costs of non-financial corporations, which have continued to fall relative to net income and helped ease the deleveraging process in the corporate sector. The corporate sector's total debt relative to GDP in the first quarter of 2016 was about 3% lower than a year earlier.

Of the large euro area countries, Italy's situation is still fragile

Economic fundamentals in **Germany** are in good shape. In 2015, the German economy grew by 1.7%, and growth continued at the same pace in the first half of 2016. Private consumption has maintained its robust growth, and housing investment has increased fairly strongly. The growth outlook in the forecast period is good against a backdrop of vigorous domestic demand. Household indebtedness is at a moderate level and the unemployment rate ranks among the lowest in the euro area. The contribution of private consumption to growth will also remain strong during the forecast period. Growth in housing investment will continue in the wake of housing price increases. Despite Germany's high competitiveness, the slower expansion of export markets due to Brexit will also put a drag on German exports and GDP growth during the forecast period. Growth in the country's economy as a whole will be good, on average, during the forecast period. On the back of a balanced budget and the lowest debt ratio among large euro area countries, the public finances will be well-equipped to adjust to a period of slightly slower growth.

In 2015, the **French** economy already expanded markedly better than in the preceding years (1.2%). According to IMF projections, the impact of Brexit on the French economy

will be of a similar scale to the euro area average. Unlike in preceding years, France's public finances will not be consolidated in net terms in 2016, but fiscal adjustments are forecast to restart towards the end of the forecast horizon. Although unemployment will only decline slowly during the forecast period, the long-term outlook has been improved by the labour market reforms approved in the summer.

Following the turn in the economy in 2013, economic growth in **Spain** accelerated to 3.2% in 2015. Growth is expected to continue at a notably stronger pace than the euro area average, but will moderate in 2017. Brexit will slow Spain's economy slightly in the immediate years ahead, due to the dampening of exports to the United Kingdom, and to some extent also to the other euro area countries. Economic growth is supported by improvements in price competitiveness, as well as by structural reforms and the fact that the aftermath of the housing bubble bursting has finally bottomed out. Favourable developments are also bolstered by a strong easing of financing conditions, reflecting the accommodative monetary policy and consolidation in the banking sector. The continued brisk pace of growth in the economy will lower unemployment and fuel inflation in the forecast period. The general government deficit is, however, still large, and government debt has risen to around 100% of GDP. The current outlook for the Spanish economy is overshadowed by what are already the second parliamentary elections within a year and the difficulties of forming a government.

The growth projections for **Italy** have been revised downwards over the entire forecast horizon. The weakness of the Italian economy is due mainly to uncertainties related to the banking sector that are eroding corporate and household confidence. The economy does, however, also include elements that support growth. The number of people employed has increased in the first half of the year, and economic growth continues to be supported by monetary policy. The most significant risks to the outlook for the Italian economy relate to the banking system and the referendum to be held in December.

UK referendum changed assumptions

For the United Kingdom, a significant downside risk materialised as those in favour of Brexit won the referendum in late June. The new Prime Minister, Theresa May has announced that she will submit the notification of withdrawal to the European Council not earlier than the end of 2016, and in practice, this means that the United Kingdom will remain a member of the European Union until the end of the forecast horizon. The Bank of Finland's forecast is based on the Bank of England's assessment of the impact of Brexit on the UK economy. As a result of the uncertainties, companies are postponing new investment and recruitment. The depreciation of the pound sterling will fuel inflation via import prices. The corporate sector is expected to act in advance and to gradually adjust to a trading environment that is slightly less open. In early August, the Bank of England announced a larger-than-expected stimulus package. In its meeting in September, the Bank of England's Monetary Policy Committee did not change its view on the impact of Brexit, and the Committee announced its preparedness to introduce further measures towards the end of the year. Economic growth will remain at 2% in 2016 as a result of strong dynamics in the first half of the year. Growth will slow during the forecast period, reflecting the weakening of investment sentiment and domestic demand. In the baseline scenario of the Bank of Finland forecast, economic growth in the UK will,

however, remain positive throughout the forecast period. (For a more detailed examination of the situation following Brexit. See [Three months after the Brexit vote – the current state of play](#).)

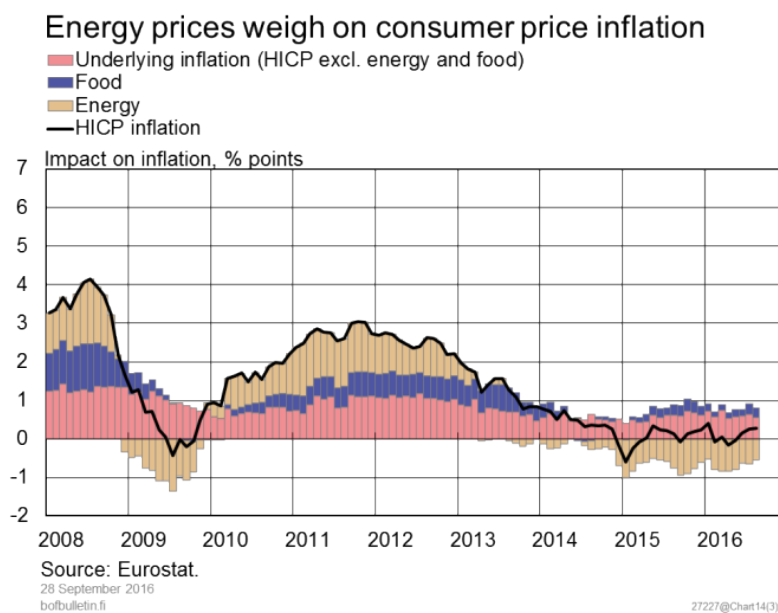
Sweden's economy grew by 4.2% in 2015. In the first half of 2016, the positive trend was supported particularly by private consumption and investment – of which housing investment, in particular, grew at a rapid pace. Economic growth in 2016 will, in fact, remain over 3%. Due to slower growth in the export markets, the economy will slow in the next couple of years, to approximately 2.5% growth. The greatest downward risk to economic balance remains the growth in household debt, maintained by the low level of interest rates, and the overheated housing market. Without the necessary macroeconomic measures, the imbalance in Sweden's economy will continue to grow.

In **Denmark**, the economy grew by 1.2% in 2015. Private consumption, and the domestic market as a whole, are developing favourably. The employment rate is rising (75.3% in the second quarter of 2016), the unemployment rate is low (4.2%) and real income is growing. Extra-EU services exports (particularly vessel chartering) have, however, developed only modestly, which is also reflected in the low GDP growth rates.

Inflation still low

Inflation according to the harmonised index of consumer prices for the euro area turned positive during summer 2016, but the rate of increase in prices is still very slow. In August, inflation was 0.2%, and since the start of the year, it has averaged close to zero. Inflation continues to be dampened by the low level of oil prices. However, underlying inflation (excl. energy and food prices) has also remained below 1% for a protracted period, reflecting subdued price pressures on the domestic market. Inflation has also been subdued in the other EU countries. In Denmark, consumer price inflation is close to zero, and in Sweden and the UK inflation has also been moderate in 2016. However, in Sweden and Denmark inflation will accelerate more than in the euro area in the immediate years ahead, due to their more positive growth outlook. In the UK, inflation is fuelled by Brexit, via in particular the depreciation of the pound sterling.

Chart 10.



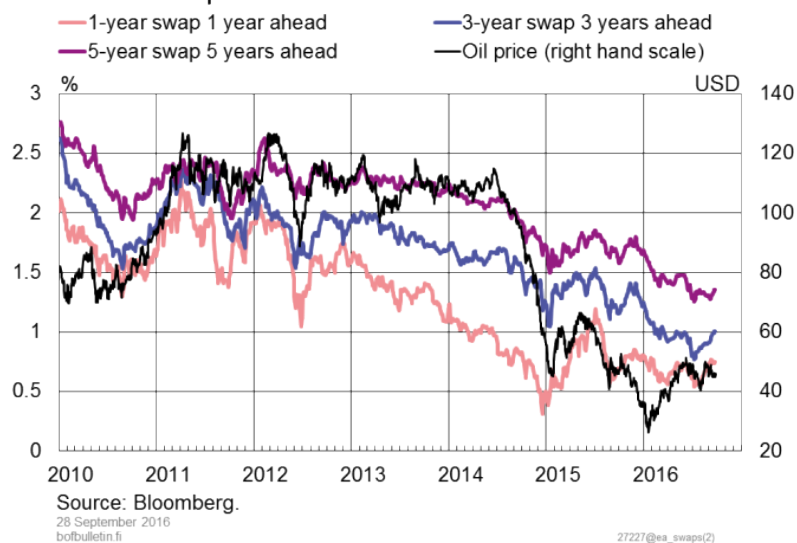
The Bank of Finland's view on the outlook for inflation is based on three key factors: the price of crude oil, inflation expectations and the output gap.

The price of oil is still fairly low, and due to oversupply it is forecast to remain at low levels until late 2017. See [Oil markets seeking a new balance](#). Changes in oil prices are, however, expected to cause a temporary acceleration in inflation at the turn of the year 2016/2017. This is due to the base effect. The price of oil has stabilised to levels clearly higher than at the previous turn of the year, and as inflation is measured as the year-on-year change in prices, this has an upward impact on prices.

The direct effects of oil prices on inflation are, however, one-off by nature. An increase in oil prices will raise the general level of prices but will not have a permanent impact on inflation, i.e. the 12-month change in consumer prices. Based on futures prices, the annual rate of increase in oil prices will level off, which will decrease the impact on inflation. Oil price fluctuations are thus not a major concern over the medium term, the relevant horizon in terms of price stability. However, the fluctuations in oil prices may also have longer-lasting, indirect effects that are eventually reflected in wage-setting, via inflation expectations.

Chart 11.

Oil price contributed to weakening of market-based inflation expectations

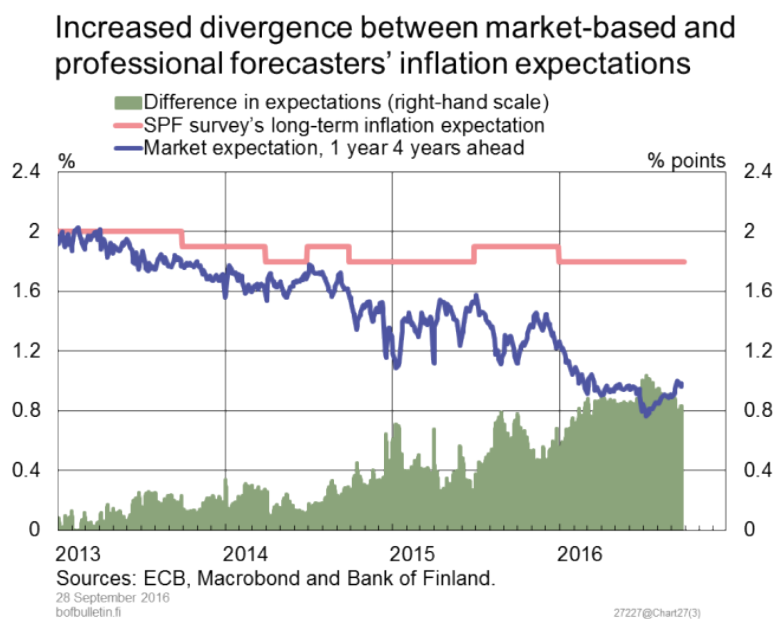


The renewed fall in oil prices at the end of 2015 and in early 2016 was reflected in a broadly based dampening in market-based inflation expectations. In contrast, the rise in oil prices in spring 2016 strengthened only short-term inflation expectations. Medium-term inflation expectations have subsequently also resumed an upward path. Longer-term expectations have, however, remained muted, and they are currently exceptionally moderate. This is not a problem for the euro area alone; in the United States, too, long-term inflation expectations have weakened, albeit recently slightly less than in the euro area.

The decline in long-term inflation expectations is a worrying trend. Inflation expectations reflect economic agents' perception of inflation developments, and are thus a key factor in inflation dynamics. A decrease in inflation expectations may drive the economy into a state in which the pace of rise in wages slows and therefore so does consumer price inflation.

Market-based inflation expectations do, however, also reflect to some extent factors other than simply perceived inflation, and therefore they are not the only relevant measure of inflation expectations. See [How well do inflation swaps reflect expected inflation?](#) Survey-based (SPF) average long-term inflation expectations for the euro area have remained broadly stable, and the expectations of professional forecasters can thus be considered as having remained anchored close to the objective of price stability. Various sources, however, show that there is slight divergence between different reported inflation expectations. In recent years, the difference between market-based inflation expectations and those of professional forecasters has increased. Assessments of the inflation outlook should, therefore, consider developments in inflation expectations in a broad-based manner.

Chart 12.



The third factor affecting the outlook for inflation is the output gap, which is a measure of the state of the real economy. The output gap is the difference between potential and actual output. A negative output gap means that there is unused capacity in the economy, which is reflected e.g. as a low level of employment. If there is unused capacity in the economy, there is only a modest upward pressure on wages and hence prices. According to various estimates, the output gap in the euro area is not expected to close until the end of the decade. Therefore, even though longer-term inflation expectations remain anchored, underlying inflation will probably remain subdued in the immediate years ahead and the price stability objective recede somewhat into the distance. It is, however, very difficult to estimate the actual size of the output gap.

Overall, if the market-based longer-term inflation expectations do not improve and the output gap in the euro area is towards the end of the forecast horizon still of the same size as currently assessed, inflation in the immediate years ahead will remain moderate but still on a sustainable path towards price stability. In 2016, inflation will still be dampened by the base effect of the fluctuations in oil prices. Thereafter, an improvement in the outlook for the economy and the sustained accommodative monetary policy stance will gradually push up inflation. The forecast is, however, surrounded by uncertainty, and, for example, larger-than-expected changes in oil prices, the development of which is difficult to anticipate, may have a significant impact on inflation.

Cyclical conditions and smaller interest payments continue to improve euro area public finances

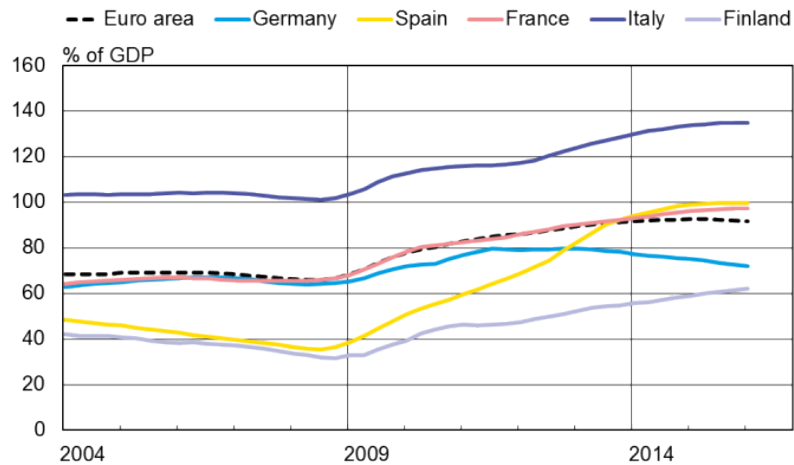
Discretionary fiscal measures and improved cyclical conditions have in recent years been reflected in the decline in the euro area general government deficit, which had increased significantly as a result of the escalation of the financial crisis in 2008. A sign of the long shadow of the financial crisis is that the euro area general government debt ratio started to decline only in 2015.

The overall general government deficit is projected to decrease slightly in 2016 to stand below 2% of GDP. The deficit will continue to improve in subsequent years, too, albeit at a slower-than-forecast pace in 2017. The deficit is also projected to decline in 2018, but not yet to below 1% of GDP. The size of the deficit differs significantly between countries.

Among large euro area countries, only Germany's debt ratio will decrease in 2016–2017. In Italy and Spain, the debt ratio will start to contract in 2018; in other words, debt ratio developments will be weaker than forecast. In France, the increase in the debt ratio is expected to come to a halt only in 2018. These forecasts are, however, surrounded by significant uncertainty, as they depend crucially on actual economic growth.

Chart 13.

Euro area government debt ratios decreased in 2015



Four-quarter moving average, latest observation I/2016.
Sources: Eurostat and calculations by the Bank of Finland.
28 September 2016
bofbulletin.fi

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The state of and outlook for the public finances are affected by the prevailing level of interest rates, cyclical conditions and discretionary fiscal measures. Of these factors, the prevailing level of interest rates is currently particularly favourable, which means that the interest payments on government debt will continue to decrease.

In many euro area countries, cyclical conditions are still by far the most important factor improving the general government primary balance, whereas until 2014 discretionary fiscal measures played a key role. In 2016, fiscal policies in the euro area are even slightly expansionary, which is partly due to the growth in public expenditure in response to the refugee crisis. The Stability and Growth Pact, however, will require renewed tightening of fiscal policy in many euro area countries towards the end of the forecast period.

In summer 2016, the Ecofin Council found that Spain and Portugal had not taken effective action in response to its recommendations on measures to correct their excessive deficits. The countries had not reduced their excessive deficits by the recommended deadline and their fiscal efforts had fallen significantly short of the Council's recommendations. Spain is required to take additional measures worth 0.5% of

GDP in both 2017 and 2018, and Portugal to take measures in the amount of 0.6% of GDP in 2017. The fines imposed on these two countries were, however, cancelled as a result of the reasoned requests they submitted to the European Commission.

There has also been discussion recently regarding the appropriate fiscal stance for the euro area.^[3]

Germany, in particular, has been encouraged to take domestic stimulus measures that also support growth in the other euro area countries, for example infrastructure investments that improve productivity and boost economic growth. Germany could take these measures, considering its budget surplus. On the other hand, the government debt ratio of Germany is still somewhat above the threshold of 60% of GDP, despite its positive trend.

Risks predominantly on the downside

The risks to the forecast for the global economy are once again on the downside. The main risks to the baseline forecast are those related to the global economy and the internal risks facing the EU22.

Risks relating to the global economy

One possible positive risk relates to the growth outlook for the US economy, which may turn out to be better than expected. This may be the case if **US productivity growth** accelerates, closer to the levels prevailing in 1995–2004. The factors affecting labour productivity can be divided into the skills of the workforce, capital deepening and total factor productivity. Of these factors, the low level of investment and, in particular, weak growth in total factor productivity have contributed to the subdued developments in labour productivity in recent years. The low level of interest rates provides support to corporate investment. In contrast, it is very difficult to estimate developments in total factor productivity. If the growth outlook for the US economy improved significantly, it would also boost euro area economic growth, as a result of an improvement in extra-euro area demand.

However, the outlook for the US economy, and the global economy, may weaken significantly, particularly if protectionist rhetoric spreads all the way to political decision-making in the advanced economies. Particular question marks relate to the possible failure of the Trans-Pacific Partnership Agreement (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). Developments related to **protectionism and turning inwards** are political by nature, and it is therefore very difficult to assess their probability and impacts by means of economics tools.

Chinese economic growth in the first half of the year was more rapid than expected. Nevertheless, it is unlikely that Chinese growth will in future surprise significantly on the upside. The rapid pace of growth in the Chinese economy is increasingly based on leverage, which in the short-term will expose the economy to financial market shocks. A

3. The rules of the Stability and Growth Pact do not obligate individual euro area countries to take into consideration the euro area aggregate fiscal stance.

longer-term problem in the development of the Chinese economy has been the fact that growth is largely export-driven and based on investment. Efforts have thus been taken to move towards a more balanced economic structure with a higher share of consumption demand, which would provide better tools for maintaining sustainable economic growth in the long term.

Risks to the Chinese economy are tilted significantly on the downside, due to major imbalances in the economy, the disorderly unwinding of which could lead to financial market shocks that are considerably bigger than those China has experienced in recent years. Corporate debt, in particular, has increased at a very rapid pace, and the bulk of the debt is held by inefficient companies with a weakened capacity to service debt. A possible **financial market shock in China** could escalate into an economic crisis, with increasing uncertainty and a rapid deterioration in confidence in the economy. An increase in uncertainty would push up corporate sector risk premia, i.e. companies' financing costs, thereby cutting investment. Higher financing costs would also be reflected in a decrease in production levels and demand for labour, slowing the rise in wages. Weaker developments in employment and wages would decrease household income and therefore also slow the growth in private demand. Due to China's large economic significance and deep integration into the world economy, the effects would also reflect on the emerging economies. According to calculations made at the Bank of Finland, using the Global Integrated Monetary and Fiscal model (GIMF), a deceleration in China's growth by one percentage point would cut US and euro area growth by about 0.3–0.4 of a percentage point.

Internal risks to EU22

An obvious risk in the euro area is the impact on economic developments of the **UK's departure from the EU** (Brexit). When and how the departure will take place in practice is, however, still unclear. See [Three months after Brexit vote – the current state of play](#). The short term economic impacts of Brexit will emerge via the confidence, wealth and exchange rate channels. In the longer term, the issues of free movement of labour and possible customs duties will become increasingly important.

Brexit scenarios are typically based on two or three assumptions on how the UK will arrange its trade relations with the EU (and the rest of the world). In the calculations, UK customs duties (in relation to the EU27) will increase permanently. In the favourable scenario, the customs duties between the UK and EU will be similar to those in Norway's EEA agreement (a good 1%, on average), in which case the direct effect on trade will remain minor. If, however, we assume that the customs duties will rise to the level of WTO tariffs (nearly 5%), the impacts would be significantly larger.

An increase in customs duties will be reflected as a permanent contraction in UK imports from and exports to the EU. The rise in the prices of imported goods will push up costs, leading to a long-term decrease in corporate investment and the capital stock. Correspondingly, households will have to cut consumption expenditure. In the calculations, the pound sterling depreciates as companies try to sell their output abroad on account of the weak domestic demand. In addition to the trade in goods, another significant channel of effect will be financial services.

Another concern relating specifically to the euro area are the **Italian banking system's** non-performing loans, amounting to EUR 360 bn. According to estimates by the Italian Ministry of Economy and Finance, of this amount, some EUR 85 billion are bad loans for which there are no loan loss provisions or banks' own funds to cover them. The Italian problem of non-performing loans may escalate if doubts arise on the financial markets as to the condition of Italian banks and/or if the referendum on constitutional reform leads to political deadlock. Financial market disturbances triggered by concerns about Chinese growth in early 2016 and the outcome of the Brexit referendum also spread extensively to the share prices and the prices of credit default swaps of banks that the markets considered to be weak.

Portuguese banks also have a considerable volume of bad loans (about EUR 30 bn). In addition to the state of the banking sector, Portugal's situation is made increasingly fragile by the fact that the country's credit rating, which is e.g. a criterion for the eligibility of government bonds as collateral in ECB monetary policy operations, hinges on a single credit rating agency (DBRS).

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