

EURO AREA: CHANGE OF COURSE IN MONETARY POLICY AND SUSTAINABLE ECONOMIC POLICY

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This is a translated version of the original German-language chapter "Geldpolitische Wende und nachhaltige Wirtschaftspolitik im Euro-Raum", which is the sole authoritative text. Please cite the original German-language chapter if any reference is made to this text.

EXECUTIVE SUMMARY

Although the economic recovery continues and the inflation rate has risen, the **European Central Bank (ECB)** is still expanding its monetary policy easing. The ECB announced additional asset purchases until at least September 2018. There are no material deflation risks that could justify this action. Even after the end of net asset purchases, the ECB's policy would remain highly expansionary measured by the size of its balance sheet and the level of policy rates. And this monetary policy is a key reason for the extremely low medium to longer-term interest rates. Interest rate reaction functions suggest that the ECB should **tighten its monetary policy considerably** in order to reflect macroeconomic developments. Risks to financial stability also support a monetary policy normalisation.

In such a situation, market participants find it particularly difficult to anticipate the future course of monetary policy, not least because the ECB has continued its easing for longer than expected based on its reaction to inflation and economic activity before the financial crisis. This **uncertainty** may lead to higher volatility on financial markets, which is why the ECB should publish a **normalisation strategy** for its monetary policy. This would allow market participants to prepare themselves, and help avoid disruptions on financial markets. To this end, it would be beneficial to develop the current forward guidance into a comprehensive **monetary policy forecast**, as seen in countries such as Norway and Sweden. This would require disclosing the ECB Governing Council's own inflation forecast. At least, it should be possible to publish a survey of the council members' individual forecasts, as is done in the United States. Also, the Euro-system staff's growth and inflation forecasts could be translated into a forecast for the path of monetary policy with the help of an interest rate reaction function.

In light of the macroeconomic developments, the ECB should **quickly reduce its net asset purchases and terminate them earlier than planned**. After the end of the purchases, medium and longer-term interest rates would again better reflect market participants' assessments. An ensuing increase in lending rates would have the positive side effect of curbing banks' interest rate risks. The ECB's next step should then be to adjust policy rates in line with inflation and growth developments.

Should a member state face a rapid increase in risk premiums, the threat of a debt crisis can be averted with the help of the **European Stability Mechanism (ESM)**. Monetary policy must not fall victim to fiscal dominance due to concerns about a member state's solvency. Rather, it is vital that member states prepare themselves for an increase in interest rates with a sustainable economic policy. **Structural reforms** need to be implemented systematically to improve competitiveness and thus growth prospects. Member states should use the temporary interest rate advantage to **consolidate their government debt**, and in doing so, reduce the amount of debt servicing required in the future so as to avoid a subsequent increase in the burden on tax payers.

I. CHANGE OF COURSE IN MONETARY POLICY NEEDED

325. The massive easing of monetary policy since 2014 has been a contributing factor to the **euro area's economic recovery**. Other key factors included a temporary decline in oil prices as well as structural adjustment processes and improved competitiveness in some member states. Economic output in the euro area is likely to reach the estimated potential level in 2017. The German Council of Economic Experts (GCEE) already concluded back in November 2016 that monetary policy should be aligned with the improved macroeconomic development and rising inflation rates, and that asset purchases should be scaled back and stopped earlier than planned.

Macroeconomic developments have continued to improve since then. The ECB should thus **quickly reduce and end its net asset purchases**. Its monetary policy would then still remain highly expansionary measured by the size of the central bank balance sheet and the level of policy rates. After the purchases are terminated, medium and longer-term interest rates would again better reflect market participants' assessments. Furthermore, the member states should not let the favourable financing conditions tempt them into postponing **fiscal consolidation** and other necessary market- and competition-oriented **structural reforms** (GCEE Annual Report 2016 items 416 f.)

326. In December 2016, however, the ECB extended its asset purchase programme that was due to end in March 2017 until December 2017. A further extension until at least September 2018 was announced in October 2017. Even though the ECB has reduced its monthly purchases in two steps from €80 to €30 billion, this will still imply an additional **significant increase in the balance sheet**. There has been **no change of course in monetary policy so far**. Rather, monetary policy has become even more expansionary.

In addition, the ECB has made several modifications to its forward guidance. For instance, in June 2017, it removed its reference to possible further policy rate reductions from its statement on monetary policy decisions. After all, the inflation rate provided no indication of a threat of deflation. In October 2017, the ECB explained it would increase the monthly net asset purchases again, in case economic developments turn out to be worse than expected. Furthermore, the ECB intends to reinvest the principal payments from maturing securities under its purchase programme for an extended period of time after the end of its net asset purchases. They also announced to publish the amount of principal repayments for the upcoming 12 months.

327. Already at the end of June ECB President Draghi pointed out that as the economy continues to recover, a constant monetary policy stance will become more accommodative (Draghi, 2017a). The central bank can accompany the recovery by adjusting the parameters of its policy instruments – not in order to tighten the policy stance, but to keep it broadly unchanged. **Markets reacted imme-**

diately with a sustained appreciation of the euro and increase of high-grade long-term government bond yields. This reaction illustrates the high degree of **uncertainty** regarding the ECB's **future course of policy**. After all, with its massive policy easing the ECB may well have deviated from its past systematic behaviour as reflected in a simple reaction function (GCEE Annual Report 2016 items 416 f.; Bletzinger and Wieland, 2017). [▶ ITEM 352 FF](#). For these reasons it is difficult to predict when asset purchases will come to an end and when policy rates will be lifted.

328. Not only is the timing of the first rate increase **uncertain**, but also the **level of interest rates after the normalisation** of monetary policy. This level is equal to the sum of the long-term inflation target and the real interest associated with long-term macroeconomic equilibrium. For some years now there has been a debate as to whether this real **equilibrium interest rate** has declined. This equilibrium is not only important for monetary policy, but also for the economic policies of the monetary union's member states. For instance, it is relevant for the future amount of debt servicing. In turn the equilibrium interest rate as well as the level of potential output are influenced by member states' efforts regarding structural reform and fiscal consolidation.
329. The current low interest rate environment and the uncertainty concerning the level of interest rates in the future have consequences for ECB and member state policy. The ECB should communicate a **normalisation strategy for its monetary policy** without delay, such that market participants can prepare in good time, and disruptions in financial markets and economic growth could be prevented or at least mitigated. The member states are responsible for sustainable government finances and successful structural policy. They need to prepare in good time for what is ultimately an unavoidable rise in interest rates. A **sustainable fiscal and structural policy** will make it easier for the ECB to normalise its monetary policy.

II. LOW INTEREST RATES AND EQUILIBRIUM

330. **Interest rates** have been stuck at **unusually low levels** in many advanced economies since the financial crisis. Short-term interest rates are still close to zero in the euro area. Yields on high grade ten-year government bonds remain very low despite the increase since the end of June 2017, at around 0.45 % for Germany and 0.75 % for France in October 2017. Short-term interest rates in the United States have been on the rise since the beginning of 2017, climbing from around 0.3 % to 1 %, while the yields on ten-year government bonds have ranged between 2.1 % and 2.5 %. By contrast, in the first half of the 2000s ten-year government bonds for the euro area and the United States still averaged around 4.5 %.
331. The **possible causes** of this persistent low interest rate environment are the subject of an intense debate. One reason for low nominal interest rates is the

significant expansion of central bank liquidity in the world's most important currencies. [↪ CHART 37 TOP RIGHT WIPO](#) This expansion is still continuing in the euro area and Japan in particular. The longer the low interest environment persists, the more the debate focusses on potential real economic causes. One candidate explanation is a **secular stagnation** – a prolonged period of economic weakness with low growth rates. But an argument against this is that not all yields have seen a sharp decline in recent years.

- 332. The equilibrium interest rate** in a macroeconomic equilibrium is reached when gross domestic product (GDP) equals potential output and inflation is stable. It defines the nominal rate of interest which is neither expansionary nor contractionary. It is an important reference point for monetary policy, particularly the deviation of the actual interest rate from this equilibrium.
- 333. One possible reason for a low equilibrium interest rate** is a decline in investment, perhaps due to a lack of innovations driving productivity (Gordon, 2012) or fears of deflation and a lack of demand (Summers, 2014; GCEE Annual Report 2016 item 412). Moreover, the decline in interest rates is often attributed to a global excess of desired saving over planned investment, brought about by demographic change (Bernanke, 2015; von Weizsäcker, 2015; GCEE Annual Report 2016 items 411 f.). However, investment activity has started to increase significantly again, even in the euro area. [↪ ITEM 235](#) Inflation in the United States and the euro area has also returned. In addition, more recent analyses reveal no negative correlation between demographics and per-capita growth. Economic growth in countries with more rapidly-ageing populations was higher in the past few decades, possibly due to faster adoption of new technologies (Acemoglu and Restrepo, 2017).

And finally, the lower equilibrium interest rate is attributed to the increased yield gap between secure, liquid government bonds and less secure, less liquid corporate bonds. This increased yield gap reflects the convenience yield (Del Negro et al., 2017).

- 334. Equilibrium concepts** differ in terms of the relevant **time horizon** (GCEE Annual Report 2015 items 315 ff.). For example, there is a distinction to be made between a medium and longer-term decline. A decline in the medium-term equilibrium interest rate will be sustained until considerable, but temporary disruptions to a country's macroeconomic equilibrium have subsided. These include for example a temporarily elevated risk aversion or propensity to save. The long-term equilibrium interest rate, however, is the rate that occurs when the long-term equilibrium is reached, that is, after all business-cycle fluctuations and other temporary disturbances have dissipated.

Recent **estimates of medium-term real equilibrium interest rates** for the United States indicate a decline between 2007 and 2009 from over 2 % to around 0 %. The associated studies are predominantly based on the much-cited Laubach and Williams (2003) approach. They use atheoretical time series methods or simple Keynesian models (Cúrdia, 2015; Lubik and Matthes, 2015; Laubach and Williams, 2016; Beyer and Wieland, 2017; Holston et al., 2017). Both Fed Chair Janet Yellen and ECB President Mario Draghi have referred to these

estimates (Draghi, 2016; Yellen, 2016, 2017). However, these estimates of medium-term equilibrium interest rates are associated with great uncertainty (GCEE Annual Report 2016 items 413 ff.). The **estimated decline is not statistically significant**. The evidence therefore does not contradict the assumption of an unchanged medium-term equilibrium interest rate. Hence, the decline in these estimates should not be the reason for major decisions regarding the course of monetary policy. [↘ BOX 8](#)

- 335.** The decline in estimates for medium-term equilibrium interest rates is primarily due to the decline in the concurrently estimated potential growth rate. **Medium-term potential growth** is thus **below the long-term level** as estimated by the Congressional Budget Office (CBO) for the United States and by the European Commission for the euro area. It follows then, that the medium-term output gap lies above the estimates of the CBO and the European Commission. [↘ CHART 41 RIGHT](#)
- 336.** It should therefore come as no surprise that **estimates for the long-term equilibrium interest rate**, which can be more precisely estimated than the medium-term rate, have **changed much less**. For example, the 2 % rate, which Taylor (1993) used in his interest rate rule for the United States, still corresponds to the long-term average of real funds rates for the period from 1960 to 2017. Furthermore, it hardly differs from the average growth rate of real GDP for this long period.
- 337.** Wieland and Wolters (2017) employed two **structural models** to obtain estimates. These are also around 2 % and are statistically significantly greater than 0 %. [↘ BOX 8](#) Recursive model-based estimates can be used to analyse why the average real interest rate deviates from the equilibrium interest rate over a longer period. It turns out that **expansionary monetary policy** and a temporary **rise in risk aversion**, in particular, keep real interest rates lower than the equilibrium rate. Del Negro et al. (2017) also use a structural model. Their estimation also takes the yield spread between corporate bonds and government bonds into account. This spread increased during the financial crisis. According to the authors this is due to the higher convenience yield of US government bonds, which caused a decline in the equilibrium interest rate associated with safe government bonds. They estimate a longer-term equilibrium interest rate between 1 % and 1.5 %.

[↘ BOX 8](#)

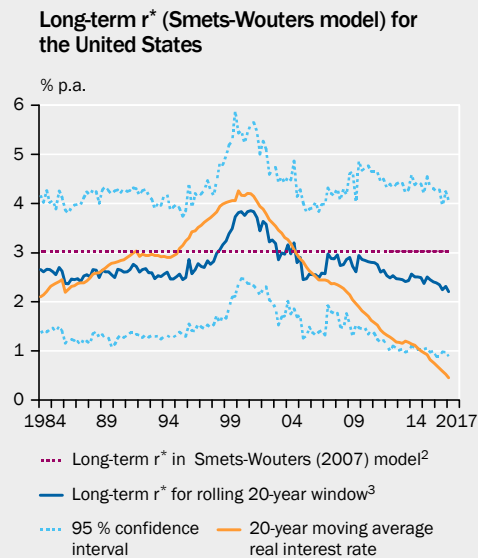
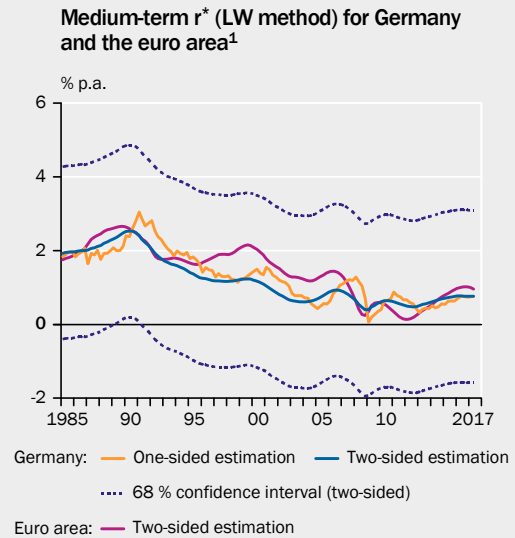
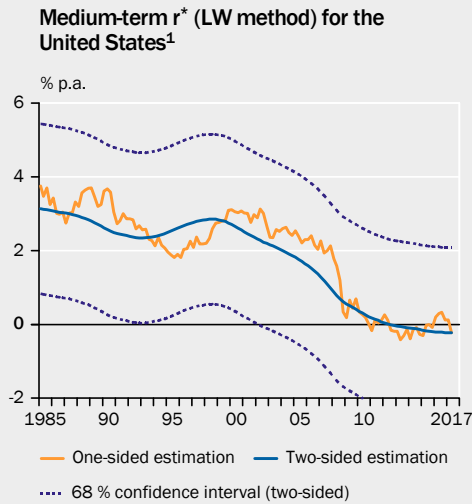
Recent equilibrium interest rate estimates: no significant decline

Estimates of medium-term equilibrium interest rates are often based on the much-cited approach by Laubach and Williams (2003). Corresponding estimates for the United States declined very quickly during the financial crisis, from around 2 % to 0 % (Laubach and Williams, 2016; Beyer and Wieland, 2017; Holston et al., 2017; Michaelis and Wieland, 2017a, 2017b). [↘ CHART 37 TOP LEFT](#) Estimates for euro area indicated a similar decline. [↘ CHART 37 TOP RIGHT](#) However, these estimates are subject to great uncertainty. The 95 % confidence interval for the United States has a range of +/-3 to +/-4 percentage points depending on the variant of the estimation method used. [↘ CHART 37 TOP](#) depicts

a 68 % interval for both the United States and Germany. The confidence intervals for the euro area are even wider and therefore not depicted. Hence, the decline in estimates is not statistically significant. The estimates are also very sensitive to changes in technical assumptions (GCEE Annual Report 2015 item 326; GCEE Annual Report 2016 items 414 f.; Taylor and Wieland, 2016).

CHART 37

Estimates of equilibrium interest rates (r^*)



Contributions to the difference between average real interest rate and long-term r^* for the United States⁴

Total difference: $-1.75\% = 0.45\% - 2.2\%$

Shock	Contribution to difference
Technology	-0,09 %
Risk premiums	-0,48 %
Government expenditure	-0,04 %
Investment-specific	-0,24 %
Monetary policy	-0,83 %
Price markup	0,15 %
Wage markup	-0,01 %
Initial values	-0,22 %

1 – Base on the Laubach-Williams method, for Germany and euro area modified according to Garnier and Wilhelmssen (2009); see also Michaelis and Wieland (2017a, 2017b). 2 – Based on the years 1966 to 2004. 3 – Based on a rolling 20-year window and real-time data. 4 – Smets-Wouters model: estimated long-term r^* and average real interest rate for the period 1997Q1 to 2016Q4 according to Wieland and Wolters (2017).

Sources: Beyer and Wieland (2017), Wieland and Wolters (2017), own calculations

Wieland and Wolters (2017) estimate the long-term equilibrium interest rate in a structural modelling framework. They use two New-Keynesian models: the Smets and Wouters (2007) model and the Del Negro et al. (2015) model. Smets and Wouters (2007) originally estimated a long-term equilibrium interest rate of 3 %, that is, some 35 basis points above the average real interest rate in the observation period from 1966 to 2004. Wieland and Wolters (2017) use the two models to identify the effects of long-term as well as temporary structural factors. These include technological, investment-specific, risk premium and monetary shocks as well as financial market frictions. This approach al-

lows them to analyse whether the long-term equilibrium interest rate has declined and to what extent long-term trends or temporary monetary and real economic shocks are responsible for low interest rates. Wieland and Wolters also perform recursive estimation based on a rolling 20-year window using real-time data to study potential structural breaks caused by non-modelled trends.

Wieland and Wolters (2017) estimate a current long-term equilibrium interest rate of 2.2 % for the United States. This rate has some relevance for the euro area because the convergence of the lower per capita income countries towards the United States level suggested by neoclassical growth theory would require higher euro area yields. The rolling estimation for 20-year windows yields different estimates over time. [↘ CHART 37 BOTTOM LEFT](#) Estimates are around 2.5 % in the 1980s and the first half of the 1990s. Around 2000, the equilibrium rate estimated temporarily rose to well above 3 % before falling back towards around 2.5 % by 2005. The confidence intervals associated with long-term equilibrium rate estimates are considerably narrower than for estimates of medium-term equilibrium interest rates. The long-term equilibrium interest rate is significantly positive. Moreover, it is considerably and statistically significantly higher than the 20-year real interest rate average of 0.45 % (1997-2016). Based on the model used, temporary factors are largely responsible for the sustained decline in real interest rates. For instance, monetary policy shocks are responsible for just under 50 % and risk premium shocks for nearly 25 % of the negative contribution to lower real interest rates. [↘ CHART 37 BOTTOM RIGHT](#)

The risk premium shocks can be interpreted as a greater preference for safe and liquid investment forms. According to another approach, the low real interest rates are due to a shortage of safe investments (Caballero and Farhi, 2014; Caballero et al., 2015, 2016; Gourinchas and Rey, 2016; Del Negro et al., 2017). This reduces the yields on safe investments compared to less safe ones. Certain policy measures such as liquidity regulation and central bank purchase programmes may also be contributing factors (Caballero and Farhi, 2017).

- 338.** These estimates of long-term equilibrium interest rates based on structural models thus indicate that the low real yields on government bonds have largely been caused by monetary policy and a possibly temporary increase in risk premiums or convenience yields, and not by a dramatic decline in the equilibrium interest rate. This would imply that monetary policy still has **a long way** to go until normalisation of interest rate policy has been concluded. It is all the more urgent that fiscal policy focus on ensuring sustainability of public finances. [↘ ITEM 558](#) The ECB and the member states are called upon to **adjust their policies in a timely manner**.

III. MONETARY POLICY STILL EXPANDING

1. ECB measures since 2016

- 339.** The ECB has implemented far-reaching measures to ease monetary policy since 2014. It has lowered the key policy rate to 0 % and its deposit rate down to -0.4 %. Meanwhile it has more than doubled its total assets through a series of asset purchase programmes. By the end of September 2018, that figure will have reached some €4,700 billion – around €2,600 billion more than at the end of 2014. [↘ CHART 38 TOP LEFT](#) This rise corresponds to just under 25 % of euro area

GDP, meaning that the ECB’s total assets increased to about four times the amount seen at the start of the financial crisis in summer 2007. A detailed chronology of the ECB’s monetary policy decisions can be found in the Appendix.

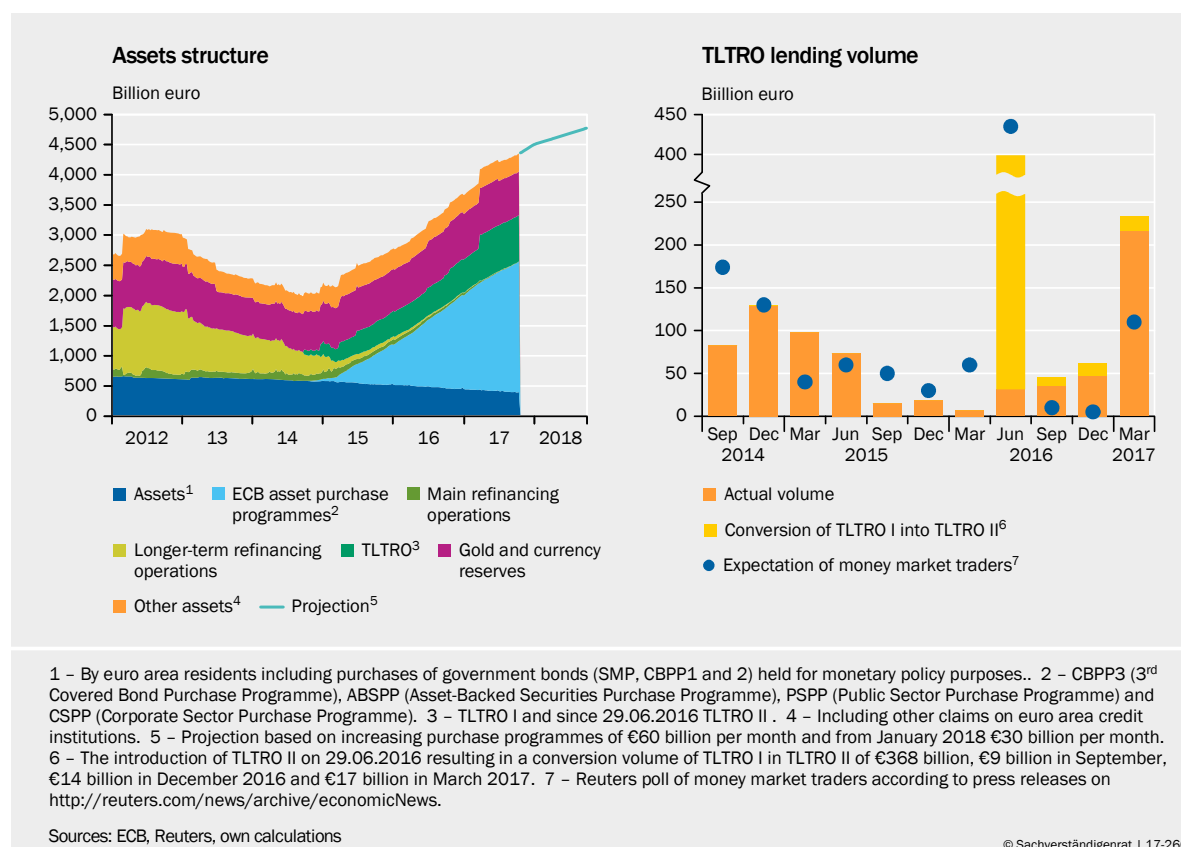
➤ TABLE 17, APPENDIX

The **ECB still continues to expand its balance sheet**. It decided, in December 2016, to continue its net asset purchases from April to December 2017, while it reduced the monthly amount from €80 billion to €60 billion. In October 2017 the ECP extended the net asset purchases until September 2018, while the monthly amount was cut in half from January 2018 onwards. In this way, total assets will rise by an additional €270 billion. Since December 2016, the increase will then amount to €810 billion. Furthermore, the expansion of the TARGET2 liabilities is also related to the bond purchases. ➤ BOX 9

340. The ECB undertook the fourth and last in the second series of its **targeted longer-term refinancing operations (TLTRO II)** in March 2017. ➤ CHART 38 RIGHT Demand from banks was much higher than expected. Overall, the TLTRO have been a major contributing factor to balance sheet expansion to date. ➤ CHART 38 LEFT These operations have given banks the opportunity to reduce their funding costs to as low as -0.4 % as long as they fulfill some moderate conditions regarding lending. According to estimates, the demand came primarily from banks in Spain and Italy (PICTET, 2017). It may have primarily helped banks with low excess liquidity. In countries such as Germany, France and the Netherlands, where excess liquidity is considerably higher, the costs of deposits

➤ CHART 38

Structure of ECB assets and targeted longer-term refinancing operations (TLTRO)



with the ECB due to the negative deposit rate are likely to be far higher than the interest rate gain under the TLTRO (PICTET, 2017). Consequently, a rise in deposit rates would bring banks in these countries greater advantages than banks in Spain and Italy, for example.

↳ BOX 9

Euro area TARGET2 balances on the rise again

Since the start of the ECB's asset-purchase programme in March 2015, the Deutsche Bundesbank's and other euro area central banks' claims from other EU member states through the TARGET2 real-time gross settlement system has increased significantly. [↳ CHART 39 TOP](#) The level of TARGET2 claims surpasses the 2012 high reached as a result of the euro area crisis.

Contrary to the increase leading up to 2012 high, the increase since 2014 has been interpreted as a mechanical effect due the ECB asset purchase programme (BIS, 2017; Deutsche Bundesbank, 2017a; ECB, 2017a). Eisenschmidt et al. (2017) explain in a detailed analysis that the current rise in TARGET2 balances is largely due to cross-border payments in the context of the asset purchases. Thus, these balances might not be taken as evidence of heightened financial market tension, increasing fragmentation or unsustainable balance of payments developments. Similar effects have also been observed in relation with the Federal Reserve System's bond-buying programme in the United States.

To give an example, a purchase of securities by the Italian central bank from a foreign investor that maintains a correspondent account in Germany mechanically leads to an increase in Italy's TARGET2 deficit and Germany's TARGET2 surplus. This example describes a partial effect that can be masked by other portfolio shifts as shown by an overall decomposition of the balance of payments changes.

[↳ CHART 39 BOTTOM](#)

The increase in TARGET2 surpluses in Germany is thus primarily due to the fact that many international investors maintain correspondent accounts in countries with financial centres, such as Germany, which consequently maintain high liquidity reserves (Eisenschmidt et al., 2017). The excess liquidity thus reduces the necessity of liquidity redistribution in the euro area via the inter-bank market. [↳ CHART 39 TOP](#) Excess liquidity in the euro area can be expected to decrease after termination of the purchase programme.

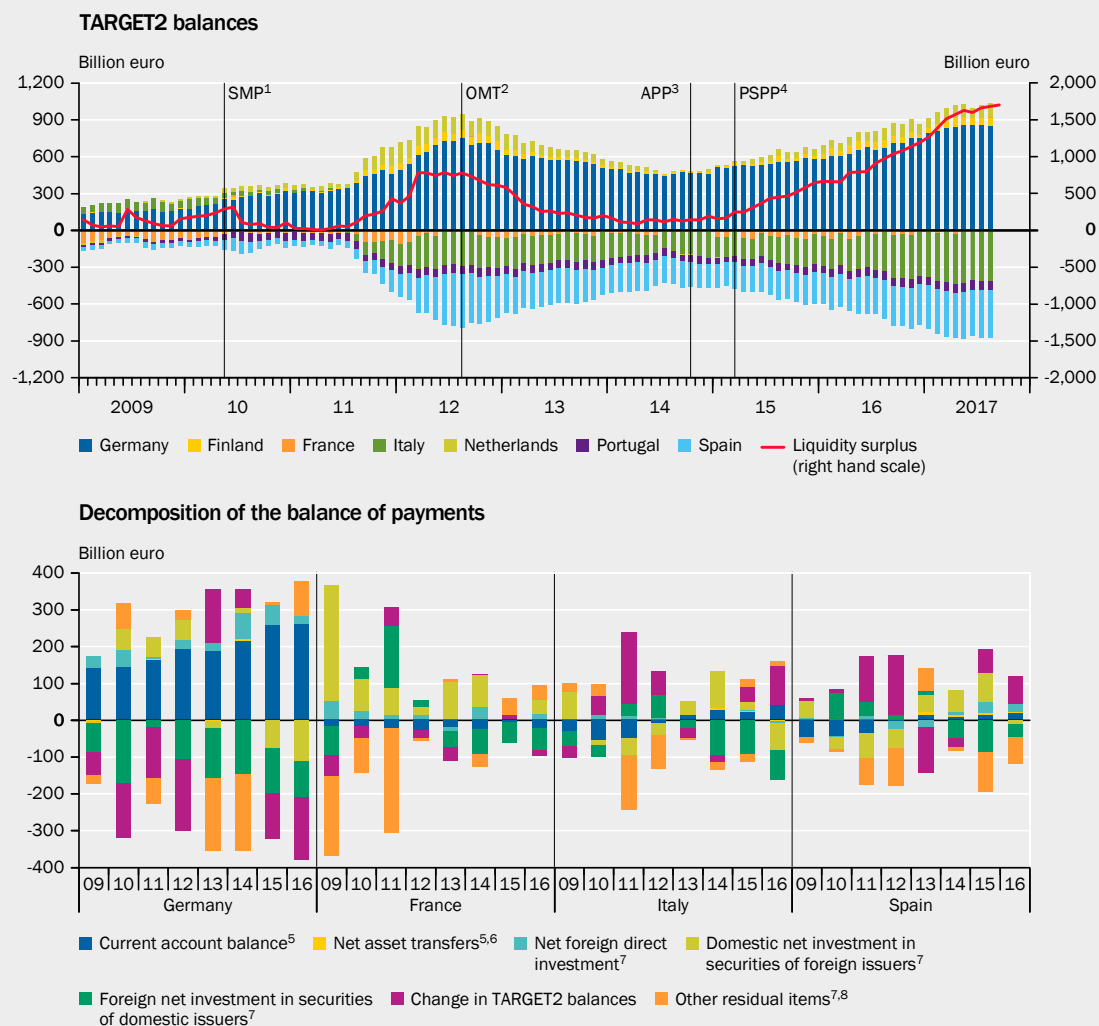
According to Eisenschmidt et al. (2017) the increase in TARGET2 balances would only be a sign of persisting fragmentation if there were notable inter-bank interest rate differences that result from domestic excess liquidity rather than excess liquidity in the entire Eurosystem. There are no such signs at present, given that Eurosystem excess liquidity is not triggering any price signals strong enough to set off a redistribution.

However, the possibility cannot be ruled out that the development signals a reduction in financial ties, as investors could have permanently reduced their balances, particularly with regard to Italy, Portugal and Spain, due to a possible higher risk assessment (GCEE economic update 2017).

It therefore remains to be seen whether normalisation of ECB monetary policy will reduce TARGET2 imbalances. It must be assumed at any rate that another crisis flare-up in a member state will increase TARGET2 claims against that country. If such country were to leave the euro area, this could result in a loss on TARGET2 claims, which would be borne by the remaining members of the euro system.

CHART 39

TARGET2 balances and decomposition of the balance of payments of selected euro area member states



1 – Securities Market Programme, launch in May 2010. 2 – Outright Monetary Transactions, announcement in August 2012. 3 – Asset Purchase Programme, start in October 2014. 4 – Public Sector Purchase Programme, start in March 2015. 5 – A positive value indicates a surplus. 6 – Including net acquisition/disposal of tangible non-produced assets. 7 – A positive value indicates a capital inflow into the respective country. 8 – Financial derivatives and employee stock options, other net capital imports/exports, change in currency reserves and balancing items (errors and omissions) less changes in TARGET2 balances.

Sources: ECB, Eurostat, national central banks, own calculations

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341. In the context of its Public Sector Purchase Programme (PSPP), the ECB is getting closer to the **self-imposed ceiling of a 33% share in individual government bond issues**. LBBW (2017a) estimates that there will soon be shortages of Finnish, Portuguese and German bonds. The Deutsche Bundesbank may be already holding a share of 28 % (LBBW, 2017b). If the PSPP should be extended, the ECB would have to change the programme's design. There are deviations in the PSPP between member states from the capital key for government bond purchases. For instance, by August cumulative purchases since the beginning of the PSPP for Germany, France, Italy and Spain were around €4 billion, 12 billion, 11 billion and 5 billion, respectively, above the capital key. By contrast, for Portugal, Ireland and Finland, they came in around €10.5 billion, 3.5 billion and 2 billion below.

Signals of increasing scarcity of some member state bonds have become clear in recent months. Monthly net purchases for the Netherlands and Germany have remained below capital key-allocated levels since spring 2017. Downward capital key deviations for German, Dutch, Portuguese, Finish and Irish government bonds are offset in particular on the French and Italian government bond markets (LBBW, 2017a, 2017b).

342. The high proportion of government bonds held by the Eurosystem could become a **hindrance to the European Stability Mechanism (ESM)**. Since 2013, euro area government bonds contain what are known as collective action clauses (CACs). These ensure that an approval by a majority of creditors is sufficient to implement debt restructuring affecting all creditors.

However, due to the Eurosystem's large bond holdings, majority approval of debt restructuring in case of a crisis could turn out to be rather difficult to obtain. After all, the ECB cannot vote in favour of a restructuring of sovereign debt since monetary financing is prohibited by the Treaty on the Functioning of the European Union. This could provide opponents of such a restructuring with a blocking minority (Buchheit and Gulati, 2017). The ECB's self-imposed limit of not purchasing more than 33 % of the outstanding nominal value of a bond series merely excludes the possibility of the ECB itself being able to block a restructuring by abstaining from voting (Grund, 2016). The **bond purchases thus undermine the effectiveness and credibility of the ESM crisis mechanism**. This is especially true for larger highly-indebted member states for which an emergency ESM rescue would have to involve maturity extension for legacy debt.

343. On 18 July 2017, the **German Federal Constitutional Court** (*Bundesverfassungsgericht* - GFCC) passed an order of reference on the PSPP bond purchases (2 BvR 859/15 et al.), referring several questions to the European Court of Justice (ECJ) for clarification in line with European Union law. **The GFCC doubts, for example, whether the PSPP is covered by the ECB mandate** and whether it is compatible with the prohibition of ECB monetary financing. In an earlier case on government bond purchases under the Outright Monetary Transactions (OMT), the GFCC also sought a Union law-compatible reply from the ECJ to specific questions, on 14 January 2014 (2 BvR 2728/13 et al.). The ECJ subsequently placed certain conditions on the programme but gave the ECB extremely broad scope in repairing the transmission mechanism in individual member states. In its subsequent OMT judgement pronounced on 21 June 2016, the GFCC obligated the Deutsche Bundesbank to only participate in any OMT bond purchases when a number of specific requirements are met. Thus, it makes sense to review whether similar conditions would have to be applied to purchases under the PSPP. [↘ BOX 10](#)

↳ BOX 10

The German Federal Constitutional Court passes an order of reference regarding ECB bond purchases

The German Federal Constitutional Court (GFCC) resolved on 18 July 2017 to stay the proceedings concerning the constitutionality of ECB government bond purchases under the PSPP and referred several questions to the European Court of Justice (ECJ) for a preliminary ruling. The GFCC judges have requested in particular that the ECJ review whether the PSPP violates the prohibition of monetary financing and exceeds the ECB's monetary policy mandate, thus encroaching upon the economic policy competences of the member states (GFCC, 2017). The GFCC acknowledges that the PSPP is meant to pursue a monetary policy objective and employs monetary policy instruments.

According to the GFCC, such a programme, must provide sufficient guarantees for government bond purchases on the secondary market to ensure observance of the prohibition of monetary financing. The GFCC judges criticize "that details of the purchases are announced in a manner that could create a de facto certainty on the markets that issued government bonds will, indeed, be purchased by the Eurosystem" (GFCC, 2017). They also state that it is currently not possible to verify compliance with certain minimum periods between the issuing of debt securities on the primary market and their purchase on the secondary market. Thus far, the bonds have been held until maturity. Moreover, as purchases include bonds that carry a negative yield from the outset, they could already imply a transfer payment to the government.

The German court is also concerned about the programme's proportionality. The economic policy consequences stemming from the PSPP volume and the resulting predictability of government bond purchases are integral features of the programme which are already inherent in its design. Based on an overall assessment of the relevant criteria of delimitation, the PSPP decision could be primarily seen as an economic policy measure rather than as a monetary policy measure. However economic policy is the responsibility of the member states. The court finds that the programme lacks a comprehensible justification that would provide criteria for a regular review regarding whether the program is still needed. And finally, the judges refer to the Bundestag's right to decide on the budget (*Budgetrecht*) and express their concerns about the risk-sharing between the ECB and the Deutsche Bundesbank regarding potential losses from purchased government bonds.

The OMT judgements of the ECJ and the GFCC

In the summer of 2012, the Governing Council of the ECB announced OMT as an instrument for the unlimited purchase of government bonds in order to prevent a further escalation of the euro area crisis (GCEE Annual Report 2012 item 133 box 8). This instrument requires that the conditions associated with an ESM support program are continuously fulfilled. As a result of complaints lodged, the GFCC asked the EJC on 14 January 2014 for a preliminary ruling. In its judgement handed down on 16 June 2015 (ECJ C-62/14), the ECJ affirmed that the Eurosystem's legal acts are subject to judicial review of compliance. Yet, it also concluded that the OMT was within the scope of the ECB mandate as long as certain conditions were met. Government bond purchases on the secondary market would be equivalent to non-permitted purchases on the primary market if investors on the primary market knew for certain that the Eurosystem was going to follow up purchasing the bonds bought there. However, the ECJ added an extremely broad justification for such ECB purchases to its ruling. In particular it assigned the ECB a general responsibility for repairing the monetary transmission mechanism in individual member states. On this basis, the ECB could justify extensive interventions in areas of economic policy. It comes close to removing the limits of the ECB's mandate (Feld et al., 2016).

Following the ECJ's preliminary ruling, the GFCC judgement on OMT pronounced on 21 June 2016 specifically prescribes concrete restrictions on participation of the Deutsche Bundesbank in the OMT programme bond purchases. Specifically, the volume of purchases is to be limited in advance, a min-

imum period between issue and purchase is to be respected, and the Deutsche Bundesbank should only purchase bonds of member states which have access to and can finance themselves on the bond market (GFCC, 2016). Moreover, bonds should only be held until maturity for exceptional cases. The purchases should be limited or ended when there is no more need for intervention. In this case purchased bonds should be placed back on the market. The PSPP is principally a monetary policy measure. Hence the legal limits could be more broadly defined than for the OMT programme. A legal review of the extent to which the criteria for the OMT bond purchases should be applied to the PSPP is, however, advisable.

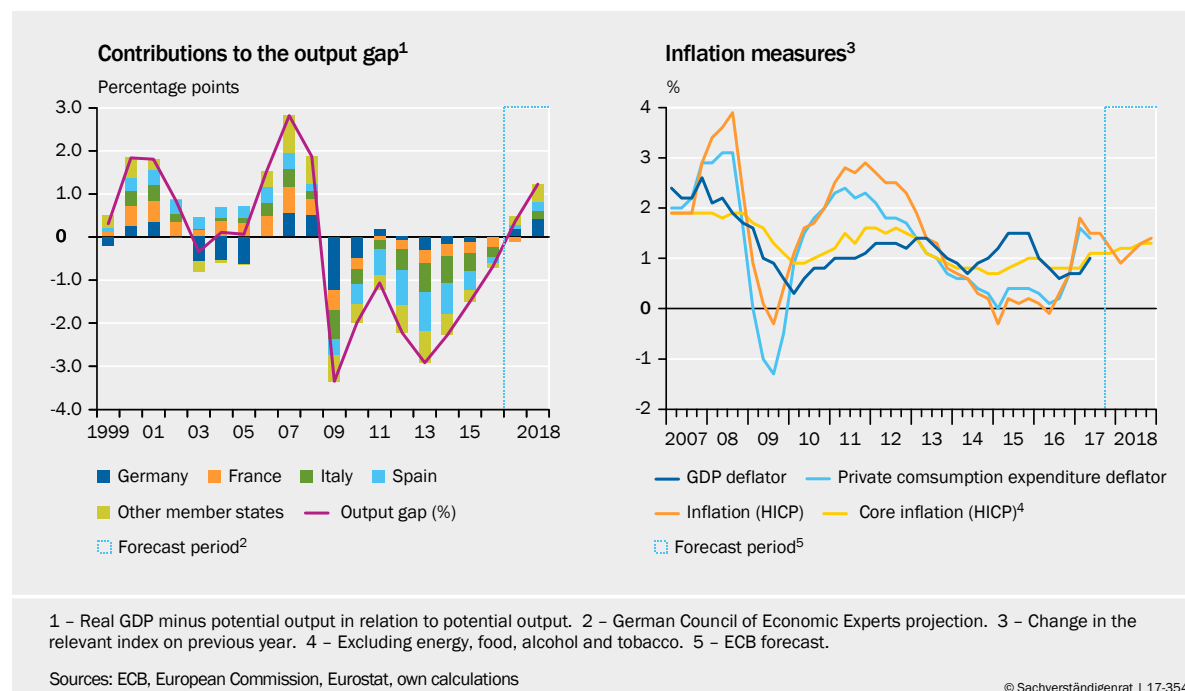
344. Meanwhile, the ECB has **adjusted its forward guidance communication** in light of the economic recovery that is already in place for a number of years and rising rates of inflation. In March 2017 it removed the sentence from its forward guidance statements that it would use all the instruments available within its mandate. In June it struck a statement referencing potential ECB key policy rate cuts because in its assessment there is no significant risk of deflation for the euro area. However, in October 2017 the ECB clarified that it could increase asset purchases in case economic developments turn out worse than expected. Furthermore, the ECB clarified that it intends to reinvest principal payments from maturing securities purchased under its purchase programmes for an extended period of time after the end of its net asset purchases. For better predictability, the ECB is going to publish the expected monthly redemption amounts over a rolling 12-month horizon.

2. Economic recovery continues

345. **Euro area economic output** has increased continuously since the second quarter of 2013. Between the first quarter of 2013 and the first quarter of 2014, the growth rate amounted to 1.7 % of GDP – even before the bond purchase programme was announced. Average quarterly growth has stayed just above 1.8 % since then. Thereby it has considerably exceeded the potential growth rate of just above 1 %. As a result, the **average output gap** has **steadily declined** and the GCEE expects the output gap to be closed this year. ↘ [CHART 40 LEFT](#) Thus, production capacity utilisation has not contributed notable disinflationary impetus in euro area countries for quite some time. This is true for the euro area average. While the small degree of overutilisation in Germany has an inflationary effect; France and Italy are estimated to have some underutilised capacity. Spanish economic output is in line with the estimate for its economy's potential.
346. **Consumer price inflation** as measured by the Harmonised Index of Consumer Prices (HICP) was primarily driven by oil prices and less by capacity utilisation from 2014 to 2016. Repeated declines in oil prices resulted in HICP inflation rates around 0 % in 2014 and 2015. This changed when the **decline in the oil price ended** in 2016 and the oil price climbed back up over the course of 2017. The HICP rate quickly rose to 2 % between the end of 2016 and the beginning of 2017. ↘ [CHART 40 RIGHT](#) HICP inflation settled at around 1.5 % once the base effect of energy prices had worn off. By contrast, **core inflation**, which ex-

↘ CHART 40

Output gap and inflation measures in the euro area



cludes volatile energy and food prices, has been quite stable for years. ↘ CHART 40 RIGHT After a slight dip to just under 1 %, it **has slowly risen** – most recently to 1.1 %. The Eurosystem staff expects 1.3 % in 2018 and 1.5 % in 2019. The GDP deflator, which covers all goods and services produced in the euro area, has also been relatively stable in recent years, hovering around its long-term average. It stood most recently just under 1 %.

347. **Employment growth** remains quite **buoyant**, accompanied by a slower than expected rise in euro area wages according to the ECB (ECB, 2016a). The euro area unemployment rate has decreased by almost 3 percentage points since 2013, although it still lies above the pre-crisis level. Spare labour market capacity suggests **moderate wage growth**. Wage restraint in an upswing serves to balance for insufficient downward adjustment during the crisis due to the presence of (downward) wage rigidities (ECB, 2016a). Different measures for assessing the degree of underutilisation of labour market capacity are under discussion (Deutsche Bundesbank, 2017b; ECB, 2017). It is not really possible, however, to estimate utilisation based on a natural rate of unemployment for the euro area as a whole, as the member states differ too much in their labour market institutions and longer-term employment and unemployment trends.
348. Recent **Phillips curve estimates** for Germany and the euro area did not provide any evidence for a weaker relationship between capacity utilisation and price - or wage inflation (Deutsche Bundesbank, 2016a; Ciccarelli and Osbat, 2017). ↘ ITEM 281 FF However, compared to the 1980s and 1990s, the positive relationship between capacity utilisation and the inflation rate in the G7 countries has apparently weakened (Borio, 2017).
349. The euro's nominal **effective exchange rate** has risen by 2.5 % since ECB President Draghi's speech in Sintra on 27 June 2017 – continuing an upward

trend that began in April of this year. However, in trade-weighted terms, the euro still lies almost 5 % below its level prior to the start of the PSPP at the end of December 2013. The appreciation observed in 2017 to date is likely a reflection of the improved overall economic situation to which Draghi referred. The appreciation may already reflect expectations of a further reduction in net bond purchases.

3. Assessing the monetary policy stance

350. The massive quantitative easing since 2014 has influenced financial market conditions, aggregate demand and euro area inflation via a variety of channels. With unchanged policy rates, the effects occur largely through portfolio rebalancing, signalling and confidence channels. A number of empirical studies provide evidence of significant announcement effects on risk premiums, yield curves, asset prices and exchange rates (GCEE Annual Report 2015 items 284 ff.; GCEE Annual Report 2016 items 388 ff.). Yet, the **magnitude of the effect on overall economic activity** remains quite uncertain.

Using a structural macroeconomic model, Hohberger et al. (2017) estimate a positive effect on GDP growth and inflation in the euro area of around 0.4 and 0.5 percentage points, respectively, in 2016. This would mean that more than 75 % of the increase in growth is due to other factors. According to model calculations by Eurosystem staff, quantitative easing since 2015 – excluding the additional measures since March 2016 – has increased euro area GDP annually by about 0.3 % to 0.7 % and inflation by 0.5 percentage points (ECB, 2016b; Praet, 2016). The Deutsche Bundesbank estimates an effect on the rate of inflation of between 0.1 and one percentage point per year, thus underscoring the high degree of uncertainty (Deutsche Bundesbank, 2016b; Lewis and Roth, 2017). However, the models used by the ECB and Deutsche Bundesbank are not available for replication.

351. Regardless whether quantitative easing has had a major or only a minor effect on aggregate economic activity, the sustained economic recovery should have triggered an adjustment in the monetary policy stance. The reason being that the disinflationary pressure resulting from underutilisation of capacity disappears with increasing capacity utilisation. The lack of such a reaction indicates that the ECB follows a **'lower for longer' strategy** (GCEE Annual Report 2014 item 252; GCEE Annual Report 2015 item 301 ff.). Such a strategy aims to prevent deflation risks by sustaining monetary easing and thus the low interest environment for a longer time (Evans et al., 2016). This approach implies an asymmetric reaction to **growth and inflation**, meaning that monetary policy reacts more strongly to a decline in economic output or inflation than to an increase.
352. Empirical reaction functions for interest rate policy support this assessment. A simple change rule provides a good description of past ECB monetary policy decisions (GCEE Annual Report 2013 items 182 ff.; Orphanides and Wieland, 2013; GCEE Annual Report 2016 item 417). Bletzinger and Wieland (2017) estimate such a change rule using inflation and growth forecasts from the ECB's

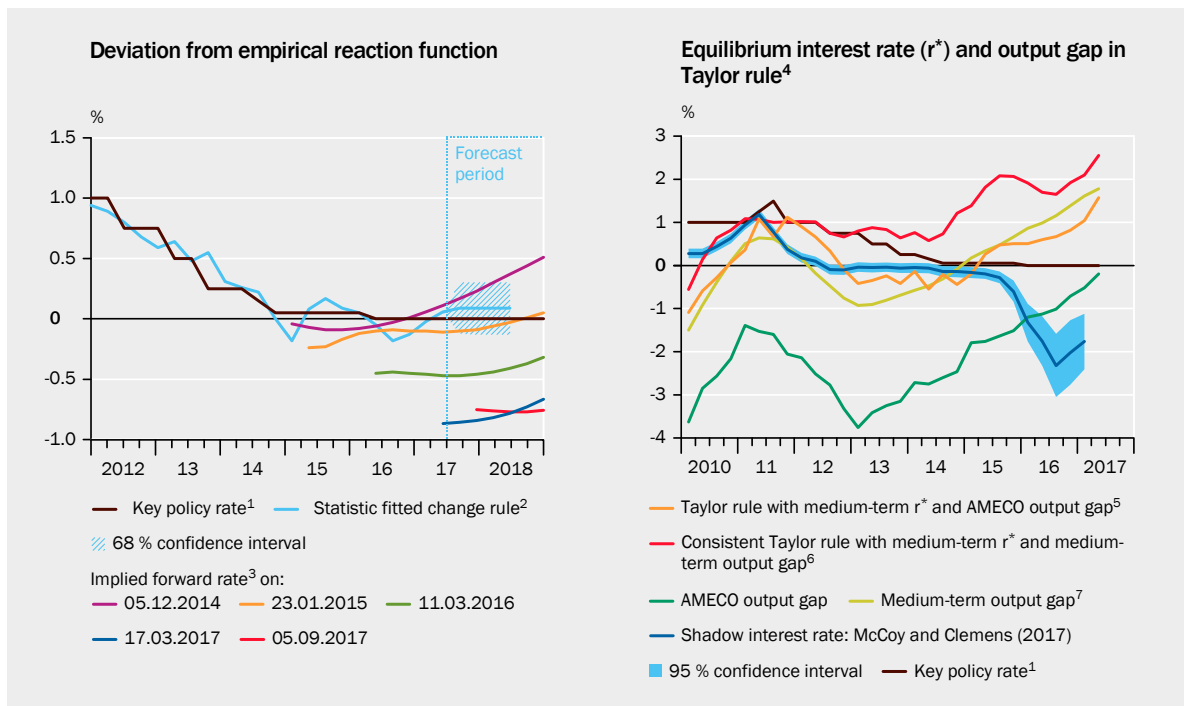
Survey of Professional Forecasters (SPF) and compare the results with the latest ECB decisions. Their findings indicate that the **quantitative easing measures** in place since 2015 imply a **downward deviation** from the ECB’s historical reaction function. This is reflected, for example, in the forward rates derived from the yield curve. They have been driven down substantially by the asset purchases since 2015. The reaction function, in contrast, would not have called for such an extensive easing of monetary policy. [↘ CHART 41 LEFT](#)

353. There are currently no major **deflation risks** that would justify a 'lower for longer' strategy. Moreover, the ECB price stability target, which is defined not as 0 %, but as below, but close to, 2 % inflation, already provides a cushion against deflation risks at the zero lower bound for nominal interest rates (Coenen, 2003; Issing, 2003; GCEE Annual Report 2016 items 430 ff.). Furthermore, the ECB states that after technical improvements, there is no longer any strong evidence for an up-side bias in consumer price measurement, which was previously given as an additional reason for the positive inflation objective (ECB, 2014).

354. Risks to the **stability of the financial system** that could result from the low interest-rate policy also provide an argument for a symmetric reaction to macro-economic developments. The low interest environment creates incentives in the financial sector to take on greater risk (Borio and Zhu, 2012; Altunbas et al.,

[↘ CHART 41](#)

Monetary policy rules compared to key policy rate and implied forward rates in the euro area



1 - Interest rate for main refinancing operations at the end of month of each quarter 2 - Equation: $i_t = i_{t-1} + 0.49(\pi^e - \pi) + 0.4(\Delta q^e - \Delta q^*)$. The coefficients 0.49 and 0.4 are based on estimates by Bletzinger and Wieland (2017). i_t denotes the estimated ECB key policy rate; it is a function of the key policy rate of the previous period, i_{t-1} , of the deviation of the inflation forecast, π^e , from the central bank target, π , and of the deviation of the growth forecast, Δq^e , from estimated potential growth, Δq^* . The estimates of potential growth are based on real-time data from the European Commission. The forecasts are based on data from the Survey of Professional Forecasters: The forecast value for inflation is in three-quarters ahead; the forecast value for growth is in two-quarters ahead. 3 - Instantaneous Forward Rates from AAA-rated euro area government bonds with a term of three months or longer. For calculation and definition, see: <https://www.ecb.europa.eu/stats/money/yc/html/index.en.html>. 4 - Equation: $i = r^* + \pi + 0.5(\pi - \pi^*) + 0.5(y)$. i is the implied Taylor rule interest rate for the money market; it is a function of the real equilibrium interest rate r^* , of the current inflation rate, π , in deviation from the central bank target, π^* , and of the output gap (y). 5 - Based on the core inflation rate and the medium-term r^* (two-sided) according to the Laubach-Williams method. 6 - Based on the core inflation rate and r^* (two-sided) based on the Laubach-Williams method and the equivalent output gap, y . 7 - Based on the Laubach-Williams method.

Sources: Beyer and Wieland (2017), Bletzinger and Wieland (2017), ECB, European Commission, own calculations

2014; Bonfim and Soares, 2014; Buch et al., 2014; Mersch, 2016; GCEE Annual Report 2016 item 421). This can lead to exaggerated asset prices. Banks' lower profitability and increasing interest rate risks also jeopardise financial stability. [↘ ITEM 475 FF](#). Furthermore, easy monetary policy takes the pressure off governments in the member states to forge ahead with necessary consolidation and reform policy. The rate cuts implemented to date may have already contributed to government spending turning out higher than planned (Hachula et al., 2016).

355. A **lower equilibrium interest rate** is frequently cited as an argument for continuing the low interest rate policy and quantitative easing (Constâncio, 2016; Draghi, 2016; Yellen 2016, 2017). **US Fed Chair Yellen**, for example, used Holston et al. (2017)'s estimates of the medium-term equilibrium interest rate in the well-known **Taylor rule** to justify the zero interest-rate policy. This rule provides a benchmark for the nominal interest rate, and responds to deviations of the real interest rate and economic output from their equilibrium values (Taylor, 1993; GCEE Annual Report 2016 item 410). Therefore, in contrast to the reaction function estimated by Bletzinger and Wieland (2017), the equilibrium interest rate and potential output play an important role in the interest rate recommendation.
356. The medium-term equilibrium interest rate estimates are, however, subject to extremely high uncertainty. This is all the more true of the euro area. [↘ BOX 8](#) Following Yellen (2017) nonetheless by using the medium-term equilibrium interest rate in a Taylor rule for the euro area, yields an interest rate recommendation of around 0.5 % for 2015 and 2016. The Taylor rule reference rate then rises rapidly in 2017. [↘ CHART 41 RIGHT](#) The output gap used is based on the potential output estimate of the European Commission. However, an estimate of potential output that is consistent with the estimated medium-term equilibrium interest rate is some 1.5 percentage points lower. As a consequence, the estimate of the output gap is higher. Thus, a **consistent application** of the Taylor rule, has called for a **tightening of monetary policy** as early as 2015 (Michaelis and Wieland, 2017a, 2017b).
357. ECB asset purchases, by contrast, have induced a considerable decline of medium- and longer-term interest rates along the yield curve. Investment grade bonds of many maturities have since been trading in negative territory. One way of summarising the impact on the yield curve is to estimate a short-term shadow interest rate. Available estimates differ quite a bit, yet all of them are well into negative territory. McCoy and Clemens (2017), for example, estimate that the **short-term shadow interest rate** for the euro area **fell to –2 %** until 2016. [↘ CHART 41 RIGHT](#) Wu and Xia (2014) even estimate a decline to about –5 %.

IV. A STRATEGY FOR POLICY NORMALISATION

358. The **issue of monetary policy normalisation** has moved to centre stage in public debate. First, a clear definition of what **“normal” monetary policy** should look like in the future is needed. Then, next steps would have to be designed such that the transition can be accomplished without disruptions. To this end, a strategy is needed that takes adequate account of the starting point as well as the anticipated end point.

1. What does normalisation mean?

359. **Prior to the financial crisis**, monetary policy in leading industrialised nations with the exception of Japan consisted primarily of using open market operations to influence the short-term interest rates on the interbank market. This system was market-based. The central bank set an **operational interest rate target**. The **interbank** rate followed the key policy rate for central bank refinancing operations. This interbank market practically dried up after the onset of the financial crisis. Since then, banks have primarily supplied themselves with liquidity via the central banks. Once the key policy rate dropped close to zero, central banks began to purchase securities to expand the liquidity supply. As a result, central bank balance sheets swelled.

360. In a “normal” economic environment – i.e. an economy that tends to be characterised by real growth and moderate inflation, the **short-term nominal interest rate** can **again** serve as **the central instrument** for implementing monetary policy. The effect of nominal interest rate changes in such an environment is theoretically well understood and empirical estimates are quite precise. To this end, central banks have sufficient tools and models for analysis (Binder et al., 2017). Open market operations aimed at influencing the money market rate result in changes in central bank balance sheets. If the central bank pursues an interest rate policy, the part of the **central bank balance sheet** relevant to monetary policy is thus determined **endogenously**. Thus, the central bank balance sheet does not provide an additional policy instrument. Asset purchases may have an additional effect on asset prices, aggregate demand and inflation even at a positive nominal interest rate. However, such effects via portfolio rebalancing are much smaller than the effect of interest rate changes.

361. **Asset purchases** as in the EAPP will remain an **instrument for exceptional circumstances** in the central bank's arsenal. They could be put to use if, in a period of recession or deflation, the key policy rate had already been reduced to the lower bound and additional policy easing were necessary. The probability of such a situation occurring in the future depends among other things on the long-term nominal equilibrium interest rate. This is the sum of the long-term real equilibrium interest rate and the central bank's inflation target (GCEE Annual Report 2016 items 410, 439). Such situations are likely to occur more frequently if the long-term real equilibrium interest rate declines. [↘ BOX 8](#)

362. In light of this, in the course of normalisation, the central bank can scale back the securities portfolio on its balance sheet to the level required for efficiently and effectively implementing monetary policy under normal circumstances. The **US Fed** already embarked on this path in September 2014 with its “Policy Normalization Principles and Plans”. ↘ **BOX 11** In the long-term, it will return to operating with a **considerably smaller central bank balance sheet**.

The **ECB** can **wind down** its **asset portfolio** acquired for reasons of monetary policy **over the longer-term**. The ECB receives government bonds as collateral in its normal refinancing operations but it does not have to purchase or sell them outright. A permanent increase in public bond holdings on the central bank balance sheet would imply additional monetary financing of public expenditure compared to the status quo ante. This is a good argument for trimming central bank balance sheets once expansionary monetary policy is no longer needed, particularly in the European monetary union where monetary financing is prohibited. Nevertheless, total assets of the ECB would likely be higher than before the financial crisis as the currency in circulation and banks' demand for central bank liquidity, particularly due to the minimum reserve requirement, have increased since then.

2. Normalisation strategy needed

363. Despite the sustained recovery in the euro area and a rise in inflation, the ECB continues its massive expansion of monetary policy. It is difficult for market participants to predict the steps the central bank will take in the future. ECB watchers hang on Mario Draghi's every word – a single comment is capable of triggering strong market reactions as occurred most recently in June 2017.
364. Since July 2013, the ECB has been informing the public about the anticipated future path of its monetary policy in addition to its current decisions (ECB, 2013). It calls this communication “forward guidance”, and in issuing it, the ECB aims to reduce the uncertainty market participants face – specifically the uncertainty regarding the ECB Governing Council's expectations of future monetary policy. If market participants correctly assess the expectations of future monetary policy, ECB policy becomes more predictable and gains more influence on economic activity (GCEE Annual Report 2013 items 185 f.). The ECB should develop its forward guidance into a strategy for the normalisation process in order to **give market participants more orientation** (Beck and Wieland, 2017).
365. Forward guidance rightly contains no unconditional commitment regarding the future path of the ECB's monetary policy. Rather, it is a forecast of future monetary policy on the basis of the ECB's two pillar strategy. The first pillar is the short to medium-term outlook for inflation based on developments in the real economy and the financial markets. In its second pillar, the ECB factors in longer-term monetary trends as a means of cross-checking this inflation assessment (ECB, 2003; Beck and Wieland, 2017). Forward guidance **to date** has offered **but few indications regarding forthcoming ECB decisions**. It has merely stated that interest rates will remain at their current level for an extended pe-

riod of time, and that this period will extend beyond the period of net asset purchases. Thus, the ECB is rather vague compared to other central banks.

366. A comprehensive normalisation strategy would consist of determining the policy path for normalization and its communication. Public communication of the chosen **normalisation strategy** makes it easier for market participants to **form expectations**. This helps the **normalization process** to proceed **without disruptions** on financial markets. Businesses and private households would be able to prepare in a timely manner. Thus, overall economic activity would not be negatively affected.
367. Some limited lessons may be drawn from the experience of Japan and the United States with ending security purchase programmes. In 2005, the **Bank of Japan** (BOJ) successfully ended the quantitative easing it had begun in 2001. The BOJ had announced that it would end bond purchasing as soon as the rate of inflation moved to zero or into positive terrain. It downsized its balance sheet over the course of 2006 without any financial market turbulence or inflation falling back into the negative zone. The BOJ was able to make this swift exit without actively selling bonds because it had previously purchased primarily short-term government bonds. The average bond maturity was scarcely longer than four months. [↘ BOX 11](#)

[↘ BOX 11](#)

Experience with exit from quantitative easing: Bank of Japan and the US Federal Reserve

The **Bank of Japan** (BOJ) implemented its first round of quantitative easing between March 2001 and March 2006 (Wieland, 2010; Yamaoka and Syed, 2010; GCEE Annual Report 2014 Box 13; Michaelis and Watzka, 2017). In 2001, it stated its operational target of expanding the balance sheet by means of government bond purchases until the rate of inflation was back at zero or above. Its total assets grew from 14 % to 22 % of GDP between 2001 and 2005. When the rate of inflation stabilised at 0 % in 2005, the BOJ indicated that it would terminate its purchases in 2006 provided that inflation and growth would turn out as expected (BOJ, 2005; Fukui, 2005). As it had primarily acquired short-term bonds and did not make new purchases upon maturity, the central bank's balance sheet quickly declined from 22 % to 17 % of GDP during 2006. The exit from quantitative easing was accomplished without disruptions and the inflation rate remained stable thereafter. As a result of the financial crisis and the global recession in 2008 and 2009, however, the BOJ was again forced to implement extensive quantitative easing operations that have continued until this day. Consumer price inflation (adjusted for the 2014 increase of value-added tax) ranged between -0.9 % and 1.6 % during the period from 2012 to 2016. It currently stands at 0.7 %. Since September 2016, the BOJ is pursuing a strategy of yield curve control. It intends to purchase government bonds in potentially unlimited quantities to keep the 10-year bond yield at 0 %. No exit is in sight.

The **US Federal Reserve** (Fed) began to buy government bonds as well as mortgage-backed securities and bonds issued by the government-sponsored home loan corporations Fannie Mae and Freddie Mac in spring of 2009. In May and again in June 2013, then US Fed Chair Ben Bernanke discussed setting a roadmap for tapering the bond purchase programme, including a potential time frame (Bernanke, 2013; Harding et al., 2013). If the economy continued to improve, the Fed would start cutting back bond purchases over the course of 2013 and then stop entirely by the middle of 2014. Bernanke mentioned the option of postponement if economic performance were to turn out weaker than expected. Reinvestment of maturing bonds was to be continued. The announcement initially triggered financial market turmoil and a sharp rise in bond yields known as the “taper tantrum”. The

Fed then began to gradually phase out its bond purchases in December 2013, ending it in October 2014. [↘ TABLE 16](#) In September 2014, the Fed laid out its approach to further normalisation in its “Policy Normalization Principles and Plans”:

- raise the Fed target range for the federal funds rate when economic conditions have sufficiently improved,
- control the federal funds rate (FFR) via the interest rate it pays on excess reserve balances,
- set up an overnight reverse repurchase agreement facility as a supplementary tool to help control the FFR. This facility allows commercial banks to invest excess funds up to a certain limit overnight at the Fed,
- trim total assets by reducing reinvestment of maturing bonds.

[↘ TABLE 16](#)

Chronology of the Fed monetary policy normalisation to date

Date	Fed normalisation steps
19.06.2013	Bernanke outlined potential timeframe for normalisation steps
18.12.2013	Tapering the bond-buying programme: - monthly purchase of AMBS ¹ of US\$35 billion instead of US\$40 billion - monthly purchase of long-term government bonds of US\$40 billion instead of US\$45 billion
29.01.2014 / 19.03.2014 / 30.04.2014 / 18.06.2014 / 30.07.2014 / 17.09.2014	Further tapering of the bond-buying programme in reductions of US\$5 billion each
17.09.2014	Presentation of the monetary policy normalisation plans and principals
29.10.2014	End of the bond-buying programme
10.07.2015	Yellen discusses the prospect of a rise in the FFR ² sometime later in the year
16.12.2015	Rise of the FFR target range from 0 % – 0.25 % to 0.25 % – 0.5 %
14.12.2016	Rise of the FFR target range to 0.5 % – 0.75 %
15.03.2017	Rise of the FFR target range to 0.75 % – 1 %
14.06.2017	Rise of the FFR target range to 1 % – 1.25 % Presentation of the plan for Fed balance sheet run-off
20.09.2017	Announcement, that the Fed will begin to taper its balance sheet in October 2017

1 – AMBS: Agency Mortgage-Backed Securities. 2 – FFR: Federal Funds Rate

Source: Fed

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The Fed began to gradually raise the FFR target range at the end of 2015. It currently stands at 1 % to 1.25 %. In June 2017, the Fed presented a detailed plan on its balance sheet run-off. In September 2017, Fed Chair Yellen announced that the balance sheet run-off would start in October 2017. Reinvestment would be phased out step by step. The monthly cap on reinvestment tapering would be gradually raised every three months for a year, to a maximum level of US\$30 billion for Treasury securities and US\$20 billion for agency mortgage-backed securities. The Fed plans to maintain this level as long as it sees fit. If the economic expectations outlook worsens, the Fed could resume reinvestments, policy rate cuts and balance sheet expansion operations. Long-term, the balance sheet is to be trimmed back to its pre-crisis level – taking into account higher currency circulation and an increased demand for central bank liquidity due to economic growth.

368. The Fed began to purchase federal government bonds as well as mortgage-backed securities and bonds from government-sponsored home loan corporations in spring 2009. In May 2013, then Fed Chair Ben Bernanke announced that the Fed would taper its monthly bond purchases over the course of the year. This set off a sharp rise in bond yields known as the “**taper tantrum**”. Once the Fed finally began to scale back its purchases in January 2014, it was able to exit from its quantitative easing without any further turbulence. In September 2014, the Fed published some **strategic principles** regarding the further normalization of its monetary policy. It had already informed investors and financial market participants in January 2012 regarding how long it expected to keep zero interest rates. Furthermore, it has **regularly published interest rate projections** by its Federal Open Market Committee (FOMC) members. Since the end of 2015, the Fed has gradually raised its target range for the federal funds rate. By mid-2017, the Fed announced concrete steps to trim its balance sheet and repeatedly adapted them to slower than expected growth and inflation developments. This process ran its course **without any major disruptions**. It remains to be seen, however, whether the Fed started normalisation early enough to avoid overheating of the economy and overshooting of inflation in the longer-run or undesirable developments in financial markets. [↘ BOX 11](#)
369. The **ECB** can only benefit to a limited extent from the experience of Japanese and US central banks, as many additional factors come into play in a monetary union of largely sovereign member states. It would be helpful, however, if the ECB were to reduce the uncertainty about its own short and longer-term expectations by means publishing **forecasts of the monetary policy path** as the Fed and other central banks do. The ECB faces particular challenges in this regard. Monetary policy can only influence average euro area developments but not target that of individual sovereign member states. The heterogeneous economic performance in the euro area requires that member states adopt growth-friendly, competition-oriented and sustainable economic and financial policies.
370. Normalisation of monetary policy is hampered by the **special constellation of a monetary union**. Some market observers may have concerns about whether the ECB can undertake normalisation free of the member states’ influence. This particularly applies if an interest rate hike could destabilise banks or other financial institutions or jeopardise the sustainability of government debt in a larger member state. A convincing communication strategy could be a means of countering concerns regarding financial or fiscal dominance.

3. The status quo on the financial markets

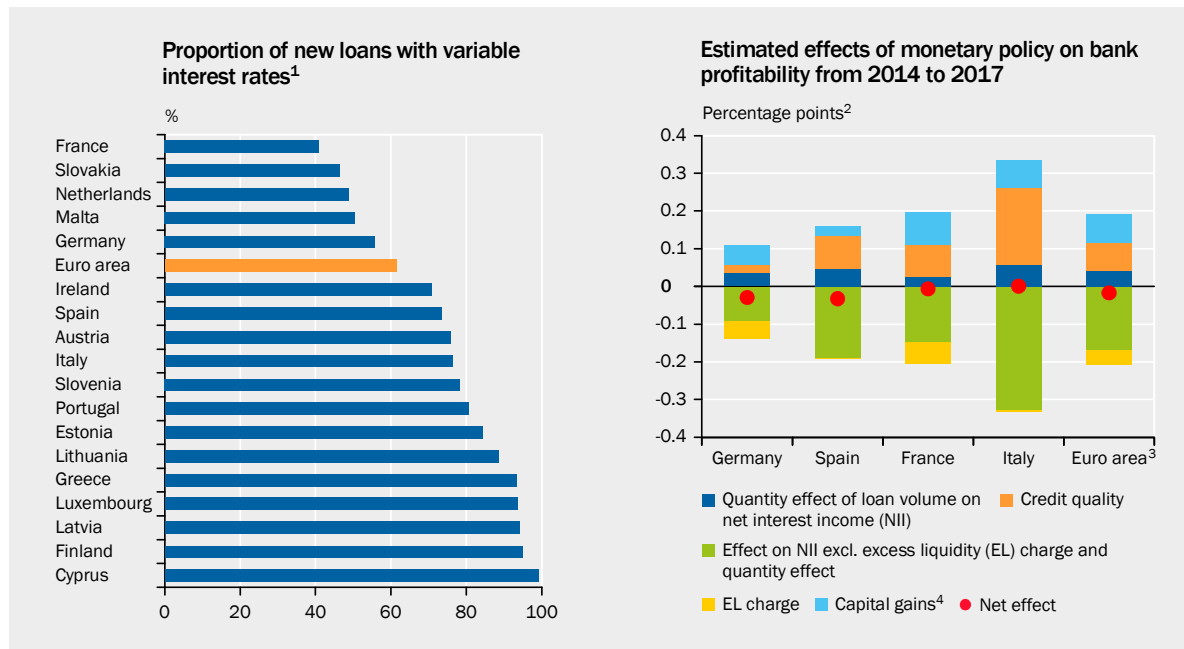
371. The current situation in the euro area is not free from risks. For instance, the adverse feedback loop between weak bank profitability, non-performing loans (NPL) and low growth rates in some countries poses a risk to financial stability (ECB, 2016c; IMF, 2016a). High levels of debt, weak growth and political uncertainty in some member states may also have negative consequences for financing conditions.

Risks for financial stability

372. The persistent low interest rate environment is causing increasing **interest rate risks**. [↪ ITEM 475 FF](#). Low interest rates and a flatter yield curve tend to reduce interest margins and thus also the profitability of banks that are particularly dependent on interest income (Borio et al., 2015; ECB, 2016; GCEE Annual Report 2016 items 506 ff.; Jobst and Lin, 2016; Claessens et al., 2017). This also limits their options for increasing capital. Another key reason for **low profitability** is the high proportion of NPLs in the euro area's former crisis countries (ECB, 2016d; 2017b; IMF, 2016a). The economic recovery has only partially improved this situation (IMF, 2016b, 2017a).
373. Banks in the member states have been affected differently according to how much their **business models** depend on interest rates. France and Germany, for example, report a relatively low proportion of variable-rate new loans. [↪ CHART 42 LEFT](#) In the euro area, smaller banks in particular face risks from interest rate changes (ECB, 2015; GCEE Annual Report 2016 item 510). [↪ ITEM 476](#) In Germany these are primarily the German savings banks and credit cooperatives (Deutsche Bundesbank, 2016c), as their interest rate risk coefficients have been increasing for several years now, which indicates heightened interest rate risk. Banks in other member states, such as Italy, on the other hand, seem less affected by interest rate risk (Banca d'Italia, 2017). If non-financial corporations and private households bear this risk, higher interest rates may, however, cause an increase in NPLs, thus likewise affecting the banking system.

↪ CHART 42

Proportion of new loans with variable interest rates and monetary policy effects on bank profitability in euro area



1 – Proportion of new loans with variable or fixed interest rates up to one year in relation to total new loans from monetary financial institutions to households and companies in July 2017. 2 – Percentage point contribution to return on assets. 3 – Euro area figures calculated as the weighted average for the countries included in the sample using the ECB's CBD data for the weight of each country's banking system in the euro area aggregate. 4 – Capital gains based on data on a consolidated basis for 68 euro area banking groups included in the list of significant institutions under ECB supervision and in the EU-wide stress test.

Sources: ECB, ECB (2016c)

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374. Estimates for smaller and medium-sized German banks point to a further decline in profitability if interest rates remain low (Deutsche Bundesbank, 2017c). The return on assets would fall by around 40 % by 2021 if there is no change in interest rates. Although an increase in rates would induce a short-term loss in profits due to value adjustments, rising margins would cause profits to recover in the medium to long-term. [↘ ITEM 477](#) The **profitability of banks in the euro area** is affected differently by monetary policy **across member states** (ECB, 2016c). [CHART 42 RIGHT](#) In the euro area as a whole, the effects were fairly balanced from 2014 to 2017. Although the low level of income from the banks' interest-dependent business has a negative effect, their profitability is buoyed by improved credit quality, increasing volumes and investment income.
375. There is also the danger that, particularly if interest rates remain low, poorly capitalised banks will keep rolling over loans (GCEE Annual Report 2016 item 518). Loans that should otherwise be written off may end up being rolled over, and thus companies kept afloat that would have left the market under “normal circumstances”. Such **misallocation of credit** may cause considerable macro-economic costs. Some fear that such developments have already begun in the euro area (Acharya et al., 2016).
376. Banking supervisors and the member states must place greater focus on NPLs and excess capacity in the banking sector, because **the longer the low interest rate environment** persists, **the greater the risks in the banking system** become. The longer the ECB waits to exit from its extremely expansionary monetary policy, the harder and potentially more detrimental it may be for the financial system. In order to strengthen the resilience of the financial sector, the supervisors must ensure that the banks have enough capital. This serves as a buffer for short-term strain resulting from rising interest rates. Furthermore, the existing rules regarding bank resolution should be applied consistently. [↘ ITEM 431 FF.](#)

Risks regarding the sustainability of public finances

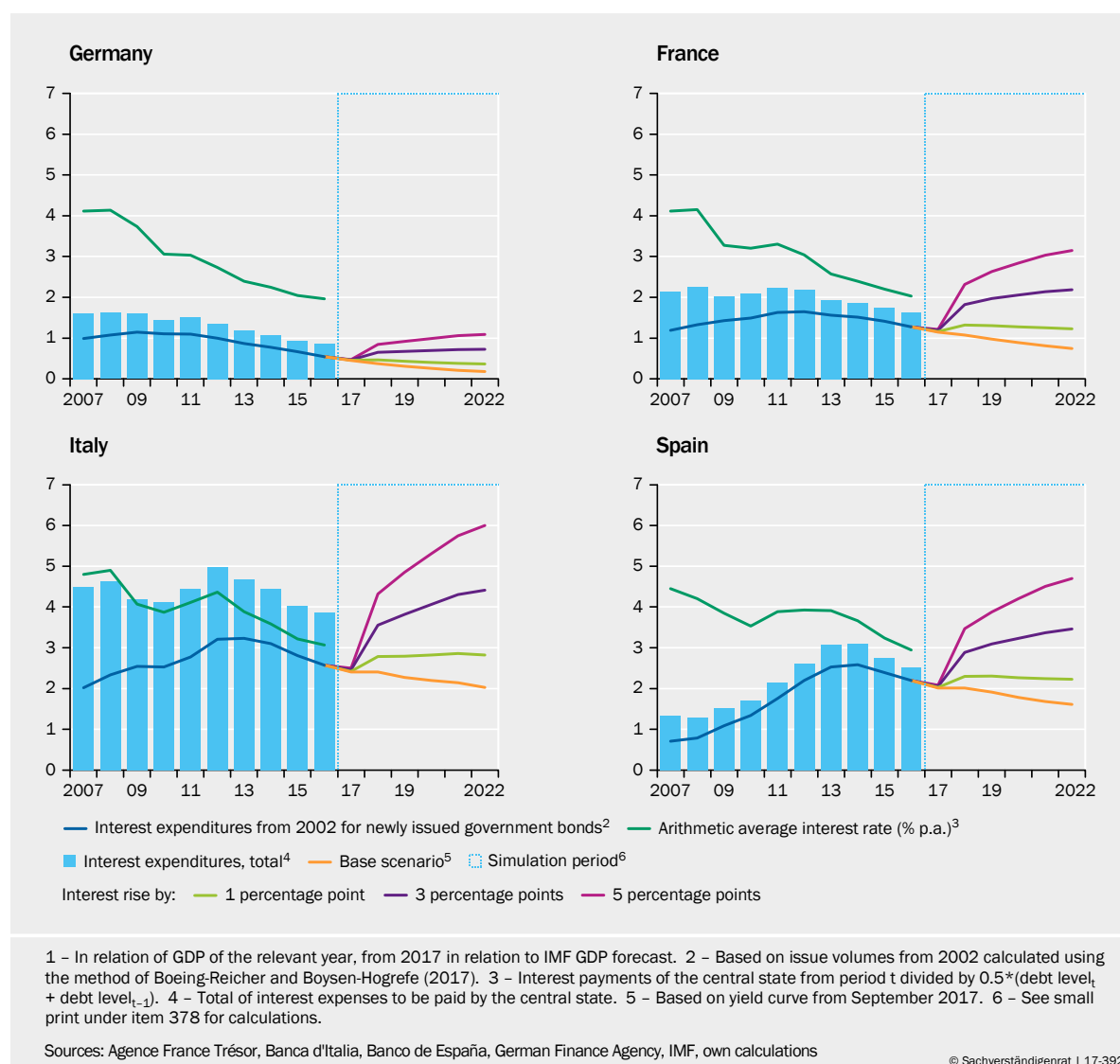
377. The member states have had the opportunity to refinance at extremely low interest rates for some years now. This has reduced their interest expenses and contributed to lower average interest payments. [↘ CHART 43](#) If the ECB brings its purchases of government bonds to an end, however, medium to long-term interest rates could rise considerably. The mere expectation of monetary policy normalisation could trigger this reaction. But not all member states appear to be prepared for such a development, as demonstrated by a simulation study of the possible future **development of** individual member state's **interest expenses**. These can be calculated from the maturities and conditions of their exchange-traded securities using certain assumptions. If the current capital market conditions and low interest rates continue (base scenario), debt servicing will further decrease. [↘ CHART 43](#) A deterioration of financing conditions would, however, slow this development down or even reverse it.
378. Below, we look at scenarios for Germany, France, Italy and Spain involving parallel increases in the yield curve by 1, 3 and 5 percentage points. The increase by one percentage point from December 2017 onwards would barely affect interest

expenses. A **three-percentage point increase** results in **significantly higher expenditures** for Spain and Italy, for example. Interest expenses on newly issued bonds since 2002 until 2022 increase to 3.5 % and 4.2 % of GDP for Spain and Italy. In the case of a five-percentage point increase, there is a much bigger rise in additional expenses, which would affect the sustainability of the debt level. In particular, higher real interest rates would require higher budget surpluses or higher economic growth in the future.

These simulations take into account bonds issued by central governments, excluding debt at regional or municipal level. [▶ ITEM 601 FF](#). The central government share of the country's debt securities is almost 100 % for Spain and Italy, around 90 % for France and 76 % for Germany. Bonds comprise around 91 % of central government debt for Spain and France, and around 87 % for Italy and Germany, so the simulation covers the majority of debt. The **interest spending simulation** thus provides a **rough lower bound** regarding the increase in national interest expenses.

▶ CHART 43

Scenarios for interest expenditure in the central state budget of selected euro area member states
in % of GDP¹





The calculations are based on the assumption that the issue volume of the bonds in 2017 remains constant for the period from 2018 to 2022. The same applies to the maturity structure. The extrapolated issue volume for 2017 is based on available data for the current year and the development of issue volumes from 2014 to 2016. The base scenario uses the average yield curve from September 2017 in each country. The interest expense scenarios also include the interest payments resulting from bonds issued since 2002 which are still outstanding.

379. The debt ratios for most euro area member states are above the 60-percent threshold stipulated by the Maastricht Treaty. [↘ TABLE 18 APPENDIX](#) Moreover, the rate of economic growth in many highly indebted countries is rather low. [↘ ITEM 253](#) [↘ TABLE 5](#) The European Commission also points out that there are considerable fiscal **sustainability risks** for some member states (European Commission, 2016). Although the member states made significant consolidation efforts between 2011 and 2014, fiscal policy has been loosened again since then. [↘ ITEM 403 FF](#). The governments do not use the interest savings resulting from monetary policy to reduce the debt ratio, in order to be able to use a lower proportion of tax revenue for interest payments in the long-term.
380. Some governments perhaps hope that monetary policy will continue to facilitate state financing. However, economic growth and inflation in the euro area do not permit the ECB to delay normalisation any longer. Normalisation would likely increase fiscal pressure in particular for highly indebted member states with low economic growth. The community of euro area member states has established a mechanism to be employed in the event of a critical escalation. If a single government is in danger of losing its market access, the **ESM** offers **support**. Access to an ESM programme gives a government fiscal scope that it would not otherwise have. With appropriate conditions for implementing growth-friendly structural reforms and fiscal consolidation, the programme helps to regain the government's credibility on the financial markets. However, the political will to assume responsibility for sustainable economic policy is still key in this regard. After all, Eurosceptic parties could try to win over voters with a call to leave the monetary union.

4. Elements of a strategy

Symmetric reaction

381. Market participants must have a good understanding of the connection between monetary policy instruments and macroeconomic development in order for normalisation to proceed as smooth as possible. This concerns, for example, the monetary policy response to rates of economic growth and inflation, including respective forecasts and the associated risks. The Fed and the ECB have evidently focused in recent years on a “**lower for longer**” **strategy** to guard against the risk of deflation. This has caused an asymmetric reaction – in other words a

comparatively stronger reaction to a decline in economic output or inflation than to an increase.

382. The downside of this strategy is increasing **risks to financial stability** the longer the low interest rates continue. These are first and foremost rising asset prices, risks of changes in interest rates and a decline in bank profitability. [↘ ITEMS 372, 471 FF.](#) Proceeding too slowly could thus contribute to an overheating of the economy and exaggerations in the financial system. If the ECB reacts too late, it may be forced to tighten policy abruptly, which in turn would stall the economic recovery and trigger turbulence on the financial markets. The sooner the ECB adjusts monetary policy, the more time there will be to proceed gradually. The ECB should therefore **react symmetrically** and thus proportionally to **macroeconomic developments** experienced during the normalisation phase.

First of all put a stop to net bond purchasing

383. Regarding sequencing of the normalisation process, opinions differ as to whether the negative deposit rates or rather the asset purchase programme should be terminated first. ECB President Mario Draghi and member of the Executive Board Peter Praet stated back in April 2017 that the **asset purchases would first be gradually scaled back**, and only after that would an increase in central bank rates be considered (Draghi, 2017b, 2017c; Praet, 2017). The ECB is likely to continue reinvesting inflows from maturing assets for some time beyond the end of net purchases. Thus, this would keep the ECB balance sheet at a high level for a long time yet.
384. The GCEE shares the view that the ECB should first end the net purchases and then raise interest rates. Putting an end to the negative deposit rate would trigger an immediate strong effect along the entire yield curve. By contrast, reducing the asset purchases will enable a cautious, gradual normalisation. The key **advantage**, however, is that the interplay of **market participants' supply and demand** again plays a stronger role in **pricing** rather than the ECB's massive interventions. Bond yields would then better reflect inflation and growth expectations as well as market participants' risk assessments again, and bring about more efficient capital allocation. And risk premiums that are formed on anonymous markets would accordingly regain a stronger disciplinary effect on debtors.
385. Moreover, the profitability of banks tends to rise with the spread between short-term and longer-term interest rates. The income from new loans would increase relative to the costs for customer deposits, and the **interest rate risks** decrease, as the banks' interest rate margins would expand. This would contribute to a normalisation process without disruptions. Ending the negative deposit rate policy would also cut the banks' costs, but the risks of interest rate changes are the greater risk for financial stability.
386. The **speed** at which the ECB scales back its bond purchases and raises interest rates should depend on macroeconomic developments. If the ECB reacts symmetrically, it will be able to terminate the net purchases in a matter of months

and thus earlier than scheduled. In light of the macroeconomic situation and outlook, the ECB should **quickly reduce and terminate** its asset **purchases**. If it does, there is no need to ease its self-imposed limits on issuer and issue shares or deviate from the capital key. The degree of monetary policy expansion would remain very high measured by the size of the central bank balance sheet and the level of the policy rate.

387. The **corporate sector purchase programme** (CSPP) can be ended immediately without risk of disruptions. The low volume of just under 5 % of monthly purchases means that it play no major role in balance sheet expansion. The programme is primarily relevant for large companies that issue bonds on the capital market. Companies of lower credit standing eligible for CSPP purchases are increasingly substituting bank loans with corporate bonds (Grosse-Rueschkamp et al., 2017). Companies with very high credit quality increase payments to shareholders and their acquisition activities. However, there are positive spillover effects on financing costs of companies not in the bond market. Using a model-based analysis for the United States, Kurtzman and Zeke (2017) show with a model-based analysis that corporate bond purchases have a distorting effect on capital allocation in the corporate sector and harbour risks of misallocation.
388. **Reinvestment** under the PSPP will rise substantially in the coming years. According to estimates by UniCredit Research (2017), the associated bond purchases will amount to around €90 to 130 billion in 2018 and around €150 to 165 billion in 2019. The large volume of government bonds on the central bank balance sheet bears risks. If, in addition, the boundary between fiscal and monetary policy is undermined, as in the case of extensive government bond purchases, there is a threat to central bank independence. In the course of the ECB's monetary policy normalization, its balance sheet level should be reduced to the amount necessary to implement monetary policy smoothly in the long run – as in case of the Fed. The ECB should communicate an associated plan, and – after the first rate hikes – **gradually shrink its balance sheet**. If macroeconomic development is good enough, the balance sheet can be slimmed down by actively selling assets on the secondary market.

Enhance forward guidance

389. Already in 2013, the ECB announced as a form of **forward guidance** that it expected central bank interest rates to remain at the current or lower level for an extended period of time. However, the ECB has yet to provide more details on the length of this period. Draghi merely pointed out that an estimate could be extracted from the published staff projection (Draghi, 2013) using an empirical central bank reaction function. Publication of this forecast of the monetary policy stance did not cause any disruptions at the time (GCEE Annual Report 2013 items 185 ff.). However, it remains **comparatively vague**. A timely publication of a normalisation strategy would be an important measure and a suitable way of enhancing the ECB's forward guidance in line with the practice at other central banks. This would enable the ECB to publish a **more concrete forecast of future monetary policy**, which would indicate, based on the Governing Coun-

cil's current outlook, when it expects to end net asset purchases and raise interest rates.

390. This does certainly not imply a **commitment** to a specific date. It would simply mean **communicating** the central bank's **expectations** (Praet, 2013). Thereby, the central bank would help **market participants to better form expectations** (Gersbach and Hahn, 2008; Wieland, 2009; ECB, 2013), which would make monetary policy more effective (Bernanke, 2004). The communication should avoid unclear, imprecise and ambiguous statements (Morris and Shin, 2002; Blinder and Wyplosz, 2004). The extensive theoretical and empirical literature on the publication of central bank forecasts as part of the inflation targeting strategy underscores their positive effect (Goodhart, 2009; Cobham et al., 2010).

The **central banks of Sweden, Norway and New Zealand** have been publishing official interest rate forecasts together with their inflation and growth forecasts and associated uncertainty bands for years, without any resulting problems (Brubakk et al., 2017; Sveriges Riksbank, 2017). It is also evident that market participants' expectations are influenced by statements made by members of the Fed's FOMC and the Governing Council of the ECB on future monetary policy development (Kohn and Sack, 2004; Bernanke et al., 2004; Gürkaynak et al., 2004; Coenen et al., 2017). Central bank forecasts of the **policy rate path** and **the size of bond purchases** increase this influence and help to harmonise market expectations and improve their precision (Swanson, 2006; Rudebusch and Williams, 2008; Andrade et al., 2015; Coenen et al., 2017).

391. The ECB would provide much more clarity with a **concrete, quantitative forecast**. It would **help** in particular to **prevent an overreaction of financial markets** at the beginning of the normalisation process. This is because the ECB could explain when it intends to end net asset purchases, how long the policy rates are likely to remain unchanged, how quickly they will rise subsequently, and how far they could rise in the long run. The ECB staff projections that are currently being provide little help in this regard, as they are based on market expectations for future policy rates and rather than the ECB's Governing Council view. Instead, the Governing Council should develop its own inflation and growth forecast based on its two pillar strategy. This forecast would have to be consistent with the Governing Council's own expectations regarding the future development of asset purchases and interest rates. It would show in particular under what conditions its predicted path for inflation converges to the inflation objective in a sustainable manner.

The **ECB Governing Council's forecast** could then be **published**. Furthermore, it could then be updated regularly based on new incoming information given actual developments. For instance, if inflation turns out below expectations, the interest rate forecast would change accordingly. This would make it easier for market participants to understand the ECB's reaction and better predict the steps it will take in the future. The uncertainty of the Governing Council regarding the forecast for inflation and economic growth would in turn be re-

flected in appropriate uncertainty bands surrounding the forecast for its monetary policy instruments.

392. A good alternative that would not require a vote in the Governing Council would be to publish the **projections of individual Council members**, or averages and central tendencies derived from these individual projections. The **Fed** has regularly surveyed FOMC members and published their projections regarding inflation, growth and unemployment for decades. It has included a forecast of the federal funds rate and the time until the first rate hike since 2012. These garner a great deal of attention. Adjustments, which result from revisions following inflation and growth forecast errors, are understandable.
393. Lastly, it would be advisable to **improve the ECB staff projections**. They are currently based on an interest rate forecast derived from derivatives traded on the market. Thus, they are not the best possible forecast from the central bank's point of view, because they do not factor in the bank's own expectations regarding its future policies. If an ECB Governing Council interest rate forecast is not available for this purpose, the staff could at least produce a consistent projection using interest rate reaction functions (Beck and Wieland, 2017). For example, the Fed has published simulations of the policy rate path using different interest rate rules, presumably in anticipation of a bill adopted by the US House of Representatives but not yet by the Senate (Fed Oversight Reform and Modernization (FORM) Act). In fact, the models used by the ECB, such as the New Area-Wide Model (NAWM), would only indicate the existence of a unique and stable equilibrium under the assumption of an adequate monetary policy reaction function. The assumption of exogenous interest rates, on the other hand, results in multiple equilibriums due to self-fulfilling expectations.

Financial and fiscal dominance can be avoided

394. The ECB does not tire of stating that its policy will remain focused solely on its mandate for price stability. Nevertheless, the question is raised time and again as to whether the central bank is really willing and able to tighten monetary policy if this would cause difficulties for a member state or systemic banks. **Fiscal dominance** arises when monetary policy is subordinated to the objective of government financing. **Financial dominance** arises when the viability of banks sets the course for interest rate policy. The normalisation strategy should address these concerns.
395. A complete institutional separation of banking supervision and monetary policy, as favoured by the GCEE, has not been possible to date due the need to amend European treaties (GCEE Annual Report 2014 items 365, 371, 374). Misguided incentives for monetary policy can lead to a policy of keeping banks and businesses without a viable business model solvent by means of low interest rates. The ECB should, in its supervisory role, push for banks in the euro area **to build up sufficient capital** in order to be able to absorb the risks resulting from the normalisation of monetary policy. The legacy burden in the form of NPLs needs to be reduced. [↘ ITEMS 444 FF](#). Moreover, the ECB can strengthen the credibility of the banking union rules by pushing for timely and effective bank resolution or

restructuring. The ECB should stress in its communication of a normalisation strategy that a **functioning framework** is in place to resolve and restructure non-viable banks without triggering systemic crises.

396. When the ECB ends asset purchases and reinvestments, **risk premiums concerning highly indebted member states** with weak growth rates could rise considerably. This may coincide with a substantial need for roll-overs of government debt. The IMF calculates the funding need for maturing bonds from the major euro member states in 2017 alone to be around €740 billion (IMF, 2017b). This equates to around 4.4 % of the euro area's economic output. Excluding Germany, this amount is around €640 billion, or 3.8 % of euro area output. The ECB's purchases are likely to account for some 60 % of the gross funding needs of the countries included in the PSPP in 2017 (Barclays, 2017).

The ECB should point out in its communication strategy that it cannot defer what is a necessary normalisation in light macroeconomic developments in the euro area overall in order to keep the funding costs of individual member states low. The respective governments are responsible for ensuring sustainable government finances. Precautions have already been taken in the event that a member state is at risk of losing market access. A member state could obtain relatively cheap loans through the **ESM**, which would be guaranteed by the other member states. These are subject to conditions which are intended to improve the sustainability of government finances and possibilities for economic growth.

V. SUSTAINABLE ECONOMIC POLICY

397. Sustainable public finances form a necessary basis for a central bank to be able to fulfill its price stability mandate. The low interest rate environment of the past few years has caused member states' interest expenses to decline. ↘ [CHART 43](#) Although this has created room for the consolidation of public finances, at the same time it reduced the imminent pressure to do so. In light of the impending change of course in monetary policy, an **assessment of consolidation and reform policies** since the euro area's financial and sovereign debt crisis leads to a sobering conclusion. The consolidation process, which advanced successfully for some years, has now largely come to a halt. ↘ [ITEM 403](#) According to the OECD (OECD, 2017a), reform efforts that boost growth and increase the sustainability of public debt in the euro area have decreased significantly since 2014.
398. Individual **member states'** track records on reforms are mixed. While Spain quickly managed to return to economic growth after putting into effect an extensive reform program, the implementation of reforms in Italy is slow (Schrader and Ulivelli, 2017). Economic output has increased fairly little there. This year, France finally began to pursue a significant reform agenda. The reforms implemented in Germany in the past few years have largely hindered the competitiveness and future viability of the German economy instead of improving them (GCEE Annual Report 2016, item 58)

399. Overall, the member states have made **inadequate use of the opportunity** created by the low interest-rate policy to enact politically difficult consolidation and reforms. The change of course in monetary policy must not be delayed because of this, but should be accompanied by more **intensive consolidation and reform efforts**.

1. Fiscal consolidation and interest savings

400. The ECB's asset purchase programme helped to bring down government bond yields significantly. For the member states this has resulted in a significant decline in interest rate payments. The amount of savings that stem from lower interest rate payments can be approximated using a counterfactual scenario based on Boeing-Reicher and Boysen-Hogrefe's method (2017). Interest rate payments on bonds issued by central governments since 2007 are calculated based on the assumption that the yields would have stayed at the level of the beginning of 2007. For the period from 2007 to 2017, cumulative savings amount to 7.9 % of the nominal GDP for France, 5.2 % for Italy, 4.9 % in Germany and 3.3 % in Spain. [↘ CHART 44 LEFT](#)

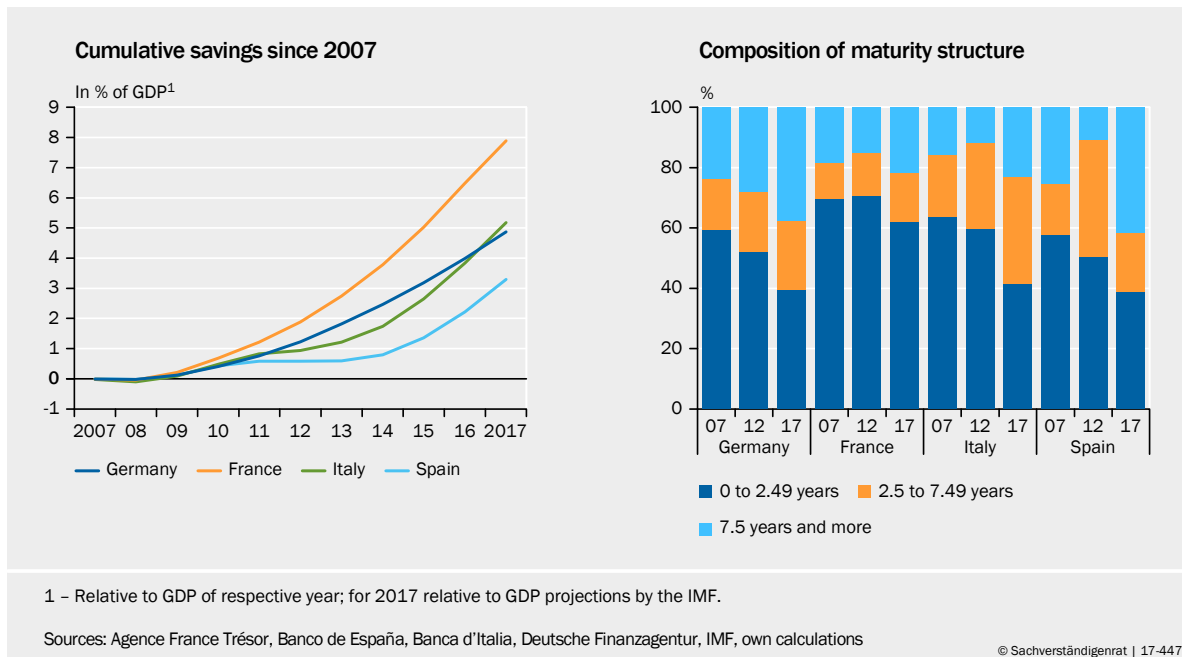


The calculation of savings on interest rate payments follows Boeing-Reicher and Boysen-Hogrefe (2017) and uses government bonds issued by central governments from 2007 onwards. The countries' government bonds are categorised by maturity structure e.g. for Germany they are grouped into 1, 2, 5, 7 and 10-year bonds. Government bonds with maturities between these are interpolated. Government bonds with maturities lower or higher than this range are assigned to the respective lowest or highest maturity category. The yields of government bonds at the beginning of 2007 are assumed as counterfactual interest rates in order to approximate the hypothetical savings..

401. The development of savings on interest payments is comparable to the **Deutsche Bundesbank's estimates** based on figures from the national accounts from 2008 to 2016 (Deutsche Bundesbank, 2017c). Their estimates are derived with a higher counterfactual yield curve. Thus, the interest savings are higher than they would be using the method of Boeing-Reicher and Boysen-Hogrefe (2017). For Germany, cumulative interest savings of the central government calculated by the Deutsche Bundesbank amount to €155 billion (5 % of the nominal GDP) since 2008. The GCEE's calculations amount to €143 billion. Including states, municipalities, and the social security funds, according to the Deutsche Bundesbank's calculations the saving for the country as a whole is €240 billion (7.7 % of the nominal GDP). For France, it estimates around €220 billion (10 % of the nominal GDP), for Italy €175 billion (10.5 % of the nominal GDP) and for Spain €60 billion (5.5 % of the nominal GDP).

↪ CHART 44

Interest rate savings of selected member states of the euro area



402. Since 2007 the maturity structure has shifted more and more towards **longer maturities**. ↪ CHART 44 RIGHT During the financial crisis the member states initially issued bonds with shorter maturities. Since 2012 however, they have increasingly been able to issue bonds with longer maturities, instead. This is a positive development, because future average interest rate expenditures will be less sensitive to level shifts of the term structure following an increase in interest rates. ↪ ITEM 378

403. The fiscal space provided by the cumulative savings on interest rate payments has not been used to consolidate to a greater extent. This impairs the sustainability of fiscal policy. In fact, since 2014 and thus the start of the ECB's asset purchase programmes the **consolidation process** even came **to a halt**. This becomes evident in indicators such as the structural primary balance which in contrast to the budget balance abstracts from business cycle and interest expenditure effects. Using estimates of the European Commission, the **structural primary balance** for Germany and France remained largely unchanged since 2014, whereas for Italy and Spain it has even **decreased**. ↪ CHART 45 Savings on interest rate payments are thus partially offset by a worsening of the structural primary balance. Callegari et al. (2017) also divide the developments in the euro area into three phases: expansionary fiscal policy from 2008 to 2010, consolidation from the end of 2010 to 2013, and stabilisation since 2014.

404. When **assessing** the **consolidation measures**, it is important to **differentiate** between the **development of the budget balance** and the **structural primary balance**, as well as the **measures** decided and implemented by governments. Consolidation measures, such as legal changes or new laws, influence cyclical and long-term economic development. Therefore, for example, spending measures that promote growth can influence the revenue side of the primary balance and vice versa. In addition, the adjustment of the primary balance for

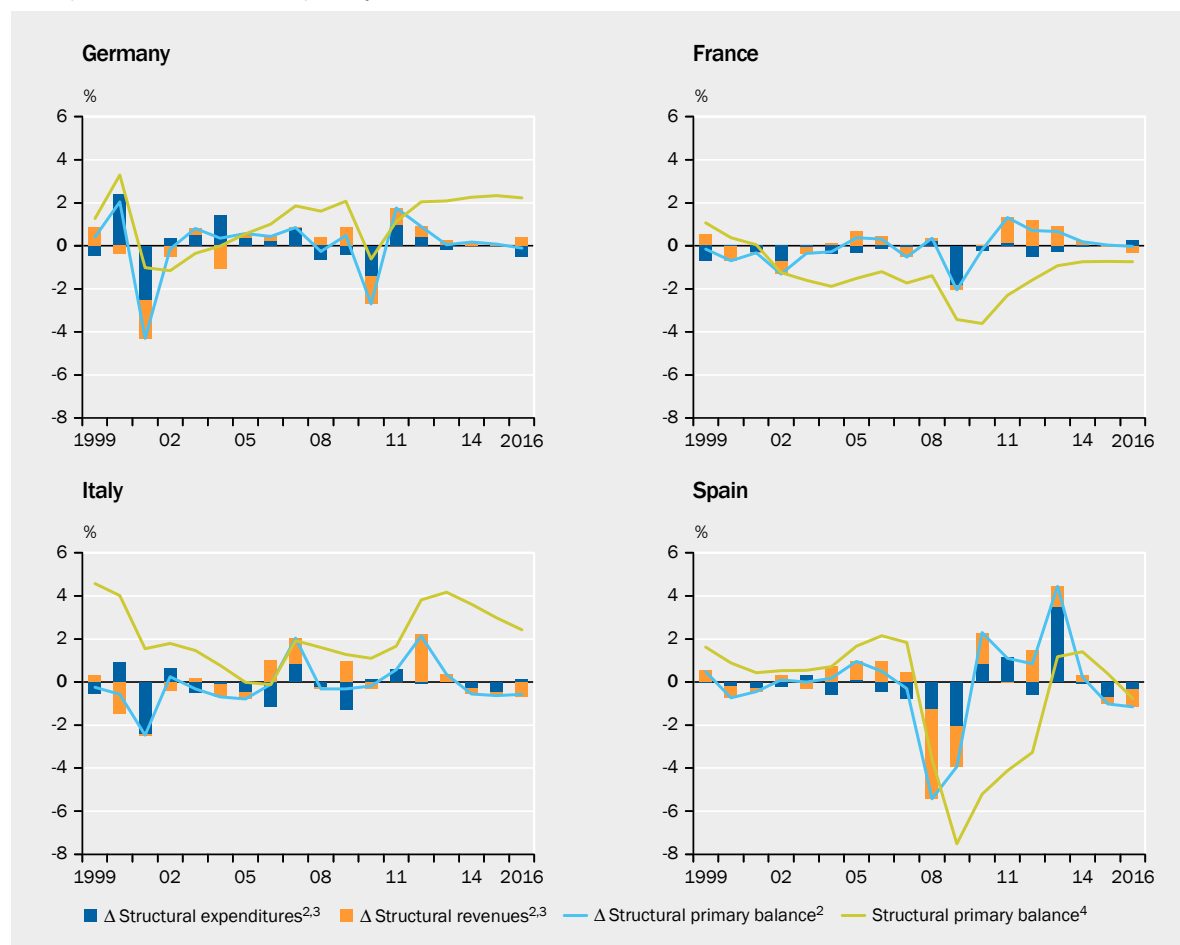
business cycle effects is imperfect and can lead to very different results depending on the method used (GCEE Annual Report 2016 item 194 box 6).

- 405. The impact of fiscal consolidation on economic development depends in particular on the combination of expenditure- and revenue-related measures. For example, consolidation on the expenditure side, which is accompanied by lower tax rates, increases economic growth sustainably (GCEE Annual Report 2013 item 212). However, cuts in direct government spending reduce aggregate demand in the short term.
- 406. A qualitative **analysis of the consolidation plans and measures** in Italy, France, Spain and Germany since 2011 shows clear differences with regard to their scope, focus on revenue-side rather than expenditure-side measures, and actual implementation. For this purpose, planned and realised consolidation measures of the stability programs will be compared with the actual development. [↘ BOX 12](#) The analysis builds on summaries of future consolidation plans of governments in the years 2011 and 2012 (OECD, 2012a). Furthermore, major measures enacted under the stability programs of the years 2014 and 2015 will

↘ CHART 45

Fiscal consolidation in the euro area

A comparison of the structural primary balances of selected member states¹



1 – Including one-off and special item effects. 2 – In percent of potential GDP, change on previous year. 3 – Changes with a negative sign imply a worsening of the structural primary balance, whereas a positive sign implies an improvement of the balance. 4 – In % of potential GDP.

Sources: European Commission, own calculations

be discussed. These plans will be compared with actual fiscal indicators [↘ TABLE 18 APPENDIX](#) and with the assessment of the European Commission as stated in the respective country reports. The analysis of consolidation plans at two dates does not claim to represent the full history of fiscal consolidation plans and their realisation. However, the analysis provides evidence of shortcomings in ensuring the sustainability of fiscal policy in the respective member states.

407. Initially planned measures frequently differ from those actually implemented (GCEE Annual Report 2013 item 213). Compared to the medium-term plans of 2011, the plans from 2014 or 2015 indicate a significantly smaller degree of consolidation.

Between 2012 and 2014, **Germany** mainly planned to enact expenditure-related consolidation measures such reductions in public sector employment and reductions in all federal budget positions except education and research (Bundesregierung, 2010; OECD, 2010). In addition to measures passed in the ancillary law of the 2011 federal budget (Haushaltsbegleitgesetz 2011) that improved the structural primary balance, one-off effects such as interest rate revenues from the German Bad Bank (FMS Wertmanagement) and the phasing out of stimulus packages markedly improved the German budget balance (Boysen-Hogrefe, 2013). [↘ CHART 45 TOP LEFT](#) Consolidation plans in 2015 under the stability program of the European Commission only included little further consolidation efforts and no statement on their budgetary impact (European Commission, 2015a). From 2013 onwards, discretionary fiscal policy measures in total have been expansionary in every year. [↘ ITEM 575](#)

Between 2011 and 2015, **France** planned to consolidate using more expenditure- than revenue-related measures (OECD, 2012b). The program budgeted for reductions in compensation and pension benefits of public sector employees. Ultimately, mainly revenue-side measures such as a VAT rate increase and higher taxes on labour and capital income were implemented. [↘ CHART 45 TOP RIGHT](#) After a slow-down of the reform pace during the final years of president Hollande's term, the newly elected French president Macron is trying to bring France back on a course of structural reform (European Commission, 2015b, 2017a). In addition to reforms of the pension system and the labour market that have already been partially implemented, the French president aims for further consolidation efforts, mainly by means of expenditure-side measures (IMF, 2017c).

Italy's consolidation plans for the years 2011 to 2014 included revenue-related measures such as for example VAT rate increases, a reform of the general tax code and measures against fraud and tax evasion. In addition, expenditure cuts, especially in the public sector were planned (OECD, 2012c). Tax hikes, labour market, and pension reforms contributed significantly to the fiscal consolidation. [↘ CHART 45 BOTTOM LEFT](#) Consolidation plans for 2015 and the following years included increases of some, and decreases of other tax rates and furthermore, substantial increase in public expenditures (European Commission, 2015c).

Spain's consolidation plans for the years 2012 and 2013 mostly encompassed expenditure-side measures (OECD, 2012d). They comprised considerable cuts of general government consumption and public investment. Further plans under

the European Commission's stability program for the year 2015 until 2017 mainly envisaged a further downsizing of the public sector. However, personal income tax and corporate tax reductions have counteracted consolidation efforts (European Commission 2015d, 2017b). [↘ CHART 45 BOTTOM RIGHT](#) Between 2015 and 2016, the Spanish government's fiscal policy has been expansionary. For the current year, consolidation efforts with an estimated impact of 0,5 % of the GDP have already been implemented (European Commission, 2017b).

[↘ BOX 12](#)

Overview of consolidation plans and their implementation in Germany, France, Italy, and Spain

Germany

The German government's 2011 **consolidation plan** focused on expenditure cuts between 2012 and 2014. Planned measures comprising 0.45 % of nominal GDP included reductions in civil servants' Christmas bonuses, reduction of staff, an armed forces reform, and budget cuts in all areas except research and education. They aimed to increase revenue by reducing tax breaks, financial aid, as well as by introducing an aviation tax and a tax on nuclear fuels. Additionally, the financial sector was meant to contribute to covering the costs of the financial crisis by means of a financial transaction tax. The revenue-side consolidation plan yet only encompassed 0.01 % of the nominal GDP (Bundesregierung, 2010; OECD, 2010).

Plans from 2015 for the period 2015-2017 only included smaller measures without detailed indications regarding budgetary effects (European Commission, 2015a).

The consolidation measures envisioned in the government's *Zukunftspaket* were formalised in *Haushaltbegleitgesetz* of 2011 with the goal of saving 0.65 % of the nominal GDP in the years from 2012 to 2014 (HBeIG 2011). A detailed examination reveals that the implementation of the consolidation plan at best partially explains the improved budget balance of €110 billion between the years 2010 and 2012. Boysen-Hogrefe (2013) showcases that the removal of a one-off effect such as the founding of a bad bank led to similar savings as generated by consolidation measures. The takeover of WestLB and Hypo Real Estate's portfolio resulted in interest-based profits, while incurred losses were covered by provisions from 2010.

The consolidation measures detailed in the *Haushaltbegleitgesetz* of 2011 were accompanied by the previous administration's expiring stimulus programs. The latter were largely responsible for the budget surplus reached for the first time again in 2012 (Boysen-Hogrefe, 2013). A reduction of the grants allocated to the *Gesundheitsfond* (federal health insurance fund) relieved the household by 0.02 % of the nominal GDP. At the time this measure was decided upon, in 2014, it was assumed that the health insurance grant would increase by 0.12 % of nominal GDP in 2015 and 2016, as well as 0.02 % of the nominal GDP (HBegIG 2014). Part of this increase was likely mitigated by the introduction of an additional national health insurance contribution of 1,1 % on top of the regular rate of contributions beginning January 2015.

Germany's budget balance has improved from a 1 % GDP deficit in 2011 to a surplus of 0.8 % of nominal GDP in 2016. [↘ TABLE 18 APPENDIX](#) After adjusting for cyclical fluctuations and interest payments, the European Commission estimates that the structural primary balance has improved by 1.1 percentage points of potential output over the same time period. [↘ CHART 45 TOP LEFT](#) The primary balance's improvement mainly took place in the years 2011 and 2012; afterwards no notable improvements occurred. The GCEE estimates that the structural primary balance has been declining since 2015. [↘ ITEM 580](#) [↘ CHART 64](#)

France

The **consolidation plans** formulated by the French government in 2011 and 2012 for the years 2012 to 2015 included expenditure cuts of 2.4 % and revenue increases of 1 % of nominal GDP (OECD, 2012b). Expenditure-based savings included cuts to civil servants' salaries and pensions, public administration, and less government spending on health and social services. Furthermore, the French government planned to increase revenues through higher social security contributions and taxes on capital income, amongst other things, to not adjust the income tax rate for inflation, and a higher VAT rate (OECD, 2012b).

Between 2014 and 2016, the government adjusted **consolidation plans** to accommodate the worse-than-anticipated macroeconomic situation. The initially announced expenditure cuts of 2.2 % of the nominal GDP in the years from 2015 to 2017 were subsequently reduced by 0.4 percentage points. At the same, taxes and social-security contributions were scheduled to decrease over the next three years by about 0.7 % of the nominal GDP (European Commission, 2015e). Furthermore, part of these savings was to be used for higher spending on education and defence.

Planned consolidation measures were realised primarily on the **revenue side**. The French government increased VAT tax rates, levied special contributions on salaries over €1 million and put a cap on tax benefits for families (French Embassy, 2014). In the years 2012 and 2013, the French senate raised the retirement age and increased pension contributions, to be paid by both employers and employees (European Commission, 2014a). The expenditure side saw further, but in its effect on the budget balance, negligible public sector cuts (European Commission, 2014a).

Further action was taken on reforming the French labor market, however, only after a significant watering down of initially intended measures (European Commission, 2014a). During 2015 and 2016, lay-off protection obstacles were abolished and professional training for young and low-skilled workers extended (OECD, 2017b). The last years of president Hollande's term did not see any further significant reforms (European Commission, 2015b, 2017a).

The newly elected French president Macron intends to pick up the reform process again. Pension system and unemployment insurance reforms are due; expenditure-related consolidation, financed by means of reductions in staff numbers and hiring freezes in the public sector, housing benefit cuts, and a simplification of the pension system are budgeted to reduce the deficit from 3.5 % in 2016 to 0.5 % of nominal the GDP in 2022. Additionally, there exist investment plans into education, environment protection, health and infrastructure that amount to 2.2 % of nominal GDP. As one of his first acts in office, in September 2017 President Macron signed a further deregulation of labour law, which has yet, however, to be adopted by parliament.

French net borrowing decreased by 1.4 percentage points to -3.4 % from 2012 to 2016. [↘ TABLE 18 APPENDIX](#) Removing business-cycle and interest expense effects shows a decrease in the structural primary balance from 2011 to 2013, which has remained fairly constant since then. [↘ CHART 45 TOP RIGHT](#)

Italy

Two-thirds of the Italian **governments' extensive reform** plans for 2011 and 2012 comprised revenue-increasing measures such as a VAT rate increase, a general tax code reform, and measures to fight tax evasion. The remaining one-third on the expenditure side included public sector wage cuts, and a pension reform that raised the retirement age and was thus intended to directly reduce pension spending (OECD, 2012c). The effect of the cumulative consolidation plans from 2011 for the period from 2012 to 2014 was estimated by the Italian government to amount to 1.7 % of nominal GDP on the expenditure side and 3.2 % on the revenue side (OECD, 2012).

The plans from 2015 for the period from 2015 to 2017, by contrast, only involved consolidation ef-

forts of 0.5 % of GDP. They included spending increases of 0.9 % and tax increases totalling 1.4 % of GDP (European Commission, 2015c).

Subsequently, considerable differences emerged between the plans and their **implementation**. In 2011, the Italian enacted three laws with substantial consolidation and reform measures (GCEE Annual Report 2015 Table 17). The pension reform in particular is likely to have led to savings on the expenditure side. On the revenue side, primarily the VAT rate increases in 2011 and 2013 are likely to have induced higher revenues (European Commission, 2014b).

Since 2012, tax rates have been reduced for people on low incomes and younger people. In 2015, increasing spending for bank bailouts and the consequences of a constitutional court ruling that declared parts of the pension reform illegal led to higher spending than originally expected (GCEE Annual Report 2015 Table 17). The European Commission currently criticises that parts of the ambitious pension reform adopted in 2015 have been watered down in the implementation. For example, the current Italian budget includes an increase in the minimum pension and a simplification of the conditions for accessing early or partial retirement (European Commission, 2017a). The reduction of net borrowing in relation to nominal GDP reflects the end of the consolidation process. [↘ TABLE 18 APPENDIX](#)

The reduction in **net borrowing** reflects the end of the consolidation efforts. [↘ TABLE 18 APPENDIX](#) Part of the change in net borrowing is due to cyclical effects and the historically low interest expenses. Compared to the considerable savings on interest payments, the reduction of net borrowing by 0.4 percentage points between 2012 and 2016 is however only marginal. [↘ ITEM 71](#) [↘ TABLE 18 APPENDIX](#) Looking at the structural component of the budget alone, it was mainly the revenue side that contributed to improving the primary surplus. [CHART 45 BOTTOM LEFT](#) The cumulative change in the structural primary balance between 2012 and 2014 is approximately 2 % of GDP. Between 2014 and 2016 primary surplus decreased from 3.6 % to 2.4 % of potential GDP.

Spain

The Spanish government's **medium-term plans** for 2012 to 2014 comprised consolidation measures amounting to 4 % of nominal GDP on the expenditure side and 1.3 % on the revenue side (OECD, 2012). This included especially cuts in government consumption and public investment. For example, public sector pay was to be frozen at the level of 2010, having previously already been cut by 5 %. Additional contributions were to be achieved through further wage moderation and a 7 % cut in the number of employees in public administration by 2013. Higher revenues were primarily to be achieved by raising the top income tax rate.

The consolidation plans for 2014 to 2017 included originally expenditure reductions of 1.4 % and increased revenues of 0.1 % of the nominal GDP (European Commission, 2015f). The plan to lower income and corporate tax rates, which amounted to 0.6 % of the nominal GDP, counteracted the consolidation efforts (EC, 2015, EC, 2017). In response to the resulting expansionary path for 2015 and 2016, the Spanish government planned consolidation measures for 2017 and 2018 amounting to 0.7 % of nominal GDP. Expenditure reductions on the scale of 0.5 % of nominal GDP have already been enacted (European Commission, 2017b).

Next to consolidation measures, which had primarily been implemented on the expenditure side, the Spanish government passed **significant labour market and pension reforms** between 2011 and 2014. For example, the retirement age was raised from 65 to 67, more restrictive conditions were imposed regarding access to early or partial retirement. Additionally, indexation in the pension system was re-worked and retirement age linked to life expectancy (GCEE Annual Report 2015 Table 17). The European Commission views this pension reform as an important contribution to the long-term consolidation of public finances (European Commission, 2015d).

Spanish **net borrowing** halved in the period between 2011 and 2016 from 9.6 % of GDP to 4.5 % of

GDP. However, the biggest part of this reduction was already completed before the end of 2014. [TABLE 18 APPENDIX](#) In 2010, the Spanish government had increased VAT rates that already achieved a high increase in revenue. The tax reform of 2014 however, lowered tax rates levied on personal incomes and corporate profits (European Commission, 2015d). This is reflected in the development of the structural primary balance. The cumulative improvement between 2011 and 2014 amounted to 5.5 percentage points of potential GDP. In the following years, the structural primary balance decreased from a one-percent surplus to a one-percent deficit. [▶ CHART 45 BOTTOM RIGHT](#)

2. Structural reforms and economic growth

- 408.** Low growth rates, high unemployment rates, and excessive debt in the private and government sectors in the aftermath of the crisis are not solely due to the collapse and sustained weakness of aggregate demand. In fact, the financial and euro crisis revealed, amongst other things, **undesirable structural developments** in terms of price and institutional competitiveness and the sustainability of public finances. A correction requires consolidation measures, structural change, and reforms in order to promote sustainable growth. The ECB emphasises that the member states' will to reform must not slacken simply because monetary policy has been very accommodative for some years. Structural reforms would improve the effectiveness of monetary policy and support the ECB in achieving its price stability target (Draghi, 2017).
- 409.** Structural reforms include improving the efficiency and quality of public administration, as well as education, tax, and financial system regulations. For the euro area, Masuch et al. (2016) show that **institutional reforms** have a particularly strong effect on potential output if they are implemented by countries in which the quality of institutions is below average and government debt is above 70 % of the GDP.
- 410. Labour-market and product-market reforms** that strengthen potential output through better functioning markets and increasing competition are decisive for self-sustaining economic development (Forni et al., 2010; Gomes et al., 2013; Gerali et al., 2015; IMF, 2015b; GCEE Annual Report 2016 item 189). If these have a consolidating effect, they create leeway for fiscal policy and improve the sustainability of public finances (Gaspar et al., 2016). An expansion of spending on education is at least initially a strain on public finances. Structural reforms that encourage competition between educational establishments are more important (Woessmann, 2016). On the basis of a macroeconomic model for Germany, Krebs and Scheffel (2016) estimate that structural measures such as the expansion of all-day childcare, the deregulation of the service sector and a reduction in social security contributions increase potential growth.
- 411.** Product market reforms, such as lowering barriers to entry in the retail, service or telecommunication sectors lead to higher growth in the medium-run (Bouis et al., 2012). Some of them are likely to have short-term growth effects already and thus create fiscal space, for example, to cushion sectoral adjustment costs. [▶ ITEM 706](#) For example, Andrés et al. (2017), show that in the case of a credit

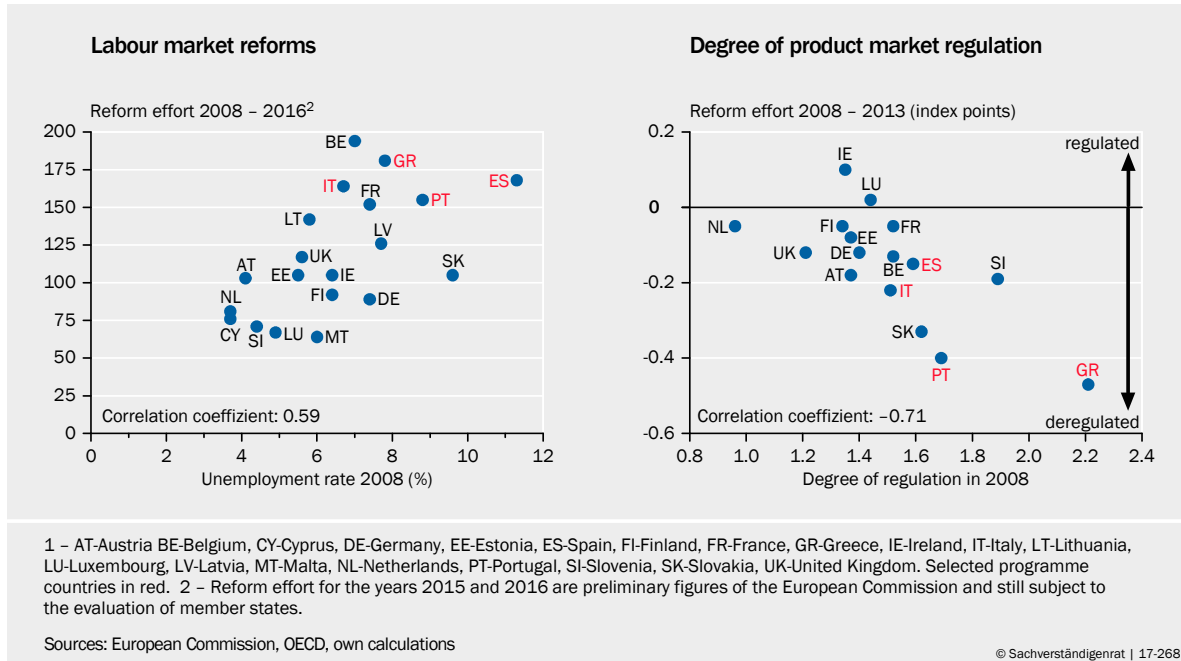
crunch due to a financial crisis, product market reforms in a monetary union lead to positive effects on revenues in the short-term. The quicker recovery of investment demand and the valuation of collateral contribute to this. In a poor economic environment, **prioritising reforms that increase productivity** over other **product market reforms** can improve the short to medium-term macroeconomic impact because these are not dependent on the economic status quo (Duval, 2016).

412. Despite positive macroeconomic consequences, structural reforms are **met with political resistance**. This is mostly due to those benefiting from the existing system using their political influence to secure their privileges and obstruct reforms. As a consequence, politically disputed reforms are often only implemented once a poor economic situation has been persisting for a prolonged period (Dias da Silva et al., 2017).
413. Due to political resistance, the scope and direction of **short-term macroeconomic effects** are at the center of the debate. For example, Eggertson et al. (2014) argue on the basis of a New Keynesian model that efficiency-increasing structural reforms have a deflationary and contractionary effect if monetary policy is restricted by the zero-lower-bound (ZLB). Instead of the binding ZLB, Cacciato et al. (2017) see the cyclical stance of the economy before implementation of a reform as key determinant of the direction of the short-term effect. In view of the ongoing economic recovery and stable inflation rates in the euro area, the ECB is in any case no longer restricted to the ZLB. [↘ ITEM 345](#)
414. If further transmission channels including expectation and distribution effects are taken into account, Eggertson et al.'s (2014) result no longer holds. An anticipated future rise in employment can already increase demand and revenues in the short-term (Fernández-Villaverde et al., 2014; Gomes, 2014; Vogel, 2014; Gerali et al., 2015). In a model extended accordingly, **labour market reforms** have a positive effect on economic growth and inflation even under the restriction of a binding zero lower bound (GCEE Annual Report 2015 item 349). For example, this applies to a reduction of workers' bargaining power or an improvement in job matching. The resulting increase in employment compensates for the decrease in pay and already increases disposable income and consumption in the short run (GCEE Annual Report 2015 items 349 f.).
415. Euro area member states have implemented numerous structural reforms in the past few years. Countries with particularly high unemployment rates made efforts to reform the labour market (Izquierdo et al., 2017). [↘ CHART 46 LEFT](#) Across a range of different countries there is a **high correlation between the unemployment rate in 2008 and reform efforts** from 2008 to 2016; countries with higher unemployment rates in 2008 implemented more reforms. This particularly applies to member states with debt higher than 90 % of their GDP, such as Italy, Greece, Portugal and Spain. The countries with a higher level of regulation have also tended to deregulate the product market. [↘ CHART 46 RIGHT](#) This is likely to contribute to a convergence of labour-market and product-market structures.

416. This analysis of consolidation and reform measures undertaken so far shows the necessity for **systematic implementation of a sustainable economic policy** in order to prepare the member states for the future. This requires on the one hand that the member states use temporary savings in interest expenses to consolidate their public finances in order to reduce the future debt service burden. On the other hand, further reform efforts that intensify competition and thus improve growth prospects should be undertaken at member state level.

↳ CHART 46

Labour market and product market reform efforts¹



A differing opinion

417. One member of the Council, Peter Bofinger, does not share the opinion held by the majority of the Council members with respect to certain remarks made in this chapter.
418. The majority called on the ECB to “announce a **normalisation strategy** for its monetary policy as soon as possible”, as market participants find anticipating the future stance of monetary policy particularly difficult in the current situation. The majority thinks it would be beneficial to develop the current forward guidance into an **comprehensive forecast on monetary policy**, as seen in countries such as Norway and Sweden. This would also mean publishing the inflation projection of the Governing Council of the ECB.
419. There is no reason to request publication of a normalisation strategy by the ECB. The ECB has long been communicating a relatively clear plan for terminating its asset purchases program that is closely aligned to its **inflation target**. The ECB President, for example, has stated at his regular press conferences for some time now that the asset purchase programme would be continued in any case “until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation aim”.
420. At every second ECB Governing Council meeting, ECB President Draghi makes explicit reference to the new **quarterly projection of the ECB staff** on the expected development of inflation and GDP. In these references, he always speaks of the analysis he has presented as being “**broadly**” confirmed by the staff projection. Therefore, the staff projection ultimately represents the ECB macroeconomic projection called for by the majority of GCEE members.
421. This creates a **link** for market participants – as demanded by the majority – between the asset purchasing monetary policy instrument and the macroeconomic development, based on the expected trend in inflation, i.e. the key macroeconomic factor in ECB policy.
422. Overall, the ECB's **forward guidance** therefore offers market participants a clear outlook. For example, the message to market participants at the press conference on 26 October 2017 was that asset purchasing would continue until at least the end of September 2018. On the basis of this and the announcement that key policy rates are expected to “remain at their present levels for an extended period of time, and well past the horizon of our net asset purchases”, it is unlikely that the ECB will hike rates before mid-2019 at the earliest.
423. The “**more specific forecast on monetary policy**” demanded by the majority in line with the practice of other central banks would, in contrast, probably not convey any better information to market participants regarding future key rate development. For example, the **Swedish central bank's current interest rate forecast** already includes a confidence interval ranging from –1.99 % to

+1.45 % for a one-year horizon. This interval increases for the period until May 2019 (–2.43 % to +2.32 %). ↘ CHART 47 LEFT

This also applies to the Official Cash Rate forecast of **the Reserve Bank of New Zealand**. This central bank does not publish confidence intervals. In the past, it has changed its forecasts so dramatically year to year, however, that they are unlikely to offer market participants particularly high informational value either. ↘ CHART 47 RIGHT

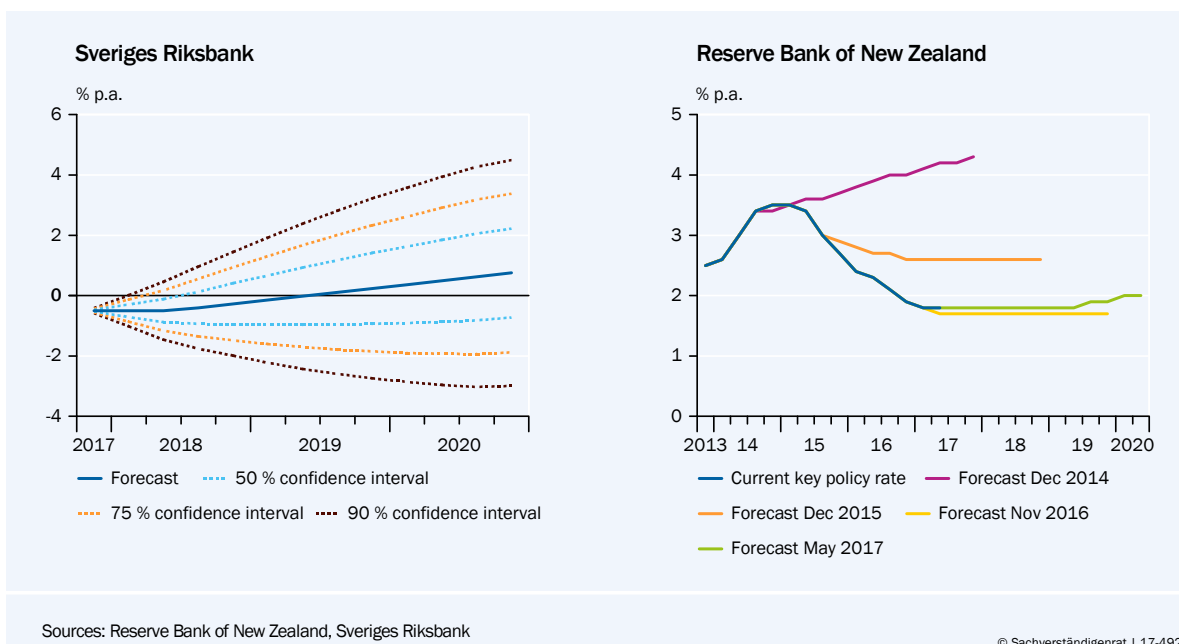
424. If the objective is to genuinely reduce the risks of exiting bond purchases, the ECB could copy the Bank of Japan’s course of action. In September 2016, the BOJ announced its **yield curve control**, by which it means simultaneously controlling short and long-term interest rates.

The ECB would have the option – at least for the period that immediately follows the end of the bond purchases – of announcing a **stabilisation of long-term interest rates**. In the monetary union's particular constellation, the focus should not be on interest rates for certain government bonds, as the ECB would then risk being accused of monetary financing. Instead, the ECB should consider an **average interest rate of long-term government bonds** issued by member states weighted according to the capital key. This would have the advantage that the ECB would not have to intervene in portfolio reallocations between the bonds of member states that leave the average unchanged. In addition, market participants would still bear a certain risk regarding the development of individual bond yields.

425. There is still no evidence of the ECB policy having resulted in “**risks to financial stability**” which would advocate a swifter normalisation of monetary policy than the ECB is currently aiming for. ↘ CHAPTER 4 EXECUTIVE SUMMARY Euro area **lending** remains very moderate, much weaker than in the years preceding the finan-

↘ CHART 47

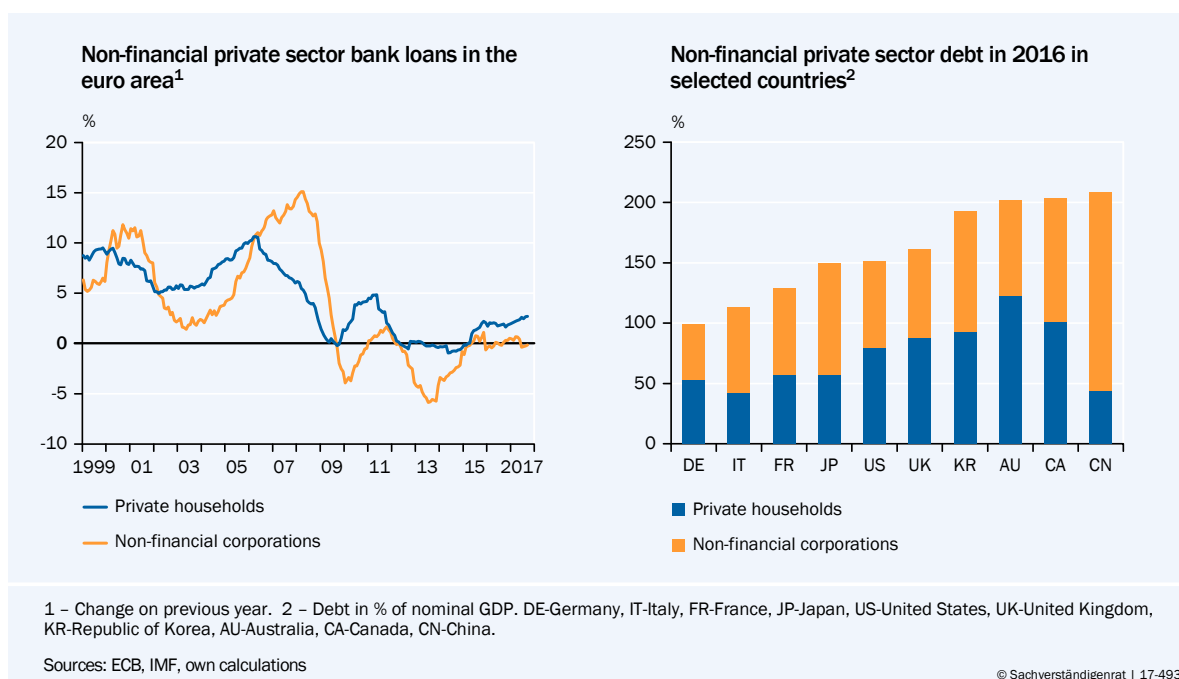
Key policy rate forecasts of the central banks of Sweden and New Zealand



cial crisis. ↘ CHART 11 LEFT The **debt to nominal GDP ratio of households and businesses** in the large euro area member states, which is low on an international scale, also provides evidence of there being no excessive risks to financial stability. ↘ CHART 48 RIGHT Rising **interest rate risks** should be addressed through higher capital requirements under pillar 2 of the Basel II Capital Accord. Nor is there evidence of **bank profitability** having overall suffered from the monetary policy of recent years. The average net effect on bank profitability in the euro area as well as in the large member states was close to zero for the period from 2014 to 2017. ↘ CHART 42

↘ CHART 48

Non-financial private sector bank loans and debt in selected countries



APPENDIX

TABLE 17

Chronology of the ECB's measures since December 2015

Measure/ Programme	Announ- cement	Start	Tentative end	Details
Rate cut	03.12. 2015	09.12. 2015	-	Deposit rate lowered by ten basis points to -0.3 %.
EAPP adjustments	03.12. 2015	01.01. 2015	Mar 2017	Extension of the intended term until March 2017; reinvestment of principal payments on maturing securities, inclusion of euro-denominated bonds issued by regional and local authorities in the euro area.
Full allotment	03.12. 2015	-	End of 2017	Extension of the settlement of main and longer-term refinancing operations (three-month maturity) until the end of the last minimum reserve maintenance period in 2017 as a fixed-rate tender with full allotment.
Communi- cation	21.01. 2016	-	-	The Governing Council of the ECB decides to review and, where appropriate, adjust the monetary policy stance in March 2016.
Rate cut	10.03. 2016	16.03. 2016	-	Main refinancing rate cut by five basis points to 0 % and deposit rate lowered by ten basis points to -0.4 %.
EAPP adjustments	10.03. 2016	19.04. 2016	Mar 2017	Increase by €20 billion to €80 billion a month; increase in the purchase limit for international organisations and multilateral development banks from 33 % to 50 %.
Targeted longer-term refinancing operations (TLTRO II)	10.03. 2016	Jun 2016	Mar 2017	Refinancing operations with a maximum four-year maturity. Banks can take out up to 30 % of their outstanding lending volume (to non-financial corporations and private households, excluding mortgage loans) as at 31 January 2016, less any volume still outstanding under the first two TLTROs I. In addition, banks were able to repay all outstanding TLTROs I voluntarily in June 2016 and, at the same time, participate in the first TLTRO II. The interest rate depends on net lending between 1 February 2016 and 31 January 2018 in relation to the bank-specific benchmark, and thus ranges between the main refinancing rate and the deposit rate. Allotment based on the deposit rate is made if net lending rises by 2.5 % in relation to the benchmark. The interest rate is reduced on a linear scale for increases of between 0 % and 2.5 %.
Corporate Sector Purchase Programme (CSPP) ¹	10.03. 2016	Jun 2016	Mar 2017	Inclusion of the purchase programme for corporate bonds into the EAPP. These relate to euro-denominated corporate bonds (excluding banks) issued by companies with registered office in the euro area and a rating of BBB- or higher. They must meet the requirements of the Eurosystem's collateral framework for monetary policy refinancing operations, have a residual maturity of between six months and 30 years and the Eurosystem applies an issue share limit of 70 %. The purchases are processed by six national central banks and coordinated by the ECB. The bonds can be purchased on the primary and secondary market (bonds issued by public-sector companies only on the secondary market – the issue share limit on these is lower in accordance with the PSPP regulations).
EAPP adjustments	08.12. 2016	Apr 2017	Dec 2017	Reduction of net asset purchases from €80 billion to €60 billion a month.
Communi- cation	08.06. 2017	-	-	ECB no longer expects deflationary risk in the euro area and does not expect its key interest rates to decrease further.
EAPP adjustments	26.10. 2017	Jan 2018	Sep 2018	Net asset purchases are intended to continue until the end of September 2018, or beyond. Reduction from €60 billion to €30 billion a month. The Eurosystem will invest the principal payments from maturing securities purchased under the APP for an extended period of time after the end of its net asset purchases, and in any case for as long as necessary.
Full allotment	26.10. 2017	Nov 2017	Dec 2019	The main refinancing operations and the three-month longer-term refinancing operations will continue to be conducted as fixed rate tender procedures with full allotment for as long as necessary, and at least until the end of the last reserve maintenance period of 2019.

1 – For further details, please refer to the Deutsche Bundesbank Monthly Report May 2016. 2 – The benchmark for banks with negative net lending in the period from 1 February 2015 to 31 January 2016 is lending volume as at 31 January 2016 less net lending in the twelve previous months. The benchmark for banks with positive net lending is lending volume as at 31 January 2016. 3 – Including insurance companies.

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TABLE 18

Fiscal indicators for selected member states of the euro area

	2009	2010	2011	2012	2013	2014	2015	2016
Actual net lending/net borrowing¹								
Euro area	- 6.3	- 6.2	- 4.2	- 3.6	- 3.0	- 2.6	- 2.1	- 1.5
Germany	- 3.2	- 4.2	- 1.0	- 0.0	- 0.1	0.3	0.6	0.8
France	- 7.2	- 6.8	- 5.1	- 4.8	- 4.1	- 3.9	- 3.6	- 3.4
Greece	- 15.1	- 11.2	- 10.3	- 8.9	- 13.2	- 3.6	- 5.7	0.5
Ireland	- 13.8	- 32.1	- 12.7	- 8.0	- 6.1	- 3.6	- 1.9	- 0.7
Italy	- 5.3	- 4.2	- 3.7	- 2.9	- 2.9	- 3.0	- 2.6	- 2.5
Portugal	- 9.8	- 11.2	- 7.4	- 5.7	- 4.8	- 7.2	- 4.4	- 2.0
Spain	- 11.0	- 9.4	- 9.6	- 10.5	- 7.0	- 6.0	- 5.3	- 4.5
Cyclically adjusted primary balance¹								
Euro area	- 1.6	- 2.3	- 0.7	0.5	1.4	1.4	1.2	1.2
Germany	2.1	- 0.6	1.1	2.0	2.1	2.3	2.3	2.2
France	- 3.4	- 3.6	- 2.3	- 1.6	- 0.9	- 0.7	- 0.7	- 0.7
Greece	- 10.5	- 3.7	1.8	3.0	- 2.1	6.3	3.0	8.7
Ireland	- 9.5	- 28.3	- 8.3	- 1.9	0.9	0.0	- 0.1	0.8
Italy	1.3	1.1	1.7	3.8	4.2	3.6	3.0	2.4
Portugal	- 5.9	- 8.2	- 2.4	1.3	2.2	- 0.7	1.0	2.5
Spain	- 7.5	- 5.2	- 4.1	- 3.3	1.2	1.4	0.4	- 0.8
Cyclically adjusted net lending/net borrowing²								
Euro area	- 4.4	- 5.0	- 3.6	- 2.5	- 1.4	- 1.3	- 1.2	- 1.0
Germany	- 0.6	- 3.1	- 1.4	- 0.3	0.1	0.5	0.8	0.8
France	- 5.8	- 6.0	- 4.9	- 4.2	- 3.2	- 2.9	- 2.7	- 2.6
Greece	- 15.6	- 9.6	- 5.4	- 2.1	- 6.1	2.3	- 0.6	5.5
Ireland	- 11.5	- 31.1	- 11.6	- 6.0	- 3.4	- 3.9	- 2.8	- 1.5
Italy	- 3.1	- 3.2	- 3.0	- 1.4	- 0.7	- 1.0	- 1.2	- 1.5
Portugal	- 8.8	- 11.1	- 6.7	- 3.5	- 2.6	- 5.6	- 3.5	- 1.7
Spain	- 9.2	- 7.1	- 6.6	- 6.2	- 2.3	- 2.1	- 2.7	- 3.6
Gross debt¹								
Euro area	78.4	83.8	86.1	89.4	91.3	91.8	89.9	88.9
Germany	72.6	80.9	78.6	79.8	77.4	74.6	70.9	68.1
France	78.9	81.6	85.2	89.6	92.4	95.0	95.8	96.5
Greece	126.7	146.2	172.1	159.6	177.4	179.0	176.8	180.8
Ireland	61.5	86.1	110.3	119.6	119.4	104.5	76.9	72.8
Italy	112.5	115.4	116.5	123.4	129.0	131.8	131.5	132.0
Portugal	83.6	96.2	111.4	126.2	129.0	130.6	128.8	130.1
Spain	52.8	60.1	69.5	85.7	95.5	100.4	99.4	99.0

1 – In % of nominal GDP. 2 – In % of potential GDP.

Sources: European Commission, Eurostat

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