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Annual Report
2017

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We mourn the loss of the following members of our staff

Franz Xaver Lindlacher	19 January 2017
Ralf Karl Franz Völkermann	2 February 2017
Annegret Gabriele Heiland	5 February 2017
Gregor August Steinhaus	22 February 2017
Norbert Hensle	24 February 2017
Markus Kiechle	20 March 2017
Stefan Förg	22 March 2017
Dieter Johannes Schliwa	9 July 2017
Andreas Faul	12 August 2017
Petra Marianne Schneider	9 October 2017
Hildegard Maria Sinner	11 December 2017
Volker Negendank	16 December 2017

We also remember the retired staff members of the Bank who passed away in 2017.

We will honour their memory.

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Abbreviations and symbols

p Provisional
r Revised
e Estimated
pe Partly estimated
… Figure available at a later date
. Figure unknown, not to be published or not meaningful
0 Less than 0.5 but more than nil
– Nil

Discrepancies in the totals are due to rounding.

Bundesbank round-up

Bundesbank round-up

Overall economic and monetary policy climate

A robust upturn, low interest rates and higher, though still moderate, inflation rates were the factors which shaped euro area macroeconomic developments in the year 2017. The general state of the economy and the outlook have not been this upbeat for years. Not only does this open a window of opportunity to normalise monetary policy; it also provides a good platform for tackling challenges which remain in the economic and fiscal policy spheres.

What had been an economic recovery in the euro area has now evolved into a full-blown upswing, with activity expanding at a far brisker pace in 2017 than it had one year earlier. On average, gross domestic product (GDP) increased by a total of 2.5% last year. Stimulus was provided by vibrant domestic demand and by the external sector, where the euro area economy was also fanned by global tailwinds. Economic growth accelerated in some 120 countries during the course of 2017.

Domestic demand in the euro area was supported by the ongoing recovery of member states' labour markets. The number of people in work climbed substantially during the course of 2017, the pace of employment growth once again outstripping the rate observed in the previous year. Consequently, the unemployment rate contracted to 8.7% at the end of the year, its lowest rate since the beginning of 2009. This average figure for the euro area as a whole does, however, mask what are, in some cases, large differences from one member state to the next. Joblessness rates above all in those countries which were hit particularly hard by the sovereign debt crisis may be substantially lower, but they are still lingering at high levels. All in all, though, rising employment rates and full order books in 2017 kept consumer and business sentiment buoyant in the euro area. Many a sentiment indicator was hovering at multi-year highs at the end of the year under review, which suggests that developments will remain favourable for some time. The Eurosystem is expecting economic activity in the euro area to expand by 2.3% in 2018, much like the rate observed in 2017. Growth in the years after that should continue to outpace the potential growth rate but flag slightly, as some member states' labour markets tighten and the euro area's export markets experience less vibrant growth. Based on this outlook, the Eurosystem staff are expecting GDP growth rates to come in at 1.9% in 2019 and 1.7% in 2020.

The German economy fared even better than the euro area's in 2017, with employment likewise hitting a new record high and year-end joblessness at its lowest level since reunification. Healthy labour market conditions stimulated household consumption and housing investment, while business investment also fared well. Overall, the German economy expanded at a seasonally and calendar-adjusted rate of 2.5% in 2017, and the Bundesbank is expecting growth to come in at a similarly high level in 2018. If that projection materialises, economic output will have outpaced potential output for quite a number of years now. Capacity utilisation at German enterprises therefore looks set to soon reach levels not unlike those observed at the peak of the last economic cycle in 2007. The tightness this is expected to cause in the labour market will probably spur markedly higher rates of wage growth in future. Hitherto, factors including migration from other EU countries had alleviated labour market shortages and put a damper on wage growth.

Economic conditions may have picked up, but price pressures in the euro area remained sluggish in 2017. One likely reason was the continued efforts in some euro area countries to use wage restraint as a way of boosting their price competitiveness. Stronger oil prices and

the robust upswing did, however, cause inflation to grow much more briskly than it had one year earlier, coming in at an annual average for the euro area of 1.5% in 2017, compared to 0.2% in the previous year.

We agreed on the Governing Council of the ECB that, with price pressures on the low side in the euro area, monetary policy needed to be kept in expansionary mode, even if the robust upturn did give us scope to slow the pace of the monthly asset purchases. This observation prompted the ECB Governing Council's decision in October 2017 to reduce the Eurosystem's monthly asset purchase volume from €60 billion to €30 billion, starting in January 2018. The asset purchases are set to continue until September 2018, or beyond, if necessary.

Opinion on the Governing Council was divided, however, over how quickly the asset purchases should be wound down. The increasingly robust upswing in the euro area is continuing to absorb business slack. Capacity utilisation across the euro area as an average should return to normal levels before the end of this year, which suggests that wage growth in the euro area will also accelerate again in future. That assumption has been incorporated into the Eurosystem staff projection, which expects domestic price pressures to continue increasing. At the end of the projection horizon, inflation is expected to be near to the monetary policy target of below, but close to, 2%.

That is why I believe that inflation is firmly on its way towards our target range. And that is also why I felt there was a good case for ending the net asset purchases sooner and communicating a clear end-date. While that might have meant bringing inflation back to the target range a little more slowly, it is worth remembering that the Governing Council deliberately formulated the target range as a medium-term objective.

Monetary policy will remain highly accommodative even after the net asset purchases have ended. That is because the degree of monetary policy accommodation is determined not so much by the monthly volume of net asset purchases as by the stock of assets held on the central bank's balance sheet. And that stock of assets will initially remain steady even after the net purchases are stopped, because the Governing Council decided some time ago that the proceeds from maturing assets should continue to be reinvested for an extended period of time after the end of the net purchases. In addition, the Governing Council has stated that it is expecting the policy rates on the main refinancing operations, the marginal lending facility and the deposit facility to even remain unchanged at their current levels of 0.00%, 0.25% and -0.40%, respectively, well beyond the end of the net asset purchases.

In any case, the longer the non-standard measures remain in place, the blunter the positive impact of the ultra-loose monetary policy on economic activity and price developments becomes, and the more undesirable side effects tend to materialise. One such side effect is that an increased appetite for risk among financial market participants can trigger exaggerations in particular asset markets such as the real estate segment. Some euro area countries have already rolled out macroprudential measures, as they are known, to brake the pace of mortgage loan growth.

The persistently strong rate of price increase observed for some years now in Germany's residential real estate market is primarily a reflection of the continued brisk demand for housing, above all in urban areas, relative to supply. There are Bundesbank calculations, however, which indicate that residential properties continue to be overvalued even if household income patterns, interest rates and demographic factors are taken into account as price determinants. These developments are not, however, being propelled by unusually dynamic mortgage lending practices. And since there is nothing to suggest that credit standards are being eased to any significant degree, residen-

New macroprudential instruments

The year 2017 saw an enhancement being made to the macroprudential toolkit in Germany. In March 2017, the German Bundestag adopted the Act on the Amendment of Financial Supervisory Law *(Finanzaufsichtsrechtergänzungsgesetz).* The Act has created two new instruments for macroprudential supervisors,[1] allowing them to impose minimum standards for the granting of loans for the construction or purchase of residential real estate if they believe that financial stability is at risk. Thus, supervisors can now require borrowers to provide a certain minimum share of own funds in new residential property financing transactions (loan-to-value (LTV) ratio). Furthermore, borrowers can be required to pay back at least a certain part of a new loan within a specified period of time (amortisation requirement).[2]

Legislators opted not to create income-related instruments, such as a cap on a borrower's debt-to-income (DTI) ratio.[3] Income is a significant factor in determining a borrower's debt sustainability, however, which in turn determines whether a household is capable of servicing a loan over its entire term. The lack of income-related instruments could reduce the effectiveness and efficiency of macroprudential policy.

Identifying systemic risks at an early stage in macroprudential supervision and analysing instruments' likely impact before they are deployed calls for more than just macroeconomic information. Disaggregated data are also required – for example, to assess the impact of instruments' deployment more closely. The German Financial Stability Committee had recommended that the Federal Government create a legal basis for the regular collection of data on housing loans. Considering the possibility of a regulation at the European level, the Federal Government has refrained from implementing this recommendation at the national level for the time being. Reference should be made here, in particular, to the relevant initiatives of the European Central Bank (ECB) and the Eurosystem resulting from the recommendation of the European Systemic Risk Board (ESRB) on closing the data gaps in the oversight of residential and commercial real estate markets. For now, however, any deployment of these instruments, and analysis of their impact, will have to allow for the fact that relevant data are not yet available in the quantity and quality recommended by the German Financial Stability Committee.

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1 For further details on the new instruments in the area of housing loans, see Deutsche Bundesbank, Financial Stability Review 2017, pp 54-56.
2 In the case of bullet loans, an amortisation requirement thus amounts to setting a maximum maturity.
3 The income-related instruments also recommended by the German Financial Stability Committee in 2015 include a cap on the ratio of the total servicing of all a borrower's debts (interest payments and principal repayments) to the borrower's income (debt-service-to-income ratio, or DSTI) and a cap on the total debt of a borrower relative to the borrower's income.

tial mortgage lending in Germany remains a limited source of risk to financial stability. However, if risk does build up distinctly at some point in the future in Germany's residential real estate market, it would be possible to deploy the instruments created last year in the area of housing loans (see the box on macroprudential instruments on page 14).

Equities and investment fund shares have also been attracting greater interest in Germany since 2014, but there is no evidence of substantial reallocations of household portfolios over the past years. The investment behaviour of households in Germany, it would appear, is being shaped less by return considerations than by individual preferences and demographic and institutional factors, and these change only slowly over time (see the box on investment behaviour in the low-interest-rate environment on pages 16 to 18).

Another factor which I think needs to be considered in any assessment of the highly expansionary monetary policy is that the degree of monetary policy accommodation has mainly been achieved through the large-scale asset purchases. But in a single currency area, purchases of government bonds by central banks are not a monetary policy instrument like any other. Their cost-benefit profile is quite different from a policy of steering short-term money market rates, which is normally the only lever operated by monetary policymakers. Sovereign bond purchases by central banks blur the boundary between monetary policy and fiscal policy, creating a direct connection between the cost of government debt and monetary policy decision-making. That is especially worrying in the euro area, where government debt is still lingering at record highs in some member states. If finance ministers fail to keep public finances on track, monetary policymakers could well come under pressure to leave rates low for longer than appropriate from the perspective of price stability.

For government budgets in the euro area, the further improvement in economic conditions not only means stronger tax revenues and low social spending – the low-interest-rate setting has also saved euro area finance ministers a huge amount of interest expenditure in recent years. Interest savings across the entire euro area since 2007 come in at well above €1 trillion (see the box on interest savings in government budgets on pages 20 and 21). It is troubling to think that these savings have not been seized upon to consolidate public budgets. At least the cyclically adjusted primary surpluses have remained steady or even declined of late. It is crucial that the sustainability of public budgets is not questioned if the interest rate setting changes.

It is probably often the case that ambitious consolidation efforts encounter fears that they might snuff out the first very gradual signs of growth returning to some euro area countries. Scaling back government debt need not be to the detriment of growth. Indeed, a large body of economic research published in recent years suggests that debt can compromise growth if debt levels climb above a particular threshold. In the case of household and public debt, that threshold stands at around 85% of GDP.[1] Average government debt levels in a number of euro area countries are still well above that threshold. Over a medium-term horizon, reducing debt levels more quickly could even unleash the forces of growth.

A credible fiscal policy which leaves no doubt as to its commitment to reducing debt can cut the cost of consolidation still further. That particularly holds true for countries which no longer conduct their own monetary policy.[2] The credibility of fiscal policymaking in the euro area comes predominantly from the Stability and Growth Pact, but only as long as its rules

1 See S G Cecchetti, M Mohanty and F Zampolli (2011), The real effects of debt, BIS Working Papers No 352.
2 See M Lemoine and J Lindé (2016), Fiscal consolidation under imperfect credibility, European Economic Review, Vol 88, pp 108-141.

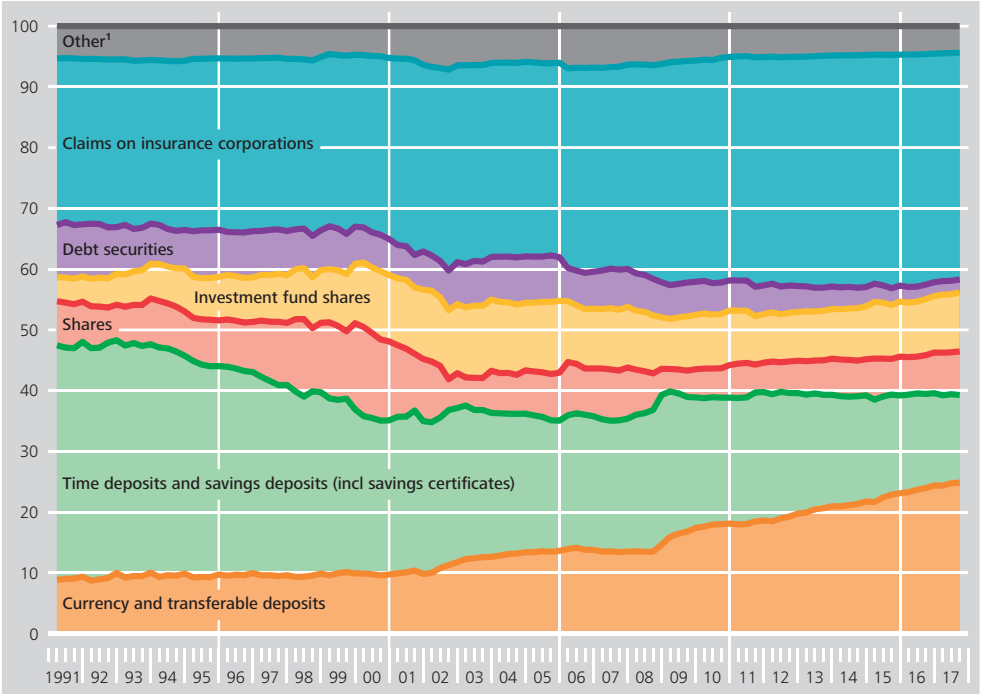
Investment behaviour in the low-interest-rate environment

As a consequence of the current low-interest-rate environment, the public debate in Germany is often focused on the low interest rates on deposits and the resulting risk of a loss of purchasing power for savings. Deposit rates were 0.2% on an annual average in Germany in 2017, while the annual average rate of inflation was 1.8%. Deposits with banks are not the only type of financial asset, however. Securities (ie shares, investment fund shares as well as debt securities) and claims on insurance corporations sometimes play a similarly important role in terms of households' financial assets in Germany. In 2017, more than half of financial assets were held in these forms of investment (see the chart below). This means that the real earnings situation of savers in Germany does not depend solely on how high deposit rates are but also on dividend payments, valuation effects, price developments and the composition of their financial assets. In order to take account of inflation-adjusted losses of purchasing power as well, it is useful to look at real returns.

The total return generated by households depends on the structure of the financial assets. In the years since 1991, this has been dominated by bank deposits (and, among these, to an increasing extent by particularly liquid transferable deposits) as well as by claims on insurance corporations (see the chart below). With such financial assets, which are quite liquid or felt to be safe, it was possible to achieve only a comparatively small real return. Securities, the real return on which was perceptibly higher on average, accounted for no more than a comparatively small percentage, however (19% in 2017 Q3).

Structure of the financial assets of households in Germany

%, end-of-quarter data



1 Besides other accounts receivable, this also comprises other share equity.

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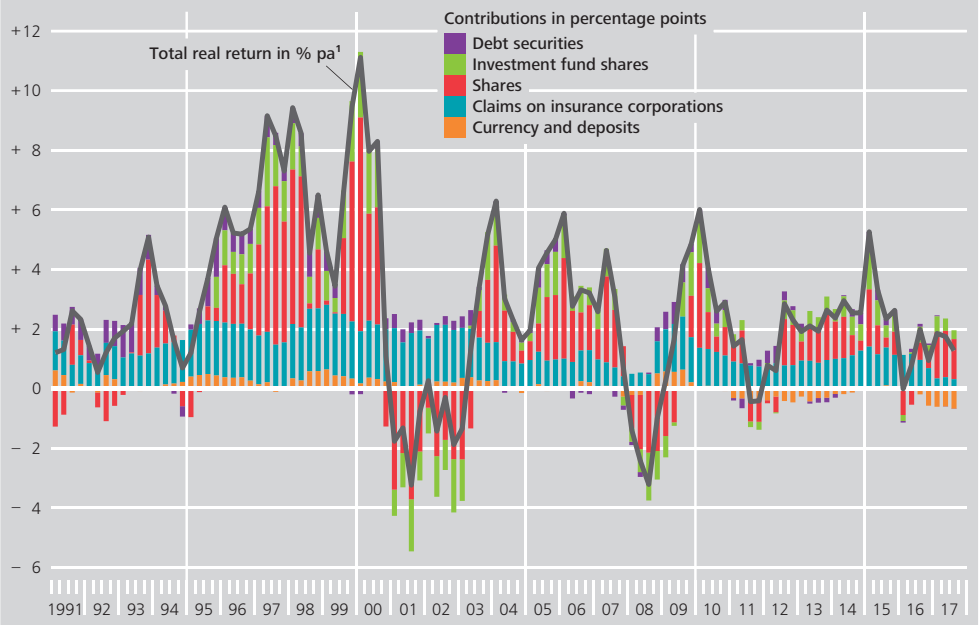
Contribution of individual types of financial asset* to the real total return of households in Germany



***** Weighted in accordance with share of financial assets. **1** For details of how the returns are calculated, see the box in Deutsche Bundesbank, German households' saving and investment behaviour in light of the low-interest-rate environment, Monthly Report, October 2015, pp 17-19.

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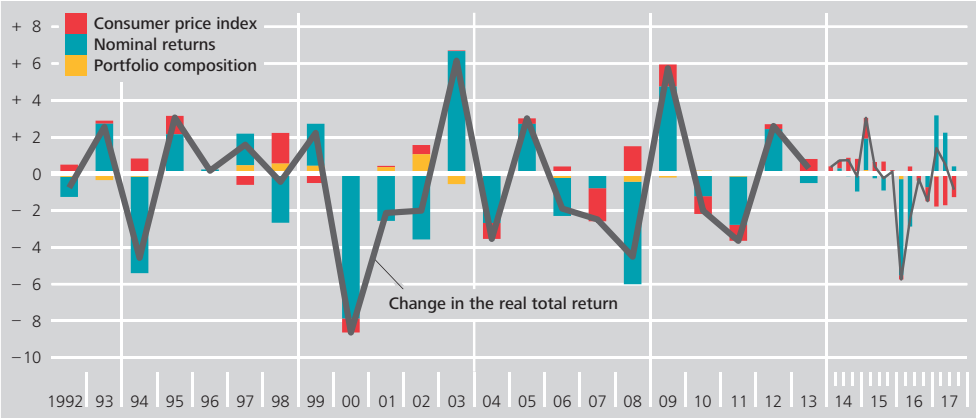
The real total return on the financial assets of households in Germany is obtained by weighting the return of the individual types of financial asset by their portfolio share.[1] In the third quarter, it was just under 1.3%. Overall, not only was it still clearly positive even after 2014, when the ECB Governing Council cut the main refinancing rate to almost 0%, it was also only slightly lower than the return in the preceding years since the introduction of the euro. Since a part of savings is held in higher-yielding financial assets, it has been possible so far to offset at least some of the consequences of the low-interest-rate environment. Such types of financial asset are not used by all savers to the same extent, however. For example, only 16% of all German households possess a share portfolio, according to a recent survey by Deutsches Aktieninstitut. There may therefore be very large differences in the real total return of the individual investors. Those investing their money solely in liquid and safe bank deposits have therefore been affected more severely by the low-interest-rate environment recently than those who have diversified their portfolio and purchased, say, shares or investment fund shares.

The contributions made by the individual types of financial asset to the real total return of households in Germany have undergone significant changes over time (see the chart above). Prior to the financial crisis and especially in the late 1990s, shares and, to a lesser extent, also investment fund shares were a key driver of the total return. Since then, however, the return on these types of financial asset has been markedly lower in

1 For details of how the returns are calculated, see Deutsche Bundesbank, German households' saving and investment behaviour in light of the low-interest-rate environment, Monthly Report, October 2015, pp 17-19. Unlike presented there, securities yields from the second quarter of 2017 onwards are, however, calculated entirely based on the securities holdings statistics.

Contributions to the change in the real total return of households in Germany

Annual change in percentage points



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some cases. The real return on bank deposits has also declined, occasionally going into negative figures (see the chart on page 17).

The level of the real total return on households' financial assets is determined by three factors: the nominal return, the inflation rate and the portfolio structure.[2] In Germany, the real total return on financial assets in the years since 1991 has been determined chiefly by changes in the nominal return on the individual types of investment. In crisis periods, for example, losses on securities played a major part in the decline of the real total return. In this respect, inflation was somewhat less important. In the period from 2012 to 2015, falling inflation rates, taken in isolation, led to rising real returns on financial assets. Since 2016, inflation developments have been dampening the real return on financial assets again (see the chart above).

Over the past few years, changes in the portfolio structure have not made any significant contribution to the real total portfolio return. Households have responded to the low-interest-rate environment only in a muted manner with shifts into higher-yielding investment fund shares and shares (see the chart above).

Overall, households in Germany are not very sensitive to returns.[3] The Bundesbank's 2016 Panel on Household Finances (PHF) survey confirms that more than half of the surveyed households did not adjust their savings patterns when confronted with lower interest rates. Only 17% of households invested their money differently.[4]

German households' investment behaviour is shaped chiefly by individual preferences as well as by demographic and institutional factors that change only slowly over time. Even in periods of low interest rates, the preference for liquid and low-risk investments still predominates.

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2 Changes in the portfolio structure may generally be due to inflows and outflows in the case of individual types of financial asset as well as to valuation effects that occur, above all, with securities.

3 See, for example, Deutsche Bundesbank (2015), loc cit; S Avouyi-Dovi, V Borgy, C Pfister, M Scharnagl and F Sédillot (2013), Households' financial portfolio choices: a comparison between France and Germany, in B Winkler, A van Riet and P Bull (eds), A flow-of-funds perspective on the financial crisis, Vol 1, Palgrave Macmillan; and F Geiger, J Muellbauer and M Ruppert (2016), The housing market, household portfolios and the German consumer, ECB Working Paper, No 1904.

4 See P Marek, Saving patterns in the low-interest-rate setting – results of the 2016 PHF summer survey, Deutsche Bundesbank Research Brief, April 2017.

are rigorously adhered to, of course. It is a welcome sign, then, that, according to the latest assessments, there is now just a single euro area country – Spain – which probably breached the 3% of GDP ceiling for new borrowing in 2017. This year might even see new borrowing in the euro area as a whole fall below that critical threshold, and I think things have to stay that way. That is why the rules need to be interpreted more strictly in future. Some euro area countries, after all, breached the 3% of GDP threshold for nine consecutive years.

One sensible proposal that would bring the interpretation of the rules back into closer alignment with the thresholds as defined in the Stability and Growth Pact, it would seem, would be to shift responsibility for fiscal surveillance from the European Commission to an independent institution. A standalone authority would not be torn between operating on the one hand as a political actor – one that is reliant on striking compromises with the European Parliament and the member states – and as the guardian of the treaties on the other. That would significantly reduce any incentive to accept compromises at the expense of fiscal discipline, and the general public would be able to see the point at which impartial analysis ends and political horse-trading begins.

Yet consolidation is not the only path leading to sound public finances. Stronger growth can also help to reach that destination. A higher rate of growth can also be a catalyst for creating new jobs, which continue to be urgently needed in some countries of the euro area. The current upswing should not blind us to the fact that growth rates in many industrial countries are following a long-term downward trend. Ever since the 1980s, the average growth rate posted by the industrial countries each decade has been worse than it was one decade earlier.

The broadening economic upswing is partly the result of the highly accommodative monetary policy – and not just in the euro area. But relying on monetary policy alone to move the euro area economies up to a persistently higher growth path would be a risky undertaking, which is why the Governing Council continued to point out in 2017 that the highly expansionary monetary policy needs to be flanked by growth-enhancing structural reforms.

The upbeat economic backdrop provides policymakers with an ideal opportunity for further structural reforms. In the period immediately following the onset of the sovereign debt crisis, the euro area member states were still busy initiating a great many reforms, but by 2017, the pace of reforms was back at the lower, pre-crisis level. That at least is the view taken by the OECD in its latest stocktake of structural reforms.[3] Time, then, to get the ball rolling again. After all, conditions are optimal – and it would be an opportunity to refute claims that countries only ever roll out reforms when they are in the grip of acute economic distress.

That goes for Germany, too, where the current upbeat state of the economy is no reason for the country to rest on its laurels. After all, the trend decline in average growth rates observed in the industrial countries for decades now is also in evidence here in Germany. Average output per working hour in Germany may be rising from one year to the next, but the increments are generally getting slimmer. Average productivity growth per hour worked has been contracting since 1970. To make matters worse, demographic forces will remove skilled workers from the labour market over the years ahead, which will put an additional damper on potential growth. On a brighter note, however, digitalisation and technological advances are opening up fresh opportunities all the time to boost productivity. Conditions do need to be right, though, if the German economy is to tap into these opportunities. For one thing, Germany needs a state-of-the-art digital infrastructure and an education system that gives as many

3 See OECD (2017), Economic policy reforms 2017 – going for growth, Chapter 1: Overview of structural reform progress and identifying priorities in 2017.

Interest savings in government budgets

Since the monetary union was established, interest rates on government bonds have been on a downward trend. This has resulted in falling financing costs, lower effective average interest rates on government debt and a perceptible reduction in government interest spending as a percentage of gross domestic product (GDP). This trend was interrupted by the global financial and economic crisis as well as the sovereign debt crisis in the euro area. Once tensions in the financial markets had subsided, the decline in government bond yields resumed. In the low-interest-rate environment, interest expenditure ratios came back down, even in the countries worst affected by the crisis such as Italy, Portugal and Spain. In 2016, both interest expenditure ratios and average interest rates in almost all euro area countries were lower than when the monetary union was launched.

In order to estimate the interest saved as a result of the drop in government bond yields since 2007, actual interest spending is compared below with hypothetical figures of what it would have been had average interest rates remained unchanged at 2007 levels.[1] Savings work out greater, the more issue yields have fallen, the more existing debt has been rolled over into lower-interest paper and the higher the underlying debt level is.[2] As compared to the pre-crisis year of 2007, the cumulative savings (for 2008 to 2017)[3] for the euro area as a whole are considerable, at well over €1 trillion, or more than 10% of GDP.

Of the euro countries included in the analysis,[4] the largest cumulative interest savings across the period under review were recorded in Italy (12½% of GDP), France (12%) and Austria, Belgium and the Netherlands (all around 11½%). Germany ranks somewhere in the middle, at 9% of GDP (see the chart on page 21, left-hand panel). Savings are smaller for Ireland, Spain and Portugal, in particular because average interest rates on government debt have fallen comparatively little in these countries.[5]

Had average interest rates not fallen since 2007, Italy, for instance, would have had to spend almost 2½% of GDP more on interest in 2017 alone. Looking at 2017 in isolation, the savings in Ireland and the Netherlands are significantly smaller, as these two countries have a much lower debt ratio than Italy (see the chart on page 21, right-hand panel).

Only in the first years of the crisis were the interest savings used to bring down deficits and thus to stabilise or even lower debt ratios, which were very high in some cases. Recently, meanwhile, several countries have softened their fiscal stance. In its forecast until 2019, for instance, the European Commission currently expects the unadjusted deficit in most

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1 This takes no consideration of additional repercussions because debt levels would have been higher given unchanged average interest rates.
2 Other calculation methods can be found in the Annual Report 2017/2018 of the German Council of Economic Experts (p 188 f) or in the European Central Bank's Economic Bulletin 5/2017 (pp 31 ff). In its calculations, the German Council of Economic Experts excludes differences in the maturity structure of government debt from interest savings. Otherwise, the calculations are very similar to the ones presented here. The ECB report examines a different statistical base and other periods and, in particular, the isolated effect of the decline in interest rates. As a consequence, any changes in the debt ratios that have occurred in the meantime are disregarded.
3 Data as in the European Commission's Autumn 2017 Economic Forecast.
4 The comparison only includes founding members of the European monetary union. Luxembourg, though a founding member, is not included as it has consistently had a very low debt ratio and the absolute volume of its debt is small.
5 Mostly declining growth rates in the nominal trend GDP tended to weigh on government budgets. Despite the interruption as a result of the crisis, the interest rate-growth differential, which nets these two factors, has nonetheless dropped in most of the euro area countries covered by the analysis. However, Italy, Spain and Portugal experienced a more unfavourable pattern in the first years of the crisis. Since 2013, a further decline in interest rates and reviving growth mean that the interest rate-growth differential has fallen again there, too.

Interest savings

As a percentage of 2017 GDP

Sources: European Commission and Bundesbank calculations.
Deutsche Bundesbank

countries to shrink by less than the deficit-lowering impact of the anticipated strong economic performance and the further decline in interest spending.

If the general interest rate level picks up once more, government budgets would come under greater pressure again going forward. However, given that maturities on government debt have tended to get longer in recent years, there will be a delay before higher issue yields leave a significant mark on interest spending. Moreover, higher-interest long-dated bonds that were issued years ago are still coming up for roll-over, which means that even rising, but initially still comparatively low, interest rates may still initially translate into interest relief overall. It would, however, be problematic – particularly given high government debt – if policymakers were to bank on a continuation of the low-interest-rate environment and not plan for a future normalisation of monetary policy. The low interest rates and improving economic situation should instead be used to bring structural deficits down quickly. That would also help lower debt ratios more rapidly, which are still very high in some cases. If this opportunity is missed and consolidation further delayed thanks to a generous interpretation of the fiscal rules, question marks about the creditworthiness of individual member states could arise again in the future if interest rates pick up.

Interest rates impact government budgets not only via interest spending, but also – albeit much less – through interest rate-sensitive revenue. This includes, for instance, central banks' profit distributions. Higher interest rates normally lead to larger profits on central bank balance sheets as these include interest-free or low-interest liabilities in the form of currency or short-term deposits on the one hand and higher-yielding claims on credit institutions on the other. The Eurosystem central banks have built up longer-term exposures with fixed coupons through the large-scale purchase of government and corporate bonds. In such a situation, a rise in interest rates, which quickly affects liabilities, causes central bank profits to drop during an interim period. With this in mind, the Bundesbank had already taken a first measure to make provision for interest rate risk by setting aside an appropriate amount in its 2016 annual accounts, and another such step was announced.[6]

6 See Deutsche Bundesbank, Central bank profits: the impact of changes in interest rates in the context of unconventional monetary policy, Monthly Report, July 2017, pp 58-60, and Deutsche Bundesbank, Annual Report 2016, p 74.

people as possible the skills they need to make the most of the new technologies. For another, flexible labour and product markets combined with a fit-for-purpose social safety net will put workers in a position where they really can switch to the most productive areas of the economy.

Protectionism/globalisation

However, structural reforms in Germany and the euro area can only reach their full potential in a market economy where trade can move freely across national borders. Erecting trade barriers, walls or fences would only destroy a major source of productivity and prosperity.

It is safe to say, however, that 2017 was a difficult year for trade policy. On 29 March 2017, the United Kingdom officially notified the European Union of its intention to leave the bloc. That notification set in motion a two-year period during which the UK can negotiate a withdrawal agreement with the EU. After the two sides had agreed in the first phase of negotiations that sufficient progress had been made on specific aspects of withdrawal, the European Union stated that it is now also prepared to discuss the future relationship with the UK. Both sides are looking to reach an agreement on this topic as well before March 2019. Failure to put a suitable arrangement in place would probably leave trade between the European Union and the United Kingdom governed by World Trade Organization (WTO) rules, which would be a huge step backwards compared with the current free movement of goods, capital, people and services. No one knows how these talks will pan out. But it would be in the interests of people on both sides of the English Channel for the UK and the EU to establish a legal framework for their future relationship which imposes fewer constraints, compared with the situation today, on the single market's four freedoms than a bilateral trading arrangement according to the WTO regime.

On the other side of the Atlantic, the newly sworn-in US president, Donald Trump, kicked off the year 2017 by unveiling his "America first" policy, while the new US administration articulated doubts over a rules-based multilateral trade regime. January 2017 saw the United States announce its withdrawal from the Trans-Pacific Partnership (TPP), a multinational free trade agreement which had been lined up with a number of countries bordering the Pacific Ocean. The United States also pushed for the North American Free Trade Agreement (NAFTA) to be renegotiated. Talks between the United States and the European Union on a Transatlantic Trade and Investment Partnership (TTIP) have been on hold since the beginning of 2017.

This is a remarkable turn of events, most notably because the United States had been a stalwart of a rules-based multilateral trade regime since the end of World War II. That arrangement was instrumental in largely dismantling tariffs and other trade restrictions around the world.

Bearing these developments in mind, the Bundesbank once again underlined the importance of international trade for prosperity during the 2017 financial year. Trade delivers benefits for all the countries involved. This does not mean that there will not be any losers alongside those who stand to gain from globalisation in every country, but the right response to this is not isolationism – it is a functioning welfare system and a fit-for-purpose education system that equips people to grasp the opportunities presented by globalisation.

German G20 presidency

Free global trade was also a priority issue for the Bundesbank and the Federal Government during Germany's presidency of the G20, which it took over from China on 1 December 2016 and passed on to Argentina on 30 November 2017.

The Bundesbank and the Federal Ministry of Finance used Germany's presidency of the G20 to put the topics of digitalisation in the financial sector and the strengthening of economic resilience on the G20 agenda. Germany's presidency also saw progress being made on the G20's financial market regulation agenda and the groundwork being prepared for agreement on major outstanding issues.

Shaping digitalisation

The Bundesbank set the priority issue of digitalisation in motion by hosting a G20 conference entitled "Digitising Finance, Financial Inclusion and Financial Literacy" on 25-26 January 2017. The dialogue among high-level politicians, central bankers, representatives from international organisations, regulators and academics made it clear that digital financial services offer a great deal of potential for financial institutions and the public at large, but also pointed to the considerable risks involved.

For banks, digitalisation is a chance to save costs by automating and streamlining processes. To tap this potential, institutions will need to run high-performance, state-of-the-art IT infrastructure and invest a great deal of money. At the same time, up-and-coming digital financial enterprises (FinTech firms) are bursting onto the scene, and they know full well how much innovative potential digitalisation holds in store. Unlikely as it is that FinTech businesses will make broad inroads into banks' territory, they may well squeeze margins further and thus act as an additional drag on bank profitability.

In Germany, the burdens which banks might face from having to compete with FinTech rivals are coinciding with sector profitability enfeebled by the persistent low-interest-rate setting. The problems which the low interest rates are creating for German credit institutions were the subject of the third joint survey by the Bundesbank together with the German Federal Financial Supervisory Authority (BaFin), which was conducted in 2017 among 1,555 small and medium-sized institutions (see the box on credit institutions' net interest income on pages 27 and 28). The survey found that the low-interest-rate environment is continuing to weigh heavily on small and medium-sized credit institutions in Germany. While institutions are expecting their total return on capital to deteriorate at a slower pace than they had assumed just two years ago, the lean period still is not over. That said, the majority of institutions are well capitalised and are in a position to withstand a protracted spell of weaker earnings.

In countries with just a loose network of bank branches, or none at all, new digital processes and business franchises can make financial services more accessible, thereby promoting financial inclusion and equal opportunities. Banking digitally by smartphone does, however, require some degree of financial literacy.

On the other hand, digital innovations can also put the transparency and stability of financial markets at risk. So it is up to supervisory authorities to identify these risks before they can materialise and cause damage.

To get a better idea of the opportunities and risks presented by digitalisation in the financial sector, the G20 commissioned the Financial Stability Board (FSB) to take stock of technology-based financial innovations and their implications for financial stability. The FSB report[4] endorsed at the G20's Hamburg summit identified multiple issues that merit greater international cooperation. Chief among them are the risks which arise when financial institutions rely on the same third-party service providers which do not fall within the financial regulatory perimeter, such as telecommunications, IT or data enterprises. The G20 leaders called upon

4 See Financial Stability Board, Financial stability implications from FinTech – supervisory and regulatory issues that merit authorities' attention.

their national authorities to continue to closely monitor FinTech developments going forward, giving due regard to the financial challenges they present at the micro and macro levels.

As the financial sector grows increasingly digitalised, cyber risk becomes more of an issue. The WannaCry malware attack in the summer of 2017, which infected more than 100,000 computers worldwide, is just one example of the dangers which digitalisation can present for the functioning of the global financial system. The G20 finance ministers and central bank governors thus identified cyber risk as a potential systemic risk, and commissioned the FSB to take stock of the existing cybersecurity regulatory and supervisory practices in the financial sectors of the G20 countries. That stocktake was published in October 2017.

For the Bundesbank, too, cyber attacks are a threat that should not be underestimated. Last year alone, the Bundesbank succeeded in intercepting around 21,000 malware-infected e-mails and blocking 178,000 unauthorised attempts to infiltrate the Bank's infrastructure. Cybersecurity is an area where the Bundesbank interacts on a regular basis with security experts from other central banks and federal authorities, besides continually monitoring developments in global IT security so as to be in a position to take timely countermeasures and optimise its detection and counter-intrusion methods. It is becoming increasingly important in this regard to press ahead with automating and forging stronger links between the procedures used to share indicators of compromise (IOCs). Major progress could be made in this direction by establishing a network at the federal level and among the G7 countries.

Strengthen economic resilience

Another thematic pillar of Germany's G20 presidency was enhancing the ability of individual national economies to cushion shocks, but also to find answers to long-term challenges such as demographic change. Although the International Monetary Fund (IMF) twice upgraded its growth projections for the global economy in 2017, many countries continue to face long-term macroeconomic challenges. For one thing, debt levels have risen further in the world economy. In the G20 countries alone, indebtedness came to 235% of GDP in 2017, more than when the financial crisis erupted. That means that there will be less scope in the next downturn to cushion a sharp decline in economic activity. That holds true for enterprises just as much as it does for government budgets.

The G20 agreed upon a set of resilience principles in an effort to enhance the robustness of their national economies and counter the dwindling momentum of reforms. These principles offer guidance for G20 members in the development of suitable actions aimed at enhancing the resilience of their economies. Gradually reducing debt levels features prominently in these principles.

Basel III reforms completed

The principles to enhance resilience complement ongoing work aimed at making the financial system more robust through stricter and better regulation. To this end, the G20 had agreed on a comprehensive regulation agenda when it met in Washington in 2008. This agenda has now been largely implemented. Until very recently, a final agreement on the Basel III reform package was still pending. This was because contention long surrounded the level at which the floors should be set for banks that calculate capital requirements using their own, rather than the standardised, methods. The groundwork for resolving this issue was laid under the German G20 presidency. In this context, I would like to thank my colleague on the Executive Board, Dr Andreas Dombret, whose negotiating skills were instrumental in the Basel III package being wrapped up in De-

cember 2017. The revised Basel rules will cap the capital savings that a bank can obtain from using internal models at 27.5% of the amount produced using standardised approaches.

I am aware that some banks consider this solution overly strict. Nonetheless, finalising a new global standard for banking regulation is an important step towards ensuring a global level playing field and provides banks with planning certainty. Naturally, one set of regulations at the international level cannot take into account all national particularities in the countries concerned. All those involved therefore had to let go of their ideal outcome. Ultimately, we had a choice: let the talks fail, with unforeseeable consequences for both the Basel process and the credibility of multilateral agreements in general, or reach a compromise. There is much to suggest that the banks will cope well with the agreed solution given the long transitional period. After all, nine years are a long time to undertake the necessary adjustments. In any case, a lot of banks will not see their capital requirements increase further as a result of the recent agreements. And let us not forget that forcing individual banks with riskier business models to maintain more capital is, in fact, the very intention of the Basel framework. What matters now is that all new regulations be fully implemented in all G20 member states. Only once this has been done can the reform achieve its intended purpose and strengthen financial stability in the long term.

However, work towards a more stable financial system does not end with the finalisation of the regulatory agenda. Now that the relevant decisions have been taken and implemented, the evaluation phase has started. Policymakers will have to examine whether the regulations still contain any loopholes, whether they achieve the intended purpose, and whether the objective of the regulations is met with as few side effects as possible. The G20's FSB has therefore presented an analysis framework in which the financial market reforms can be evaluated post implementation. A first evaluation of the OTC derivatives reform and reforms on central counterparties is already under way. It is clear to the Bundesbank that such an evaluation must not be a pretext for turning back the clock on regulation in general.

International progress in statistics

Another achievement of the German G20 presidency was to step up the pace of progress on various statistics initiatives. For instance, the IMF was tasked with liaising with the FSB and the Bank for International Settlements to set up a publicly accessible database on macroprudential measures. In order to better model increasingly complex financial and real economic ties, the G20 finance ministers and central bank governors further recommended that the national authorities improve the exchange of and access to statistical data. One objective is to promote exchange using globally accessible anonymised microdatasets. The newly established International Network for Exchanging Experience on Statistical Handling of Granular Data (INEXDA), which is chaired by the Bundesbank, is already working towards this goal. Back in 2015, when the second phase of the G20 Data Gaps Initiative was introduced, policymakers agreed that new regular data deliveries should be achieved by 2021. In preparation for this, timelines, intermediate targets and annual monitoring in the form of a traffic light system were introduced during the year under review.

New reference rate for the money market

The Eurosystem will apply the principle "collect data only once", which is at the heart of the G20 Data Gaps Initiative, for instance to the planned provision of an unsecured overnight reference interest rate. Back in September 2017, the Eurosystem announced that it would publish an overnight interest rate of this nature

by 2020. This will be done using new money market statistics developed to analyse and assess the situation on the euro money market without the need for additional bank surveys. The new overnight rate is to complement existing benchmark rates, will be published daily and is intended as an alternative to private sector interest rates.

Developing monetary union

Notwithstanding the sound state of the economy, low interest rates and progress on financial market regulation, we must not forget that the institutional framework of the monetary union still contains inconsistencies. Setting up the European Stability Mechanism (ESM) and the Single Supervisory Mechanism has rendered the euro area more resilient to crises in recent years. However, it would be a mistake to believe that the euro area is now equipped for all eventualities.

Adapting the institutional framework to make the monetary union lastingly stable therefore remains on the agenda. With this in mind, it is good news that the debate on stepping up European integration has been revived following the election of Emmanuel Macron as French president. Macron has, for instance, proposed communitising additional policy areas – defence, migration and climate protection, to name just a few; that means taking joint decisions in these policy areas and financing them jointly.

Towards the end of last year, the European Commission, too, presented its thoughts on deepening European integration. It is proposing, amongst other things, more risk-sharing, for instance through a stabilisation function to cushion asymmetric shocks and stronger political control of the ESM by the EU ministers of finance. All this is to be achieved without amending the EU Treaty.

Challenges such as combatting climate change, securing external borders and developing common communications, energy and transport networks may indeed be handled more efficiently at the European than at the national level. And if joint funding for such tasks is based on economic performance, this may in fact stabilise the euro area in the event of a member state encountering economic difficulties.

By contrast, I consider a stabilisation facility to cushion what are referred to as asymmetric shocks to be neither necessary nor expedient. A member state with sound public finances can take effective measures against downturns or crises using fiscal mechanisms, without breaching the fiscal rules or having to resort to outside assistance. And should a crisis threaten to overwhelm a member state financially, it can turn to the ESM. The ESM only grants assistance provided certain conditions are met, conditions that are intended to remedy the country's economic problems. And rightly so, as aid payments mutualise risks on a large scale. Incidentally, the Academic Advisory Board at the Federal Ministry for Economic Affairs recently pointed out that an additional stabilisation facility may harbour risks, particularly if it is accompanied by new borrowing opportunities at the European level.

However, new institutions are not always needed to render the monetary union more stable. Sometimes it is much more important to apply the existing rules. This is true not only of public finances; it also applies to the rules intended to encourage financial market participants to behave in a risk-appropriate way. For instance, following the financial crisis, the member states of the European Union agreed on a single resolution mechanism (Bank Recovery and Resolution Directive, or BRRD). One objective of this framework is for banks to be resolved without government assistance, where possible. In 2017, the new resolution regime was put to its first test. Banco Popular Español in Spain as well as Banca Popolare di Vicenza

The effects of the low-interest-rate environment on the net interest income of German credit institutions

Between April and June 2017, the Bundesbank and Germany's Federal Financial Supervisory Authority surveyed the credit institutions under their direct supervision to gauge how their profitability and resilience are faring in the low-interest-rate environment. Institution-specific planning and projection data were collected from a total of 1,555 credit institutions in a complete survey of all small and medium-sized banks and savings banks. "Significant" institutions supervised by the European Central Bank (ECB) were excluded. The survey covered around 88% of all credit institutions in Germany, and roughly 41% of their aggregate total assets. This is already the third time this survey has been carried out, following similar exercises in 2013 and 2015.

What the survey reveals is that Germany's small and medium-sized credit institutions are expecting their pre-tax net income to contract further on average until 2021, with a considerable part of the contraction stemming from interest business. A comparison of the annual results for 2016 with the figures planned and projected for the five years after that shows that, on aggregate, institutions are anticipating a 9% contraction in their pre-tax net income by 2021. Furthermore, they are expecting their total return on capital – that is, pre-tax net income for the year as a share of total assets – to shrink by as much as 16% on aggregate, given projected balance sheet growth of roughly 10% over the same period.

Contributions to net interest income in the planning scenario*

Aggregate data as a percentage of total assets

* Figures from 2017 based on institutions' projections.

Deutsche Bundesbank

The expected downturn in net earnings can mainly be put down to two factors. The first is the need to set aside more allowances for losses, particularly in credit business. In light of the consistently upbeat economic conditions, this can be interpreted as prudent planning on the part of institutions. The second is that banks and savings banks are expecting to experience a sharp decline in net interest income. In this regard, the projected earnings flows from the individual forms of interest business on both sides of the balance sheet show some interesting differences. In particular, institutions are expecting the three components of net interest income to move in different directions.

Judging by the survey data, the prevailing low-interest-rate setting will make it increasingly difficult to earn a relative spread in deposit-taking business over the price of matched-maturity funding in the money or capital markets. This liability-side margin contribution, as it is known, is projected to shrink from 0.53% to 0.22% of aggregate total assets over the next five years (see the chart on page 27). Arguably, this can mainly be put down to what is, in effect, a 0% floor for customer deposits, which most institutions, operating amid intense competition above all in the retail segment, are loath to breach. At the time the low-interest-rate survey was carried out, only around 10% of respondents indicated that they were considering passing on negative deposit rates to their retail customers by 2021.

Another component of net interest income, the structural contribution, is also feeling the impact of the low interest rates, which have long been in evidence in all maturity segments. This component notably comprises earnings which institutions generate from investing equity and from transforming maturities, ie from making longer-term investments in the money and capital markets using short-term funds. As higher-yielding assets mature, and with the spread between short and long-term maturities still narrow, institutions' planning indicates that while total assets will increase moderately, the structural contribution will tighten from 0.44% to 0.32% of total assets over the five-year period under observation.

As for the third component of net interest income, the asset-side margin contribution, which is the difference between a credit operation and a matched-maturity alternative investment in the money or capital markets, German banks and savings banks are projecting an increase from 0.87% to 0.98% of aggregate total assets over the short and medium term. According to their planning, however, this will not be enough to prevent net interest income as a share of total assets from contracting to 1.5% by 2021.

and Veneto Banca in Italy were the first three banks to be resolved or liquidated using the new legal framework. In addition, Banca Monte dei Paschi di Siena received a precautionary recapitalisation.

First experiences with the application of the resolution rules have, however, shown that the promise given by the G20 leaders at the height of the crisis, namely that banks would no longer be rescued at taxpayers' expense, is not yet being kept in all cases. Banco Popular Español was indeed resolved according to European law without taxpayers' involvement. But when it came to Banca Popolare di Vicenza and Veneto Banca, the European Resolution Board determined that resolution action was not in the public interest. In such a case, the BRRD stipulates that banks must be wound up under national insolvency laws. The switch from the European to a national legal framework completely altered the playing field, as Italian insolvency legislation allows greater recourse to government assistance. This must, nonetheless, comply with European State aid rules. Although the banks' owners and subordinated creditors had to shoulder some of the losses, the Italian government contributed up to €17 billion to the bail-out. Overall, these test cases have demonstrated that the new framework can work. However, the treatment of the Italian banks also shows that the system needs some adjustments. Technically, the large-scale government assistance to wind up the two Venetian banks contravened neither the new resolution framework nor EU State aid legislation. However, the example does demonstrate that taxpayers are still not sufficiently protected from having to foot the bill for bank creditors. A group of 14 respected French and German economists recently also pointed out that some political effort is still needed to move from bail-outs to bail-ins.[5]

State bail-outs of banks are problematic not just for taxpayers; they are indirectly also an issue for monetary policy. Both the global financial crisis and the euro area debt crisis have shown that investors are tempted to take on excessively high risks if they stand to receive the profits from risky investments, but the government shields them from some of the potential losses. If that destabilises the entire financial system, the real economy and thus price stability may ultimately also be jeopardised.

When applying national insolvency procedures or a precautionary recapitalisation, safeguards will have to be put in place going forward to ensure adequate creditor bail-in. European State aid rules should therefore be brought into line with the stricter EU resolution rules to ensure comprehensive protection for taxpayers. In addition, the review of the legal framework (BRRD and SRM Regulation) currently under way at the EU level is very important. Action must be taken to ensure that the requirements regarding loss-absorbing capital are not watered down. The amount and quality of bail-in-able liabilities should be sufficient to ensure that an institution can be wound up without having to resort to taxpayers' money. At the same time, it has to be acknowledged that difficult social and distributional questions may arise in individual cases – say, where retail investors have been missold investments. Such issues would, however, have to be resolved outside of resolution and insolvency law.

Successful conclusion of T2S migration

Last year saw the achievement of a milestone in the field of payments. The migration of the more than 20 European central securities depositories (CSDs) to the securities settlement platform TARGET2-Securities (T2S), which began operations in June 2015, was concluded in September 2017. In the final wave, the Spanish and Baltic CSDs migrated their settlement business to T2S. This was preceded in February

5 See A Bénassy-Quere et al, Reconciling risk sharing with market discipline: a constructive approach to euro area reform, CEPR Policy Insight No 91, January 2018.

2017 by the successful migration of the German market. The migration of the German CSD, Clearstream Banking AG, to the single settlement platform was of particular importance, since the German market alone contributes 40% to the total transaction volume of T2S. Now that migration has been finalised, 99% of securities transactions settled in central bank money in the euro area are processed via T2S. In the next stage, securities transactions will also be settled via T2S in Danish krone for the first time from October 2018. Danmarks Nationalbank will thus be the first central bank to make use of this settlement platform's multi-currency capability.

Tenth anniversary of TARGET2

The European platform for settling urgent euro-denominated payments in central bank money has already celebrated its tenth anniversary. Since it started operating on 19 November 2007, TARGET2 has developed into one of the biggest large-value payment systems worldwide and currently processes an average of 340,000 payments every business day with a value of roughly €1.7 trillion. At the same time, TARGET2 is the first Eurosystem market infrastructure operating on a single technical platform, which is also one of the reasons why it is regarded as groundbreaking.

Development of TARGET Instant Payment Settlement approved

The coming year will see a new addition to the TARGET family. In June 2017, the Governing Council of the ECB approved the launch of the TARGET Instant Payment Settlement (TIPS) project. TIPS means that, from 30 November 2018, the Eurosystem will be providing a service for the real-time settlement of payments in central bank money through which payments in central bank money can be settled in a matter of seconds around the clock, on every day of the year – even on weekends and public holidays. This will put commercial banks in a position to offer their customers credit transfers in real time using, say, suitable smartphone applications which allow payments to be initiated and receipt of payment to be verified at the same time. This means enabling bank customers to settle payment against delivery transactions in commercial bank money, for example, when making purchases online or if, when buying a second-hand car, payment and handing over the keys are to take place simultaneously. TIPS, like T2S, is designed with multi-currency capability. Central banks outside the euro area, too, will therefore have the option to make the TIPS service available to their customers.

Introduction of new banknotes

TARGET2 and TIPS facilitate the settlement of e-payments. Most purchases in Germany are still paid for in cash at the point of sale, however. In order for retailers and shoppers not to fall victim to counterfeits, the Eurosystem is continuously improving the security features of its banknotes. This is also the case for the new €50 banknote that was brought into circulation in April 2017. It is the fourth denomination in the "Europa series", which is gradually replacing the older euro banknotes. The new series of euro banknotes provides even more protection against counterfeits. Preparations for the new – and as yet unissued – €100 and €200 banknotes are now well under way. Their introduction is scheduled for the turn of 2018-19. Issuance of the €500 banknote is to be discontinued at the same time. The €500 banknotes of the first series in circulation will remain legal tender indefinitely, however.

Transfers of gold

As Germany's central bank, the Bundesbank is responsible for managing Germany's reserve

assets. This includes its gold holdings, a large part of which – for historical reasons – was previously stored abroad. Over the past few years, in line with a storage site strategy for the gold holdings that was approved in 2012, the Bundesbank has transferred part of the gold which was located abroad. The aim was to have half of the German gold reserves stored in vaults in Germany by 2020. This objective was achieved ahead of schedule in 2017. The transfer involved a total of 674 tonnes of gold being moved to Germany. The early completion of the transfer of gold reserves from New York in 2016 was followed in 2017 by the relocation of the remaining 91 tonnes from Paris. With a total of 1,710 tonnes of gold, 50.6% of the gold reserves are now stored by the Bundesbank in Frankfurt.

Inclusion of renminbi in the foreign exchange reserves

The Bundesbank's reserve assets comprise not only gold but also foreign exchange reserves. At present, the Bundesbank's foreign exchange reserves are invested in instruments denominated in US dollars, Japanese yen and Australian dollars. These include government bonds and fixed-income securities of other investment-grade issuers.

In summer 2017, the Bundesbank's Executive Board decided to invest a small part of the foreign exchange reserves in Chinese renminbi in future. Diversification into other currencies is under constant examination.

The decision to include the renminbi as a further investment currency reflects the growing importance of the Chinese currency in the global financial system. Over the past few years, China has been undertaking cautious steps towards an internationalisation of the renminbi. This has played a part in the renminbi being added to the IMF's basket of currencies. Investment in renminbi will commence once the technical and organisational preparations have been successfully completed.

Economic education

The Bundesbank's stability-oriented stance depends vitally, amongst other things, on it being anchored in the public consciousness. The general public have to appreciate the value of a stable currency and possess a basic understanding of economic facts. With its range of economic education services and the Money Museum, the Bundesbank continued in 2017 to help strengthen awareness and understanding of money, monetary policy and central bank tasks among the general public. In 2017, the Bundesbank organised more than 2,000 activities to do with economic education, attracting around 73,000 visitors. These efforts were augmented by an open day. To mark the Bundesbank's 60th anniversary, the Bundesbank's Central Office and the Regional Office in Hesse held an open day on 1 and 2 July 2017 to present their work to the general public and give them an opportunity to ask questions and make suggestions. This event was very well received by the public. Central Office and the regional office were able to welcome some 28,000 visitors on this occasion. The established formula of "Weidmann meets schoolchildren" was also expanded to the other members of the Bundesbank's Executive Board. For the first time, 2017 saw other Executive Board members invite groups of school pupils to the Bundesbank to talk with them about central bank issues.

In arranging these activities, the Bundesbank is also responding to a sharp decline in awareness of central banks and central banking issues over the past few years, especially among young people. Those under the age of 30 now know significantly less about this subject than the rest of the population. This is likely to be partly due to younger persons nowadays obtaining information through channels other than those to which older generations are ac-

customed, ie less from newspapers, radio and television and more through social media such as Facebook, Youtube and Twitter. Still, encouragement can be taken from the fact that the past three years have seen a sharp rise again in the percentage of younger persons who take an interest in the economy. According to a banking association study, the figure rose from 22% in 2012 to 47% in 2017. The younger generation evidently want to be informed about things again – but not in the same way as earlier generations.

That is why I am delighted that the revamped Money Museum in Frankfurt am Main, which reopened in December 2016, has met with such a positive response, especially among the younger public. The ambitious goal of 50,000 visitors annually was achieved in 2017. This means that visitor numbers have been boosted by 20% compared with the period before the redesign. The new permanent exhibition is impressive not only in terms of its content but is also a shining example of a state-of-the-art contemporary structure, for which it won the German Design Award 2018. The Money Museum's permanent exhibition was augmented in 2017 by a special exhibition "Guardian of the currency – 60 years of the Bundesbank in the eyes of the media" and an art exhibition "Money makers" *(Geldmacher)*.

Bundesbank Conference on Human Resources

Whether it is monetary policy, banking supervision, financial stability, supplying cash, settlement of cashless payments or market analysis, the Bundesbank could not function without its competent and committed staff. In order to maintain the high standard of staffing, the Bundesbank wishes to remain an attractive employer even if the future workplace is transformed by digitalisation and demographic change. What changes lie in store for us in this respect was the topic of an international conference held by the Bundesbank at the end of November 2017. Under the heading "Future conditions of working: a leadership challenge", HR staff from some 30 central banks and supervisory authorities as well as members of Bundesbank management came together for an in-depth exchange of views and ideas with experts from the fields of research, business, politics and administration. The results of the discussions about various modern office environments, issues relating to flexibility in scheduling and location of work and the associated changes in organisational culture will be incorporated into the Bundesbank's plans. Specifically, they will have an impact on our deliberations concerning the renovation of the main building at the Ginnheim campus, which is due to commence in 2019.

Management feedback

In order to further improve the management culture with the involvement of all employees, the Bundesbank introduced modern management principles back in 2014. This process was backed up by management feedback, which staff were requested to provide for the first time in 2017. The contents of this feedback process are based on management principles, an analysis of feedback instruments used by other organisations and institutions as well as current academic debate. All employees had the opportunity to give their respective managers systematic feedback on their perception of managerial behaviour, allowing the managers to compare their self-image with how others perceive their management behaviour. The vast majority of employees took the opportunity to give feedback, which, following evaluation, produced a clearly positive outcome. First, managerial behaviour is rated as very good overall. Second, our managerial staff have demonstrated a strong willingness to undertake a critical assessment of and improve their management behaviour.

Acknowledgements

Last but not least, on behalf of the members of the Bundesbank's Executive Board as well as personally, I wish to thank all those who support the Bundesbank with their expertise and their untiring commitment: our members of staff. Whether at the Bundesbank's Central Office, its regional offices or its branches, they have shown great dedication in serving the Bundesbank and in performing their tasks. This has also been central to shaping the perception of the Bundesbank as an institution that is competent and committed to stability. I am already looking forward to our continuing to work together so that the general public can go on paying in a stable currency and relying on the stability of the financial system in the future.

Frankfurt am Main, February 2018

Dr Jens Weidmann
President of the Deutsche Bundesbank

Chronology of economic and monetary policy measures

1 January 2017

The contribution rate to the public long-term care insurance scheme is raised from 2.35% to 2.55% (plus an additional 0.25% in each case for childless persons). At the same time, long-term care benefits are expanded under the second Act to Strengthen Long-term Care *(Zweites Pflegestärkungsgesetz),* which plans, not least, a comprehensive reform of the range of benefits, replacing the former three-level care requirement classification with a five-level system. In particular, greater assistance will be available for those with dementia-related conditions.

The health insurance institutions receive increased transfers from the health insurance fund's liquidity reserve. Confined to 2017, these additional payments add up to €1½ billion. Owing in part to this, the average additional contribution to be paid solely by insured persons remains practically unchanged at 1.1%.

The basic income tax allowance is raised by €168 to €8,820, child tax allowances are increased by €108 to €7,356, and monthly child benefits rise by €2 per child. Moreover, the other income tax brackets are shifted slightly to the right, by 0.7%, meaning that they only become effective when there is a corresponding increase in income. The objective is to eliminate for all income categories at least the estimated effect of bracket creep owing to inflation in 2016. Bracket creep is regarded as an increase in the average tax burden caused by income rising at the rate of inflation while tax brackets remain unchanged.

25 January 2017

In its *Annual Economic Report* for 2017, the Federal Government anticipates real gross domestic product (GDP) growth of 1.4% (1.6% in calendar-adjusted terms). This is set to be driven primarily by domestic impulses once again, especially private and government consumption expenditure and housing construction investment. International trade, by contrast, is likely to remain subdued, dampening the prospects for exports as well as for private investment in machinery and equipment.

23 February 2017

The Bundesbank presents its annual accounts for the 2016 financial year. The profit of €399 million is transferred to central government.

1 March 2017

The European Commission publishes a White Paper on the future of Europe, in which it outlines five possible scenarios for the further integration of the European Union and the euro area.

9 March 2017

The ECB Governing Council announces that, from April 2017, it intends to continue its net asset purchases under the expanded asset purchase programme (APP) at a monthly pace of €60 billion until the end of December 2017, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation aim. Since April 2016, purchases have been carried out at a monthly pace of €80 billion.

15 March 2017

The Federal Cabinet approves the benchmark figures for the 2018 central government budget and for the financial plan up to 2021. The decision to forego new net borrowing is to be adhered to. To this end, the refugee reserve of €18½ billion is to be completely used up by 2019.

29 March 2017

The fourth and last of the second series of four targeted longer-term refinancing operations (TLTRO II) is conducted. It sees 474 institutions

take up an overall volume of €233 billion. Simultaneously, €16.7 billion is paid back on the first series of targeted longer-term refinancing operations (TLTRO I) under the voluntary repayment option.

4 April 2017

The new €50 banknote is introduced in the 19 euro area countries. It is the fourth denomination in the Europa series, of which the €5, €10 and €20 banknotes are already in circulation.

12 April 2017

The Federal Cabinet presents an updated stability programme for Germany. It assumes real GDP growth of 1.4% in 2017, 1.6% in 2018 and 1.5% each year thereafter up to 2021. There are plans to achieve surpluses in the general government budget by 2021 (both unadjusted and structural, as a percentage of GDP: ½% in 2017, ¼% in both 2018 and 2019 and ½% every year thereafter until 2021). The debt ratio is expected to fall to 57% at the end of 2021.

24 April 2017

The general government deficit and debt figures reported by the EU member states in their spring notifications are published under the European budgetary surveillance procedure, after validation by Eurostat. These figures reveal that Germany recorded a surplus of 0.8% of GDP and a debt ratio of 68.3% in 2016. For 2017, the Federal Government expects a surplus of 0.4% of GDP and a fall in the debt ratio to 66.3%.

31 May 2017

The European Commission presents a reflection paper on the future of the economic and monetary union, as announced in its White Paper (see 1 March 2017). A particular need for change in the euro area is identified in its sovereign-bank nexus, its fiscal stabilisation function and in the light of the complex decision-making process in the European Union.

2 June 2017

The day after it is passed by the Bundestag, the Bundesrat adopts a reform package for the federal financial equalisation scheme, which will enter into force from 2020. Instead of transfers between the state governments, equalisation will be achieved through the distribution of turnover tax receipts in future, which are to be increased at the expense of central government, and higher supplementary central government grants. Additional burdens for central government arising from the financial equalisation scheme, totalling €9½ billion, are reported for 2020. In return, central government's special-purpose grants for reconstruction in eastern Germany (€2 billion in 2019) and the fixed-term divestiture grants for state governments (€2½ billion) will be discontinued once joint tasks have been phased out. In addition, the temporary consolidation assistance for the five heavily indebted state governments of Berlin, Bremen, Saarland, Saxony-Anhalt and Schleswig-Holstein is superseded by open-ended budgetary restructuring assistance for the states of Bremen and Saarland, which is only to be used to a lesser extent for debt redemptions (Article 143d of the German Basic Law). The sub-constitutional rules for the new financial equalisation scheme and the article of the German Basic Law referring to restructuring assistance will apply indefinitely unless, after 2030, the Federal Government, the Bundestag or at least three federal state governments call for a reform. Furthermore, from 2021, German motorways will no longer be managed via state government administration, but by a company owned by central government. It is prohibited by law to finance this company with loans.

7 June 2017

The Federal Constitutional Court announces its ruling, issued without oral proceedings, that the nuclear fuel tax introduced by central gov-

ernment for the period 2011–16 was unconstitutional and void due to a lack of taxation competencies among central government legislators. The total earnings of €6½ billion, plus a compensation payment of €1 billion for interest accrued, are to be paid back to nuclear power plant operators.

9 June 2017

The Bundesbank anticipates real GDP growth of 1.6% in 2017, 1.7% in 2018 and 1.5% in 2019 (in calendar-adjusted terms, this equates to 1.9% in 2017, 1.7% in 2018 and 1.6% in 2019). According to this projection, the German economy will consistently expand at a faster rate than production capacity. Consumer price inflation as measured by the Harmonised Index of Consumer Prices (HICP) is expected to slow down slightly from 1.5% in 2017 to 1.4% in 2018, with a subsequent acceleration to 1.8% in 2019. Excluding food and energy, the inflation rate would climb from 1.3% in 2017 to 1.7% in 2018 and 1.9% in 2019, given the upbeat state of the economy.

20 June 2017

The advisory European Fiscal Board of the European Commission presents its first report on the overall direction of fiscal policy in the euro area. It recommends that the available fiscal space be utilised fully, and encourages stronger fiscal coordination between member states.

22 June 2017

On the basis of the plans submitted, the Stability Council foresees no risk of failure to adhere to the structural general government deficit ceiling of 0.5% of GDP up to 2021. Furthermore, it concludes that the federal states in receipt of consolidation assistance (Berlin, Bremen, Saarland, Saxony-Anhalt and Schleswig-Holstein) have again adhered to the agreed reduction path for their structural deficits in 2016, and thus approves the disbursement of a total of €0.8 billion in assistance. In its semi-annual statement, the Independent Advisory Board to the Stability Council also expects the ceiling for the structural general government fiscal deficit to be comfortably adhered to until 2021, based on the current plans. At the same time, it recommends that local governments only be permitted to obtain multi-year cash advances from their home state government, and that these advances be counted towards the state's borrowing allowance under the debt brake. Structural deficits of the social security funds are to be recorded by central government at regular intervals, and counted towards the federal government borrowing allowance under the debt brake if central government loans are drawn on. These proposals aim at identifying possible conflicts with the structural EU deficit ceilings in good time and safeguarding adherence to the structural deficit ceiling more effectively.

28 June 2017

The Federal Cabinet approves a draft central government budget for 2018 and a financial plan up to 2021. As in the benchmark figures of 15 March 2017, net new borrowing is again to be avoided. Following the upward revision of the May 2017 tax estimate, however, projected revenue is raised. This creates additional leeway during the fiscal planning period of just under €15 billion cumulatively, which is not earmarked on account of the upcoming German general election on 24 September 2017. The draft budget is to be revised and newly incorporated into parliamentary deliberations by the Federal Government which is formed after the election.

7 July 2017

The Bundesrat approves three laws passed by the Bundestag in the area of old-age provision. Under the Act to Strengthen Occupational Pensions *(Betriebsrentenstärkungsgesetz),* a company pension plan for which contributions are paid into a pension scheme and the company is released from its service liability can be adopted (defined contribution commitments), as speci-

fied in the collective labour agreement. In addition, tax concessions for company pension schemes in particular are expanded, Riester pension allowances are raised and the crediting of supplementary private pension plans is restricted to the basic allowance. The Act on Improvements in Pension Insurance Benefits *(Erwerbsminderungsrenten-Leistungsverbesserungsgesetz)* will extend the reckonable period for the pensions of persons with reduced earning capacity in stages by up to three years between 2018 and 2024. From 2024, it will thus be assumed that those with reduced earning capacity have made contributions up to the age of 65. The final pension transfer act *(Rentenüberleitungs-Abschlussgesetz)* will align pensions in eastern Germany in seven stages to the level of those in western Germany by 2025. In return, the higher valuation of the wages of persons in eastern Germany insured for pension purposes will be gradually phased out. This harmonisation will result in net pension increases for policyholders in eastern Germany who are already drawing their pension or are soon to do so. To finance this, transfers from the central government budget to the statutory pension insurance scheme are to be increased in stages from 2022 to 2025 by €2 billion in the long term, which corresponds to around half of the additional expenditure.

15 August 2017

The Federal Constitutional Court announces that it has stayed proceedings reviewing the ECB's public sector purchase programme (PSPP). In the view of the Senate, there are strong arguments as to why the ECB decisions governing the asset purchase programme violate the prohibition of monetary financing and exceed the monetary policy mandate of the ECB, thus encroaching upon the competences of the member states. It refers several questions to the Court of Justice of the European Union for a preliminary ruling.

17 October 2017

The Federal Government submits its draft budgetary plan for the 2018 general government budget to the European Commission. Compared with the stability programme published in April 2017, markedly higher general government surpluses of ¾% and ½% of GDP are envisaged for 2017 and 2018 respectively. At ¾% of GDP in 2017, the structural fiscal balance is also set to be slightly higher, while remaining unchanged in 2018 (¼% of GDP). The debt ratio is projected to fall to 65¼% and 63¼% by the end of 2017 and 2018 respectively.

23 October 2017

The general government deficit and debt figures reported by the EU member states in their autumn notifications are published under the European budgetary surveillance procedure, after validation by Eurostat. According to these data, in 2016 Germany recorded a general government fiscal balance of 0.8% of GDP coupled with a year-end debt ratio of 68.1%. For 2017, the Federal Government anticipates a surplus of 0.8% of GDP and a fall in the debt ratio to 65.5%.

26 October 2017

The ECB Governing Council announces that, from January 2018, it intends to continue its net asset purchases under the APP at a monthly pace of €30 billion until the end of September 2018, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation aim. Additionally, it stresses that the reinvestment of principal payments from maturing securities purchased under the APP – a measure decided upon back in December 2015 – will continue for an extended period of time after the end of its net asset purchases, and in any case for as long as necessary.

Furthermore, the Governing Council decides to continue to conduct the main refinancing operations and three-month longer-term refinancing operations 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.

8 November 2017

In its *Annual Economic Report,* the German Council of Economic Experts expects the strong economic upswing in Germany to continue and forecasts real GDP growth of 2.0% for 2017 (2.3% in calendar-adjusted terms) and 2.2% for 2018 (2.2% in calendar-adjusted terms). The Council sees clear signs of an overutilisation of aggregate capacity, with capacity overutilisation in construction being considered especially high. The Council expects the increasing capacity shortages to dampen growth over the projection horizon.

9 November 2017

The Working Party on Tax Revenue Forecasting raises its revenue expectations for the years 2017 to 2021 by up to €7 billion *per annum*. Despite the financial burden generated by central government's nuclear fuel tax repayments, revenue is still expected to rise by €2 billion in 2017. For central government alone, the budgets drawn up for the new legislative period provide additional revenue totalling €15 billion. Therefore, when factoring in the relief for the 2017 budget, the cumulated room for manoeuvre reported in the June 2017 financial plan rises to around €40 billion.

15 November 2017

The European Fiscal Board publishes its first *European Fiscal Board Annual Report.* Despite the shortcomings identified with respect to implementing the fiscal rules and the difficulties in assessing the fiscal stance, the euro area's slightly expansionary fiscal policy is deemed appropriate on the whole. However, according to the Board, individual member states with fiscal space did not use it fully, while countries without such fiscal space and with less favourable sustainability analysis results made use of the scope for flexible interpretation of the rules to provide stimulus to boost demand.

22 November 2017

The European Commission publishes its opinions on the 2018 draft budgetary plans that all euro area countries (excluding Greece, which receives financial aid under an ESM programme) are required to submit. The fiscal plans of only six countries are fully compliant with the European rules. The plans of six other countries are found to be only broadly compliant with requirements. Furthermore, of another six countries whose plans pose a risk of non-compliance with requirements, four (Belgium, France, Italy and Portugal) have debt ratios of over 90%. However, according to the European Commission, no plan has been found to be in particularly serious non-compliance with requirements. A review of Italy's compliance with the 2016 debt reduction benchmark is not presented.

6 December 2017

As part of a roadmap for deepening Europe's economic and monetary union, the European Commission proposes introducing a European Monetary Fund, a fiscal backstop for the Single Resolution Fund, a stabilisation function for public investment and a European finance minister, as well as integrating the European Fiscal Compact into EU law.

11 December 2017

In agreement with its independent advisory board, the Stability Council establishes that, on the basis of the plans submitted, Germany will adhere to the ceiling for the structural general government fiscal deficit of 0.5% of GDP until 2021. The independent advisory board points out that, while reserve withdrawals – from the

central government refugee reserve, for instance – make it possible to forgo net borrowing, they still count towards the general government deficit ceiling. The Stability Council concludes new fiscal consolidation programmes with the federal states of Bremen and Saarland.

14 December 2017

The ECB Governing Council announces changes to collateral eligibility criteria for unsecured bank bonds (UBBs). Expected to come into effect in the first quarter of 2018, UBBs that are subject to statutory, contractual or structural subordination will no longer be eligible as collateral. However, UBBs that are currently eligible as collateral but do not fulfil the new eligibility criteria will remain eligible until 31 December 2018. Moreover, UBBs issued by entities that are on the list of agencies eligible for the ECB's public sector purchase programme (PSPP) and government-guaranteed bank bonds (GGBBs) will remain eligible until maturity provided that they are not subject to contractual or structural subordination and that they have been issued before 31 December 2018. Senior preferred UBBs will remain eligible as collateral.

15 December 2017

The Bundesbank expects real GDP growth of 2.3% in 2017, 2.5% in 2018, 1.7% in 2019 and 1.9% in 2020 (2.6%, 2.5%, 1.7% and 1.5% in calendar-adjusted terms). The pace of expansion therefore significantly outstrips the potential output growth rate, meaning that aggregate capacity utilisation could soon reach similarly high levels to those seen at the height of the last business cycle in 2007. As measured by the HICP, consumer price inflation could increase from 1.7% in 2017 to 1.9% in 2020 (excluding energy and food: a rise from 1.3% in 2017 to 2.1% in 2020).

1 January 2018

The basic income tax allowance is raised by €180 to €9,000, child tax allowances are increased by €72 to €7,428, and monthly child benefits rise by €2 per child. Moreover, the other income tax brackets are shifted by 1.6% to the right. The objective is to eliminate for all income categories at least the effect of bracket creep owing to inflation in 2017 (as estimated in the second quarter of 2016).

As no Budget Act for 2018 has been adopted since the German general election took place in September 2017, the central government budget is subject to provisional budgetary rules. There are therefore restrictions on new spending.

The contribution rate to the statutory pension insurance scheme is reduced from 18.7% to 18.6%. If the contribution rate had remained unchanged, the upper limit for the reserves would have been exceeded in the budget plan by quite a margin at the end of 2018.

The Federal Ministry of Health lowers the health insurance institutions' arithmetical supplementary contribution rate by 0.1 percentage point to 1.0%. According to the Ministry's forecast, this rate could be sufficient to cover relevant expenditure by the health insurance institutions. However, the average actual supplementary contribution rates of individual health insurance institutions remain virtually unchanged.

11 January 2018

Initial calculations by the Federal Statistical Office indicate real economic growth of 2.2% for 2017 (2.5% in calendar-adjusted terms).

12 January 2018

The Federal Ministry of Finance presents the provisional outturn for the 2017 central government budget. According to the figures, a surplus of €5 billion was recorded. Additional tax revenue was the main driver behind an improvement of €12 billion compared with the budget plans. Factoring in the negative impact of a transfer of €5½ billion to the reserves,

smaller deficits posted by the off-budget entities included under the debt brake and the cyclical relief for the central government budget, the structural outturn is reported as -0.1% of GDP. In this context, the debt brake limit of -0.35% of GDP is clearly undershot once again.

16 January 2018

The Federal Constitutional Court conducts an oral hearing on the constitutionality of real estate tax levied on the basis of rateable values from 1935 and 1964.

31 January 2018

In its *Annual Economic Report* for 2018, the Federal Government anticipates real GDP growth of 2.4% (2.4% in calendar-adjusted terms). The global economic climate is taking a more favourable turn, contributing to a pick-up in exports and investment. Furthermore, domestic expansionary forces are set to continue to make themselves felt.

7 February 2018

The CDU, CSU and SPD reach a coalition agreement – subject to a party membership ballot – to form a new Federal Government. Under the agreement, a central government budget with no net borrowing is envisaged. However, recourse will be made to cyclical surpluses and the refugee reserve in the budget, which could result in procyclical or erratic fiscal policy and/or non-compliance with the structural deficit ceiling set out in the European Fiscal Compact. In particular, the contribution rate to the Federal Employment Agency is to be cut by 0.3 percentage point to 2.7%, and there are plans to abolish the solidarity surcharge up to a certain exemption limit (with a sliding scale) in 2021. Additional funding has been earmarked, first and foremost, for social affairs, education, digitalisation and families. The establishment of a commission to make recommendations for fundamental pension reform from 2025 is proposed. All in all, German fiscal policy will become significantly more accommodative over the new few years if all measures agreed are adopted. At the EU level, the coalition indicates that it is, in principle, open to taking further steps towards integration and to Germany paying a greater financial contribution.

23 February 2018

For 2017, the Federal Statistical Office publishes a general government fiscal surplus of 1.1% of GDP, pursuant to the Maastricht definition of the national accounts.

27 February 2018

The Bundesbank publishes its annual accounts for the 2017 financial year. A profit of €1,902 million is transferred to central government.

Annual accounts of the Deutsche Bundesbank for 2017

Balance sheet of the Deutsche Bundesbank as at 31 December 2017

Assets

			31.12.2016
		€ million	€ million
1 Gold and gold receivables		117,347	119,253
of which: gold receivables €303,017.56			*(0)*
2 Claims on non-euro area residents denominated in foreign currency			
2.1 Receivables from the IMF	18,280		(21,519)
2.2 Balances with banks and security investments, external loans and other external assets	31,215		(34,993)
		49,495	56,512
3 Claims on euro area residents denominated in foreign currency		7,168	1,788
4 Claims on non-euro area residents denominated in euro		4,396	438
5 Lending to euro area credit institutions related to monetary policy operations denominated in euro			
5.1 Main refinancing operations	1,049		(1,807)
5.2 Longer-term refinancing operations	93,272		(63,518)
5.3 Fine-tuning reverse operations	–		(–)
5.4 Structural reverse operations	–		(–)
5.5 Marginal lending facility	–		(149)
		94,320	65,474
6 Other claims on euro area credit institutions denominated in euro		464	3,025
7 Securities of euro area residents denominated in euro			
7.1 Securities held for monetary policy purposes	512,125		(357,700)
7.2 Other securities	–		(–)
		512,125	357,700
8 Claims on the Federal Government		4,440	4,440
9 Intra-Eurosystem claims			
9.1 Participating interest in the ECB	1,948		(1,948)
9.2 Claims equivalent to the transfer of foreign reserves to the ECB	10,430		(10,430)
9.3 Net claims related to the allocation of euro banknotes within the Eurosystem	–		(–)
9.4 Other claims within the Eurosystem (net)	906,805		(754,534)
		919,183	766,912
10 Items in course of settlement		2	1
11 Other assets			
11.1 Coins	1,041		(1,003)
11.2 Tangible and intangible fixed assets	795		(770)
11.3 Other financial assets	11,194		(10,921)
11.4 Off-balance-sheet instruments revaluation differences	92		(–)
11.5 Accruals and prepaid expenses	5,272		(4,477)
11.6 Sundry	295		(299)
		18,688	17,471
		1,727,629	1,393,014

Liabilities

			31.12.2016
		€ million	€ million
1 Banknotes in circulation		275,376	264,907
2 Liabilities to euro area credit institutions related to monetary policy operations denominated in euro			
2.1 Current accounts	392,785		(284,948)
2.2 Deposit facility	217,039		(126,402)
2.3 Fixed-term deposits	–		(–)
2.4 Fine-tuning reverse operations	–		(–)
2.5 Deposits related to margin calls	2		(–)
		609,826	411,350
3 Other liabilities to euro area credit institutions denominated in euro		2,677	466
4 Liabilities to other euro area residents denominated in euro			
4.1 General government deposits	66,970		(32,458)
4.2 Other liabilities	51,815		(73,371)
		118,785	105,828
5 Liabilities to non-euro area residents denominated in euro		199,813	117,016
6 Liabilities to euro area residents denominated in foreign currency		0	4
7 Liabilities to non-euro area residents denominated in foreign currency		1,008	1,218
8 Counterpart of special drawing rights allocated by the IMF		14,322	15,371
9 Intra-Eurosystem liabilities			
9.1 Liabilities related to the issuance of ECB debt certificates	–		(–)
9.2 Net liabilities related to the allocation of euro banknotes within the Eurosystem	359,306		(327,262)
9.3 Other liabilities within the Eurosystem (net)	–		(–)
		359,306	327,262
10 Items in course of settlement		1	1
11 Other liabilities			
11.1 Off-balance-sheet instruments revaluation differences	–		(18)
11.2 Accruals and income collected in advance	447		(109)
11.3 Sundry	1,938		(1,965)
		2,385	2,092
12 Provisions		23,485	21,879
13 Revaluation accounts		113,079	119,658
14 Capital and reserves			
14.1 Capital	2,500		(2,500)
14.2 Reserves	3,164		(3,064)
		5,664	5,564
15 Distributable profit		1,902	399
		1,727,629	1,393,014

Profit and loss account of the Deutsche Bundesbank for the year 2017

		€ million	2016 € million
1.1	Interest income	5,174	(3,704)
1.2	Interest expense	– 1,002	(– 386)
1	Net interest income	4,172	3,319
2.1	Realised gains/losses arising from financial operations	537	(874)
2.2	Write-downs on financial assets and positions	– 215	(– 198)
2.3	Transfer to/from provisions for general risks, foreign exchange risks and price risks	– 1,075	(– 1,750)
2	Net result of financial operations, write-downs and risk provisions	– 754	– 1,073
3.1	Fees and commissions income	74	(58)
3.2	Fees and commissions expense	– 34	(– 28)
3	Net income from fees and commissions	41	30
4	Income from participating interests	329	339
5	Net result of pooling of monetary income	– 406	25
6	Other income	118	134
	Total net income	3,501	2,773
7	Staff costs	866	1,123
8	Administrative expenses	416	396
9	Depreciation of tangible and intangible fixed assets	85	94
10	Banknote production services	110	159
11	Other expenses	21	39
	Profit for the year	2,002	963
12	Allocation to/withdrawal from reserves owing to the restriction on distribution pursuant to section 253 (6) of the German Commercial Code *(Handelsgesetzbuch)*	– 100	– 564
	Distributable profit	1,902	399

Frankfurt am Main, 13 February 2018

DEUTSCHE BUNDESBANK
Executive Board

Dr Jens Weidmann Professor Claudia Buch

Dr Johannes Beermann Dr Andreas Dombret Carl-Ludwig Thiele Professor Joachim Wuermeling

Unqualified independent auditor's report for statutory audits of annual financial statements

To the Deutsche Bundesbank, Frankfurt am Main

Auditor's opinion on the annual financial statements

We have audited the annual financial statements of the Deutsche Bundesbank, Frankfurt am Main, consisting of the balance sheet as at 31 December 2017 and the profit and loss account for the business year from 1 January 2017 to 31 December 2017.

In our opinion, based on the findings of our audit, the said annual financial statements comply, in all material respects, with the legal requirements and the principles for the accounting of the Deutsche Bundesbank approved by the Executive Board pursuant to section 26 (2) of the Bundesbank Act and give a true and fair view of the net assets and financial position of the Deutsche Bundesbank as at 31 December 2017 and the results of operations for the business year from 1 January 2017 to 31 December 2017 in accordance with German principles of proper accounting.

Pursuant to section 322 (3) sentence 1 HGB ["Handelsgesetzbuch": "German Commercial Code"], we declare that our audit has not led to any reservations with regard to the regularity of the annual financial statements.

Basis for the auditor's opinion on the annual financial statements

We conducted our audit of the annual financial statements in accordance with section 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the *Institut der Wirtschaftsprüfer* [Institute of Public Auditors in Germany] (IDW) as well as, on a supplementary basis, the International Standards on Auditing (ISAs). Our responsibilities pursuant to these provisions, principles and standards are further described in the "Auditor's responsibilities for the audit of the annual financial statements" section of our report. We are independent of the Deutsche Bundesbank in accordance with German commercial and professional laws and regulations, and we have fulfilled our other German ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

The Executive Board is responsible for other information. Other information comprises any and all information in the *Annual Report* with the exception of the annual financial statements and the auditor's report.

Our opinion on the annual financial statements does not cover this other information, and we therefore do not express an auditor's opinion or draw any other form of audit conclusion regarding this other information.

In connection with our audit, we have the responsibility to read the other information and to evaluate whether

- there are material inconsistencies between the other information and the annual financial statements or the findings of our audit, or
- the other information otherwise appears to contain a material misstatement.

If we conclude, on the basis of our audit, that the other information contains a material misstatement, we are obliged to draw attention to this matter. We have nothing to report in this regard.

Responsibilities of the Executive Board for the annual financial statements

The Executive Board is responsible for the preparation of the annual financial statements in accordance with the legal requirements and the principles for the accounting of the Deutsche Bundesbank approved by the Executive Board pursuant to section 26 (2) of the Bundesbank Act and for ensuring that the annual financial statements give a true and fair view of the net assets, financial position and results of operations of the Deutsche Bundesbank in accordance with German principles of proper accounting. Moreover, the Executive Board is responsible for such internal control as it determines necessary in accordance with German principles of proper accounting to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the Executive Board is responsible for assessing the Deutsche Bundesbank's ability to continue as a going concern. It is also responsible for disclosing, as applicable, matters related to going concern and using the going-concern basis of accounting, provided there are no factual or legal impediments thereto.

The Executive Board is responsible for overseeing the Deutsche Bundesbank's financial reporting process for the preparation of the annual financial statements.

Auditor's responsibilities for the audit of the annual financial statements

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion on the annual financial statements.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with section 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the *Institut der Wirtschaftsprüfer* as well as, on a supplementary basis, the ISAs will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual financial statements.

We exercise professional judgement and maintain professional scepticism throughout the audit. We also

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the overriding of internal control.

- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Deutsche Bundesbank's internal control.

- evaluate the appropriateness of the accounting policies used by the Executive Board as well as the reasonableness of accounting estimates and related disclosures made by the Executive Board.

- conclude on the appropriateness of the Executive Board's use of the going-concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or condi-

tions that may cast significant doubt on the Deutsche Bundesbank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Deutsche Bundesbank to cease to continue as a going concern.

– evaluate the overall presentation, structure and content of the annual financial statements and whether the annual financial statements represent the underlying transactions and events in a manner that gives a true and fair view of the net assets, financial position and results of operations of the Deutsche Bundesbank in accordance with German principles of proper accounting.

We communicate with the Executive Board regarding, amongst other matters, the planned scope and timing of the audit and significant audit findings, including any deficiencies in internal control that we identify during our audit.

Frankfurt am Main, 20 February 2018

KPMG AG
Wirtschaftsprüfungsgesellschaft

Helke
Wirtschaftsprüfer

Müller
Wirtschaftsprüfer

Overview of the principles for the accounting of the Deutsche Bundesbank

General accounting principles
Record of economic reality, thus reflecting the Bundesbank's assets and liabilities, financial position and profitability; prudence; account to be taken of post-balance-sheet events that affect the balance sheet; materiality; going-concern principle; accruals principle (income and expense to be recognised in the accounting period in which they are earned or incurred); consistency and comparability.

Recording of spot transactions
Spot transactions in gold and foreign currencies shall be taken into account as from the trade date for ascertaining the average acquisition cost and the realised gains and losses. The balance sheet recording of these spot transactions and of spot transactions in securities shall be based on the date of payment (settlement date).

Balance sheet valuation rules
Gold, foreign currency instruments, securities and financial instruments shall be valued at mid-market rates and prices on the balance sheet date. Securities held to maturity shall be valued at amortised cost; if the impairment is expected to be permanent, an extraordinary write-down is to be carried out. The same applies to non-marketable securities and securities held for monetary policy purposes by virtue of a decision adopted by the Governing Council of the ECB.

No distinction shall be made between price and currency revaluation differences for gold, but a single gold revaluation difference shall be accounted for on the basis of the euro price per defined unit of weight of gold derived from the euro-US dollar exchange rate on the balance sheet date.

Revaluation shall take place on a currency-by-currency basis for foreign exchange (including off-balance-sheet transactions).

In the case of securities, each revaluation shall be on a code-by-code basis (same ISIN number/type).

Repurchase agreements
A repurchase agreement (repo) shall be recorded as a collateralised inward deposit on the liabilities side of the balance sheet, while the item that has been given as collateral remains on the assets side of the balance sheet. A reverse repurchase agreement (reverse repo) shall be recorded as a collateralised outward loan on the assets side of the balance sheet for the amount of the loan.

In the case of security lending transactions, the assets shall remain on the balance sheet of the transferor. Security lending transactions as part of which cash collateral is provided are to be treated in the same way as repos.

Income recognition
Realised gains and realised losses can arise only in the case of transactions leading to a reduction in a securities item or a currency position. They are derived from a comparison of the transaction value with the acquisition value as calculated using the average cost method; they shall be taken to the profit and loss account.

Unrealised gains and unrealised losses arise as a result of the revaluation through a comparison of the market value with the acquisition value as calculated using the average cost method. Unrealised gains shall not be recognised as income but shall be transferred directly to a revaluation account.

Unrealised losses shall be taken into the profit and loss account if they exceed previous unrealised gains registered in the corresponding revaluation account. Unrealised losses recorded in the profit and loss account in previous years shall not be reversed in subsequent

years in the event of new unrealised gains. There shall be no netting of unrealised losses in any one security, in any currency or in gold holdings against unrealised gains in other securities, currency or gold.

The average cost method shall be used on a daily basis for calculating the acquisition cost in the case of assets that are subject to exchange rate and/or price movements. The average acquisition cost of the assets shall be reduced by unrealised losses taken to the profit and loss account at the end of the year.

In the case of securities, the difference between the acquisition value and the redemption value (premium or discount) shall be distributed over the contractual residual maturity in accordance with the internal rate of return method, treated as part of the interest income (amortisation in accordance with the internal rate of return method) and recognised at acquisition value (amortised cost).

Accrual and deferral items covering foreign currency holdings shall be converted at the mid-market rate on each business day and change the respective foreign currency position.

Accounting rules for off-balance-sheet instruments

Foreign exchange forward transactions, the forward legs of foreign exchange swaps and other currency instruments involving an exchange of one currency for another at a future date shall be included in the foreign currency position as from the trade date.

Interest rate swaps and futures, forward rate agreements and other interest rate instruments shall be accounted for and valued on an item-by-item basis.

Gains and losses arising from off-balance-sheet instruments shall be recognised and treated in a similar manner to those from on-balance-sheet instruments.

Tangible and intangible fixed assets

Tangible and intangible fixed assets shall be valued at cost less depreciation, which shall be calculated on a straight-line basis and applied over the expected economic life of the asset. A distinction shall be made as follows:

- Computers, related hardware and software, and motor vehicles: four years
- Equipment, furniture and installed equipment: ten years
- Building and refurbishment expenditure: 25 years
- Depreciation shall not apply to land

Tangible and intangible fixed assets, the acquisition value of which, after deduction of value added tax, is less than €10,000 shall be fully amortised in the year in which they were acquired.

Provisions

With the exception of the provisions for Eurosystem monetary policy operations, the regulations set forth in the Commercial Code *(Handelsgesetzbuch)* continue to apply to the reporting of provisions in the balance sheet. Pursuant to section 26 (2) of the Bundesbank Act *(Bundesbankgesetz),* the creation of liability items for general risks associated with domestic and foreign business is possible.

Transitional arrangements

The assets and liabilities shown in the closing Deutsche Mark balance sheet as at 31 December 1998 shall be revalued as at 1 January 1999. Unrealised gains arising on or before 1 January 1999 are to be recorded separately from the unrealised gains which arise after 1 January 1999. The market rates/prices applied by the Bundesbank in the euro-denominated opening balance sheet as at 1 January 1999 shall be deemed to be the average acquisition rates/prices as at 1 January 1999. The revaluation items for unrealised gains accruing on or before 1 January 1999 shall be dissolved only in connection with decreases in value and in the event of disposals after 1 January 1999.

General information on the annual accounts

Legal basis

Sections 26 and 27 of the Bundesbank Act *(Gesetz über die Deutsche Bundesbank)* form the legal basis for the annual accounts and the distribution of profit. In accordance with the provisions on accounting laid down in section 26 (2) sentence 2 of the Bundesbank Act, the Bundesbank may apply the accounting principles governing the annual accounts of the ECB.

Accounting principles of the Deutsche Bundesbank

The Governing Council of the ECB adopted the principles it applies to its annual accounts in accordance with Article 26.2 of the ESCB Statute. The Bundesbank decided to adopt those principles as the "accounting principles of the Deutsche Bundesbank".[1] An overview of the Deutsche Bundesbank's accounting principles is given on the preceding pages. The annual accounts of the Bundesbank are thus in alignment with the harmonised rules applied in the Eurosystem, both in terms of the structure of the balance sheet and the profit and loss account, and with regard to the balance sheet valuation and accounting principles.

Creation of reserves owing to the restriction on distribution pursuant to section 253 (6) of the Commercial Code

An amendment to section 253 of Germany's Commercial Code *(Handelsgesetzbuch)* in 2016 means that provisions for post-employment benefit obligations must be discounted at the average market rate corresponding to their residual maturity calculated over the past ten rather than the past seven financial years, as was previously the case. The savings in terms of provisions that arise from applying the ten-year rather than the seven-year observation period must be calculated annually and may not be distributed. In accordance with section 253 (6) sentence 2 of the Commercial Code, the distribution of profits shall be restricted to the part that exceeds the amount for which distribution is forbidden less any disposable reserves. However, the Bundesbank does not have any such reserves. The amount for which distribution is restricted itself has to be treated as reserves, and the transfer to reserves takes place in the profit and loss account once the profit for the year has been determined as part of the appropriation of profit. The residual amount is reported as distributable profit (net profit).

Balance sheet entry of euro banknotes and …

The ECB and the national central banks of the euro area countries, which together comprise the Eurosystem, issue banknotes denominated in euro. The following allocation procedure was approved for recording the euro banknotes in circulation in the financial statements of the individual central banks in the Eurosystem.[2] The respective share of the total value of euro banknotes in circulation due to each central bank in the Eurosystem is calculated on the last business day of each month in accordance with the key for allocating euro banknotes. The ECB is allocated an 8% share of the total value of the euro banknotes in circulation, whereas the remaining 92% is allocated to the national central banks in proportion to their respective paid-up shares in the capital of the ECB. As at 31 December 2017, the Bundesbank had a 25.6% share in the fully paid-up capital of the ECB and, therefore, a 23.5% share of the euro banknotes in circulation in accordance with the banknote allocation key. The value of the Bundesbank's share in the total amount of euro banknotes issued by the Eurosystem is shown in item 1 "Banknotes in circulation" on the liabilities side of the balance sheet.

… of intra-Eurosystem balances arising from the allocation of euro banknotes

The difference between the value of the euro banknotes allocated to each central bank of the Eurosystem in accordance with the banknote allocation key and the value of the euro banknotes that the central bank actually puts into circulation gives rise to remunerated intra-Eurosystem balances.[3] If the value of the euro

1 Published as a revised edition in Deutsche Bundesbank Notice No 10001/2017 of 3 February 2017.
2 Decision of the European Central Bank of 13 December 2010 on the issue of euro banknotes (ECB/2010/29), as last amended by the Decision of the European Central Bank of 27 November 2014 (ECB/2014/49).
3 Decision of the European Central Bank of 3 November 2016 on the allocation of monetary income of the national central banks of member states whose currency is the euro (ECB/2016/36).

banknotes actually issued is greater than the value according to the banknote allocation key, the difference is recorded in the balance sheet as an intra-Eurosystem liability in liability sub-item 9.2 "Net liabilities related to the allocation of euro banknotes within the Eurosystem". If the value of the euro banknotes actually issued is less than the value according to the banknote allocation key, the difference is recorded in asset sub-item 9.3 "Net claims related to the allocation of euro banknotes within the Eurosystem". These balances are remunerated at the respective rate of the main refinancing operations.

In the year of the cash changeover and in the following five years, the intra-Eurosystem balances arising from the allocation of euro banknotes within the Eurosystem are adjusted in order to avoid significant changes to national central banks' relative income positions from those in previous years. The adjustments are made by taking into account the difference between the average value of the banknotes that each national central bank had in circulation in the reference period and the average value of the banknotes that would have been allocated to each of them during that period in accordance with the ECB's capital key. The adjustments are reduced in annual stages until the first day of the sixth year after the year of the cash changeover. Thereafter, income from euro banknotes in circulation is allocated fully in proportion to the national central banks' paid-up shares in the ECB's capital. In the year under review, the adjustments resulted from the accession of the Latvian central bank in 2014 and the Lithuanian central bank in 2015; the adjustments will finish accordingly as at 31 December 2019 and 2020 respectively. The interest income and interest expense arising from the remuneration of the intra-Eurosystem balances are cleared through the accounts of the ECB and are shown in the Bundesbank's profit and loss account in item 1 "Net interest income".

ECB's interim profit distribution

The ECB's income from the 8% share of the euro banknotes in circulation as well as from securities purchased by the ECB as part of the securities markets programme (SMP), the third covered bond purchase programme (CBPP3), the asset-backed securities purchase programme (ABSPP) and the public sector purchase programme (PSPP) is distributed to the national central banks of the Eurosystem as interim profit in the same financial year in which the income arises, unless the ECB's net profit is less than this income or the Governing Council of the ECB decides to retain the amount for allocation to the ECB risk provision.[4] For the financial year 2017, €988 million of the aforementioned ECB income (2016: €966 million) was distributed among the national central banks as interim profit in January 2018. The Bundesbank's share of €253 million (2016: €247 million) is shown under item 4 "Income from participating interests" in its profit and loss account.

Preparation and auditing of financial statements

The Executive Board drew up the Deutsche Bundesbank's financial statements for the financial year 2017 on 13 February 2018. The financial statements were audited by KPMG AG Wirtschaftsprüfungsgesellschaft, Frankfurt am Main. The Executive Board had appointed the firm as external auditors on 27 January 2015 in accordance with section 26 (3) of the Bundesbank Act. The auditors confirmed without qualification on 20 February 2018 that the Bundesbank's financial statements for 2017 – consisting of the balance sheet and the profit and loss account – comply, in all material respects, with the legal requirements and the principles for the accounting of the Deutsche Bundesbank approved by the Executive Board and give a true and fair view of the net assets, financial position and results of operations of the Deutsche Bundesbank. After studying the external auditors' report, the Executive Board decided to publish the financial statements and transfer the Bundesbank's profit to the Federal Government on 27 February 2018.

4 Decision of the European Central Bank of 15 December 2014 on the interim distribution of the income of the European Central Bank (recast) (ECB/2014/57) as last amended by the Decision of the European Central Bank of 2 July 2015 (ECB/2015/25).

Notes on the individual balance sheet items

Assets

1 Gold and gold receivables

As at 31 December 2017, the Bundesbank's physical holdings (bars) of fine gold amounted to 3,373,661 kg or 108 million ounces (ozf). These are supplemented by an additional 9 kg of gold receivables that were generated by the settlement of margins in the context of gold transactions. The gold was valued at market prices at the end of the year (1 kg = €34,783.28 or 1 ozf = €1,081.881). Compared with the previous year's price of 1 kg = €35,303.00 or 1 ozf = €1,098.046, this represents a decline of 1.5%. The gold holdings declined by just 0.1% (4,306 kg or 0.1 million ozf) in the year under review. This was due to the sale of gold to the Federal Government at market prices for the purpose of minting gold coins. The resulting income in the amount of €151 million is shown in sub-item 2.1 "Realised gains/losses arising from financial operations" in the profit and loss account.

2 Claims on non-euro area residents denominated in foreign currency

This item comprises the claims on the International Monetary Fund (IMF) as well as balances with banks and security investments, loans and other foreign currency claims on non-euro area residents.

2.1 Receivables from the IMF

Sub-item 2.1 contains the claims on the IMF which are financed and held by the Bundesbank and which arise from Germany's membership of the IMF. The claims, which total 15,392 million special drawing rights (SDRs) (€18,280 million), are made up of the drawing rights within the reserve tranche, the allocated SDRs and loans under the New Arrangements to Borrow (NAB).

The drawing rights within the reserve tranche correspond to the amounts actually paid to the IMF in gold, special drawing rights, foreign currency and national currency under the German quota. The drawing rights held in the reserve tranche represent the difference between the German quota of SDR 26,634 million (€31,632 million) and the euro balances amounting to €29,031 million (SDR 24,445 million) at the IMF's disposal at the end of the year. In 2017, these fell on balance by SDR 807 million to SDR 2,190 million (€2,601 million).

Special drawing rights – by means of which freely usable currencies as per the IMF definition can be obtained at any time – in the amount of SDR 12,059 million were allocated free of charge. A corresponding counterpart is

Gold reserves by storage location

	31.12.2017		31.12.2016		Year-on-year change			
Storage location	Tonnes	€ million	Tonnes	€ million	Tonnes	%	€ million	%
Deutsche Bundesbank, Frankfurt	1,710	59,482	1,619	57,157	91	5.6	2,325	4.1
Federal Reserve Bank, New York	1,236	43,000	1,236	43,643	–	–	– 642	– 1.5
Bank of England, London	427	14,865	432	15,240	– 4	– 1.0	– 374	– 2.5
Banque de France, Paris	–	–	91	3,213	– 91	– 100.0	– 3,213	– 100.0
Total	3,374	117,347	3,378	119,252	– 4	– 0.1	– 1,905	– 1.6

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Receivables from the IMF

Item	31.12.2017		31.12.2016		Year-on-year change			
	SDR million	€ million	SDR million	€ million	SDR million	%	€ million	%
German quota	26,634	31,632	26,634	33,949	–	–	– 2,317	– 6.8
less Euro balances	24,445	29,031	23,638	30,129	807	3.4	– 1,098	– 3.6
Drawing rights within the reserve tranche	2,190	2,601	2,997	3,820	– 807	– 26.9	– 1,219	– 31.9
Special drawing rights	11,777	13,987	11,719	14,938	58	0.5	– 951	– 6.4
New Arrangements to Borrow	1,426	1,693	2,167	2,762	– 741	– 34.2	– 1,069	– 38.7
Total	15,392	18,280	16,883	21,519	– 1,490	– 8.8	– 3,239	– 15.0

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shown as liability item 8 "Counterpart of special drawing rights allocated by the IMF". In 2017, the holdings of special drawing rights went up by SDR 58 million to SDR 11,777 million (€13,987 million).

The New Arrangements to Borrow (NAB) are multilateral credit lines with the IMF, which serve as a backstop for use in the event of a systemic crisis. Following the increase in quotas, these lines of credit were deactivated in 2016. However, the IMF may continue to use NAB resources to finance any IMF programmes to which it had committed during the NAB activation period. The Bundesbank's NAB credit arrangement amounts to SDR 12.9 billion. At the end of the reporting year, this resulted in receivables from the IMF of SDR 1,426 million (€1,693 million). The additional bilateral credit line of €41.5 billion pledged by the Bundesbank to the IMF was not drawn upon, as adequate IMF liquidity was available. There were, therefore, no receivables arising from bilateral loans at the end of the year.

If all items on the assets side and the liabilities side of the balance sheet are taken into account, the net holdings of special drawing rights amounted to SDR 3,337 million, compared with SDR 4,825 million in 2016. The valuation is based on the reference rate of SDR 1 = €1.1876 (2016: SDR 1 = €1.2746) calculated by the ECB at the end of the year for all central banks participating in the Eurosystem.

2.2 Balances with banks and security investments, external loans and other external assets

The balances with banks and security investments, loans and other foreign currency claims which are shown in sub-item 2.2 amounted to €31,215 million at the end of 2017, compared with €34,993 million in the previous year. These include, in particular, US dollar holdings in the amount of US$34,326 million (€28,622 million), representing an increase of US$351 million on the year. The sub-item also contains holdings in yen (¥203,207 million, equivalent to €1,505 million), Australian dollars (A$1,666 million, equivalent to €1,085 million) and, to a limited extent, other currencies. The holdings are interest-bearing. If all items on the assets side and the liabilities side of the balance sheet are taken into account, the net US dollar holdings valued at market prices amounted to US$33,235 million (2016: US$32,801 million), the net yen holdings to ¥203,299 million (2016: ¥203,295 million) and the net Australian dollar holdings to A$1,683 million (2016: A$1,644 million). The foreign currency holdings were valued at the respective end-of-year market rate. In the case of the US dollar holdings, this was €1 = US$1.1993 (2016: €1 = US$1.0541), for the holdings of yen €1 = ¥135.01 (2016: €1 = ¥123.40) and for the Aus-

Balances with banks and security investments, external loans and other external assets

Item	31.12.2017 € million	31.12.2016 € million	Year-on-year change € million	Year-on-year change %
Current account holdings and overnight deposits	1,753	2,589	– 837	– 32.3
Claims arising from reverse repurchase agreements	1,008	1,218	– 210	– 17.2
Fixed-term deposits and deposits redeemable at notice	3,794	2,799	995	35.6
Marketable securities				
Government bonds				
US dollar	20,970	24,105	– 3,135	– 13.0
Yen	287	397	– 110	– 27.7
Australian dollar	1,078	1,107	– 29	– 2.6
Supranational, sovereign and agency (SSA) bonds	2,183	2,635	– 453	– 17.2
Other	141	142	– 1	– 0.8
Total	31,215	34,993	– 3,779	– 10.8

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tralian dollar holdings €1 = A$1.5346 (2016: €1 = A$1.4596).

3 Claims on euro area residents denominated in foreign currency

This item contains US$8,597 million (€7,168 million) of US dollar claims on credit institutions resulting from refinancing operations in the context of the standing swap agreement with the Federal Reserve Bank (2016: €1,788 million). In order to carry out these operations, based on the swap agreement, the ECB receives US dollars from the Federal Reserve Bank in return for euro; the ECB then allocates these to the national central banks, which pass them on to euro area credit institutions. The TARGET2 liabilities resulting from swap transactions between the ECB and the Bundesbank lower the TARGET2 settlement balances shown in asset sub-item 9.4 "Other claims within the Eurosystem (net)".

4 Claims on non-euro area residents denominated in euro

Claims on non-euro area counterparties arising from bilateral repo transactions are shown in this item. These claims amounted to €4,396 million (2016: €438 million) and resulted from repos and simultaneous reverse repos, in which securities in the PSPP portfolio with maturities of up to seven days were lent against Federal securities on a cash-neutral basis. The corresponding liabilities are shown under liability item 5 "Liabilities to non-euro area residents denominated in euro".

5 Lending to euro area credit institutions related to monetary policy operations denominated in euro

The volume and structure of liquidity-providing monetary policy operations carried out by the Bundesbank as part of the Eurosystem are shown in this item (main and longer-term refinancing operations, structural reverse operations and the marginal lending facility). At the end of the reporting year, the Eurosystem's corresponding outstanding volume of monetary policy operations amounted to €764,310 million (2016: €595,873 million), of which the Bundesbank accounted for €94,320 million (2016: €65,474 million). Pursuant to Article 32.4 of the ESCB Statute, risks from these operations, provided they materialise, are shared among the Eurosystem national central banks in proportion to the prevailing shares in the capital of the ECB. Losses arise only if the counterparty involved in a monetary policy operation defaults and the collateral it has provided proves insufficient upon realisation. The national central banks may accept certain types of collateral excluded from risk-sharing on their own responsibility. The Bundesbank does not accept such collateral.

Main refinancing operations are regular weekly transactions with a standard one-week maturity, the purpose of which is to provide liquidity. In the reporting year, main refinancing operations continued to be conducted as fixed-rate tenders with full allotment. At the end of the

year, the main refinancing operations amounted to €1,049 million, which was €759 million less than in the previous year. On a daily average, the outstanding volume of main refinancing operations came to €559 million (2016: €2,221 million).

In the year under review, the regular longer-term refinancing operations with maturities of three months were carried out as fixed-rate tenders with full allotment at the average main refinancing rate. In addition, the final targeted longer-term refinancing operation of the second series (TLTRO II), with a maturity of four years, was conducted. Depending on the evolution of each counterparty's eligible lending activities, the TLTRO II, which total €88,925 million, are remunerated at an individual rate which lies between the main refinancing rate and the deposit facility rate applicable at the time the transactions were conducted. The relevant rate will only be determined in mid-2018 and will apply retroactively to the entire term of the operation, which means that, for precautionary reasons, the interest accrued on these transactions in 2017 is calculated using the lower deposit facility rate. Each counterparty's potential recourse to these operations is limited according to the scope of their lending to the real economy. On account of voluntary repayments, the residual volume of TLTRO I operations conducted in previous years was reduced to €3,963 million as at 31 December 2017. The volume of all longer-term refinancing operations combined amounted to €93,272 million at the end of the year and was, therefore, €29,753 million higher than in the previous year. Increased recourse to the TLTROs, which reached a total of €92,888 million (2016: €62,670 million), more than offset the decline in volume caused by the limited uptake of the three-month tenders (€384 million, compared with €848 million in 2016). On a daily average, the volume of longer-term refinancing operations amounted to €87,346 million (2016: €47,850 million).

The marginal lending facility is a standing facility which counterparties may use to obtain overnight liquidity at a predetermined interest rate. At the end of 2017, no recourse was made to this facility (2016: €149 million). Average daily use came to €25 million (2016: €19 million).

6 Other claims on euro area credit institutions denominated in euro

This item, amounting to €464 million (2016: €3,025 million), consists, in particular, of fixed-term deposits which are held at credit institutions and arise from funds received in connection with central bank services (see liability item 5 "Liabilities to non-euro area residents denominated in euro").

Securities held for monetary policy purposes

Item	31.12.2017		31.12.2016		Year-on-year change			
	Balance sheet value € million	Market value € million	Balance sheet value € million	Market value € million	Balance sheet value		Market value	
					€ million	%	€ million	%
SMP portfolio								
Greece	1,722	1,873	2,620	2,638	– 898	– 34.3	– 765	– 29.0
Ireland	1,377	1,517	1,368	1,594	8	0.6	– 77	– 4.8
Portugal	1,315	1,417	1,941	2,112	– 626	– 32.3	– 695	– 32.9
Italy	10,222	11,341	12,003	13,618	– 1,780	– 14.8	– 2,277	– 16.7
Spain	3,390	3,768	4,236	4,783	– 845	– 20.0	– 1,015	– 21.2
Total	18,026	19,916	22,168	24,745	– 4,142	– 18.7	– 4,829	– 19.5
CBPP portfolio	1,833	1,953	3,589	3,804	– 1,757	– 48.9	– 1,851	– 48.7
CBPP2 portfolio	1,384	1,503	2,052	2,211	– 668	– 32.5	– 708	– 32.0
CBPP3 portfolio	57,293	57,596	48,224	48,610	9,069	18.8	8,985	18.5
PSPP portfolio	401,606	400,156	269,646	272,057	131,960	48.9	128,100	47.1
CSPP portfolio	31,983	31,995	12,021	11,926	19,962	166.1	20,069	168.3
Grand total	512,125	513,119	357,700	363,354	154,425	43.2	149,765	41.2

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7 Securities of euro area residents denominated in euro

This item contains the holdings of securities denominated in euro resulting from purchases made within the framework of the Eurosystem purchase programmes announced by the ECB Governing Council, which are shown under sub-item 7.1 "Securities held for monetary policy purposes". These holdings are carried at amortised cost, irrespective of whether the securities are held to maturity. In 2017, net purchases were made under the CBPP3, PSPP and the corporate sector purchase programme (CSPP) announced by the ECB Governing Council on 4 September 2014, 22 January 2015 and 10 March 2016 respectively. By contrast, bonds purchased under the terminated programmes CBPP, SMP and CBPP2 matured.

At the end of 2017, the Eurosystem national central banks' SMP holdings amounted to €82,490 million (2016: €94,803 million), their CBPP3 holdings to €220,955 million (2016: €186,965 million) and their CSPP holdings to €131,593 million (2016: €51,069 million). The Eurosystem national central banks' PSPP holdings of securities issued by supranational institutions stood at €203,932 million (2016: €139,639 million), although the Bundesbank itself did not acquire any holdings. Pursuant to Article 32.4 of the ESCB Statute, all risks from the SMP, CBPP3, CSPP and the above-mentioned PSPP holdings, provided they materialise, are shared among the Eurosystem national central banks in proportion to the prevailing shares in the capital of the ECB, as is the case with the income received. Risks and income from the covered bonds purchased under the Eurosystem programmes CBPP and CBPP2, by contrast, remain with the individual national central banks holding them. The same applies to the government bonds purchased under the PSPP (including regional government bonds and bonds issued by eligible agencies located in the euro area). The Bundesbank purchases only German bonds under the PSPP.

The Governing Council of the ECB decided that (with the exception of one CSPP security) no impairment loss had incurred for securities contained in the SMP, CSPP and PSPP holdings and in the three CBPP portfolios as at 31 December 2017, as it is expected that all payment obligations relating to the bonds and debt securities contained in Eurosystem central banks' holdings will continue to be met as agreed. The Eurosystem provision for monetary policy operations adopted by the ECB Governing Council for the required impairment of the aforementioned CSPP security is included in liability item 12 "Provisions".

8 Claims on the Federal Government

This item shows the equalisation claims on the Federal Government and the non-interest-bearing debt register claim in respect of Berlin; both date back to the currency reform of 1948. They form the balance sheet counterpart of the amounts paid out at that time in cash *per capita* and per enterprise and of the initial provision of credit institutions and public corporations with central bank money. Equalisation claims yield interest at a rate of 1% *per annum*. In conjunction with Article 123 of the Treaty on the Functioning of the European Union (the Lisbon Treaty), it has been stipulated that the equalisation claims and the debt register claim are to be redeemed in ten annual instalments, starting in the year 2024.

9 Intra-Eurosystem claims

The Bundesbank's claims on the ECB and on the national central banks participating in the Eurosystem are combined in this item.

Sub-item 9.1 shows the Bundesbank's participating interest in the ECB. Pursuant to Article 28 of the ESCB Statute, the ESCB national central banks are the sole subscribers to the capital of the ECB. As at 31 December 2017, the Bundesbank's participating interest in the ECB was unchanged at €1,948 million.

Sub-item 9.2 contains the Bundesbank's euro-denominated claims equivalent to the transfer of foreign reserves to the ECB. At the beginning of 1999, the central banks participating in the Eurosystem transferred foreign reserve assets (15% in gold and 85% in foreign currency) to the ECB in accordance with Article 30

of the ESCB Statute. Adjustments to the key for subscribing to the ECB's capital also result in adjustments to the Bundesbank's claims arising from the transfer of foreign reserves to the ECB. As at 31 December 2017, these claims amounted to €10,430 million, unchanged on the 2016 figure. As the transferred gold does not earn any interest, the claims are remunerated at 85% of the prevailing main refinancing rate.

Sub-item 9.3 "Net claims related to the allocation of euro banknotes within the Eurosystem" shows the claims which arise from applying the euro banknote allocation key. Like at the end of 2016, the Bundesbank had no claims at the end of 2017 and instead recorded liabilities, which are shown in liability sub-item 9.2 "Net liabilities related to the allocation of euro banknotes within the Eurosystem".

A daily net balance vis-à-vis the ECB is derived from settlement balances between the central banks of the ESCB which result from cross-border payments as recorded in the Eurosystem's TARGET2 large-value payment system. The German banking system received extensive central bank money via TARGET2 in 2017. At the end of the year, the Bundesbank's net claim on the ECB thus rose by €152,679 million to €906,941 million and is shown under sub-item 9.4 "Other claims within the Eurosystem (net)". The net balances (with the exception of non-interest-bearing intra-Eurosystem balances resulting from the swap transactions between the ECB and the Bundesbank – see asset item 3 "Claims on euro area residents denominated in foreign currency") are remunerated at the respective main refinancing rate. On a daily average, the interest-bearing net claim amounted to €827,311 million (2016: €653,013 million). This item also contains the liabilities of €389 million arising from the allocation of monetary income to the national central banks (see profit and loss item 5 "Net result of pooling of monetary income") and the €253 million claim on the ECB arising from the interim distribution of profit (see "General information on the annual accounts").

10 Items in course of settlement

This item contains the asset items arising from payments still being processed within the Bundesbank.

11 Other assets

The Bundesbank's holdings of euro coins are shown in sub-item 11.1 "Coins". New coins are received from the Federal mints at their nominal value for the account of the Federal Government, which holds the coin prerogative.

Sub-item 11.2 "Tangible and intangible fixed assets" amounted to €795 million, compared

Tangible and intangible fixed assets

€ million

Item	Purchase/ production costs 31.12.2016	Additions	Disposals	Accumulated depreciation	Book value 31.12.2017	Book value 31.12.2016	Depreciation in 2017
Land and buildings	2,283	43	– 89	– 1,632	605	612	– 41
Furniture and equipment	828	70	– 53	– 661	185	157	– 41
Computer software	145	6	– 11	– 135	4	2	– 3
Total	3,256	119	– 152	– 2,428	795	770	– 85

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with €770 million in 2016. It comprises land and buildings, furniture and equipment, and computer software.

Sub-item 11.3 "Other financial assets" amounted to €11,194 million, compared with €10,921 million in 2016. It contains the Bundesbank's own funds portfolio (euro portfolio) as a counterpart to the capital, statutory reserves, provisions for general risks and long-term provisions for pensions and healthcare assistance. The own funds portfolio is invested not in government securities but exclusively in fixed-rate covered bonds denominated in euro, which are generally held to maturity and are, therefore, valued at amortised cost; the duration is based on commonly used indices. As at 31 December 2017, the value of the own funds portfolio at amortised cost amounted to €11,143 million, of which German Pfandbriefe accounted for €8,831 million and French covered bonds for €2,312 million. The total market value of the own funds portfolio stood at €11,483 million.

This item also includes €52 million in participating interests held by the Bundesbank. The Bundesbank's participating interest in the BIS, Basel, was unchanged at €50 million at the end of 2017; it holds 50,100 shares, with 25% of their par value being paid-in capital. As in 2016, the participating interest in the cooperative society SWIFT, La Hulpe (Belgium), amounted to €2 million.

Sub-item 11.4 "Off-balance-sheet instruments revaluation differences" essentially comprises the result in the amount of €92 million for the valuation of the US dollar forward liabilities to the ECB arising from the euro/US dollar swap agreement with the ECB (see asset item 3 "Claims on euro area residents denominated in foreign currency"). In 2016, US dollar forward liabilities valued at market prices exceeded the corresponding euro forward claims, resulting in the latter being shown in liabilities sub-item 11.1 in the amount of €18 million.

Sub-item 11.5 "Accruals and prepaid expenses" contains the accruals and prepaid expenditure calculated as at 31 December 2017. This chiefly consists of (accrued) interest income due in 2018 from securities which were acquired or transacted in 2017.

Liabilities

1 Banknotes in circulation

The total value of euro banknotes issued by the central banks in the Eurosystem is distributed among these banks on the last business day of each month in accordance with the key for allocating euro banknotes (see "General information on annual accounts"). According to the banknote allocation key applied as at 31 December 2017, the Bundesbank has a 23.5% share of the value of all euro banknotes in circulation. During the year under review, the total value of banknotes in circulation within the Eurosystem rose from €1,126.2 billion to €1,170.7 billion, or by 4.0%. Taking into account the allocation key, the Bundesbank had euro banknotes in circulation worth €275,376 million at the end of the year, compared with €264,907 million a year previously. The value of the euro banknotes actually issued by the Bundesbank in 2017 increased by 7.2% from €592,169 million to €634,681 million. As this was more than the allocated amount, the difference of €359,306 million (2016: €327,262 million) is shown in liability sub-item 9.2 "Net liabilities related to the allocation of euro banknotes within the Eurosystem".

2 Liabilities to euro area credit institutions related to monetary policy operations denominated in euro

Sub-item 2.1 "Current accounts" contains the deposits of credit institutions, amounting to €392,785 million (2016: €284,948 million), which are also used to meet the minimum reserve requirement and to settle payments. The main criterion for including these deposits in this sub-item is that the relevant counterparties appear in the list of institutions which are subject to the Eurosystem's minimum reserve regulations. The balances held to fulfil the minimum reserve requirement amounted to €34,246 million on an annual average. These balances are

remunerated at the average main refinancing rate in the respective maintenance period. In the year under review, any deposits exceeding this amount were subject to negative interest equivalent to the deposit facility rate. On a daily average, the current account deposits increased from €209,729 million in 2016 to €400,302 million in 2017.

Sub-item 2.2 "Deposit facility", amounting to €217,039 million (2016: €126,402 million), contains overnight deposits at the deposit facility rate (a negative interest rate applied in the year under review). On a daily average, the deposit facility amounted to €170,944 million, compared with €89,458 million in 2016.

Sub-item 2.5 "Deposits related to margin calls" contains cash collateral of €2 million deposited by credit institutions in order to increase underlying assets (2016: no holdings).

3 Other liabilities to euro area credit institutions denominated in euro

This item contains liabilities to euro area credit institutions arising from bilateral repo transactions. In these repo transactions, securities purchased under the PSPP are lent against cash as collateral, or in the case of simultaneous reverse repos, against Federal securities on a cash-neutral basis; the transactions have a maximum term of seven days. The liabilities of €2,551 million reported as at 31 December 2017 (2016: €405 million) result exclusively from securities lending against cash as collateral. In addition, this item contained liabilities in the amount of €127 million (2016: €60 million) arising from account balances pledged for deposit protection pursuant to the Deposit Guarantee Act *(Einlagensicherungsgesetz)* in conjunction with the Regulation on the Financing of the Compensation Scheme *(Entschädigungseinrichtungs-Finanzierungsverordnung)*.

4 Liabilities to other euro area residents denominated in euro

Sub-item 4.1 "General government deposits" encompasses the balances of the Federal Government, its special funds, the state governments and other public depositors. The deposits of other public depositors constitute balances held by social security funds and local authorities. On 31 December 2017, general government deposits amounted to €66,970 million in all (2016: €32,458 million). The increase is primarily the result of higher Federal Government deposits, particularly due to payments into the accounts of the fund for financing nuclear waste disposal.

Sub-item 4.2 "Other liabilities" amounted to €51,815 million, compared with €73,371 million a year earlier. It mainly comprises deposits of financial intermediaries and individuals. The decrease is primarily due to lower deposits of the European Stability Mechanism (ESM).

5 Liabilities to non-euro area residents denominated in euro

This balance sheet item, amounting to €199,813 million (2016: €117,016 million), contains the balances of non-euro area central banks, monetary authorities, international organisations and commercial banks held, *inter alia,* to settle payments. These include fixed-term deposits of central banks accepted as part of the Bundesbank's central bank services, which are then invested in the money market (see asset item 6 "Other claims on euro area credit institutions denominated in euro"). In addition, the liabilities to non-euro area counterparties arising from the bilateral repo transactions are also reported here. In these repo transactions, securities purchased under the PSPP are lent against cash as collateral, or in the case of simultaneous reverse repos, against Federal securities on a cash-neutral basis; the transactions have a maximum term of seven days. At the end of the year, securities lending against cash as collateral gave rise to liabilities in the amount of €6,538 million (2016: €3,939 million), and securities lending against Federal securities resulted in liabilities of €4,396 million (2016: €438 million); the claims associated with the latter are reported in asset item 4 "Claims on non-euro area residents denominated in euro".

6 Liabilities to euro area residents denominated in foreign currency

This item contains US dollar deposits of banks resident in the euro area and of the Federal Government.

7 Liabilities to non-euro area residents denominated in foreign currency

The foreign-currency-denominated liabilities to banks outside the euro area are recorded in this item. These are liabilities in US dollars, amounting to €1,008 million (2016: €1,218 million), which have arisen from securities repurchase agreements (repos).

8 Counterpart of special drawing rights allocated by the IMF

The counterpart of the special drawing rights (SDRs) allocated by the IMF free of charge corresponds to the allocations of SDRs to the Federal Republic of Germany from 1970 to 1972, from 1979 to 1981 and in 2009, which together totalled SDR 12,059 million (see asset sub-item 2.1 "Receivables from the IMF").

9 Intra-Eurosystem liabilities

The Bundesbank's liabilities to the ECB and to the other central banks participating in the Eurosystem are combined in this item.

Sub-item 9.1 contains "Liabilities related to the issuance of ECB debt certificates". The ECB issued no debt certificates in 2017.

Sub-item 9.2 "Net liabilities related to the allocation of euro banknotes within the Eurosystem" contains the liabilities arising from the application of the banknote allocation key (see liability item 1 "Banknotes in circulation"). At the end of the year, these liabilities amounted to €359,306 million in total (2016: €327,262 million). The 8% share of the total value (€1,170.7 billion) of euro banknotes in circulation attributable to the ECB resulted in a liability of €23,946 million for the Bundesbank (according to its capital share of 25.6%). In addition, the difference between the Bundesbank's actual banknote issuance of €634,681 million and its notional share (again according to the capital share) in the allocation of the remaining 92% of euro banknotes in circulation to the balance sheets of the national central banks resulted in a liability of €335,360 million. The main reason for the total increase of €32,044 million in the year under review was the Bundesbank's still disproportionately high share of banknote issuance, which is largely due to net outflows of banknotes to other countries through tourism, to give one example.

The net liabilities arising from other assets and liabilities within the Eurosystem would be shown in sub-item 9.3 "Other liabilities within the Eurosystem (net)". At the end of 2017, the Bundesbank had a net claim, which is shown on the assets side under sub-item 9.4 "Other claims within the Eurosystem (net)" and outlined in the explanatory notes above.

10 Items in course of settlement

This item contains the liability items arising from payments still being processed within the Bundesbank.

11 Other liabilities

At the end of 2017, no holdings were reported under sub-item 11.1 "Off-balance-sheet instruments revaluation differences" (2016: €18 million). In the current financial year, these holdings are shown in assets sub-item 11.4.

Sub-item 11.2 "Accruals and income collected in advance" contains the accrued and collected income calculated as at 31 December 2017. This consists mainly of (accrued) interest expenditure which is due in future financial years but was incurred in 2017 and which arose in connection with the negative remuneration of credit institutions' refinancing (especially TLTRO II).

Sub-item 11.3 "Sundry" comprises mainly the liabilities arising from Deutsche Mark banknotes still in circulation. Deutsche Mark banknotes are no longer legal tender. However, the Bundesbank has publicly undertaken to redeem Deutsche Mark banknotes that are still in circulation for an indefinite period. The Deutsche Mark banknotes still in circulation belong to the series BBk I/Ia and BBk III/IIIa. In accordance with accounting principles, the liabilities arising from Deutsche Mark banknotes still in circulation will continue to be reported until it is virtually certain that claims are no longer to be expected. In keeping with this, the reported liabilities arising from Deutsche Mark banknotes in circulation now comprise only notes of the ser-

ies BBk III/IIIa in the amount of €1,827 million (2016: €1,849 million). In addition, there are still banknotes in circulation belonging to the series BBk I/Ia, which has already been written off, amounting to €1,204 million. Deposits of Deutsche Mark banknotes in 2017 totalled €28 million, of which €21 million consisted of the BBk III/IIIa series banknotes and €6 million of the BBk I/Ia series banknotes (see profit and loss item 11 "Other expenses").

12 Provisions

The provisions for general risks are created pursuant to the regulations governing the Bundesbank's annual accounts laid down in section 26 (2) of the Bundesbank Act *(Gesetz über die Deutsche Bundesbank).* They are established to hedge against general risks associated with domestic and foreign business. The level of funds to be allocated to the provisions for general risks is reviewed annually using value-at-risk and expected shortfall calculations, amongst others. In doing so, the holdings of risk-weighted assets, their risk content, foreseeable changes to the risk situation, the financial situation expected for the coming year, and the statutory reserves (€2.5 billion) are taken into account. The Bundesbank's risks, which are determined using a model, relate, in particular, to exchange rate risk, default risk of the asset purchase programmes and credit risk arising from refinancing loans. Interest rate risk has also been taken into account since 2016, with the corresponding increase in risk provisions initially being spread over two years. In the reporting year, the default risk of the SMP and CBPP3 as well as the credit risk arising from refinancing loans decreased, whereas the risk situation regarding interest rate risk continued to deteriorate; the ECB Governing Council's decision in October 2017 to extend the asset purchase programme (APP) until at least the end of September 2018 will also lead to additional growth in the open interest rate position in the coming year. This also increases the likelihood that future financial burdens arising from a possible rise in policy rates could lead to the Bundesbank posting negative annual results, potentially for a number of years. With regard to the ECB Governing Council's current forward guidance, according to which the ECB policy rates will remain at their present levels for an extended period of time and well past the horizon of the net asset purchases, the necessary increase in risk provisions can be extended by an additional year to the end of 2018. Taking into account all of the aforementioned factors, the existing risk provisions were topped up by €1,075 million as at 31 December 2017 owing to the current risk assessment. The provisions for general risks thus amounted to €16,425 million as at 31 December 2017. The risk analysis does not take account of the risks arising from

Provisions

	31.12.2017	31.12.2016	Year-on-year change	
Provisions for	€ million	€ million	€ million	%
General risks	16,425	15,350	1,075	7.0
Monetary policy operations	18	–	18	.
Direct pension commitments	4,965	4,620	346	7.5
Indirect pension commitments (supplementary pension funds for public sector employees)	513	477	36	7.5
Healthcare subsidy commitments to civil servants	1,392	1,241	151	12.2
Partial retirement scheme	13	24	– 11	– 47.0
Staff restructuring schemes	74	103	– 29	– 28.5
Other	85	64	21	33.2
Total	23,485	21,879	1,606	7.3

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the Bundesbank's TARGET2 claim on the ECB and from the issuance of euro banknotes. The Bundesbank could hypothetically be affected (in the case of the TARGET2 claim, only indirectly as an ECB shareholder) by the risk to which the Eurosystem is exposed if a euro area country were to leave the single currency area and its central bank failed to settle its TARGET2 liability to the ECB or its banknote liabilities to the ECB (8% share) and the national central banks. It considers this scenario to be unlikely to materialise, however, which means that the credit risks arising from Eurosystem operations to provide liquidity are ultimately the key factor.

In accordance with the Eurosystem's accounting principles, the ECB Governing Council decided to establish a provision of €69 million for the required impairment of a CSPP security. Pursuant to Article 32.4 of the ESCB Statute, provisions for monetary policy operations are funded by each national central bank in the Eurosystem according to its capital share. The Bundesbank's €18 million share in this provision was allocated against profit and loss item 5 "Net result of pooling of monetary income".

The provisions for post-employment benefit obligations (direct pension commitments and indirect pension commitments as a result of the Bundesbank's obligation to act as guarantor for pension payments out of the supplementary pension funds for public sector employees) as well as for healthcare subsidy commitments to civil servants are valued on the basis of an actuarial expert opinion based on current mortality tables (2005 G mortality tables issued by Dr Klaus Heubeck) pursuant to the entry age normal method *(Teilwertverfahren)* (for employees) and pursuant to the present value method *(Barwertverfahren)* (for pensioners and ex-civil servants with portable pension entitlements), with a discount rate of 3.62% used for post-employment benefit obligations and of 2.87% for healthcare subsidy commitments to civil servants in the reporting year (2016: 3.91% and 3.21% respectively). For financial year 2017, as in 2016, it is estimated that there was a wage trend of 2.5%, a career trend of 0.5% as well as a pension trend of 2.5% for civil servants and of 1% for public sector employees. The cost trend for healthcare subsidy commitments to civil servants amounted to 3.5%, compared with 3.25% in the previous year. The discount rate used for post-employment benefit obligations is, in each case, a matched-maturity average market interest rate for the past ten years or, for healthcare subsidy commitments to civil servants, for the past seven years pursuant to the Regulation on the Discounting of Provisions *(Rückstellungsabzinsungsverordnung)*. Pursuant to section 253 (6) of the German Commercial Code, the difference arising from the application of a ten-year period, as opposed to seven years, for calculating the average market interest rate for post-employment benefit obligations is subject to a restriction on distribution. In 2016, the ten-year rate (3.91%) and the seven-year rate (3.21%) resulted in an interest margin of 70 basis points, representing a difference of €564 million, which was transferred to reserves. In the reporting year, the interest margin grew by 5 basis points (3.62% compared to 2.87%), which, taking stock effects into account, resulted in a higher difference of €664 million; the book profit of €100 million over 2016 was also transferred to reserves.

The provisions for the partial retirement scheme and for payment commitments arising from staff restructuring schemes that had already been carried out by the balance sheet date are calculated using a discount rate of 1.33% (2016: 1.67%) based on an actuarial expert opinion based on current mortality tables pursuant to the present value method, or pursuant to the entry age normal method in the case of the outstanding settlement amount for the partial retirement scheme. As in 2016, a wage trend of 2.5% is taken into consideration. The discount rate is based on a matched-maturity average market rate for the past seven years pursuant to the Regulation on the Discounting of Provisions.

The other provisions are created for remaining holiday entitlement, overtime worked and positive balances of flexible working hours and long-term working hours accounts as well as for other uncertain liabilities.

Expenses in the amount of €547 million from marking up the provisions (including the effects of changing the discount rate) are contained in profit and loss sub-item 1.2 "Interest expense". Profit and loss item 7 "Staff costs" contains a net allocated amount of €13 million, with the utilisation of €225 million standing against a total allocated amount of €238 million, which was €274 million lower than in 2016 (the high allocation in 2016 was a result of the increase in the wage trend from 2.0% to 2.5%). Other changes in the provision levels give rise, on balance, to utilisation-related relief of €33 million in profit and loss item 11 "Other expenses" and to an allocation-related expense of €13 million in profit and loss item 8 "Administrative expenses". The reversal of provisions resulted in income of €27 million in profit and loss item 6 "Other income".

13 Revaluation accounts

This item contains the disclosed hidden reserves from the initial valuation at the time of the changeover to market valuation on 1 January 1999 (revaluation items "old") and the unrealised gains arising from market valuation as at 31 December 2017 (revaluation items "new").

Revaluation items "old"

A revaluation item "old" now remains only for the gold position. It represents the difference between the market value of gold as at 1 January 1999 and the lower value of gold prior to that date. In the balance sheet as at 31 December 1998, the value for gold was 1 ozf = DM143.8065 (€73.5271), while the market value as at 1 January 1999 was 1 ozf = €246.368. Although the valuation gains arising from the initial valuation of the gold holdings are not eligible for distribution, they will be released under certain circumstances. Besides a release in the case of valuation losses on the gold position, a proportionate release will also take place in the event of net reductions if the end-of-year gold holdings are below their lowest end-of-year level since 1999.

The reduction of 4,306 kg or 0.1 million ozf in the gold holdings resulted in the release of €24 million in the year under review. This amount is included in profit and loss sub-item 2.1 "Realised gains/losses arising from financial operations".

Revaluation items "new"

In the case of gold holdings, the net positions in each foreign currency and the securities portfolios in each category of security (secur-

Revaluation accounts

Item	Revaluation items "old"	Revaluation items "new"	Total as at 31.12.2017	Total as at 31.12.2016	Year-on-year change	
	€ million	€ million	€ million	€ million	€ million	%
Gold	18,747	90,625	109,372	111,267	– 1,895	– 1.7
US dollar	–	3,551	3,551	7,665	– 4,114	– 53.7
SDR	–	–	–	321	– 321	– 100.0
Japanese yen	–	101	101	243	– 143	– 58.6
Australian dollar	–	–	–	55	– 55	– 100.0
Securities in foreign currency	–	56	56	106	– 50	– 47.4
Total	18,747	94,332	113,079	119,658	– 6,579	– 5.5

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ities identification number), the positive difference between their market value on 31 December 2017 and their value in terms of the average amortised acquisition cost from 1 January 1999 is shown in the revaluation items "new".

As regards gold, the acquisition cost is 1 ozf = €246.369. At the end of 2017, the market value of the gold position exceeded its acquisition value, leading to a revaluation item of €90,625 million (2016: €92,496 million). In the case of the net foreign exchange items in US dollars and Japanese yen, the market values at year-end were also above their acquisition values (€1 = US$1.3759 and €1 = ¥144.69 respectively), with the result that there were revaluation items. At the end of the year, the market values of the net foreign exchange items in SDRs and Australian dollars were below their respective acquisition values (€1 = SDR 0.8280 and €1 = A$1.5329 respectively), meaning that a valuation loss was incurred in each case (see profit and loss sub-item 2.2 "Write-downs on financial assets and positions").

The valuation gains from foreign-currency-denominated securities shown in the balance sheet result almost exclusively from US Treasury notes (€51 million). However, for the majority of the US Treasury notes, the relevant acquisition values were higher than their corresponding market values on the balance sheet date, resulting in valuation losses (see profit and loss sub-item 2.2 "Write-downs on financial assets and positions"). In principle, securities denominated in euro are carried at amortised cost.

14 Capital and reserves

In accordance with section 2 of the Bundesbank Act, liable capital amounts to €2.5 billion; the Federal Government is entitled to it. As in the previous year, the statutory reserves pursuant to the Bundesbank Act are at the fixed upper limit of €2.5 billion laid down in section 27 number 1 of the Bundesbank Act. The difference arising from the discounting of post-employment benefit obligations, which is subject to a restriction on distribution pursuant to section 253 (6) of the German Commercial Code (see "General information on the annual accounts", liability item 12 "Provisions" and profit and loss item 12 "Allocation to/withdrawal from reserves owing to the restriction on distribution pursuant to section 253 (6) of the German Commercial Code *(Handelsgesetzbuch)"),* rose by €100 million. This book profit will be transferred to (other) reserves, which now total €664 million (2016: €564 million).

15 Distributable profit

The profit and loss account for the year 2017 closed with a profit for the year of €2,002 million, of which €100 million (2016: €564 million) will be transferred to reserves on account of the restriction on distribution pursuant to section 253 (6) of the German Commercial Code (see "General information on the annual accounts", liability item 12 "Provisions" and profit and loss item 12 "Allocation to/withdrawal from reserves owing to the restriction on distribution pursuant to section 253 (6) of the German Commercial Code *(Handelsgesetzbuch)").* Pursuant to section 27 of the Bundesbank Act, the remaining distributable profit of €1,902 million will be transferred in full to the Federal Government as the statutory reserves were at their maximum level of €2.5 billion at the end of the year.

Notes on the profit and loss account

1 Net interest income

This item shows interest income less interest expense. Net interest income was greater than in the previous year, rising by €854 million to €4,172 million. One of the key causes of this was balance sheet growth, in particular. The negative interest-bearing deposits of credit institutions and of other domestic and foreign depositors increased significantly on account of the current purchase programmes (CBPP3, PSPP and CSPP) and liquidity flowing in from abroad via TARGET2. Income growth was held back by the negative interest rate on targeted longer-term refinancing operations (TLTRO-II) and by the maturity-based decrease in securities held for monetary policy purposes from the terminated purchase programmes (SMP and CBPP/CBPP2), particularly since the current purchase programmes do not make any contribution to net interest income owing to their low remuneration.

1.1 Interest income

Interest income in foreign currency rose from €406 million in 2016 to €583 million in 2017 owing to higher yields. Interest income in euro increased year on year by €1,293 million to €4,591 million. Interest income from negative interest rates on credit institutions' deposits climbed by €1,127 million owing to the annual average increase in excess reserves of €270 billion. During the reporting year, no income arose from the TARGET2 claim on the ECB (despite an increase in the TARGET2 claim of around €175 billion on an annual average) as a consequence of the reduction in the main refinancing rate to 0% as from March 2016. Income from securities held for monetary policy purposes relating to the terminated purchase programmes (SMP and CBPP/CBPP2) declined by €346 million to a total of €1,225 million on account of the annual average decrease in holdings of €7 billion. In the current programmes (CBPP3, PSPP and CSPP), purchases are made for the most part above par because of the low market yields. The large difference between the acquisition value and the redemption value is accounted for by allocating it over the residual maturity as a negative portion of interest income (alongside coupon rates), so that on balance there is only low remuneration. In the CBPP3 portfolio, the average rate of interest was 0.26%, as in the previous year; owing to the annual average increase in holdings of €11 billion, interest income rose from €109 million in 2016 to €139 million. For the PSPP portfolio, despite an increase in average market yields during the reporting year, purchases of assets with yields below the deposit facility rate pursuant to a decision by the ECB Governing Council in January 2017 led to a higher negative remuneration of -€345 million (2016: -€116 million) for fixed-income securities, whereas the higher inflation adjustment resulted in positive remuneration of €88 million (2016: €38 million) for inflation-linked bonds, producing interest income of -€258 million on balance. In the CSPP portfolio, on the other hand, securities remunerated at positive rates (€82 million) outweighed those remunerated at negative rates (-€10 million), resulting in interest income of €72 million on balance. On the back of the smaller holdings and lower average interest rate (1.37% compared with 1.70% in 2016), the Bundesbank's own funds portfolio saw its interest income contract by €44 million to €151 million. Interest income arising from the negative remuneration of euro balances held by domestic and foreign depositors rose by €627 million, particularly because of increased average holdings. The bilateral repo transactions executed since September 2016 (see liability item 3 "Other liabilities to euro area credit institutions denominated in euro" and liability item 5 "Liabilities to non-euro area residents denominated in euro") resulted in interest income of €79 million (2016: €3 million).

1.2 Interest expense

There was a year-on-year increase of €616 million to €1,002 million in interest expense. Monetary policy refinancing operations led to higher interest expense owing to an increase in TLTRO-II

Net interest income

Item	2017 € million	2016 € million	Year-on-year change € million	Year-on-year change %
Interest income in foreign currency				
IMF	102	17	85	490.8
Reverse repo transactions	26	14	12	89.0
Securities	397	361	35	9.7
Other	59	14	45	331.0
Total	583	406	177	43.7
Interest income in euro				
Deposits of credit institutions (negative interest)	2,174	1,047	1,127	107.6
TARGET2 claim on the ECB	–	63	– 63	– 100.0
SMP portfolio	1,091	1,366	– 276	– 20.2
CBPP and CBPP2 portfolio	134	204	– 70	– 34.3
CBPP3 portfolio	139	109	29	26.7
PSPP portfolio	– 258	– 78	– 180	– 231.6
CSPP portfolio	72	2	69	.
Claims arising from the transfer of foreign reserves to the ECB	–	1	– 1	– 100.0
Own funds portfolio (financial assets)	151	195	– 44	– 22.4
Euro balances of domestic and foreign depositors (negative interest)	963	336	627	186.8
Repo transactions (negative interest)	79	3	76	.
Other	47	50	– 3	– 6.0
Total	4,591	3,298	1,293	39.2
Total interest income	5,174	3,704	1,470	39.7
Interest expense in foreign currency				
IMF	77	13	65	509.9
Repo transactions	10	1	8	582.2
Other	6	2	4	160.4
Total	93	16	77	464.5
Interest expense in euro				
Refinancing operations (negative interest)	328	54	275	510.1
Liabilities arising from the allocation of euro banknotes	–	31	– 31	– 100.0
Claims arising from central bank services (negative interest)	20	18	2	10.4
Marking up of staff provisions	547	264	283	107.0
Reverse repo transactions (negative interest)	12	1	12	.
Other	0	1	0	– 35.6
Total	909	369	540	146.2
Total interest expense	1,002	386	616	159.9
Net interest income	4,172	3,319	854	25.7

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Net result of financial operations, write-downs and risk provisions

Item	2017 € million	2016 € million	Year-on-year change € million	Year-on-year change %
Realised gains/losses				
Gold	151	103	48	46.2
Foreign currency	304	647	– 343	– 53.0
Securities	81	124	– 42	– 34.3
Total	537	874	– 338	– 38.6
Write-downs				
Foreign currency	– 68	– 0	– 68	.
Securities	– 147	– 198	51	25.7
Total	– 215	– 198	– 18	– 8.9
Transfer to/from provisions for general risks, foreign exchange risks and price risks	– 1,075	– 1,750	675	38.6
Total	– 754	– 1,073	320	29.8

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by €275 million; the interest expense of €328 million on balance is composed of interest accrued for TLTRO-II operations at the deposit facility rate (interest expense: €329 million) and interest income (€1 million) from other refinancing operations. Owing to the reduction in the main refinancing rate to 0% as from March 2016, there was no interest expense for intra-Eurosystem balances arising from the allocation of euro banknotes, despite the fact that liabilities were around €33 billion higher on an annual average (see "General information on the annual accounts"). Expenses arising from the marking up of staff provisions went up by €283 million owing to changes in the discount rates (see liability item 12). The bilateral repo transactions executed since September 2016 (see asset item 4 "Claims on non-euro area residents denominated in euro") resulted in an interest expense of €12 million (2016: €1 million).

2 Net result of financial operations, write-downs and risk provisions

The realised net income from foreign currency transactions reported in sub-item 2.1 mainly concerns transactions involving US dollars (€287 million) and special drawing rights (€15 million). Realised gains on sales of securities primarily relate to US Treasury notes (€77 million).

Net income from fees and commissions

Item	2017 € million	2016 € million	Year-on-year change € million	Year-on-year change %
Income				
Cashless payments	24	23	1	2.1
Cash payments	8	9	– 1	– 8.8
Securities business and security deposit business	29	14	15	102.5
Other	13	12	2	14.3
Total	74	58	16	27.7
Expense				
Securities business and security deposit business	26	20	6	32.6
Other	8	9	– 1	– 10.7
Total	34	28	5	19.3
Grand total	41	30	11	35.6

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Write-downs in sub-item 2.2 chiefly result from valuation losses on US Treasury notes and on currency holdings in SDRs.

Sub-item 2.3 "Transfer to/from provisions for general risks, foreign exchange risks and price risks" contains the increase of €1,075 million in the provision for general risks (see liability item 12 "Provisions").

3 Net income from fees and commissions

Net income from fees and commissions came to €41 million, compared with €30 million in the previous year.

4 Income from participating interests

This item contains the Bundesbank's profit from its participating interests in the ECB and BIS. The total income of €329 million (2016: €339 million) includes, in particular, the Bundesbank's share of the ECB's profit distribution for the financial years 2016 and 2017. The share of the ECB's interim distribution of profit for financial year 2017 is €253 million (previous year: €247 million for financial year 2016); a further €58 million came from the (remaining) profit distribution for financial year 2016 which took place in February 2017 (previous year: €69 million for financial year 2015).

5 Net result of pooling of monetary income

This item comprises expenditure of €406 million overall in 2017. Risk provisioning for Eurosystem monetary policy operations resulted in expenditure of €18 million. Expenditure from the pooling of monetary income amounted on balance to €389 million (2016: income of €25 million).

The monetary income of the Eurosystem national central banks is pooled in accordance with a decision taken by the Governing Council of the ECB.[5] Since 2003, the amount of monetary income allocated to each national central bank has been measured on the basis of the actual income which arises from the earmarked assets that each holds as a counterpart to its liability base.

The liability base contains, in particular, the following items: liability item 1 "Banknotes in circulation", liability item 2 "Liabilities to euro area credit institutions related to monetary policy operations denominated in euro", liability sub-item 9.2 "Net liabilities related to the allocation of euro banknotes within the Eurosystem" and the TARGET2 net liability contained in liability sub-item 9.3 "Other liabilities within the Eurosystem (net)". All interest paid on these items or contained in them owing to the negative interest rates decreases or increases the amount of monetary income to be transferred by the national central bank concerned.

A national central bank's earmarked assets consist mainly of the following items: asset item 5 "Lending to euro area credit institutions related to monetary policy operations denominated in euro", asset sub-item 7.1 "Securities held for monetary policy purposes", asset sub-item 9.2 "Claims equivalent to the transfer of foreign reserves to the ECB", asset sub-item 9.3 "Net claims related to the allocation of euro banknotes within the Eurosystem", the TARGET2 net claim contained in asset sub-item 9.4 "Other claims within the Eurosystem (net)" and a limited amount of the national central banks' gold holdings corresponding to their share in the fully paid-up capital of the ECB. It is assumed that no income is generated from the gold and that the covered bonds purchased under the CBPP and CBPP2 as well as the government bonds (including regional government bonds and bonds issued by eligible agencies located in the euro area) purchased under the PSPP generate income commensurate with the applicable main refinancing rate, as the ECB Governing Council has ruled out the possibility of sharing the risk and returns arising from these instruments among the national central banks.

If the value of a national central bank's earmarked assets is above or below the value of its liability base, the difference is offset by apply-

5 Decision of the European Central Bank of 3 November 2016 on the allocation of monetary income of the national central banks of member states whose currency is the euro (ECB/2016/36).

ing to the value of the difference the applicable interest rate for the main refinancing instrument. At the end of each financial year, the total monetary income transferred by all national central banks is distributed among the national central banks in proportion to their respective paid-up shares in the fully paid-up capital of the ECB. The allocation can cause redistribution effects among the national central banks under two conditions in practice. First, earmarked assets or liabilities as part of the liability base must have an interest rate that is different from the interest rate of the main refinancing instrument (such as, for instance, the excess reserves remunerated at the deposit facility rate and TLTRO-II operations). Second, the quota share of these earmarked assets or liabilities on the balance sheet of the respective national central bank must be higher or lower than its share in the ECB's capital. For example, the ratio of excess reserves on the Bundesbank's balance sheet to the total stock on the consolidated balance sheet of the Eurosystem, at around 33.1%, is well above the Bundesbank's capital share of 25.6%; with regard to TLTRO-II, the Bundesbank's share, at 12.0%, is considerably lower.

On the whole, the pooling of monetary income resulted in a net expense of €389 million for the Bundesbank (2016: net income of €25 million). This balance represents the difference between the €3,146 million (2016: €2,508 million) in monetary income paid by the Bundesbank into the common pool and the Bundesbank's claim of €2,758 million (2016: €2,533 million) – corresponding to the Bundesbank's share of the ECB's paid-up capital – on the common pool. The Bundesbank paid €638 million more in monetary income into the common pool compared with the previous year; in particular, this offsets the disproportionately high interest income from excess reserves (see profit and loss sub-item 1.1 "Interest income") and the comparatively low interest expense from TLTRO-II (see profit and loss sub-item 1.2 "Interest expense").

Pursuant to Article 32.4 of the ESCB Statute, the Governing Council identified a need to recognise an impairment on a CSPP security. In line with its capital key share of 25.6%, the Bundesbank created a provision of €18 million (see liability item 12 "Provisions").

6 Other income

Other income amounted to €118 million, compared with €134 million in 2016. Of this, €45 million (2016: €56 million) was attributable to the contributions of the Eurosystem national central banks to the costs of developing and running Eurosystem services, €27 million (2016: €20 million) to the reversal of provisions (see liability item 12 "Provisions") and €20 million to rental income (as in 2016).

7 Staff costs

Staff costs fell from €1,123 million to €866 million year on year. In particular, expenditure relating to staff provisions (see liability item 12 "Provisions") was, on balance, €274 million lower than in the previous year owing to reduced transfers. Excluding this effect, staff costs rose by around 5.1%. This was attributable to the general pay rises for salaried staff and civil servants as well as higher staff numbers.

The remuneration received by each member of the Executive Board is published in the *Annual Report* in accordance with item 9 of the "Code of Conduct for the members of the Executive Board of the Deutsche Bundesbank". For 2017, the President of the Bundesbank received a pensionable salary of €371,487.28, a special non-pensionable remuneration of €76,693.78 and a standard expenses allowance of €5,112.96, amounting to a total of €453,294.02. The Vice-President of the Bundesbank received a pensionable salary of €297,189.76, a special non-pensionable remuneration of €61,355.03 and a standard expenses allowance of €3,067.80, amounting to a total of €361,612.59 for 2017. The other members of the Executive Board each received a pensionable salary of €222,892.46, a special non-pensionable remuneration of €46,016.27 and a standard ex-

Staff costs

Item	2017	2016	Year-on-year change	
	€ million	€ million	€ million	%
Salaries and wages	563	534	29	5.4
Social security contributions	84	81	4	4.7
Expenditure on retirement pensions	219	508	– 289	– 57.0
Total	866	1,123	– 256	– 22.8

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penses allowance of €2,556.48, amounting to a total of €271,465.21 for the year 2017.

Total remuneration payments to serving and former members of the Executive Board, former members of the Bundesbank's Directorate and of the Executive Boards of the Land Central Banks, including their surviving dependants, amounted to €10,911,787.05 in 2017.

8 Administrative expenses

Administrative expenses increased from €396 million in 2016 to €416 million. This item shows not only operating expenditure but also, in particular, expenditure of €114 million on computer hardware and software (2016: €103 million) and of €92 million on office buildings (2016: €81 million) as well as expenditure of €38 million on Eurosystem services (2016: €47 million).

9 Depreciation of tangible and intangible fixed assets

The depreciation of land and buildings, of furniture and equipment and of computer software amounted to €85 million, compared with €94 million in 2016 (see asset sub-item 11.2 "Tangible and intangible fixed assets").

10 Banknote production services

Expenditure on banknote production services declined by €49 million year on year to €110 million due to a lower procurement volume in the reporting year.

11 Other expenses

Other expenses amounted to €21 million compared with €39 million in 2016, and contained, in particular, expenditure on residential buildings amounting to €14 million as well as expenditure on the encashment of the BBk I/Ia series Deutsche Mark banknotes, which are no longer shown on the balance sheet, in the amount of €6 million (see liability sub-item 11.3 "Sundry").

In 2017, the Bundesbank's donations totalled €846,372.32: €523,059.65 for specific projects, €88,534.00 for events, €84,950.00 for scholarships and prize money, €56,306.97 for basic financial assistance and €43,520.00 for institutional financial assistance.

12 Allocation to/withdrawal from reserves owing to the restriction on distribution pursuant to section 253 (6) of the German Commercial Code (Handelsgesetzbuch)

Pursuant to section 253 (6) of the German Commercial Code, the difference of €664 million (2016: €564 million) arising from the application of a ten-year period rather than a seven-year period for calculating the average market interest rate at which to discount post-employment benefit obligations is subject to a restriction on distribution (see "General information on the annual accounts" and liability item 14 "Capital and reserves"); the book profit of €100 million (2016: €564 million) will be transferred to reserves.

Annex

The Deutsche Bundesbank: key figures

Staff[1]	2016	2017
Core staff (full-time equivalents)	9,775	9,965
– Contraction since 31 December 2001[2]	5,043 (= 34.0%)	4,835 (= 32.7%)

Locations/core staff (full-time equivalents)[1]	2016	2017
Central Office	1 / 4,731	1 / 4,880
Regional Offices	9 / 2,594	9 / 2,658
Branches	35 / 2,450	35 / 2,426

Annual accounts[1]	2016	2017
Distributable profit	€399 million	€1,902 million
Net interest income	€3,319 million	€4,172 million
Balance sheet total	€1,393,014 million	€1,727,629 million
Foreign reserve assets (total)	€175.8 billion	€166.8 billion
– Foreign currency	€35.0 billion	€31.2 billion
– Receivables from the IMF	€21.5 billion	€18.3 billion
– Gold	(3,378 t) €119.3 billion	(3,374 t) €117.3 billion
Allocation across the various storage locations		
Frankfurt	(1,619 t) €57.2 billion	(1,710 t) €59.5 billion
New York	(1,236 t) €43.6 billion	(1,236 t) €43.0 billion
London	(432 t) €15.2 billion	(427 t) €14.9 billion
Paris	(91 t) €3.2 billion	–

ECB capital key[1]	2016	2017
Share of subscribed capital	17.9973%	17.9973%
Share of paid-up capital	25.5674%	25.5674%
Amount of the participating interest in the ECB	€1.95 billion	€1.95 billion
Foreign reserve assets transferred to the ECB	€10.43 billion	€10.43 billion

Money market transactions	2016	2017
Open market operations in the euro area[3]		
– Main refinancing operations	€49.12 billion	€13.40 billion
– Longer-term refinancing operations (LTROs)[4]	€481.09 billion	€716.04 billion
of which counterparties of the Bundesbank	€50.07 billion	€87.35 billion
– Banks participating in the main refinancing operations (average) / *of which* via the Bundesbank	93 / 38	43 / 16
Standing facilities[3]		
– Marginal lending facility in the euro area	€0.13 billion	€0.25 billion
– Deposit facility in the euro area	€326.03 billion	€587.13 billion
Asset purchase programmes (Bundesbank's share)[1]		
CBPP3 portfolio	€48.2 billion	€57.3 billion
PSPP portfolio	€269.6 billion	€401.6 billion
CSPP portfolio	€12.0 billion	€32.0 billion

1 On 31 December. **2** Core staff (full-time equivalents) on 31 December 2001 (year before the structural reform began): 14,800. **3** Daily average of the individual amounts outstanding. **4** Including targeted longer-term refinancing operations (TLTROs).

Cash payments	2016	2017
Volume of euro banknotes in circulation (Eurosystem)[1]	€1,126.2 billion	€1,170.7 billion
Volume of coins in circulation (Eurosystem)[1]	€26.9 billion	€28.0 billion
Returned DM banknotes and coins	DM104.8 million	DM85.9 million
Unreturned DM banknotes and coins	DM12.72 billion	DM12.63 billion

Incidence of counterfeit money in Germany	2016	2017
Euro banknotes (number)	82,200	73,000
Euro coins (number)	33,000	32,500

Cashless payments	2016	2017
Payments via the Bundesbank (number of transactions)	4,322.4 million	4,461.3 million
of which via RPS	4,274.5 million	4,382.1 million
of which via TARGET2-BBk	45.0 million	76.4 million
– payment transactions in T2	43.7 million	44.0 million
– settlement of securities transactions in T2S[5]	1.3 million	32.4 million
Payments via the Bundesbank (value)	€159.7 trillion	€179.0 trillion
of which via RPS	€3.1 trillion	€3.2 trillion
of which via TARGET2-BBk	€155.2 trillion	€174.1 trillion
– payment transactions in T2	€153.8 trillion	€160.9 trillion
– settlement of securities transactions in T2S[5]	€1.4 trillion	€13.2 trillion
Share of TARGET2-BBk transactions in EU-wide TARGET2 system (number of payment transactions)	~ 50%	~ 50%

Banking supervision	2016	2017
Number of institutions to be supervised	3,285	3,179
On-site inspections	196	203

Cooperation with foreign central banks	2016	2017
Training and advisory events	204	214
– Number of participants (total)	2,862	3,290
– Number of participating countries (total)	82	99

Selected economic publications (editions/circulation)	2016	2017
Annual Report	1 / 8,000	1 / 8,300
Financial Stability Review	1 / 8,700	1 / 8,300
Monthly Report	12 / 7,500	12 / 7,500
Statistical Supplements	52 / 1,170	52 / 1,170
Research Centre Discussion Papers	52 / 300	39 / 300
Publications in academic journals	67	66

External communication/public relations	2016	2017
Visitors to the Money Museum[6]	2,295	50,559
Written answers to queries	12,877	11,802
Press releases	332	323
Visits to the website (www.bundesbank.de)	5,974,933	5,985,933
Training sessions on counterfeit prevention	1,900	2,000
– Number of participants	39,800	42,000

5 Participation of the German central securities depository (Clearstream Banking AG) since 6 February 2017. **6** The Money Museum was closed for renovation up to 16 December 2016.

Branches of the Deutsche Bundesbank on 1 April 2018

Locality number	Bank location	Locality number	Bank location
720	Augsburg	860	Leipzig
		545	Ludwigshafen
100	Berlin		
480	Bielefeld	810	Magdeburg
430	Bochum	550	Mainz
		700	Munich
870	Chemnitz		
370	Cologne	150	Neubrandenburg
		760	Nuremberg
440	Dortmund		
300	Düsseldorf	280	Oldenburg
		265	Osnabrück
820	Erfurt		
360	Essen	750	Regensburg
		640	Reutlingen
500	Frankfurt/Main	130	Rostock
680	Freiburg		
		590	Saarbrücken
260	Göttingen	600	Stuttgart
450	Hagen	630	Ulm
200	Hamburg		
250	Hanover	694	Villingen-Schwenningen
660	Karlsruhe	790	Würzburg
570	Koblenz		

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Staff of the Deutsche Bundesbank on 31 December 2017*

Item	Staff numbers[1]				Year-on-year changes			
	Total	Regional Offices	Branches	Central Office	Total	Regional Offices	Branches	Central Office
Civil servants	5,841	1,560	1,081	3,200	152	36	– 27	143
Salaried staff	5,586	1,480	1,568	2,538	53	26	1	26
Total	11,427	3,040	2,649	5,738	205	62	– 26	169
of which Trainees	614	127	0	487	– 1	– 11	0	10
Remainder Core staff	10,813	2,913	2,649	5,251	206	73	– 26	159
Memo item								
Core staff *pro rata* (full-time equivalents)	9,965.0	2,658.4	2,426.2	4,880.4	189.9	64.8	– 23.8	148.9

	End-2017	End-2016
* Not included:		
Members of staff on secondment	146	216
Members of staff on unpaid leave	243	255
Members of staff in the second phase of the partial retirement scheme	239	360
1 Of which part-time employees	2,754	2,607
Of which staff with temporary contracts	193	167

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Offices held by members of the Executive Board of the Deutsche Bundesbank

Pursuant to the Code of Conduct for members of the Executive Board of the Deutsche Bundesbank, the *Annual Report* shall disclose details of offices held by Board members on supervisory boards or similar inspection bodies of business enterprises.[1]

The Board members hold the offices indicated below.

- Dr Jens Weidmann, President:
  Chairman of the Board of Directors, BIS;
  Member of the Financial Stability Board (FSB);[2]
  Vice-President of Deutsches Aktieninstitut[2]
- Professor Claudia Buch, Vice-President:
  Member of the Board of Trustees, Monetary Stability Foundation
- Dr Andreas Dombret:
  Member of the Board of Directors, BIS;
  Alternate, Board of Trustees, Monetary Stability Foundation
- Mr Carl-Ludwig Thiele:
  Member of the Board of Trustees, Monetary Stability Foundation
- Professor Joachim Wuermeling:
  Alternate, Board of Directors, BIS

1 Membership of other official bodies is not listed.
2 Ex officio.