

# Annual Report 2014



# Members of the Executive Board of the Deutsche Bundesbank

Dr Jens Weidmann  
*President of the Deutsche Bundesbank*

Sabine Lautenschläger  
*Deputy President of the Deutsche Bundesbank  
(until 26 January 2014)*

Professor Claudia Buch  
*Deputy President of the Deutsche Bundesbank  
(since 13 May 2014)*

Dr hc Rudolf Böhmler

Dr Andreas Dombret

Dr Joachim Nagel

Carl-Ludwig Thiele



## We mourn the death of the following members of our staff

Volker Oliver Förster	7 January 2014
Angelika Martha Heimann	31 January 2014
Ralph Doleys	25 February 2014
Detlef Albert Sievers	5 March 2014
Jürgen Weinrich	15 April 2014
Silvana Erika Zimmermann	1 June 2014
Joachim Erich Frommhold	11 September 2014
Bernhard Fritz Schütt	16 September 2014
Rico Wondrejz	6 October 2014
Andrea Helga Dephilipp	7 October 2014
Bernhard Nehrdich	26 October 2014
Cai Friedrich Kähler	20 November 2014
Anna Ursula Blaschke	25 December 2014

We also remember the retired staff members  
of the bank who died in 2014.

**We will honour their memory.**

**DEUTSCHE BUNDESBANK**

Deutsche Bundesbank  
Wilhelm-Epstein-Strasse 14  
60431 Frankfurt am Main  
Germany

Postal address  
Postfach 10 06 02  
60006 Frankfurt am Main  
Germany

Tel +49 69 9566 0  
Fax +49 69 9566 3077

<http://www.bundesbank.de>

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## Abbreviations and symbols

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	Figure unknown, not to be published or not meaningful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

Discrepancies in the totals are due to rounding.



## ■ Bundesbank round-up

## ■ Bundesbank round-up

### ■ Reform path must be adhered to

In 2014, low inflation rates and a very subdued and uneven economic recovery in the euro area re-ignited the debate on the Eurosystem's monetary policy. In Germany, too, the historically low key interest rates and the large-scale government bond purchase programme that was adopted at the beginning of 2015 generated animated discussion. This also embraced the implications of the accommodative monetary policy for savers, consumers and businesses as well as the risks to financial stability. I shall elaborate on these views below.

Despite the ongoing sovereign debt crisis, heightened financial market stress such as was seen in 2012 fortunately did not recur last year. Instead, government bond premiums – frequently perceived as a barometer of the sovereign debt crisis – contracted further in most of the countries of European monetary union (EMU) that were hit hardest by the crisis. This was partly attributable to the continued progress made by most of these countries in their adjustment efforts. While these countries differ in the degree to which they have so far implemented reform measures, the latter mostly point in the right direction.

It is vital that countries do not now slacken the pace of reform. This is particularly important given that interest rate levels have fallen further, thereby additionally easing government financing conditions. However, I firmly believe that it would be harmful to interpret this easing of the situation as indicating that further reform is not needed. On the contrary, the underlying causes of the crisis can only be lastingly resolved by persistent and resolute efforts. For the individual euro-area member countries, this means concentrating on sustainably consolidating their public finances and improving

the performance and competitiveness of their respective economies. And at the European level, it means strengthening the regulatory framework – the cornerstone of the single currency – such that EMU is unshakably anchored as a union of stability.

### ■ Decision-making autonomy cannot be divorced from responsibility and liability

Under the monetary union's regulatory framework, the Governing Council of the European Central Bank (ECB Governing Council) sets monetary policy in the euro area centrally, whereas the individual member states plan and implement their national fiscal and economic policy largely autonomously. However, this mix of a centralised monetary policy and decentralised fiscal policies entails particular risks in a monetary union, since it can lead to moral hazard by encouraging member countries to build up excessive debt.

Moreover, a lack of budgetary discipline can place strains on the euro area's single monetary policy. Past experience shows that political pressure on the central bank – along with calls for a loose monetary policy and low interest rates – tends to increase in line with mounting public debt. Hence a sound budgetary policy is of paramount importance for a stability-oriented monetary policy. That is particularly true in the euro area, which explains the rationale underlying the budgetary rules enshrined in the Stability and Growth Pact.

One of the consequences of the crisis-related measures implemented over the last few years – including the financial rescue packages – is that the euro-area member countries have come increasingly to share liability for the government debt of individual member states.

However, decision-making and control over national budgetary policy have not been communitised to the same extent. This asymmetry undermines the liability principle, which is a pillar of economic logic. According to the liability principle, whoever makes a decision must also take responsibility – ie assume liability – for the consequences of that decision. In order to durably bolster the framework of monetary union, it is crucial to reinforce this liability principle, which the euro-area countries agreed on when the single currency was launched. In addition, governments again need to adhere more closely to the debt ceilings for government budgets laid down in the Stability and Growth Pact – not simply to comply with the budgetary rules *per se* but to safeguard the stability policy that underlies the single currency.

But this also requires a more stringent approach from the European Commission to ensuring that these rules are observed. My impression is that, at present, the opposite is the case. When it comes to interpreting how the fiscal framework should be implemented, “flexibility” is often invoked as a popular watchword, and the discretionary scope for a flexible interpretation has actually been widened in the last few years by the amendments to the budgetary rules. This discretionary drift threatens to erode the binding effect of the fiscal framework.

Ultimately, Europe will have to bite the bullet and enforce the fiscal rules more vigorously in order to effectively counter this central danger to stability in the monetary union. Alternative scenarios, such as the creation of a fiscal union featuring greater collective liability linked to greater collective control of national budgets, are a non-starter in my view given the present political realities. Neither the governments nor the parliaments nor the populations of the euro-area member countries seem willing to share their fiscal policy sovereignty with other member countries or with the European level. Events at the beginning of 2015 demonstrated that this is true even of member states which are heavily dependent on external financial assistance.

## Monetary policy stance loosened further by asset purchase programme adopted in early 2015

Inflationary pressures in the euro area have been exceptionally low since the second half of 2014, in particular. During the course of last year, the ECB Governing Council responded to this by implementing a series of measures designed to loosen still further their already very accommodative monetary policy stance. These measures included interest rate cuts down to the zero bound and very long-term refinancing operations, which sought to boost bank lending to the private sector. In addition, two programmes were adopted in September 2014 to purchase asset-backed securities and covered bonds. These were followed, in January 2015, by an additional programme of massive government bond purchases, which is often popularly referred to as “quantitative easing”.

The government bond purchase programme is especially controversial. While an accommodative monetary policy stance is currently justified in principle given the muted outlook for euro-area inflation and growth, quantitative easing nevertheless entails its own specific risks. These include the fact that, in the context of monetary union, the large-scale purchase of government bonds is not a monetary policy instrument like any other.

One especially problematic aspect is that the massive government bond purchases will make the Eurosystem central banks the biggest creditors of the euro-area member countries. Fiscal policy and monetary policy will become even more closely entwined as a result, which could amplify political pressure on the Eurosystem in the future to such an extent that the independence of monetary policy might ultimately be compromised. This could pose a problem for monetary policy in the event – in particular – that the euro-area member states grow accustomed to the current exceptionally fa-

avourable financing conditions. Political pressure could intensify particularly at times when the inflation outlook requires the ECB to tighten its monetary policy stance and raise its policy rates.

I believe that these risks make it essential to set the bar for resorting to quantitative easing very high. I remain unconvinced that the macroeconomic situation really warrants deploying this instrument. The often cited danger that a prolonged phase of low inflation rates might lead to a self-reinforcing downward spiral of falling prices, wages, output and employment is still slight. On the contrary, there are some indications that the low and, in some cases, negative inflation rates we have seen over the last few months are merely a transitory phenomenon. Above all, they reflect the sharp fall in oil prices as well as the price-dampening effects of the ongoing economic adjustment processes in the countries hardest hit by the crisis. Another important factor is that the drop in energy prices is bringing significant financial relief to businesses and households alike, which should have a positive knock-on effect on their ability to invest and consume, thus making a slide into deflation even more improbable.

Thus, as long as the low inflation rates do not lead to second-round effects – of which there are no signs whatsoever – I believe there was no need to loosen monetary policy further.

I am aware that many savers are finding the very low interest rates frustrating. Yet the low interest rate levels are affecting not only German savers but all euro-area savers wishing to invest their money safely. And of course, people are not just savers – they are also homeowners, employees, shareholders and taxpayers. Anyone currently wishing to take out a loan, for instance, is glad that borrowing rates are so low. This is true not only of homebuyers but of firms as well. The favourable financing conditions are bolstering the economy and hence, ultimately, safeguarding jobs.

## Economic situation and outlook

The pace of global economic growth accelerated slightly during the course of last year, although the rate of expansion was below pre-crisis levels. In many industrial countries an accommodative monetary policy stance is supporting growth, but the need for fiscal consolidation persists. In the emerging market economies, by contrast, economic expansion is being handicapped by structural bottlenecks and stunted by financial and macroeconomic imbalances. As a result, the contribution of emerging economies to global growth is markedly lower at present than the average over the past ten years. Compared with the expansion rate of global economic output, the volume of global trade rose only moderately in 2014, falling significantly short of expectations. Both global output growth and the volume of global trade are likely to pick up again in the medium term, however.

In the euro area, the economic recovery process which began in spring 2013 lost momentum over the summer of last year. The negative news was concentrated on the core euro-area countries, but was probably attributable in part to the moderate growth of the global economy. By contrast, many of the countries that were hit hardest by the crisis provided positive surprises. Expansionary forces now appear to be gaining the upper hand in these countries after retarding factors had predominated there hitherto as a function of their economic adjustment processes. In the medium term, economic growth ought to pick up further in the euro area, too, on the back of the brightening prospects for international trade, improved financing conditions and substantially lower oil prices.

After getting off to a good start to the year in 2014, the German economy did not perform as strongly in the second and third quarters as was originally expected. But Germany has

now emerged from that sluggish phase faster than many believed possible. One indication of this is the country's strong economic growth towards the end of 2014. The economic upturn is being driven not only by a recovery in industrial activity but also notably by a very buoyant consumer climate. This, in turn, is mainly attributable to the upbeat income and employment prospects. In 2014, real disposable incomes rose distinctly in the context of a marked rise in labour income coupled with muted inflation. With the saving ratio almost unchanged, private consumption rose sharply. Employment likewise reached another historical high despite a weaker-than-expected economic performance. Unemployment remained at a low level.

Overall, the German economy is still in good shape. This is both benefiting the domestic economy and opening up sales opportunities on foreign markets. These openings ought to increase if the economic recovery in the euro area gathers pace as expected and world trade regains momentum. Following the moderate rate of expansion recorded at the middle of last year, the German economy should therefore grow somewhat beyond its normal capacity utilisation level this year, and perhaps even more strongly in 2016.

However, the economic outlook remains fraught with risks, such as geopolitical tensions. What is more, the recovery that has got underway in the euro area is still fragile. For this reason, it needs to be underpinned by economic policy reform measures, particularly in those countries with exceptionally low growth.

Germany's general government budget again recorded a slight surplus last year. While government expenditure was fuelled by a sharp rise in pension and healthcare costs, government interest payments contracted significantly, chiefly thanks to the very favourable financing conditions. From a current perspective, the fiscal balance could deteriorate somewhat this year. A key factor in this will be faster expend-

iture growth due, not least, to higher social spending in the wake of the pension benefits package adopted in mid-2014. There will be another small surplus again this year, however.

Although the economic situation in Germany is good overall, in my view there is no cause for complacency on the part of economic policymakers. This is true especially given that the unfavourable demographic outlook will weigh heavily on the German economy in the medium term. To make matters worse, policy measures such as early retirement on a full pension at the age of 63 are already constraining the labour supply, thereby eroding growth opportunities. In addition, the introduction of a national statutory minimum wage could both harm the employment prospects for the low-skilled and cause the structural unemployment rate to rise over the medium term horizon.

Given the demographic challenges confronting Germany, economic policy should be focused *inter alia* on initiatives to improve the integration of women and older people into the economic process. Moreover, barriers to market entry should be removed, as intensified competition ultimately translates into greater prosperity. Constraints on competition also exist outside Germany, however. A strengthening of the single European market likewise holds out the prospect of growth for German enterprises.

## First pillar of European banking union in place

On 4 November 2014, the ECB assumed responsibility for the direct supervision of 123 euro-area credit institutions currently classified as significant under the Single Supervisory Mechanism (SSM), which is located at the ECB. This figure includes 21 German institutions.

The commencement of the SSM's work means the first pillar of European banking union is now in place. The SSM is a network in which national supervisory authorities and the ECB

cooperate under ECB leadership. Direct supervision of credit institutions classified as significant is performed by joint supervisory teams (JSTs). Responsibility for the direct supervision of less significant institutions (LSIs), by contrast, remains with national supervisors. They are subject to overall scrutiny by the ECB, however. In terms of the number of institutions and total assets, Germany, with just under 1,700 such credit institutions, accounts for nearly half of all LSIs in the SSM.

One of the SSM's objectives is to harmonise the diverse range of national supervisory practices in Europe to form a consistently high supervisory standard. In this way the SSM seeks to take account of the integrated and financially inter-linked nature of Europe's financial markets.

Before the ECB assumed responsibility for directly supervising significant credit institutions in the euro area, the banks concerned were subjected to a comprehensive assessment (CA). This assessment was conducted jointly by the ECB, the European Banking Authority (EBA) and the national supervisors. The purpose of this assessment, which was unprecedented in its comprehensive reach, was to create transparency concerning the resilience of the largest European banks in order to boost confidence in the European financial sector. The announcement of the CA alone prompted a number of European banks to considerably improve their capital levels in the run-up to the CA. It is not least because of this that the CA can be considered a success.

The CA consisted of two parts: a comprehensive asset quality review (AQR) of banks' balance sheets and a stress test developed together with the EBA.

The chief criterion in the AQR was supervisors' assessment of whether the banks' balance sheet assets were valued appropriately, ie sufficiently conservatively. Accordingly, the assumptions made were often stricter than under currently applicable accounting rules. This

approach produced results that were comparable across all banks reviewed. In addition, the results tended to correspond more closely to supervisors' more prudent approach than is the case with financial statements.

In the stress test, an adverse macroeconomic scenario involving a severe economic slump, falling prices in the financial and real estate markets and a rise in banks' funding costs was simulated over a three-year horizon. In order to pass the stress test, banks needed to demonstrate that they maintained a Common Equity Tier 1 (CET1) capital ratio of at least 5.5% after incurring such stress and after applying the stricter regulatory definitions of capital that will be introduced in the coming years. The outcome of the stress tests showed that German banks are adequately capitalised and will be able to meet the forthcoming regulatory capital requirements even in such a stress scenario. This positive outcome is doubtless due partly to the German banking sector's progressive build-up of capital following the financial crisis.

## Second pillar of European banking union also making rapid progress

Further progress was also made in 2014 towards creating a regulatory regime for the recovery and orderly resolution of banks without jeopardising financial stability or using taxpayers' money where possible. This project constitutes the second pillar of European banking union.

In this context, the EU regulation setting up a Single Resolution Mechanism (SRM) created both a corresponding European resolution body and a single, bank-financed resolution fund. The latter is open to all member states participating in the SSM.

The SRM, which will enter into force in 2016, will largely restore the liability principle, described earlier, for banks, too, following a financial crisis in which institutions required



massive injections of taxpayers' money to avert even worse damage. It will thus realign more closely the freedom of entrepreneurial decisions and responsibility for their consequences, in line with a central principle of market economies.

Against this background, the Bank Recovery and Resolution Directive (BRRD), which is applicable to all EU member states, was adopted on 12 June 2014. It harmonises recovery and resolution instruments at the European level. The directive envisages the creation of national resolution agencies, the introduction of preventive measures and extensive powers for supervisory and resolution agencies to intervene in institutions' activities.

The SRM and BRRD have created a clear hierarchy of liability in which banks' shareholders and creditors will be the first parties to bear the losses in a resolution event. The taxpayer will be the last to have to pay, and only under certain conditions. The bail-in tool is the prime instrument for first involving shareholders and creditors in the funding of a restructuring or resolution event. It is designed to ensure that owners and lenders participate in banks' losses by converting their claims or debt instruments into capital or (partly) writing them off according to a predefined liability cascade.

The BRRD has been implemented in Germany through the Act on the Recovery and Resolution of Institutions and Financial Groups (*Gesetz zur Planung der Sanierung und Abwicklung sowie Restrukturierung von Instituten und Finanzgruppen*, Recovery and Resolution Act), which entered into force on 1 January 2015. The Financial Market Stabilisation Agency (FMSA) will initially serve as Germany's national resolution agency. In a second step, the FSMA will be incorporated into the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*, or BaFin) as an "agency within an agency" at some later time.

## **Sovereign loans should be backed by capital**

The SRM is undoubtedly a key step on the road to a more stable banking system. However, neither of the two existing pillars of European banking union will completely solve the underlying problem of the, in some cases, very close ties between banks and sovereigns. This can lead to a potentially threatening nexus in a crisis event. I have therefore repeatedly pointed out that, over the medium term, the existing regulatory preferential treatment of lending to sovereigns needs to be brought to an end or at least substantially scaled back in order to loosen the sovereign-bank nexus. The recent debate on the financial situation in Greece and the state of Greek banks has highlighted just how close this nexus can be. This discussion has also shown that loans to sovereigns are not risk-free. Banks' claims on sovereign borrowers should therefore be backed in future by capital commensurate with the risk and should also be subject to large exposure limits. Given the particular significance of this issue, the first of the two analytical articles in this *Annual Report* is devoted to the privileged treatment of sovereign debt.

## **Reforming the global financial system**

In 2008, the G20 heads of state or government agreed on fundamental regulatory reform in order to make the global financial system less vulnerable to systemic crises. Key elements of this reform agenda were either implemented or set in train on schedule by the resolutions adopted by the G20 in Brisbane at the end of last year. Banks' resilience has been improved by elevated quantitative and qualitative capital requirements under the Basel III framework. Common standards for the leverage ratio, funding requirements and the amount of liquidity to be held, as well as reforms to remuneration practices, are likewise helping the banking system to become more resilient.

Another central challenge that still remains is to develop ways of resolving banks in future which are currently regarded as “too big to fail”. At present, such credit institutions can reasonably assume that, in a severe distress event, they will be rescued using public funds in order to avert damage to the financial system as a whole. This potentially encourages them to take excessive risks and thus pose a danger to financial stability.

There are, above all, two outstanding issues which need to be addressed in order to solve the “too-big-to-fail” problem. One is to enforce the cross-border recognition of resolution measures. The other is that global systemically important banks (G-SIBs) should, in future, hold additional capital as a safety buffer which can be used to absorb losses in the event that recovery or resolution becomes necessary. The Financial Stability Board (FSB) published a consultative document on this issue in November 2014, and comprehensive impact studies are envisaged for this year. In the light of the financial crisis, the new standard, which will be binding on all G-SIBs, should be oriented towards increased funding needs in a crisis event and, as planned, should be completed by year’s end.

Complementary international initiatives are aimed at transforming the shadow banking system into a resilient, market-based funding system. On the basis of current work, in 2014 the G20 heads of state or government adopted an ongoing timetable for 2015 for supervising and regulating the shadow banking system.

To ensure the effectiveness of all reforms, the internationally coordinated standards and agreements need to be systematically transposed into national law in each country in good time.

## Progress in the area of macroprudential policy

Alongside the progress being made in the areas of European banking union and internation-

al financial market regulation, rapid advances were also made in the field of macroprudential policy. This is a supervisory approach designed to identify, assess and mitigate risks to the stability of the financial system as a whole.

In this connection, the European Systemic Risk Board (ESRB) adopted a joint procedural framework to report national macroprudential measures and issue recommendations. In addition, the ESRB has published *inter alia* a comprehensive manual for applying macroprudential instruments.

Whereas the ECB has thus far not exercised its new macroprudential powers under the SSM, some euro-area countries have already deployed a broad range of instruments. Depending on national exigencies and risks, risk weights have been adjusted, liquidity measures taken, microprudential (ie single-entity) supervision intensified or capital buffers introduced.

In Germany and other European countries, developments in the real estate markets were a key focus of macroprudential interest in 2014. It is particularly the potential emergence of a credit-funded real estate price bubble which could pose a threat to financial stability there. According to an *ad hoc* survey of 116 banks in 24 towns and cities conducted by the Bundesbank in the first quarter of 2014, in the past few years, a substantial share (around 30%) of German sustainable loan-to-value ratios identified in Germany were over 100%. This means that, in such cases, the mortgage lending value recognised for the posted collateral is less than the amount lent. This might point to a structural vulnerability in the German banking system in the event that residential real estate prices fall and default rates concurrently rise. On the whole, however, the data on mortgage loan developments in Germany show no signs of a destabilising nexus between lending and price developments in the real estate market. There are also no indications so far that banks have been structuring the terms of their mortgage loans in a procyclical manner. Moreover, in the

towns and cities where real estate prices have been rising rapidly, there has been no evidence that either credit growth or the share of borrowed funds have been growing especially dynamically.

## ■ Smooth migration to SEPA

With effect from 1 August 2014, businesses, public authorities and associations in all euro-area countries are now required to use the SEPA format to settle euro-denominated credit transfers and direct debits. Migration to this new format went smoothly. Consumers have been granted a transition period extending until 1 February 2016. During this time, individuals may continue to use the combination of a bank account number and a sort code in their bank transactions instead of the new IBAN (international bank account number). This makes allowance, in particular, for the fact that some individuals view the transition to SEPA as inconvenient, as they find using IBANs an unfamiliar and, in some cases, complicated process. Migration to the new format marked the definitive launch of the Single Euro Payments Area (SEPA). As a result, cross-border euro payments can now be settled as cheaply, quickly and securely as national payments. The Bundesbank has helped to shape SEPA's implementation from the outset and encouraged open discussions between all stakeholders.

However, the migration of credit transfers and direct debits to SEPA is only the first step on the road to a single payments market; neither card payments nor innovative online and mobile phone payment services are yet subject to harmonised European standards. The Euro Retail Payments Board (ERPB) is therefore driving forward the next steps to foster an integrated European retail payments market. In this new European body, users and retail payment services providers are represented in equal number. The ERPB is chaired by the ECB and includes representatives of the Eurosystem national central banks, such as the Bundesbank.

The second analytical article of this *Annual Report* discusses digital structural change in payment services and outlines the challenges this poses in terms of payment security and the regulatory environment.

## ■ TARGET2-Securities on schedule

In 2014, the Eurosystem's TARGET2-Securities (T2S) project made major strides towards the launch of a single pan-European securities settlement platform in mid-2015. At the end of March 2014, the four central banks running the project (Banco de España, Banque de France, Banca d'Italia and the Deutsche Bundesbank) delivered their jointly developed software to the Eurosystem on schedule. The user testing phase began on 1 October last year. Participants will migrate to T2S in four waves between June 2015 and February 2017. The German central securities depository (CSD) Clearstream Banking Frankfurt will be part of the third wave in September 2016.

## ■ Renminbi clearing in Frankfurt, Germany's financial hub

Germany is China's most important trading partner in Europe. To continue building on these economic relations, it is important to have high-performance payment systems. An efficient clearing system which enables direct settlement of renminbi (RMB) payments with the People's Republic of China facilitates cross-border business for enterprises and banks as well as breaking down market barriers, especially for small and regional institutions.

In March 2014, China decided to appoint the Frankfurt branch of the Bank of China as the first RMB clearing bank in the euro area, thus taking another important step forward in opening up its financial market. The Bundesbank has supported this initiative from the outset and

played an advisory and coordinating role in its implementation.

## Statistics provide a broader and deeper range of information

In 2014, the Bundesbank implemented several ambitious initiatives to address the growing demand for detailed and coordinated data as the basis for economic and macroprudential analysis. It brought its macrostatistical accounting systems in line with the revised international standards, as well as expanding these systems and integrating them more closely with one another. As a result, the balance of payments statistics, the international investment position and the financial accounts now provide more granular data. Conceptually, they are fully harmonised with the Federal Statistical Office's national accounts, which have likewise been aligned with the new standards.

By joining the International Monetary Fund's Special Data Dissemination Standard Plus in 2014, Germany played its part in closing gaps in the data which had been exposed by the global financial crisis. Given the high quality of Germany's statistics and the close cooperation between the Federal Ministry of Finance, the Federal Statistical Office and the Bundesbank, Germany was one of the first nine countries in the world to implement this ambitious new standard. This means that better information is now available, in particular, for financial stability analysis and crisis prevention.

In addition, the Bundesbank's new Research Data and Service Centre (RDSC) began its work in 2014. The RDSC enables external researchers and analysts, too, to access selected microdata in compliance with legal requirements. The centre will progressively develop, process and supply additional data sets for research purposes.

## Expanded education programme for the general public

The Bundesbank not only places great importance on economic literacy but also plays an active role in this field of work. Its educational activities in this area are targeted, in particular, at teaching staff, school pupils and students of economics. One of the key aims is to improve public understanding of the importance of a stable currency and financial stability. To help achieve this, the Bundesbank offers education on basic concepts and principles in the fields of money, currency, the financial system and central banking. The ongoing financial and sovereign debt crisis and the current phase of low interest rates have significantly increased the demand for education in these subjects. The Executive Board therefore decided to further expand the Bundesbank's economic education programme.

In addition to its educational services for the general public, the Bundesbank has always placed a high premium on internal education and training for its own staff. In 2014, its measures in this area continued to centre around the launch of the SSM, which has led to greater demand for highly-qualified staff. To help ensure efficient and effective banking supervision in Europe, the Bundesbank has further increased its educational and training activities in this field. In cooperation with the ECB, other national central banks and supervisory authorities, the Bundesbank continued to provide an extensive qualification programme for supervisors in 2014.

## Board adopts Gender Equality Action Plan and builds on measures to promote a healthy balance between work and family life

In May of last year, the Bundesbank's Executive Board adopted the Gender Equality Action Plan, a new initiative to foster a sustainable, equal-opportunity corporate culture. The Gender Equality Action Plan aims to make managers, in particular, more alert to the issue of equal opportunities while also raising awareness among all Bundesbank staff. It is a matter of great importance to me personally to push ahead with the plan's goals on a continuous basis. The Executive Board will therefore be reviewing the progress made in its implementation on a regular basis.

In mid-September 2014, the Bundesbank opened its own in-house day nursery. The flexible conditions the nursery offers (such as all-day childcare, including during school holidays) are ideal for promoting a healthy balance between work and family life.

## Inclusion of staff with disabilities

In July 2014, the Bundesbank and its employee representation committees adopted an agreement on the inclusion of staff with disabilities. This agreement builds and improves on the Bundesbank's existing rules concerning

the rights of staff with disabilities, thereby updating, improving and aligning these provisions with the UN Convention on the Rights of Persons with Disabilities. The aim is to ensure true equality of opportunity and make the Bundesbank a barrier-free community from the outset, enabling all individuals to participate on an equal footing according to their specific abilities and wishes.

## Management principles

To strengthen management skills at the Bundesbank, an initiative was launched in summer 2014 to develop a set of management principles. These values-based principles are designed as a guide for day-to-day management and staff interaction at the Bundesbank which will help to motivate all staff members and enhance the Bundesbank's attractiveness as an employer. Both managers and employees are closely involved in defining the management principles. Following last year's successful launch, the Bundesbank will continue and expand this process in 2015.

I would like to take this opportunity to thank all members of staff, on behalf of the entire Executive Board and myself, for their input and dedication in 2014. It is entirely thanks to their skill and hard work that the Bundesbank was able to successfully perform its varied and demanding tasks last year. My thanks also go to the staff representation committees for their invariably constructive cooperation.

Frankfurt am Main, March 2015



Dr Jens Weidmann  
President of the Deutsche Bundesbank



## Reducing the privileged regulatory treatment of sovereign exposures

*The negative consequences of the sovereign-bank nexus were thrown into particularly sharp relief in the wake of the financial and sovereign debt crisis. For one thing, doubts about government solvency led to a deterioration in the credit quality of banks; for another, bank distress triggered government support measures, thus calling into question the sustainability of public finances. This resulted in the emergence of a self-reinforcing feedback loop harbouring considerable risks to financial stability and macroeconomic growth. The European banking union can play a major part in severing the link between sovereign and bank risks – through the introduction of a bail-in mechanism, for example. It cannot solve the underlying problems, however.*

*The close nexus between banks and sovereigns is due, among other things, to the fact that sovereign exposures enjoy privileged regulatory treatment under both international and European rules. Such preferential treatment is revealed, in particular, by the zero weighting of exposures to sovereign debtors in the country's own currency and their exemption from applicable limits on large exposures under the existing capital regime. Moreover, the future liquidity regulation provides for preferential recognition of sovereign exposures. However, the crisis has shown that the assumption underlying the cited preferential rules – that claims on government are per se especially immune to default or liquid – does not generally hold true.*

*The privileged regulatory treatment of sovereign exposures makes it more difficult to price their risks appropriately and weakens incentives for a sound fiscal policy. Furthermore, it encourages an agglomeration of risks on banks' balance sheets, which leads to a stronger concentration of solvency risks in the banking system. This also complicates efforts to accomplish a restructuring of sovereign debt and an orderly resolution of banks. The privileged treatment of sovereign debt can thus increase the volume of support measures to be borne by general government. If private borrowers are crowded out as a result of regulation, economic growth can also be impaired, which, in turn, has negative implications for public finances.*

*For these reasons, the existing privileged treatment of sovereign debt should be brought to an end or, at least, substantially reduced. In this connection, there are five main areas where action has to be taken: abolishing the zero weighting in the capital regime; applying the limits on large exposures; amending the liquidity regulation; enhancing the transparency of risk exposures to sovereign debtors; ensuring consistent regulation of all financial intermediaries. As such a reform may have considerable repercussions for investors as well as for sovereign issuers, its implementation has to be planned as a medium to long-term process.*

## Misplaced incentives of preferential rules in the European monetary union

*Privileged treatment of sovereign exposures in banking regulation encouraged close nexus between governments and banks*

Banks traditionally play a prominent role in financing governments and, not least for that reason, often enjoy privileged treatment.<sup>1</sup> Giving privileged status to sovereign exposures in banking regulation has, however, encouraged the growth of close links between governments and banks (see the box on pages 25 to 27). The debt crisis in the euro area has intensified these links – in some cases also in association with monetary policy decisions – with negative repercussions in both directions (sovereign-bank nexus).

In a market economy, there has to be a good reason for special rules such as the privileged regulatory treatment of sovereign exposures<sup>2</sup> because they can easily lead to an inefficient allocation of resources and thus to welfare losses. In actual fact, however, the existing preferential treatment of sovereign exposures cannot be justified either as a corrective measure for market failure or with reference to distribution policy objectives.

*Unjustified preferential rules lead to allocative distortions*

The privileged regulatory treatment of sovereign debt influences banks' investment decisions directly in favour of such debt instruments. This produces indirect effects on the market prices of other forms of investment, non-banks' portfolio decisions as well as the financing costs and channels of non-sovereign debtors. The preferential rules may thus have many different adverse implications in terms of misaligned incentives and economic distortions. They can widen governments' borrowing options, weaken incentives for a sound fiscal policy, lessen risk diversification in the portfolios held by banks and, ultimately, also place a strain on financial stability.

The existing prudential regulations granting preferential treatment to sovereign exposures should therefore be amended in the medium

to long term so that the regulatory system does not provide any general incentives for preferring sovereign debt over other investments.

### ■ The sovereign-bank nexus

The various forms of preferential regulatory treatment for sovereign debt are not the sole reason for the sovereign-bank nexus, however. Banks hold sovereign debt in their portfolios because of fundamental economic considerations, too. They need a stock of safe and liquid assets to reduce their vulnerability to negative liquidity and price shocks.<sup>3</sup> Government bonds with a comparatively high credit rating and highly liquid markets fulfil this requirement. That is why they are also of major importance as collateral for central bank operations and in the interbank market and thus for liquidity management. These incentives for holding sovereign debt would continue to exist if its preferential regulatory treatment were removed. Nevertheless, they do not justify the strong focus on domestic sovereign debt in many banks' portfolios, as these instruments are not necessarily particularly safe or liquid. The economic criteria for holding sovereign debt could also be met, or even satisfied more effectively, by means of more strongly diversified sovereign debt portfolios.

*Banks hold sovereign debt because of fundamental economic considerations, too*

Exposures to domestic government (or to a country in which the bank concerned conducts a significant part of its business) are characterised in particular – compared with other forms

<sup>1</sup> See also C W Calomiris and S H Haber (2014), *Fragile by Design: The Political Origins of Banking Crises and Scarce Credit*, Princeton University Press.

<sup>2</sup> In this article, sovereign debt (sometimes referred to as "sovereign exposures") refers to all claims on government (government bonds, loans, claims arising from derivatives contracts etc).

<sup>3</sup> See also M K Brunnermeier and M Oehmke (2012), *Bubbles, Financial Crises, and Systemic Risk*, NBER Working Paper 18398, National Bureau of Economic Research.



## Preferential rules for sovereign debt: a brief review

### Capital regime

The applicable capital regime essentially requires credit institutions to back their exposures, ie including those to governments, with a risk-appropriate amount of own funds. The riskiness of such exposures is evaluated using what is known as the credit risk standardised approach (CRSA) or internal bank procedures (internal ratings-based or IRB approaches).

The choice of risk weight to be applied under the CRSA is based on external ratings.<sup>1</sup> The framework of the Basel Committee on Banking Supervision (BCBS) allows exemptions to be made to the regulatory risk weighting of exposures to public debtors. This option was used under European banking law, making it possible under the CRSA to assign a regulatory risk weight of 0% – irrespective of the debtor's actual default risk – to exposures to public debtors (and central banks) of member states which are denominated and funded in the debtor's domestic currency.<sup>2</sup> In addition, credit institutions may assign a reduced risk weight to exposures to central governments (and their central banks) in third countries, provided that supervisory and regulatory arrangements which are at least equivalent to those applied in the EU are in force in the third country,<sup>3</sup> the exposure is denominated and was funded in the domestic currency of the third country, and the competent authorities of the third country assign a lower risk weight to such exposures. This exemption also applies to exposures to regional governments and local authorities; this means that joint liability is assumed to exist within the country in question.

Banks which use internal models to assess risk can likewise choose not to back sovereign exposures with own funds. Although

the internal approach provides, in principle, for adequate risk weighting, a floor (as is common for other asset classes) is not in place here – neither for the probabilities of default that the banks estimate for the respective debtors when using these approaches, nor for the risk weights linked to these probabilities of default. Moreover, a concept known as partial use allows the capital backing of sovereign debt to be determined on a permanent basis according to the standardised approach regime under certain circumstances. Hence, a 0% risk weight may be assigned under the pre-conditions described above, even if internal models would produce different results.

### Limits on large exposures

The large exposure regime fulfils its purpose of preventing the emergence of concentration risks by limiting the credit risk exposures of a credit institution or group of institu-

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**1** The following risk weights are to be assigned to sovereign exposures under the CRSA (here: Standard & Poor's rating): AAA to AA-: 0%; A+ to A-: 20%; BBB+ to BBB-: 50%; BB+ to B-: 100%; below B-: 150%; no rating: 100%.

**2** For information on the CRSA, see Bank for International Settlements, International Convergence of Capital Measurement and Capital Standards: a Revised Framework; comprehensive version dated June 2006, paragraph 54, the contents of which were transposed verbatim into Article 114 (4) of the Capital Requirements Regulation (CRR, Regulation (EU) No 575/2013). By contrast, the risk weighting of sovereign bonds outside the European Economic Area is based on rating grades (Article 114 (2) of CRR). For the IRB approach, Article 150 of CRR allows sovereign exposures to be exempted from the IRB approach's scope of application if they are exposures to central governments or central banks to which a 0% risk weight has been assigned under the standardised approach. The European Banking Authority (EBA) has been tasked with developing guidelines regarding the permissible scope of these exemptions by 2018.

**3** These third countries comprise Andorra, Australia, Bahrain, Bermuda, Brazil, Canada, Chile, Guernsey, Hong Kong, India, Isle of Man, Japan, Jersey, Jordan, Mexico, Monaco, New Zealand, Saudi Arabia, Singapore, South Africa, South Korea, Switzerland, Turkey, USA (as at 25 November 2013).

tions to a given borrower or borrower unit. At the European level, the large exposure regime was revised by Article 387 *et seq* of CRR, which is the relevant directly applicable regulation for banks. This legislation defines a large exposure as an institution's exposure to a client or group of connected clients, the value of which is equal to or exceeds 10% of the institution's eligible capital (Article 392 of CRR). The limit is set at 25% of the institution's eligible capital.<sup>4</sup>

Bank exposures to sovereigns are exempt from the large exposure regime according to Article 400 (1) letter (a) of CRR provided they have been assigned a regulatory risk weight of 0%.<sup>5</sup> This amplifies still further the impact of the above-mentioned exemption regarding the capital backing of sovereign bonds. The preferential regulatory treatment thus allows euro-area credit institutions to accumulate unlimited amounts of exposures to privileged government debtors, irrespective of their actual credit quality and potential concentration risks.

### Liquidity regulation

The prudential framework<sup>6</sup> published by the BCBS in December 2010 envisages two liquidity provisions as minimum requirements for the strengthening of credit institutions' resilience.

- The liquidity coverage ratio (LCR) requires institutions to hold an adequate stock of high-quality liquid assets (HQLA) at all times. These assets need to be sufficiently liquid, even in a significant stress scenario,<sup>7</sup> and enable institutions to independently cover their expected total net cash outflows over a period of up to 30 days. The LCR is to be phased in starting in October 2015.
- The net stable funding ratio (NSFR, introduction scheduled for 2018) is designed to limit the maturity transformation per-

formed by institutions by setting a minimum level of stable, long-term funding contingent on the exposures entered into.<sup>8</sup>

The Basel liquidity requirements were implemented in the EU by way of the CRD IV/CRR; the specification of the LCR was formulated in a Commission delegated regulation.<sup>9</sup> Within the European Union, all marketable bonds issued by central governments of the EU – including those treated as such and issued by regional governments, local authorities and public sector entities – can, therefore, be counted towards the liquidity buffer and are regarded as level 1 assets,<sup>10</sup> irrespective of the bonds' credit quality and without restrictions on volume or a haircut. The implementation of the NSFR in EU law is still outstanding, however.<sup>11</sup> It is presumed that, under the NSFR, government

<sup>4</sup> If the large exposure limit is nevertheless exceeded in the non-trading book, various administrative measures and sanctions may be imposed in accordance with Article 67 of Directive 2013/36/EU, ie the Capital Requirements Directive (CRD IV).

<sup>5</sup> If sovereign debtors carry a 20% risk weight, the competent authorities may partially or fully exempt them from the large exposure limits (Article 400 (2) letter (b) of CRR).

<sup>6</sup> The revised version of the 2010 framework was published in the form of "Basel III: The liquidity coverage ratio and liquidity risk monitoring tools" of January 2013 and "Basel III: The net stable funding ratio" of October 2014.

<sup>7</sup> The scenario incorporates both idiosyncratic and market-wide stress factors, including the withdrawal of customer deposits and simultaneous draws on previously granted credit facilities.

<sup>8</sup> The ratio of available stable funding (ASF) and required stable funding (RSF) must equal at least one as from the scheduled 2018 introduction date.

<sup>9</sup> The delegated act was published in the Official Journal of the European Union on 17 January 2015.

<sup>10</sup> In addition, diversification within the HQLA is envisaged to prevent the emergence of concentration risks, although government bonds (along with many other level 1 assets) are exempted from certain constraints imposed by the competent authorities.

<sup>11</sup> According to Article 510 of CRR, the EBA, in consultation with the European Systemic Risk Board (ESRB), is tasked with submitting a report on the suitability of the NSFR, its impact on the business and the risk profile of credit institutions and on adequate methods for determining stable refinancing needs by 31 December 2015. If appropriate and taking into account these reports, the European Commission shall draw up a legislative proposal by 31 December 2016.

bond holdings classified as level 1 assets under the LCR only need to have a required stable funding (RSF) factor of 5%, irrespective of their residual maturity. The NSFR would thus make government bonds even more attractive than they already are due to their regulatory treatment.

Additional preferential regulatory treatment is embedded in Article 400 (2) letter (h) of CRR, which allows sovereign debt held to comply with liquidity requirements and meeting certain rating requirements to be exempted from the large exposure regime.

### Regulations for insurers

Under the Solvency I regulations, which are still in force, investment risks are not taken into account when setting an insurance company's own funds requirements.<sup>12</sup> Under Solvency II, however, which is to be phased in from 2016 onwards, insurers

will be required to back their investments with own funds, the amount of which depends on the risk inherent in the individual investments.<sup>13</sup> However, it appears that the Solvency II regime will likewise exempt sovereign bonds issued by EU member states in domestic currency. This would mean that such sovereign exposures would be largely excluded from the calculation of risk capital under the Solvency II standard model,<sup>14</sup> irrespective of their rating.

<sup>12</sup> Capital requirements are essentially determined via the liability side of the balance sheet, whereas the allocation of assets is governed by general investment guidelines and a catalogue of eligible investment types. Thus, insurers are allowed to invest up to 50% of their restricted assets in debt instruments and in loans (see BaFin Circular 4/2011 (VA), B.3.4 Mix). A percentage of no more than 30% per depositor applies to investments in one and the same public issuer (see section 4 (2) of the Investment Regulation (Anlageverordnung)).

<sup>13</sup> Quantitative investment restrictions are no longer envisaged under Solvency II.

<sup>14</sup> No exemptions are in place for the measurement of risk using an internal model.

of investment – by the close relationship that can exist between the risks of sovereign debt instruments and domestic banks. This is a problem, above all, in crisis situations. In the debt crisis, this close interlinkage of banks and governments sparked self-reinforcing feedback effects.

Struggling banks deemed to be systemically important were, on the one hand, often stabilised by government support measures. This places a strain on public finances in the long term. In some countries, such strains (and further ones expected in the future) contributed at times to sharply climbing risk premiums on sovereign debt.<sup>4</sup> This creates perceptible strains for highly indebted countries, even though the risk premiums only gradually make themselves felt in the average interest rate paid on sovereign debt. Implicit and explicit government guarantees for financial institutions have amplified this link.<sup>5</sup>

On the other hand, unsound public finances had negative repercussions for the banks. Since

the outbreak of the debt crisis, for example, banks' capital market-based financing costs in particular have shown a markedly stronger correlation with those of their national governments. For one thing, this is likely to reflect the direct negative effects of a potential (partial) default of sovereign debt, such as unrealised losses which weaken banks' capital base. For another, indirect effects emerge, too, via the remaining bank loans, as the solvency of the other borrowers also suffers.<sup>6</sup> The combination of these two effects is likely to have led to higher costs and placed a strain on profitability, especially among banks which obtain much of

*... while stressed public finances weighed on bank balance sheets*

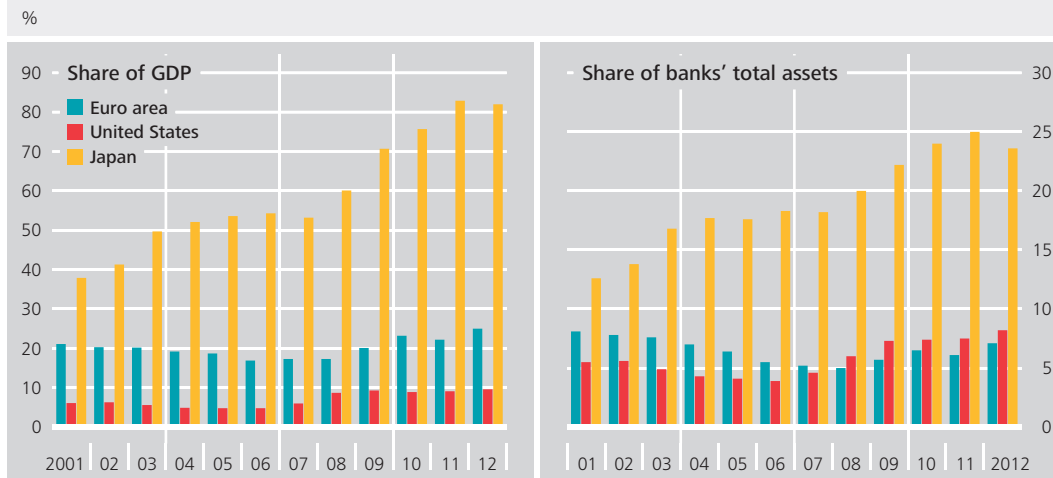
*Government measures to support weak credit institutions placed a strain on public finances, ...*

<sup>4</sup> See, for example, S Gerlach, A Schulz and G B Wolff (2010), Banking and Sovereign Risk in the Euro Area, CEPR Discussion Paper No 7833.

<sup>5</sup> See also German Council of Economic Experts, Jahresgutachten 2014/15, November 2014.

<sup>6</sup> From an investor's perspective, weak government finances also tend to weaken the assumed (ie implicit) government guarantee for systemically important banks and thus make their market financing more costly compared with similarly important institutions of other member states.

### Banks\* domestic sovereign exposures: an international comparison



Source: IMF, International Financial Statistics, 2014. \* Excluding central banks.

Deutsche Bundesbank

their funding through the capital market. The effect is all the greater, the more sovereign debt the banks hold. The privileged treatment of sovereign debt principally boosted this particular leg of the sovereign-bank nexus.

An international comparison reveals that the nexus is especially pronounced in Europe's bank-based financial system. Despite similarly high government debt ratios, government financing via banks in the euro area relative to GDP is more than twice as high as in the United States (see the chart above).

## Implications for financial stability

*Preferential rules weaken market discipline and risk diversification and can therefore impair financial stability*

The preferential rules play a major role in encouraging the emergence of negative interactions between sovereigns and banks, weaken market discipline and risk diversification and can therefore also place a strain on financial stability. In the case of private issuers, climbing risk premiums and ratings downgrades normally result in increased risk provisioning or portfolio restructuring at banks, which, in turn, prompt borrowers to reduce risk. Exposures to public sector issuers, by contrast, can continue to be increased despite, or even because of, rising risk premiums and rating

downgrades. Banks in crisis countries therefore have scope to build up substantially larger exposures on their books than would be the case without preferential regulatory treatment.<sup>7</sup> This means that banks are exposed to considerable balance sheet risks, but not just when risk premiums rise. The concentration of sovereign solvency risks in the banking system, which is higher than it would be without preferential rules, and the accompanying elevated balance sheet risks also make the restructuring of sovereign debt more difficult. Likewise, the orderly resolution of banks is likely to be more complicated because, if the preferential treatment afforded to sovereign debt drives up the concentration of domestic government bonds in banks' balance sheets, the volume of support measures to be borne by general government tends to increase.

On the whole, then, this preferential treatment not only contributes to risk radiating out more strongly from sovereigns to banks; it also amplifies the spillover of risk from banks to sovereigns.

<sup>7</sup> However, it should be noted in this context that, even if the impact of regulatory standards is limited, a bank's internal risk management system may impose binding financial requirements regarding the volume of exposures to sovereign debt. The more the bank in question is subject to the disciplining effect of the capital market, the stronger this dampening effect is likely to be.

*Weak banks lacking sustainable business models, in particular, invest in domestic government bonds*

Current research suggests that large banks with a weaker capital base, in particular, have an incentive to take on especially large exposures to public sector issuers and, thanks to the preferential regulatory treatment, are able to do so.<sup>8</sup> In times of crisis, banks might particularly ramp up their exposures to their domestic government just as risk premiums are rising. This approach, which banks might fund by raising additional funds from the central bank, would allow them to earn the spread between the high-yield bonds issued by the domestic sovereign and the lower funding costs (carry trades). In this way, weak banks lacking sustainable business models, in particular, might “gamble for resurrection”.<sup>9</sup> Not only does this increase stability risks; it also weakens the ability of the markets to discipline fiscal policy because the stronger demand for sovereign debt tends to drive risk premiums down.

*Preferential treatment places a strain on financial stability in the euro area in particular*

In the euro area’s current regulatory framework, in particular, in which member states are largely responsible for their own economic and fiscal policies, the preferential treatment afforded to sovereign debt entails grave problems for financial stability and ultimately also for the disciplining effect on fiscal policy. This set-up is designed to safeguard sound public finances in two ways. First, suitable rules were established at the European level but, despite the adjustments made during the crisis, these still only have limited firepower owing to the inability to intervene in national fiscal policy. Second, rising capital market rates, which investors demand as compensation for the growing risk of default when public finances are unsound, are supposed to have a disciplining effect on fiscal policy. The effectiveness of this second path hinges on insolvencies of individual governments ultimately being possible without severely impairing financial stability. However, since preferential treatment allows banks, or even encourages them, to hold large stocks of government debt on their balance sheets, the restructuring of sovereign debt exacerbates the risk posed to financial stability. Yet looming risks to financial stability were one

of the decisive reasons why key principles of the original framework underpinning the euro area were not applied consistently during the sovereign debt crisis.

## Implications for public finances

Some argue in favour of the preferential treatment of government debt by claiming that it drives down interest payments, thus easing public finances. This, they say, is because the preferential treatment fuels banks’ demand for sovereign debt and depresses yields.

The actual effect on the issue yield of sovereign debt depends on how much additional demand is created and on the relative interest rate elasticities of the supply and demand of capital. The extent to which the government budget is eased depends on the level of public debt; the easing effect climbs as debt levels grow and credit quality declines. However, this contrasts with the strain which might be placed on the government budget if the economic developments turn out to be less favourable because private borrowers are crowded out as a result of regulation. Furthermore, if the interest to be paid by government is lowered, the measure of the opportunity costs of public spending is distorted. This can lead to an inefficient expansion of debt and government activity, with the result that budgets tend to become less sound.<sup>10</sup> Overall, then, it is by no means certain that

*Easing effect of preferential treatment on government budget debatable*

<sup>8</sup> See also V V Acharya and S Steffen (2013), The “Greatest” Carry Trade Ever? Understanding Eurozone Bank Risks, NBER Working Paper No 19039, and, for Germany, C M Buch, M Kötter and J Ohls, Banks and sovereign risk: A granular view. Deutsche Bundesbank Discussion Paper No 29/2013.

<sup>9</sup> In the current environment, the risk of more costly rollover financing is minimised by the forward guidance provided by the ECB’s Governing Council. The haircuts on Eurosystem collateral should also be taken into account when considering the attractiveness of carry trades.

<sup>10</sup> See also Wissenschaftlicher Beirat at the Federal Ministry of Finance (2014), Der Staat als privilegierter Schuldner – Ansatzpunkte für eine Neuordnung der öffentlichen Verschuldung in der Europäischen Währungsunion, Opinion 02/2014.

preferential regulatory treatment takes pressure off the general government budget.

## Implications for the real economy

*Preferential regulatory treatment of sovereign exposures can impair aggregate growth potential*

The preferential regulatory treatment of sovereign exposures can also affect aggregate growth potential. If a government expands its debt as a result of the preferential regulation, driving up its demand for capital and satisfying at least part of this demand through the domestic supply of capital, in a closed economy, this is likely to diminish the volume of credit available to the private sector and make private domestic debt more expensive. Private borrowers would need to pay higher interest rates and would scale back their demand for credit. As a result, in a new market equilibrium brought about by regulation, the volume extended to private sector borrowers (loans and bonds) would be lower than it would in the absence of preferential regulatory treatment. This crowding-out of the private sector might impair real economic growth if private debt is used to a greater extent than public debt for productivity-boosting and growth-promoting investment.

In this case, the preferential treatment can also have a negative impact on the capital stock and growth potential in the long term.

In the normal scenario of an open economy, there is likely to be significantly less crowding-out of the private sector through preferential regulatory treatment. After all, the stronger demand for capital can be at least partially satisfied by an elastic supply of capital from abroad. This is likely to be the case in the euro area, in particular, because capital mobility here is not curbed by exchange rate effects. In this case, the negative growth effects caused by crowding-out are spread across domestic and foreign countries, and thus also across the other euro-area member states, in particular.

If the preferential treatment does not cause government debt to rise evenly across all member states, this might cause negative growth effects to be shifted from countries with a particularly large expansion in debt to those where the increase was less pronounced. As outlined earlier in this article, the rise in debt will probably tend to be above-average in countries with high levels of public debt or a low credit standing.

## European banking union

*Banking union can mitigate the problems of preferential regulatory treatment, ...*

In the euro area, the destabilising effects that problems in the banking sector can have on public finances are to be brought to an end, or at least mitigated, by the banking union. First, the Single Supervisory Mechanism (SSM), an institution that will provide improved supervision and is independent of the member states, is tasked with preventing risk from emerging in the first place. Second, the European Bank Recovery and Resolution Directive (BRRD) and the Single Resolution Mechanism (SRM) will provide a superior toolkit for winding down distressed banks, if need be. Under the SRM re-

gime, private shareholders and creditors will be first in line ("bailed in") to shoulder the costs of resolving a credit institution before the bank-financed Single Resolution Fund (SRF) steps in. Under the BRRD rules, public funds will only be used as a last resort once a broad range of private funding sources have been exhausted.<sup>11</sup> These rules now need to be strictly applied to safeguard the credibility of the SRM. However,

<sup>11</sup> See also Deutsche Bundesbank, Implications of the banking union for financial stability, Financial Stability Review 2014, November 2014, pp 69-88.

many of the problems arising from the sovereign-bank nexus, as outlined above, are likely to remain virulent in the banking union.

Not all banks fall within the scope of direct ECB supervision under the SSM, nor, in a crisis scenario, will they all be restructured using SRF resources under the responsibility of the Single Resolution Board (SRB). However, a raft of small institutions whose risks are correlated and which continue to be supervised largely by the individual member state can also become systemically important. If the member state has opted to introduce government financial stabilisation tools when implementing the BRRD, and if the relevant preconditions have been met – notably a bail-in of shareholders and creditors as well as previous and final state aid approval – government financial assistance might still be provided under certain circumstances.

A situation may arise, at least while the privately financed SRF is being built up, in which banks' respective domestic governments continue to share some of the liability as hitherto.

Given the fundamental priority given to private over public loss-bearing, it makes sense to oblige banks to contribute additional capital to the SRF if required, even though this might open the door to new contagion channels. Such contagion effects cannot be entirely ruled out even in the event that public funds, which are only to be used as a last resort, are drawn upon.

*... but it cannot solve the crucial issues*

The contagion effects of the nexus in the other direction – and the vulnerability of banks to sovereign solvency risk – are not mitigated by the banking union, because the latter will not change the regulatory regime in terms of the preferential treatment of government bonds. As long as banks are generally permitted to have a greater exposure to government

bonds, they will continue to make use of this option, even in the banking union. The weakened disciplining effect on fiscal policy of appropriate risk premiums is thus another problem that will persist. It remains to be seen to what extent macroprudential supervision and the stricter European economic and budgetary surveillance procedures will provide a certain counterweight. The resolution toolkit created by the BRRD and the SRM, especially the bail-in rules, can play a crucial role if it is credible from the outset and also applied widely in a crisis situation. This hinges on the exceptions to the bail-in regime being used rather sparingly in practice.

Generally speaking, the credibility of the new resolution regime can contribute to reducing implicit government guarantees, which are still considerable. Early decisions by credit rating agencies suggest that corrections are underway. However, it is not yet clear whether the incentives created by the bail-in regime will be sufficient to curb banks' large exposures to domestic government debt in good time. For example, the new resolution regime will only come into play at a later stage, ie when the domestic government is already in the throes of a solvency crisis and a bank is in distress as a result. Ultimately, member states might also be tempted to pressurise the SSM into continuing to approve above-average stocks of government bonds despite the new framework.

*Credibility of new resolution regime may contribute to reducing implicit government guarantees*

The SSM can only verify compliance with the existing regulations. As long as exceptions are made for sovereign exposures under the large exposure regime, banks can continue to build up large holdings of domestic government bonds, largely unchecked. This makes it all the more important to establish supporting regulatory measures in the EU and scale back the preferential regulatory treatment of government bonds.

## ESRB report on the regulatory treatment of sovereign exposures

At the beginning of 2012, the European Systemic Risk Board (ESRB) set up an expert group (in which the Bundesbank is represented), which was given the task of examining the regulatory treatment of sovereign exposures. In particular, the group analysed potential systemic risks arising from the treatment of these exposures in current and planned EU financial market regulation, and published the results in a report.<sup>1</sup> In addition, the report identifies and discusses policy options for curbing these risks. The expert group paid particular attention to the treatment of exposures to sovereign governments (or to the public sector) in the capital adequacy and liquidity rules that apply to banks (Basel III and CRD IV/CRR), including the rules on large exposures. The treatment of sovereign debt under the new solvency regime for the EU insurance sector (Solvency II), which is to be phased in from 2016, was also examined.

The expert group drew up a range of proposals for how current and future regulation could be amended to mitigate systemic risk. With regard to reducing the preferential treatment of sovereign exposures in the capital adequacy rules for banks, the report lists the following options.

- Ensure risk-sensitive capital requirements in Pillar I (in the credit risk standardised approach (CRSA)) and in the internal ratings-based or IRB approach.
  - In the CRSA, external ratings are used for this purpose; the allocation of risk weights and capital is then carried out using six prudentially defined risk categories (risk weights between 0% and 150%).
- In the IRB approach, capital requirements are calculated using internal rating procedures which are subject to supervisory assessment.
- Introduce a floor for capital requirements in the CRSA and IRB approach. A minimum risk weight of 20%, for example, would ensure that even exposures to sovereigns with a top credit rating (AAA rating) would be subject to minimum capital requirements. Furthermore, this would result in equal treatment of sovereign exposures and loans to private debtors, as a minimum risk weight of 20% also applies to exposures to the latter with a top credit rating.<sup>2</sup>
- Capital backing by means of direct macroprudential intervention by supervisory authorities. A time-varying sovereign capital requirement (additional capital buffers for government bonds held by banks) is proposed, as is the case for comparable macroprudential instruments that have already been implemented.

The ESRB expert group deliberately refrains from prioritising the proposed options in its report so as not to pre-empt future negotiations and decisions.

The expert group's assessment of the impact of their proposals shows that abolition

<sup>1</sup> See ESRB report on the regulatory treatment of sovereign exposures, 10 March 2015.

<sup>2</sup> As the use of external ratings is not without problems, the report makes reference to alternative credit assessments that could be used instead of external ratings. For example, credit ratings from credit insurers would be a conceivable option (as is already the case in export business, for instance).



of the current preferential treatment afforded to government bonds would result in measurably higher capital requirements. However, the ESRB report, which looks at the EU as a whole, considers the required volume to be manageable. This is also true of Germany.

The report further contains proposals for deprivileging sovereign exposures with regard to the application of the large exposure regime for banks.

- Apply the large exposure rules to credit claims on sovereign debtors. Full application of the large exposure limit would have a major impact on European banks' holdings of government bonds. Therefore, longer transitional periods or grandfathering clauses would have to be considered.
- Only partial consideration of the amounts granted to sovereign debtors would also have a positive impact. For example, government bond holdings could be adjusted using a risk-sensitive weighting factor rather than being counted at their full nominal amount.
- Exemptions from the large exposure rules for sovereign exposures that are part of a well-diversified government bond portfolio. An example of such a portfolio would be one in which the bonds of euro-area countries are weighted according to their share of euro-area gross domestic product. Similarly, a synthetic security could be exempted from the large exposure rules if it generates the same payment flows as a well-diversified government bond portfolio (for example, European safe bonds).<sup>3</sup>

- Capital backing of concentration risk (this is not discussed in further detail in the ESRB report). Exposures that exceed a certain threshold could be subjected to capital requirements.

As the regulatory treatment of sovereign debt and possible reform options are of particular importance in the European Economic and Monetary Union, the ESRB provides a suitable forum for assessing proposals for eliminating preferential treatment at the European level and for analysing the impact of such proposals. The Bundesbank broadly backs the proposals put forward in the report as in principle they appear to be a suitable means of putting an end to, or at least substantially reducing, the preferential regulatory treatment of sovereign debt in the medium to long term. However, it must be ensured that the reform options do not themselves create new exemptions. This applies, for example, to the discussion of large exposure waivers for exposures that are part of a diversified government bond portfolio or for synthetic securities which replicate such portfolios.

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<sup>3</sup> See M K Brunnermeier, L Garicano, R Lane, M Pagano, R Reis, T Santos, D Thesmar, S Van Nieuwerburgh and D Vayanos (2011), *European Safe Bonds (ESBies)*, The euro-nomics group.

## ■ Reform options and their impact

Reform of the preferential regulatory treatment of sovereign debt should focus on five areas. Risk-appropriate capital requirements should be introduced, the large exposure limits should be applied to claims on sovereign debtors and the planned liquidity regulation should be adjusted (see the box on pages 32 and 33). In principle, reform should ensure consistent regulation of all financial intermediaries at all times and increase transparency. The following section looks at capital regulation and the application of the large exposure limit in more detail.

### ■ Capital regulation

The planned introduction of a leverage ratio will limit the preferential treatment of sovereign debt in capital regulation, at least to a certain extent.<sup>12</sup> Since, by definition, the leverage ratio does not involve risk weighting, claims on sovereigns would also be implicitly subject to a capital requirement. As this requirement will probably be relatively low and is unlikely to differentiate by government debtors' credit quality, however, the existing prudential regulations on capital backing for government debt should also be adjusted.

One possible option for more appropriate regulatory treatment of government bonds in future would be to determine the risk weight in line with the debtor's actual default risk using the credit risk standardised approach (CRSA) and thus in the same way as for other exposure classes. At the same time, this would be a step towards more consistent regulatory treatment of all exposure classes. If, for example, the ratings-based risk weights of the Basel Committee on Banking Supervision are used as a basis, only sovereign debt with a rating of AAA to AA- would be exempted from the capital backing requirement (see the table on page 35).

*Raising risk weights in line with default risk results in more appropriate treatment of sovereign debt*

The potential impact of new regulatory provisions depends on a variety of factors. This is not least because the bank concerned will decide whether, for example, to meet higher requirements with a voluntary capital buffer which it may have if capital already exceeds the regulatory minimum requirement, or to respond with portfolio adjustments or a capital increase. Since this is not known in advance, the impact of the additional regulatory requirements can only be broadly estimated. Furthermore, large, cross-border institutions generally use an internal ratings-based (IRB) approach to determine the capital backing required. When this internal approach is used, risk weighting reacts sensitively to sovereigns' differing credit quality. This means that, as things stand, there is already essentially no zero risk weighting of these institutions' exposures to the public sector. However, here too it is fundamentally possible to apply zero risk weighting under the CRSA.<sup>13</sup>

The effects of a change to the capital backing of German banks' CRSA claims on euro-area sovereigns can be analysed using a simulation. In this simulation, the risk weights of the individual euro-area countries are derived using their ratings.<sup>14</sup> The differing credit quality of the individual states is thus given greater consideration than has been the case until now. The additional requirement for German banks<sup>15</sup> arising as a result of this would be relatively

*Potential impact of new regulatory provisions depends primarily on banks' response*

*Capital requirements would be manageable for German banks*

<sup>12</sup> A supervisory leverage ratio is envisaged as a supplementary capital measure in the Basel III package of reforms; decisions still have to be taken on its final design and introduction as a binding minimum capital requirement with effect from 1 January 2018.

<sup>13</sup> "Partial use", under which institutions that use an internal model can, under certain conditions, apply the more favourable rules of the standardised approach (see the box on pp 25-27).

<sup>14</sup> The ratings used are average values from the country ratings produced by Moody's, Standard & Poor's and Fitch Ratings in spring 2014.

<sup>15</sup> German banks include all banks with a parent undertaking (or, if they are single entities, with a head office) domiciled in Germany.

small, however, amounting to less than 1% of the current capital requirements. The majority of the claims considered are attributable to the German government and would accordingly be assessed as having the highest level of credit quality and a 0% risk weighting. For German banks' exposures to other euro-area countries, as well, this scenario results in no, or only a small, additional capital requirement, however. More than half of these claims are thus on euro-area countries with a rating of AAA to AA- which would be assigned a risk weighting of 0% in accordance with the Basel framework. The greatest additional capital requirement would be in the class of sovereigns rated BBB+ to BBB- with a potential risk weighting of 50%.

### Ratings-based risk weights for sovereign exposures

Rating	Risk weight
AAA to AA-	0%
A+ to A-	20%
BBB+ to BBB-	50%
BB+ to B-	100%
Lower than B-	150%
No rating	100%

Source: Basel Committee on Banking Supervision (2006): International Convergence of Capital Measurement and Capital Standards.

Deutsche Bundesbank

Eliminating the privileged status of government bonds would have knock-on effects on other European banking markets as well, but these are harder to gauge given the poorer data situation. The bank-level data published by the European Banking Authority (EBA) as part of the EU-wide stress test in 2014 on the 123 most significant EU banks from 22 EU states can provide a rough indication.<sup>16</sup> However, the data on actual exposures to central, state and local government will be relatively reliable only in countries where the most significant banks are representative of the entire domestic banking sector. This means that an analysis of this kind can merely provide an approximation of the adjustments for the relevant countries overall.

To calculate the additional capital requirement, the total claims on a euro-area country are assessed with a rating-differentiated risk weight (see the adjacent table) and the risk-weighted assets calculated in this way are multiplied by a hypothetical capital ratio of 8%. The claims are those of banks on central and regional government (states, local authorities).<sup>17</sup> Furthermore, no distinction was made between claims assessed using the CRSA and the IRB approach.

Overall, the capital requirements would thus rise by up to €33 billion, or by around €31 billion excluding German institutions. The greatest

impact would be seen in Spain and Italy, where the countries' most significant banks would be hit the hardest. These banks hold relatively large claims on their home governments, which would require a higher risk weighting in the event of a reform.<sup>18</sup> The results of such an assessment should be interpreted with great caution given the limitations of the data. A more precise assessment would have to use more detailed information on specific banks from the individual countries.

The above descriptions broadly outline the effects of a reform of the capital backing requirement for sovereign debt. It remains the task of politicians to negotiate the specific structure of measures and their link to a consistent framework. The assessments of the impact, which need to be further developed in parallel, can, not least, provide insights into the most suitable design for reform options, the ability to

*Italian and Spanish banks in particular would be affected by the abolition of zero risk weighting*

<sup>16</sup> One limitation of the analysis is that the figures for each bank relate to the respective international group and not to the claims of the group entity in the parent company's country. This means that it is not possible to calculate the share of a country's entire banking sector accounted for by the relevant banks of that country recorded in the EBA database.

<sup>17</sup> Net exposures are analysed, but no major deviations arise in an analysis of gross exposures, either.

<sup>18</sup> A counter-assessment of these results using the ECB's MFI balance sheet statistics, which are only available at the country level, produces comparable results in the aggregate.

implement them and the appropriate speed for a change of regime.

## ■ Large exposure limits

*Apply large exposure limits to claims on sovereign debtors as well*

In the EU, bank claims on sovereign debtors are exempted from the large exposure regime if they have been assigned a regulatory risk weight of 0% (see the box on pages 25 to 27).<sup>19</sup> This exemption, which is bound up with the capital requirements, should be abolished and the large exposure limits also applied to credit claims on sovereign debtors. This would result in greater consistency between the treatment of claims on sovereign debtors and those on other debtors.

These assessments of the effects of such a reform should be interpreted as an upper limit for the actual effects. Particularly in view of the fact that no account is taken of the interaction with the liquidity regulation that is now gradually taking effect, which itself provides for certain exceptions,<sup>20</sup> the ability of such a partial analysis to yield meaningful insights is limited.

With respect to how government bonds are incorporated into the large exposure regime, a decision needs to be taken on the level of aggregation of sovereign debtors. In other words, the question of whether the large exposure limit should be applied to each individual borrower (central government, federal state, local authority), or to related borrowers, ie groups of connected clients, needs to be clarified (see also the chart on page 37). The justification for the second approach would be the implicit or explicit joint liability between the different levels of government.

*Effect of a large exposure limit heavily dependent on level of aggregation selected for sovereign debtors*

To make things clearer, two different aggregation levels are considered in the following section of this article. First, each sovereign issuer is treated as an independent group of connected clients. Second, joint liability between all levels of government is assumed and a single group of connected clients is defined.<sup>21</sup> Such a dis-

inction takes into account the mutual financial dependency, which in many countries is close, between the individual government entities and prevents regulatory arbitrage through debt-shifting within the government sector.

Where the Federal Government, federal states and local authorities are considered separately, the impact on German banks is likely to be fairly low. Limiting loans to the Federal Government would have a significant impact on just a few banks. The reduction in claims on the federal states would particularly affect the Landesbanken and specialised credit institutions, alongside a large number of credit cooperatives and savings banks. As expected, the effects of scaling back loans to local authorities are greatest for the savings banks because their activities are rooted in local government financing.

In a hypothetical analysis of joint liability between the Federal Government, federal states and local authorities, German banks would be hit harder. German bank lending to German government borrowers is considerable. The total claims on German central government captured in reporting of loans of €1.5 million or more amount to around €398 billion. This equates to around 5.7% of the aggregate total assets of German banks.<sup>22</sup> These figures suggest that the introduction of a large exposure limit would have a very restrictive effect in this analysis. Measured by the required reduction in claims, it would primarily affect the Landesbanken, the savings banks and the regional institutions of credit cooperatives. These entities would especially have to reduce their exposures to federal states and local authorities (see also the chart on page 37). A large exposure limit for government debtors would therefore

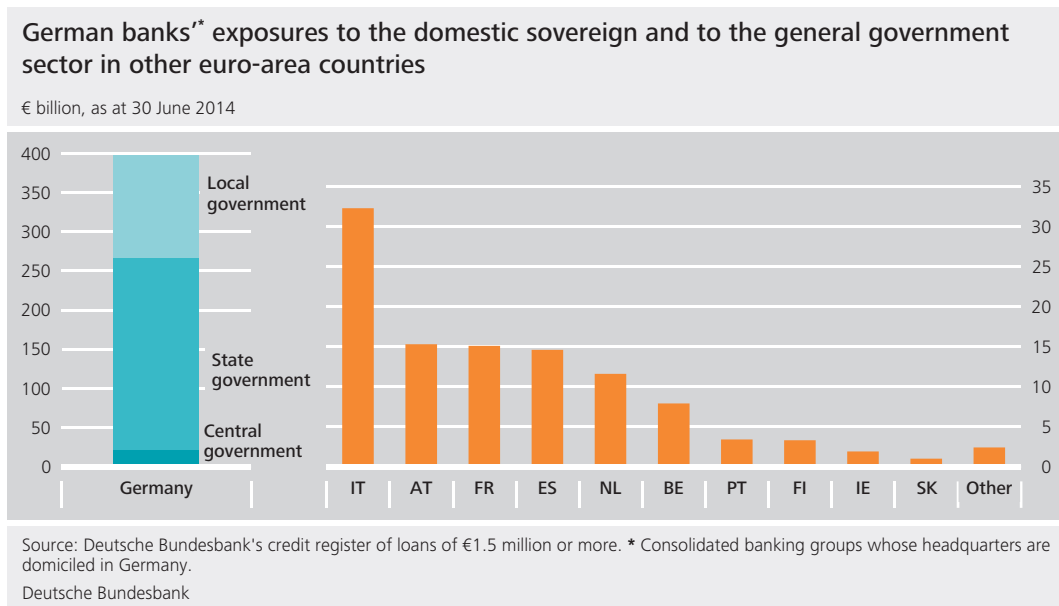
*Initial estimates indicate that large exposure limit would potentially have strong impact on German banks*

<sup>19</sup> See Article 400 (1)(a) of the Capital Requirements Regulation (CRR).

<sup>20</sup> Pursuant to Article 400 (2)(h) of CRR, sovereign debt which is held as high-quality liquid assets (HQLA) to meet the liquidity requirements and meets certain rating requirements can currently be exempted from the rules on large exposure limits.

<sup>21</sup> However, combining sovereign issuers in this way would raise legal issues.

<sup>22</sup> As at 30 June 2014.



contribute to loosening the ties between the sovereign and the banks in Germany. For lending to the general government sector in other European countries, no major effects for German banks are apparent.

The data published by the EBA as part of the EU-wide stress test in October 2014 can be used to examine the impact of a large exposure limit for the most significant banks in the euro area (see the chart on page 38). These data contain only claims on all levels of government<sup>23</sup> (ie the large exposure limit would be applied in the restrictive variant to the groups of connected clients). The data are broken down by sovereign for each bank. However, this information is only available for the largest banks of the relevant EU countries, as the stress test was confined to these institutions.<sup>24</sup>

*Banks in other euro-area countries would also be affected by a large exposure limit*

Large claims and those exceeding a large exposure limit of 25% of eligible capital would primarily be held by the largest banks in Germany, Spain, Italy and France.<sup>25</sup> Based on the broad definition of borrowers, German banks would be most heavily affected by the introduction of large exposure limits, as they predominantly hold claims on domestic government debtors and all levels of government in Germany are considerably indebted (see also the chart above). In other countries, debt is concentrated

more strongly on central government; accordingly, the definition of borrowers plays a lesser role for those states.

In principle, the introduction of a large exposure limit for sovereign debt is intended to ensure greater diversification and would limit sovereign borrowing from domestic banks to a greater extent in cases where home bias is pronounced.

These findings do not preclude abolishing the special treatment outlined above. The actual impact of reform is likely to be considerably smaller on the whole than is suggested by the assessment outlined in this article. For example, the additional special rule for government bonds in the liquidity regulation – which certainly warrants criticism – would probably have a dampening effect.<sup>26</sup> The funds needed to meet the liquidity requirements are not taken into account when calculating the large exposure limits. Above all, however, stronger diver-

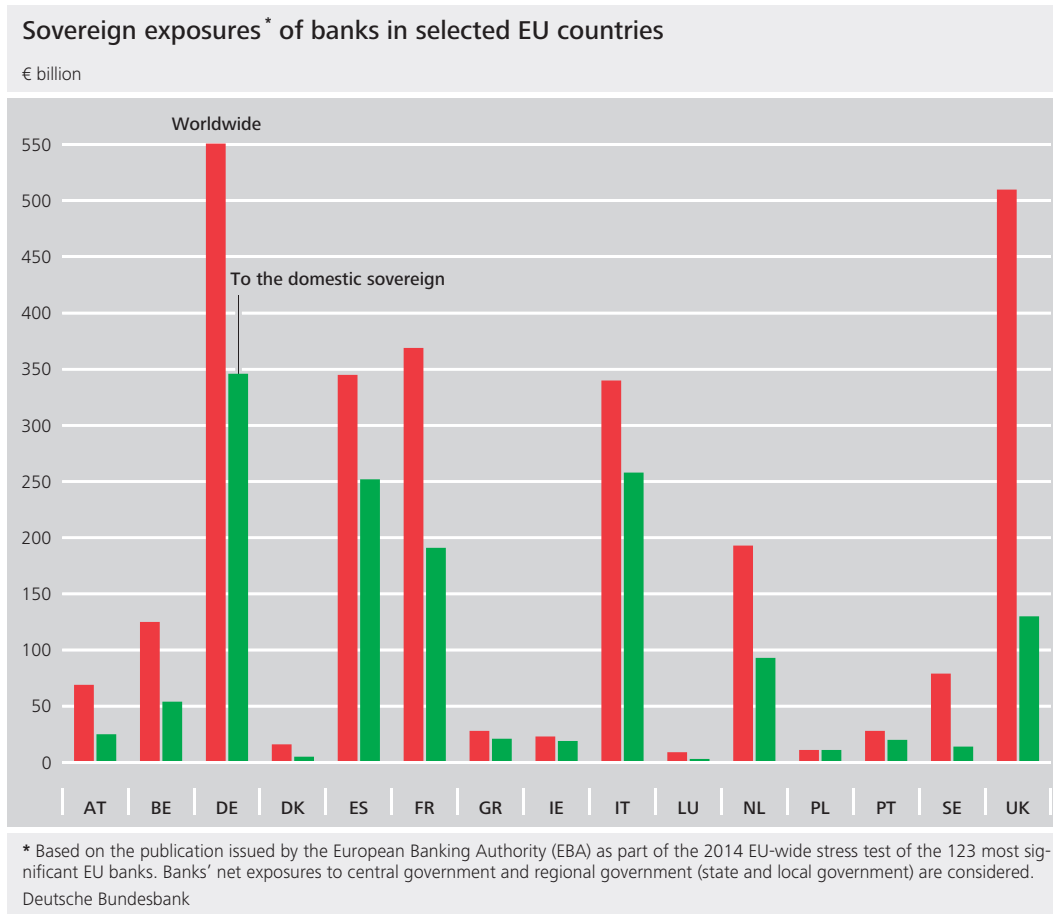
*Actual impact of a reform likely to be smaller than outlined here*

<sup>23</sup> Net exposures are analysed, but no major deviations arise in an analysis of gross exposures, either.

<sup>24</sup> The figures for each bank relate to the respective international group and not to the claims of the group entity in the parent company's country.

<sup>25</sup> Again, it is possible to make a counter-assessment of these results using the ECB's MFI balance sheet statistics, which are only available at the country level; once again, this produces comparable results in the aggregate.

<sup>26</sup> See the box on pp 25-27.



sification of lending, which is entirely desirable, would allow the European banking sector to extend considerably more credit to sovereigns than the estimates shown here suggest.

## Further consequences of new regulatory treatment

The overall impact of new regulatory treatment largely depends on banks' response. For example, the extent to which sovereign debt is reduced will crucially hinge on whether credit institutions scale back their risk assets across the board (deleveraging) or whether they confine the reduction to the sovereign debt portfolio, which is responsible for the higher capital requirements.<sup>27</sup> Demand for top-rated government bonds could even increase overall if they gain a relative advantage in the euro area – for example, in the wake of risk-based capital backing.

If a change in the regulatory treatment of government bonds limits the volume of bonds held under a large exposure regime and/or leads to risk-sensitive capital backing, this could have an impact on the investor structure of general government bonds. The majority of securities issued by central government and the other levels of government in Germany are held by foreign depositors (around 75%).<sup>28</sup> Insofar as aspects of international risk sharing or associated transactions (eg collateral) are the main focus here, marginally higher costs are unlikely to have a major effect on the investor structure.

*New regulatory treatment likely to have impact on investor structure*

<sup>27</sup> Compensation by reducing other assets could be encouraged, for example, by a bank being required to hold government bonds for other transactions (such as collateral for monetary policy operations, central counterparties (CCPs) or derivatives transactions). However, the new costs of holding government bonds would then have to be cross-financed by the other business areas.

<sup>28</sup> For market values, see Deutsche Bundesbank, securities holdings statistics.

## Summary and outlook

The privileged status of sovereign exposures creates misplaced incentives for banks and sovereigns. This gives rise to excessive contagion risks between them, thus tending to hamper the restructuring of sovereign debt and the resolution of banks. Moreover, the preferential treatment heightens stability risks, as it enables even weak banks to survive on the market (for instance, by means of carry trades). The special rules can also widen governments' borrowing options, weaken incentives for sound fiscal policy and potentially reduce the volume of credit granted to private debtors.

should therefore also be subject to a large exposure limit in future.

Government bonds are also afforded preferential treatment in the liquidity regulation which will come into force this year, as it assumes that there is constant liquidity in government bond markets. Although their market liquidity is often very high, the sovereign debt crisis has shown that this assumption is not always correct. The premise that market liquidity is guaranteed at all times for government bonds *per se* is therefore not justified.

*Abolition of preferential treatment should focus on five areas*

Therefore, the current preferential regulatory treatment of sovereign exposures should be brought to an end or, at least, substantially reduced. Five areas are of particular importance in this context. The most promising regulatory approach to curb the sovereign-bank nexus is the introduction of large exposure limits together with risk-appropriate capital requirements. In addition, the planned liquidity regulation needs to be amended. Furthermore, consistent regulation of all financial intermediaries should be ensured and transparency improved.

As a general rule, all exposures on banks' balance sheets should be adequately backed by capital – including claims on sovereign debtors. The current *de facto* zero weighting of sovereign debt does not adequately reflect the risk these exposures actually entail. Exposures to sovereign debtors therefore require risk-appropriate capital backing to put an end to the public sector's funding cost advantage, for which there is no objective justification.

Furthermore, large exposure limits ought to apply to all claims held by credit institutions. The preferential treatment afforded to sovereign debtors undermines the desired effect, which is risk diversification. Claims on public debtors

Furthermore, treatment of claims on sovereign debtors needs to be consistent with that of claims on other debtors, as a rule. In addition, consistency among the various regulations applicable to the banking industry and across the different sectors of the financial system is crucial for minimising regulatory arbitrage. This therefore also implies eliminating special rules that give preferential treatment to sovereign exposures among non-bank financial intermediaries such as insurers. Moreover, care must be taken to ensure that future regulatory initiatives do not again lead to a privileged status for claims on sovereign debtors (eg haircuts on securities financing transactions based on sovereign bonds, EU proposal for separate banking systems<sup>29</sup>).

Finally, exposures to public debtors should be fully disclosed, since investors in credit institutions depend on being able to gain a comprehensive picture of the risks incurred by the institutions. Greater transparency reduces uncertainty for investors and can curb an increase

*Future regulatory initiatives should avoid giving privileged status again*

<sup>29</sup> For example, the EU's draft regulation on separate banking systems (Proposal for a Regulation of the European Parliament and of the Council on structural measures improving the resilience of EU credit institutions; "Barnier proposal" of 29 January 2014) foresees an exemption from the separation requirement for trading in government bonds (Article 8(2)).

in volatility and negative confidence effects, particularly in crisis situations. Expanded disclosure requirements for the risk positions in banks' portfolios are therefore a good means of fostering the financial markets' disciplining function.

*Reform needs to be agreed at international level; national solo efforts of little use*

Policymakers now need to address and press ahead with the implementation of the reform initiatives. National solo efforts on regulatory issues are of little use given close global financial market integration. The Basel Committee on Banking Supervision develops banking supervision regulations agreed at an international level and should therefore be the first port of call when discussing a reform.

If it is not possible to reach a consensus at this level with regard to abolishing the privileged status of government bonds, a European solu-

tion would also be conceivable in principle. In this case, the corresponding European regulations (CRD IV/CRR) would have to be revised. This would reduce the mutual dependence between sovereigns and banks in the European Economic and Monetary Union, too; the problems arising from this dependence are particularly pronounced in the current regulatory framework of European monetary union, in which the member states are largely responsible for their own economic and fiscal policy.

As putting an end to the preferential regulatory treatment of sovereign exposures may have considerable repercussions both for investors and for some sovereign issuers, a medium to long-term implementation plan is needed, which could also provide for a gradual phasing out of privileged treatment.

*Implementation requires a medium to long-term plan*



## **Digital structural change in payments business**

*The rapid development of communications technology has led to significant social and economic change. Nowadays, communication is dominated by the internet, smartphones featuring powerful applications and social networks. E-commerce transactions currently account for around one-tenth of retail turnover. Surprisingly, up to now, these developments have made virtually no dent in the German payment services market. Although several new online payment methods are available, traditional payment instruments continue to prevail. Payments are made almost exclusively in cash or by girocard (formerly known as the "ec card") in bricks-and-mortar retail stores. The vast majority of private transactions, usually involving smaller sums of money, are settled in cash or, more rarely, by bank transfer.*

*However, change is now on the horizon for payments, too. The digitalisation of everyday life with the advent of new, more powerful and mobile communication tools has given rise to innovative payment methods such as contactless payment via mobile phone. In the United States, the launch by a well-known technology enterprise of a new service which allows consumers to pay by smartphone has caused quite a stir. This new force driving the payment services market can also be felt in Germany and is primarily attributable to the success of new market players, the door potentially being opened to other financially strong international competitors and anticipated revenue cuts in card business as a result of regulation. Added to that is the coming-of-age of a new generation of Germans who take the use of smartphones and online shopping for granted. Furthermore, the emergence of virtual currencies such as Bitcoin has led many to imagine a future in which global payments are completely detached from the traditional monetary system. However, new payment products can only succeed if they are superior to existing products in terms of cost, security, convenience and acceptance. The regulator's task is to foster competition and facilitate innovation in the payment services market whilst at the same time ensuring an appropriate level of security. The future digitalisation of payments is also likely to be driven by public authorities in connection with their eGovernment projects.*

## Impact of digitalisation

*Internet and mobile devices also changing payments business*

The digitalisation<sup>1</sup> of the private and professional spheres has advanced rapidly in recent years, resulting in distinct social and economic change. New communications technologies and structures have laid the foundation for a high level of interconnectedness that is unaffected by the constraints of time and space. Access to information as the basis for effective decisions has become much simpler and cheaper. Scope for action and response times have improved. The virtual world and the real world are drawing closer and closer together. Industry is witnessing the dawn of a new era characterised by “intelligent” production processes, increasingly individualised small-scale rather than large-scale production and the collaboration of highly specialised professionals working in global networks of teams.

This rising level of digitalisation is also reflected in the banking industry, specifically in payments business. While the industry has been able to significantly enhance efficiency in the past by fully automating the settlement of payments without paper-based documentation and expanding its use of electronic communication media, digitalisation is leading to fundamental

changes in the point of contact with the customer. The advance of e-commerce and the increasing availability of smartphones, mobile internet access and contactless technology are paving the way for new, more convenient and faster payment methods. New payment service providers are entering the market, seeking to utilise synergies between their core business activities and payment services.

It is against this backdrop that the changes on the horizon for payments business will be analysed. This article will begin with a general outline of the structural changes in the payment services market, followed by a detailed examination of individual trends in various market segments. The article will then discuss the impact on payment security and the regulatory consequences. The conclusion will comprise an assessment of the outlook for the payments business.

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<sup>1</sup> Digitalisation generally refers to the conversion of information such as sound, images or text into numerical values for the purposes of electronic processing, storage or transmission. It goes hand in hand with an increase in the extent to which people, objects and information are interconnected.

## Shift in culture and demand

*Internet dominates everyday life*

In the first quarter of 2014, 80% of the population in Germany aged 10 and over used the internet. Almost 60% of the population aged 14 and over owned a smartphone and around one-quarter a tablet at the end of 2014, with younger segments of the population overrepresented and older segments of the population underrepresented as users and owners.<sup>2</sup> The internet-savvy and technology-savvy share of the population will continue to grow in future

because today's adolescents, often referred to as “digital natives”, have been brought up with digital technologies. The changes brought about by the digital shift are correspondingly viewed in

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<sup>2</sup> <http://www.initiated21.de/portfolio/mobile-internet-nutzung-2014/>; [https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/EinkommenKonsumLebensbedingungen/ITNutzung/Aktuell\\_ITNutzung.html](https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/EinkommenKonsumLebensbedingungen/ITNutzung/Aktuell_ITNutzung.html); <http://de.statista.com/statistik/daten/studie/198959/umfrage/anzahl-der-smartphonenuutzer-in-deutschland-seit-2010/>

a much more positive light by younger people compared with the population as a whole.<sup>3</sup>

Socialisation with the internet as an information and communication tool that is available at virtually all times is leading to a completely different perception of transaction processes. It is taken for granted that information can be transmitted at the lowest possible cost, regardless of distance or information content. In this sense, it is difficult for young people, in particular, to comprehend why cashless payments, including foreign payments, cannot be settled immediately. The need for payments to be settled globally has also risen due to the online availability of goods and services.

*Digital natives prefer cashless payments*

The more technology-friendly attitude of the younger generation is also reflected in payment behaviour. For example, younger people already frequently use cashless payment instruments such as debit cards at an above-average rate and pay for over 50% of their purchases using non-cash instruments. They have also shown themselves to be particularly open to new payment methods which, for instance, work via smartphone. Acceptance of payment innovations is therefore likely to rise as this young, technology-savvy generation reaches adulthood and is followed by other generations.

The ubiquity of the internet has made it possible to buy goods and services online from almost anywhere in the world, 24 hours a day. The resulting significance of online purchases is placing new demands on payment services and giving rise to new payment procedures. In addition, the rapid spread of mobile devices is transforming communication, consumption patterns and, consequently, payment habits. For instance, smartphones are inspiring ideas about their use as digital wallets<sup>4</sup> into which not only payment functions but also a range of digital products and services are integrated. The development of various technologies for the contactless transfer of data across short distances, a key prerequisite for new payment methods by smartphone and payment card,

has created new payment methods that can be used in bricks-and-mortar sales, too. In particular, the digitalisation of tickets for use on public transport, which is being launched on local public transport in urban centres and is already commonplace in major cities outside Germany, has in many ways laid the foundation for contactless payment in other areas, too.

Acceptance of payments is also on the rise as retailers, too, are taking a growing interest in innovative payment methods. Almost all larger retailers now operate an online store as an additional distribution channel. Contactless payment methods, in particular, may be expected to proliferate in the bricks-and-mortar retail trade due to the speed with which they can be used. At present, it is estimated that only 10% of terminals in Germany can process contactless payments.<sup>5</sup> However, seven out of ten major retail enterprises either plan to invest in contactless technology or already support it.<sup>6</sup> In addition, the ongoing replacement of retail terminals means that new devices generally already capable of supporting the new technology will subsequently be introduced.

While data-based technologies and services simplify payments to a large extent, they also entail risks that are difficult for individuals to estimate. For example, using various mobile devices creates growing reams of data containing, in some cases, sensitive personal information, which is processed and analysed in different ways. Very few people have a clear idea

*Significance of data protection and data security rising*

<sup>3</sup> See Institut für Demoskopie Allensbach (2014), Die Zukunft der digitalen Gesellschaft. Ergebnisse einer repräsentativen Bevölkerungsumfrage.

<sup>4</sup> There is currently no universally accepted definition of the term digital/mobile/e-wallet. The Federal Association for Information Technology, Telecommunications and New Media (Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e. V. – BITKOM) defines a mobile wallet as an open platform on a mobile device that enables the user to use and combine various services to authenticate, identify and digitalise valuables (eg data from payment cards, ID cards, tickets, coupons, bonus points etc). See BITKOM (2014), Leitfaden Mobile Wallet.

<sup>5</sup> Estimate based on a Eurosystem-wide survey of network providers.

<sup>6</sup> See EHI-Studie (2014), Kartengestützte Zahlungssysteme im Einzelhandel 2014.

of what this involves. Generally speaking, this results in a vague feeling of discomfort when asked to disclose personal information, which often becomes a distinct feeling when it comes to financial data.<sup>7</sup> This sceptical attitude of

many payers can lead to reservations about the use of innovative payment services.

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<sup>7</sup> See [http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_423\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_423_en.pdf)

## Impact on the structure of payment service providers

The changes in behaviour emerging with respect to retail payments are chiefly reflected in one-off payments initiated by consumers in the retail trade sector. Regular payments by enterprises outside the retail trade sector, eg business-to-business (B2B) transactions and payments to individuals, are less strongly affected by these changes.

*Movement in payments between individuals and in retail trade sector*

Competition is growing primarily with regard to products used for payments in the retail trade sector and between individuals (person-to-person, P2P). Non-banks are progressively boosting their share in the market as part of the payment chain. In this context, non-banks are defined as entities involved in the provision of payment services without a licence to conduct deposit or lending business pursuant to the German Banking Act (*Kreditwesengesetz*).<sup>8</sup> Depending on their business activities, these non-banks may be subject to either simplified supervision, eg as a payment institution pursuant to the German Payment Services Oversight Act (*Zahlungsdiensteaufsichtsgesetz*), or no supervision at all. For example, SOFORT AG, which is based in Germany and specialises in online payment settlement, has so far not been supervised by either BaFin or any other European supervisory authority.

*Growing competition from non-banks*

Recently, non-banks that expand on and complement traditional payment services have frequently been categorised as “fintech” companies. The term “fintech” is a *portmanteau* of “financial services” and “technology” and refers

to technologies that enable or provide financial services. Other services besides payment services include, for example, technologies for the systematic analysis of large volumes of data (“big data”).

Special internet payment procedures have been launched not only by numerous start-up companies but also by established technology and commercial enterprises such as Google (Google Checkout) and Amazon (Amazon Payments). However, these have not yet been able to establish a foothold in the German market. Payment systems are not a core business for larger technology and commercial enterprises. As a result, even if offered at no charge, payment services can be attractive to such firms if they provide indirect returns. First, enterprises can increase customer loyalty and thus generate additional turnover and, second, they usually acquire more customer data. This enables them to, for instance, use payment data to further improve analysis of purchasing behaviour and personalise advertising.

In the medium term, it is likely that the high degree of competition will lead to growing price pressure on the payment services market. As a general rule, most consumers are not particularly willing to pay for payment services. This is partly due to the fact that, from the customer’s point of view, the payment process is

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<sup>8</sup> See Bank for International Settlements, Non-banks in retail payments, September 2014.

### Payment instruments categorised according to user group

Payers	Payees	Frequently stated reasons for payment	Frequently used payment instruments	Short designation <sup>1</sup>
Enterprises, public institutions	Enterprises, public institutions	Deliveries	Credit transfer (standing order), direct debit	B2B
	Private individuals	Wage payments	Credit transfer (standing order)	B2C
Private individuals	Enterprises (excluding bricks-and-mortar retailers), public institutions	Insurance premiums, pension contributions, rent	Traditional: credit transfer (standing order), direct debits	C2B
		Tradesmen's invoices, taxi fares, purchases at temporary (sales) events	Innovative: card payments at mobile points of sale	
	Bricks-and-mortar retailers	In-store purchases	Traditional: cash, card	
			Innovative: contactless payments by card or mobile phone (based on NFC, QR code, Bluetooth Low Energy (BLE)), card payment at a mobile point of sale	
	Online retailers, public institutions	Online purchases, payment for public services	Traditional: credit transfer, credit card, direct debit	
			Innovative: e-payment schemes, such as PayPal, SOFORT Überweisung, giropay	
Private individuals	Reimbursement of expenses for restaurants, presents, pocket money payments	Traditional: cash, credit transfer	P2P	
		Innovative: P2P payment schemes via mobile phone (eg PayPal)		

<sup>1</sup> B2B: business-to-business. B2C: business-to-consumer. C2B: consumer-to-business. P2P: person-to-person.

naturally the least attractive part of a purchase, meaning that little value is placed on it as an independent service. Another major factor in Germany is the growing range of free current accounts on offer, which have left many users feeling strongly that payment services should be provided free of charge. In terms of new providers on the payment services market, the services they have to offer must either be very competitively priced for users or provide an additional benefit compared to existing services in order to get users to pay for them.

*Peculiarities of the payment services market: network effects and two-sided markets*

The emergence of competitors to established banks in the field of payment services is mainly attributable to the fact that the banking industry has thus far scarcely been able to make innovative payment services mainstream in the market. This is partly because the inherent peculiarities of the market create a certain degree of market inertia: payments business is influenced by network effects. Thus, achieving "critical mass" plays a crucial role in the success of a payment instrument. When it comes to payment procedures, the benefit increases for each existing participant as the total number of participants increases. For example, an online retailer will only be interested in offering a payment method if it has the potential to be used by as many customers as possible, while customers will only be interested in using the payment method if they can use it to make purchases from as many retailers as possible. Achieving critical mass becomes more difficult for providers of payment services because demand is split between two interdependent customer groups: merchants and consumers. To this extent, both sides of the market need to have an incentive to simultaneously launch and use a payment service – it is not an attractive option for one side alone.

*Non-banks as innovation drivers in payment business*

The two-sided nature of the market for payment services means that large, established providers are generally at an advantage because they are able to cover a large proportion of demand. In this regard, the banking industry is in a good starting position as virtu-

ally all payers have a bank account in Germany. However, utilising this competitive advantage requires banks to agree on the provision of common basic services. This is prolonging the established providers' response time and is making way for new providers in the payment services markets to establish a foothold in individual market segments, as they can often respond more quickly to the rapidly changing technical environment and new user requirements. In addition, payment services in the banking industry are often looked at from a purely cost-based perspective rather than as a strategically relevant business area with a future ahead of it.

Another likely motivation for the German and European banking industries to concern themselves with innovative payment services and potential new business lines is attributable to caps on interchange fees for card-based transactions. A corresponding EU regulation will come into effect before the end of this year and lead to sharp revenue cuts in the card payments domain.<sup>9</sup> Interchange fees paid by merchants' banks to customers' banks, which the latter often use to cover much of their card business costs, are set to be limited, as a general rule, to 0.2% of transactions for debit cards and 0.3% of transactions for credit cards.

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<sup>9</sup> Regulation on interchange fees for card-based payment transactions, compromise text following the trialogue of 16 January 2015; <http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%205119%202015%20INIT>

## ■ Current market developments

The growing digitalisation of all walks of life has created new opportunities for payment services in various market segments in recent years.

### ■ Market for online payments

In the last few years, online sales in Germany have gone up by an annual average of more than 10%.<sup>10</sup> Compared with bricks-and-mortar trade, online trade places other demands on the payment infrastructure. This is because in online trade, the payment and the receipt of the goods occur at different points in time owing to the physical distance separating them (with the exception of certain services, such as insurance policies that are purchased online, or digital goods, such as film downloads). This is why the seller generally prefers not to dispatch the goods until s/he has received payment or a payment guarantee from the buyer, whereas the buyer prefers to delay the payment until s/he has received and checked the goods. Online payment methods have to try to strike a balance between the preferences of both buyers and sellers and to offer both parties a sufficient level of security. The classic payment instruments, such as credit transfers, purchases on account or payments by credit card, all of which are still widely used for online payments, fulfil these requirements only to a limited extent, however. Furthermore, these payment instruments can often only be used domestically, whereas online trade requires more universal solutions owing to its global reach. This is why specialised online payment methods have been developed; these have been growing rapidly over the past few years.

These online payment procedures are often not entirely new payment instruments. On the contrary, they generally merely offer a new gateway to classic payment instruments, such as

credit transfers, direct debits or card payments. They enable the buyer to be uniquely identified by means of his/her e-mail address and password, for instance, and then automatically generate a direct debit or card payment on the basis of previously stored data or data entered *ad hoc*, for example. In particular, online payment procedures try to make the payment process as intuitive and uncomplicated as possible. Online merchants also benefit from this as potential customers will often cancel the transaction if the payment process proves to be overly complicated.

From the consumer's perspective, factors which sway the choice of payment method include not only user-friendliness but, more importantly, the perceived security of the respective procedure. Payers would ideally prefer not to have to enter any sensitive financial data whatsoever, such as their account number or credit card number. For customers, those payment procedures requiring them to enter their payment details only once with a single trusted provider are particularly attractive; such payment procedures generally redirect the customer either to the payment provider's website or to the online banking portal of his/her house bank during the payment process, where s/he is then required to log in and initiate the payment.

With regard to perceived security, those online payment procedures offered by the German banking industry clearly have a competitive advantage with consumers. However, this is not sufficient as the other actors on the demand side – ie online merchants – also expect attractive conditions. For example, potentially more than 35 million current account holders in Germany are now able to make use of the giro

*In many cases, new payment methods merely offer customers a new gateway to classic payment instruments*

*Consumers attach particular importance to the ease of use and security of online payment procedures*

*Many online payment procedures offered by German banking industry still in development stage or with low market penetration*

<sup>10</sup> <http://www.einzelhandel.de/index.php/presse/zahlen-faktengrafiken/item/110185-e-commerce-umsaetze>

payment procedure via the over 1,500 banks and savings banks participating in the procedure, without the need to register in advance or to install additional software. With giro pay, a pre-filled transfer form containing all the required data is placed in the customer's online banking application, which s/he then confirms by means of a transaction authentication number (TAN). However, this procedure is only offered by around ten percent of online merchants as a payment option.<sup>11</sup> This is certainly due, in part, to the fact that online merchants would consequently restrict themselves to the customers of cooperative banks and savings banks.

In contrast to this niche product offered by the German banking industry, a number of other online payment procedures which are not operated by the banking industry, such as SOFORT Überweisung or PayPal, function irrespective of the credit institution with which the customer holds his/her current account. SOFORT Überweisung is a payment procedure in which a technical service provider (non-bank) – SOFORT AG – places a transfer request in the customer's own online banking application, which the user confirms using his/her personal log-in and authorisation data.

In order to be able to use PayPal, the customer has to complete a one-time registration and enter his/her bank account details or credit card data. The user is required to provide these data as PayPal is an account-based e-money procedure.<sup>12</sup> To make a transfer using PayPal, a prepaid amount of credit is transferred from the PayPal account (e-money) of the payer to the PayPal account of the payee. In practice, the buyer identifies him/herself uniquely for the payment transaction using his/her e-mail address and password and confirms the transaction. Given that in Germany payers often do not keep a credit balance on their PayPal accounts, the PayPal account first of all has to be "topped up" automatically in the background by means of a direct debit or a credit card payment. The payee can then convert the amount

credited to his/her PayPal account back into book money.

In addition to the actual payment services, supplementary services are increasingly being offered in connection with the payment process for online merchants and their customers, such as trustee services or payment default guarantees, which serve to bridge the "float" time between payment and receipt of the goods.

Given that the internet can be accessed at virtually any time of the day, the boundaries between online trade and bricks-and-mortar trade are becoming increasingly blurred. In this respect, payment methods which can be used both online and in retail outlets are likely to be attractive payment solutions for users in future.

*Greater interconnectedness between online and offline trade*

## Paying by smartphone at the point-of-sale

Technological developments in the card market as well as the increasing level of market penetration and use of internet-ready smartphones, which, with the aid of appropriate technologies, can be used to make contactless payments at the point-of-sale, are the main driving forces behind the convergence of online and offline trade. Near field communication (NFC) is the most widespread of these new technologies. NFC enables the contactless transfer of data over a distance of up to ten centimetres and, when used in connection with various media, can be used to make payments. When making a contactless payment using a payment card, the payer holds the payment card just in front of the NFC-enabled point-of-sale terminal. This can speed up the payment process significantly,

*Contactless data transfer technologies are an important basis for innovative card payments and mobile payment procedures*

<sup>11</sup> See ibi Research, Zukunft des Bezahlens – Einschätzungen und Trends aus Händlersicht.

<sup>12</sup> Pursuant to the E-money Directive (2000/46/EC), the official definition of e-money in Europe is: E-money is the monetary value as represented by a claim on the issuer which is (i) stored on an electronic device, (ii) issued on receipt of funds of an amount not lower in value than the monetary value issued, and (iii) accepted as a means of payment by undertakings other than the issuer.



Selected innovative payment schemes				
Payment scheme	Payment situation	Transmission method	Authentication	Payment settlement
PayPal	Remote payment, usually using a PC, laptop or tablet	Internet (LAN, W-LAN, mobile communication)	Username and static password	e-money account, topped up via credit card or direct debit
SOFORT Überweisung	Remote payment, usually using a PC, laptop or tablet	Access to online banking (LAN, W-LAN, mobile communication)	PIN and usually a transaction-specific TAN	Credit transfer
giropay	Remote payment, usually using a PC, laptop or tablet	Access to online banking (LAN, W-LAN, mobile communication)	PIN and usually a transaction-specific TAN	Credit transfer
Yapital	Payment at bricks-and-mortar retailers using a smartphone	QR code	Username and static password	e-money account, topped up via credit card or direct debit
NettoApp	Payment at bricks-and-mortar retailers using a smartphone	Transaction-specific payment code via app, to be entered manually by cashiers	Username and transaction-specific password	Credit card, direct debit
Apple Pay	Payment at bricks-and-mortar retailers using a smartphone, in-app purchases	Near field communication	Biometric element	Credit card

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NFC

especially if, for small transaction amounts of up to €20 or €25 depending on the procedure, no PIN number is required. This form of payment is currently being promoted by the international card scheme operators Visa (PayWave) and MasterCard (PayPass) and by the German banking industry, in particular, which is marketing this system under the name of girogo (based on the GeldKarte<sup>13</sup> scheme). NFC can not only be used in connection with a physical debit or credit card for the contactless transfer of the required payment data to the merchant's terminal, but can also be integrated into mobile phones, for example, to enable mobile payments to be made. In such cases, the actual payment can still be settled in the form of a conventional direct debit or as a card payment.

Alongside NFC technology, QR codes<sup>14</sup> can also be used for the contactless transfer of data. A payment is initiated on the merchant's terminal by scanning a QR code using the camera of a smartphone. The payment is then effected via the payment service provider's system and the relevant amount is credited to the merchant. It is often retail chain stores that are driving the development of mobile payment procedures. Yapital, a payment procedure developed by the

QR codes

<sup>13</sup> The GeldKarte works on the basis of a credit balance (e-money) stored on a chip in the payment card. The GeldKarte function is generally integrated in all debit cards that are issued in Germany.

<sup>14</sup> The QR (quick response) code is a two-dimensional barcode. It is possible to embed any type of information in a QR code with the content essentially consisting of text data. This text can include a payment instruction which will be carried out after the code has been unencrypted using a smartphone and dedicated software.

retail industry for use with smartphones, uses QR codes. The supermarket chain Netto, on the other hand, has set up a proprietary mobile payment scheme, which does not require a direct connection between a smartphone and a merchant terminal. With this scheme, the customer initiates the payment by entering his/her PIN number in a specially designed application, or app. A four-digit code is generated and displayed on the smartphone's screen; the customer then reads this code out to the cashier. The customer's bank account is debited in the background and the amount credited to the merchant's account.

*Beacon*

A third type of transmission technology, known as beacon, works on the basis of the Bluetooth low energy standard. Using this radio standard, electronic devices equipped with the required technology can be linked together within a radius of around ten metres. Provided that the customer has authorised the connection on a one-time basis, his/her smartphone can automatically be connected to the merchant's terminal upon entering the store. The payment process can then be initiated on a contactless basis using a special app.

*Mobile wallet*

The computer manufacturer Apple triggered wide-scale media coverage in September 2014 with the announcement of its Apple Pay mobile payment system. This new payment tool allows consumers in the United States to pay for goods in retail stores using an NFC-enabled smartphone. This payment procedure does, however, require the user to be in possession of Apple's latest smartphone as well as a credit card. Apple Pay has been designed to be extremely user friendly. The payment is not authorised by entering a PIN, but by using the user's fingerprint. The actual payment is then transacted using a digitalised credit card stored in a mobile wallet (e-wallet). Users can also simply use the credit card data that they already have stored in Apple's iTunes store, for instance. Credit card companies are also one of the main drivers behind mobile payments as

they have been investing in contactless physical card products for quite some time now.

Apple Pay can be used not only in retail outlets but also for paying for goods online, which generates synergy effects in payment processes for both Apple and the user. E-wallets can be used to store not just digitalised payment cards but also digitalised products and services, such as admission tickets to events, rail tickets or vouchers. Thanks to so-called in-app purchases, it is now also possible, for instance, to pay for hotel bookings using the app of an online booking portal or to purchase digital media, such as music downloads.

It is not only necessary for consumers to have the required technical equipment; merchants, in particular, also have to be equipped with retail terminals that are capable of processing contactless payments. Given that these retail terminals generally also accept contactless payments using physical cards, synergy effects can be achieved. Apple Pay users in the United States, for instance, can make payments at any retail terminal that is equipped to accept NFC-ready credit cards.

E-wallet solutions are still not very widespread in Germany for a number of reasons. First, these solutions are generally very restricted and are accepted by only a small number of retailers. Second, consumers hold mobile payment procedures to particularly high security and data protection standards, which complicates their usability. Moreover, these solutions are only then attractive for the majority of payers if they offer an added value when compared with traditional payment instruments.

Unlike in the case of online payment procedures, telecommunication enterprises, in particular, also play a prominent role in mobile payments alongside credit card companies. Digitalisation has opened up new business opportunities for both groups of providers. Given their generally broad customer base, telecommunication enterprises can make a decisive

*E-wallet solutions require providers to cooperate with one another*

contribution towards disseminating e-wallet solutions. What retailers see in e-wallets, on the other hand, is an opportunity to integrate voucher and bonus point systems and thus to further entrench customer loyalty. Depending on the design of the system, these solutions can also be used to better analyse consumer behaviour and to make offers to customers more personalised.

The use of personal data for marketing purposes as described above has come under much public criticism by data and consumer protection groups. It has often been shown in practice, however, that consumers are prepared to disclose their buying habits if they receive a financial benefit in return. In Germany, for instance, a minority of just 10% of the population opts out of reward schemes entirely.<sup>15</sup> Around 60% of German consumers take advantage of reward cards, such as Payback or Deutschlandkarte, where targeted customer data regarding the consumer's buying habits are collected each time that the card is used.<sup>16</sup> Reward cards generally also lend themselves well to expansion into e-wallet solutions. For the customer, this has the advantage that, when paying for goods using a smartphone, any vouchers stored in the e-wallet can be directly redeemed, and loyalty points can be directly credited to the customer's e-wallet.

Smartphones can be used not only by customers to make payments at the point-of-sale, but also by merchants for accepting card payments. This solution is known as a mobile point of sale (mPOS). mPOS works by connecting a card reader to a smartphone or a tablet computer. The merchant enters the amount due into the smartphone and then inserts the card into the reader. Depending on the system and the card that is used, the customer then either has to sign the display of the device or enter his/her PIN in a separate device. The payment data are encrypted by the device itself and the smartphone merely serves as a modem for transmitting the transaction data to the payment service provider's server. The mPOS ser-

vice is primarily aimed at small retailers, taxi drivers and also tradespeople, who previously did not accept card payments for cost reasons; mPOS is an attractive solution for these groups of professionals as they do not need to have a fully equipped payment terminal, which would be associated with a monthly overhead.

## Payment settlement in near real-time

Users of payment services have become accustomed to real time in the information and communication technology they use on a daily basis. As with instant messaging, they now increasingly also expect retail payments to be settled immediately. As faster processing speeds are an important driver for the efficiency of payment transactions, "faster", "instant", "real-time" or "near real-time" payments have become a global trend in the field of retail payments. Real-time or near real-time in this context refers primarily to clearing between the payer and the payee, with the payee normally being able to use the credited amount immediately or extremely shortly thereafter. By contrast, it is not essential for there to be immediate settlement between the credit institutions involved.<sup>17</sup> Moreover, unlike traditional credit transfers, the transmission of real-time payments is generally possible 365 days a year, seven days a week, 24 hours a day.

The primary source of potential demand for real-time payments lies in person-to-person payments (P2P) and online purchases, where the immediate receipt of payment would benefit customers by enabling the merchant to ship goods immediately. From the consumer's perspective, real-time payment solutions there-

*Real-time becoming increasingly significant in retail payments*

*Real-time P2P payments using smartphones appealing*

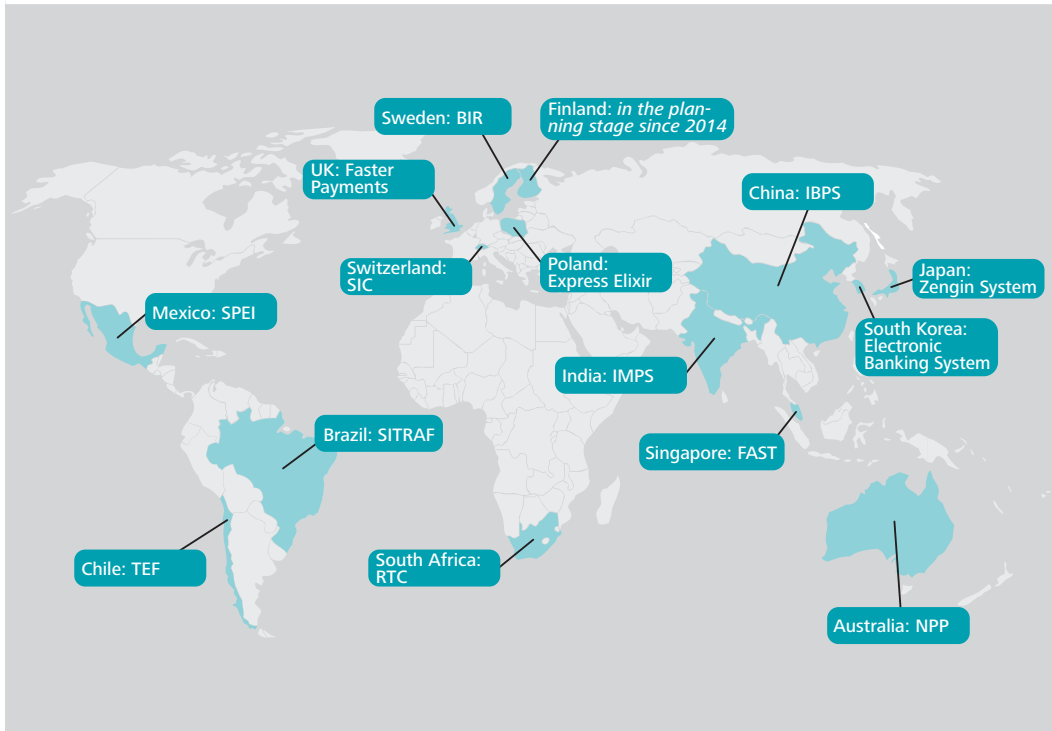
*Mobile end devices as card payment acceptance terminals (mPOS)*

<sup>15</sup> <http://www.deals.com/umfragen/gutscheinstudie-2014>

<sup>16</sup> <http://www.zahlendatenfakten.de/studien-marktdaten-marktanalysen/dienstleistungen/49-studie-bonusprogramme-2014.html>

<sup>17</sup> Instead of an immediate settlement between the banks involved, interbank settlement can, for example, take place on the basis of previously arranged (collateralised) credit lines.

## Instant payment systems worldwide



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fore present a potential alternative to cash and card payments. Integrating real-time payment solutions into online banking would provide a secure alternative to using credit cards for online purchases (e-commerce), with the potential to reduce the risk of fraud by making it unnecessary to disclose card details over the internet. More generally, enterprises would realise efficiency gains in liquidity management, as claims would be settled just in time, thereby making it possible to bypass “float losses” caused by the time lag between debiting and crediting.

In the large non-euro-area countries of the EU, such as the United Kingdom, Sweden and Poland, real-time systems of this kind have already been introduced. Further afield, for example in Canada, Japan, Mexico, Singapore and South Africa, such systems are already in operation. In the euro area, these developments are still in their infancy. One reason for this is almost certainly the SEPA migration, which has used up a large amount of banks’ capacity in recent

years. There have only been a few instant payments initiatives to date in the euro area, and these have chiefly had a national focus. Some of these systems are currently still in an early developmental stage or can only be used within one bank or banking group. From a European perspective, it is desirable to find solutions that can be used transnationally across the entire SEPA area in the spirit of the single market.

The approaches and concepts used by the various initiatives to implement real-time payment systems vary. The key issues here are the rules governing the clearing and settlement of real-time payments, the modalities for payment and information flows and the procedures for settlement between the relevant banks. This latter point is where central banks play an especially important role, since interbank settlement is often executed using central bank money and via payment systems provided by the central banks. While the development of real-time payment systems requires considera-

ble up-front investment on the part of credit institutions, branching out beyond core business areas on the basis of real-time payments would make it possible to develop new services such as P2P payment solutions and efficient products for online payments.

Instant P2P payments are almost always made using a smartphone in some capacity. P2P payments via smartphones can be an efficient alternative, especially to small cash payments or traditional transfers between private individuals, such as collecting money for a joint present or splitting the bill after a meal out. The payer and the payee in P2P payments usually identify themselves simply and conveniently using their mobile telephone number or e-mail address.

## ■ Virtual currencies

Beyond the realms of traditional payments, a technology has been developed in recent years that, in principle, already enables high settlement speed in near real-time: virtual currency. This is a digital representation of value that is neither issued by a central bank, a credit institution or an e-money institution, but which can, under certain circumstances, serve as an alternative to money.<sup>18</sup> Virtual currencies can take various forms. Fixed mathematical rules often play an important role in how they are set up.<sup>19</sup> As virtual currencies are not at present recognised as legal tender by any country, their value is derived solely from the trust placed in their voluntary acceptance.

Virtual currencies have recently gained a lot of media attention, and none more so than Bitcoin. From a payments perspective, it is notable that virtual currencies are transferred between individuals directly over the internet without traditional intermediaries such as credit institutions and without the use of central systems. This occurs without regard for national borders and independently of legal or banking systems. However, as a payment instrument, virtual currencies have thus far been no more

than a niche phenomenon. Even bitcoins are only used in between 85,000 and 115,000 payments worldwide each day. This includes not only transactions in which actual goods and services are paid for with bitcoins, but also transactions in which bitcoins themselves are traded. By contrast, almost 65 million credit transfers and direct debits are processed every day in Germany alone.<sup>20</sup>

In general, two key aspects of virtual currencies need to be distinguished, namely their function as a store of value and their function as a medium of exchange. The former is currently lacking due to high price volatility<sup>21</sup> and repeated attacks on trading platforms, which have even resulted in virtual currency theft.<sup>22</sup> In turn, the function as a medium of exchange is negatively affected by the poor function as a store of value, with recipients keen to convert the virtual currency into official currency as soon as possible on account of high exchange rate risk.

Perhaps the most attractive feature for those accepting payments in virtual currencies is the prospect of avoiding charges from payment system intermediaries. However, it is often forgotten that users generally need to buy virtual currencies via exchanges, which entails costs, as does the conversion of bitcoins back into "real" currency. Moreover, in the Bitcoin network it is also necessary, for example, for transactions to be verified and unequivocally documented. This is carried out by so-called miners, who are rewarded with newly created bitcoins. At the moment, miners receive the equivalent of about US\$10 for verifying and documenting a transaction.<sup>23</sup> By contrast, the cost per trans-

*Opportunities  
and risks of use*

*Virtual currencies operate outside of the official monetary system*

<sup>18</sup> See ECB, "Virtual currency schemes – a further analysis", 2015, p 4.

<sup>19</sup> In the Bitcoin system, for example, 25 new bitcoins are currently created every 10 minutes. The currency has been set up in such a way that no more than 21 million bitcoins will ever be created.

<sup>20</sup> See Deutsche Bundesbank, 2014, Payment and securities settlement statistics in Germany 2009-2013.

<sup>21</sup> According to Coinbase, prices fluctuated between US\$950 and US\$310 in 2014.

<sup>22</sup> In 2015, hackers stole a considerable number of bitcoins on the Bitstamp exchange.

<sup>23</sup> <https://blockchain.info/de/charts/cost-per-transaction>

action of a European retail payment probably amounts to just a few cents.

Bitcoin could prove more competitive in the field of costly, cross-border payments outside of the euro area, which are frequently settled via correspondent banking. Due to high charges, the transfer of money by migrants to their home countries (remittances), which today is carried out, for example, using money transfer services such as Western Union or MoneyGram, has also become a public talking point.

However, the use of virtual currencies entails risks beyond the exchange rate risk for both payer and payee. For example, there are no generally binding legal rules for the settlement of payments using bitcoins. By contrast, conventional cashless payments such as credit transfers and direct debits are governed by legal rules which set out what claims the customer can make against the payment service provider in the case of improperly executed payments. In addition, the user is subject to loss risks arising in connection with the storage of virtual currencies in the "online wallets" offered by commercial exchange operators.<sup>24</sup>

*Promising "distributed ledger" technology*

The real potential may therefore lie less in the virtual currency systems themselves than in the technologies that underpin them.<sup>25</sup> The so-called distributed ledger, as used for example in Bitcoin's block chain technology, is considered to be the key innovation of virtual currencies. It is a publicly accessible digital record of all user transactions, which means it is possible to ascertain at any time how many units were held by a given user at any given point in time. The ledger identifies users with a unique address in combination with a private key, but the identity of users is not visible, providing a sort of pseudo-anonymity.<sup>26</sup> Another key characteristic of this ledger is the way it is administered. As a general rule, the ledger is not maintained centrally by a single entity, but by users on a decentralised basis. This decentralised administration makes central intermediaries obsolete,

creates transparency and can guard against manipulation. Work is currently being carried out on how this technology could be used to digitalise and intelligently transfer legal claims ("smart properties").

It is therefore hardly surprising that the innovation departments of traditional players in the financial sector are investigating how this innovative technology might be exploited. From a payment transactions perspective, cross-border payment transactions offer certain development opportunities. The question is whether payment systems based on decentralised infrastructures can actually be operated at lower cost than today's centralised settlement systems for credit transfers, direct debits and card transactions. After all, centralised settlement systems benefit from economies of scale on account of the largely fixed-cost nature of IT infrastructure, meaning that unit costs fall with increasing settlement volumes. Moreover, in light of the low volumes handled by existing virtual currency systems, it remains to be seen whether they can handle mass volumes. It should also be taken into account that the potential cost advantages of a decentralised system are eroded if it is necessary to have additional participants, for example to operate exchanges or provide e-wallets.

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<sup>24</sup> The insolvency in January 2014 of the largest global exchange platform at the time, Mount Gox, caused high losses for a large number of investors and led to a sharp fall in the exchange rate.

<sup>25</sup> <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q3digitalcurrenciesbitcoin1.pdf>

<sup>26</sup> Full anonymity is not guaranteed if, for example, it is possible to link an address to a specific person, as is the case, for instance, in online payment processes.

## ■ Challenges in the field of payment security

*Consumers not fully aware of risk of misuse*

The spread of payment innovations and changes in the way traditional payment schemes are used have increased the complexity of payment processes. Together with carelessness on the part of some users, this has opened the door to new sources of payment misuse and fraud.

### ■ Cybercrime

*Opportunities for manipulation many and varied*

Most cases of digital theft so far have been less about direct attacks on payment infrastructures or payment service providers, and more about procuring sensitive information from bank customers or merchants which can be used to initiate a payment. This confidential information might be the authentication data which an individual uses to access his/her bank account online, say, or customer credit card details stored in a merchant's systems. One incident which drew major attention was the theft, in autumn 2013, of more than 40 million credit card numbers from a major US retailer.

Hackers use a broad toolkit to infiltrate payment systems. They might intentionally infect an unsuspecting user's computers or mobile devices with malicious software (malware), or take advantage of functional flaws in poorly protected and outdated operating systems and software (eg browsers or specialised applications) to gain control of computers in an attempt to access, steal, compromise or delete the data stored there. Hackers have also been known to log data by recording the keys struck on a keyboard (a method known as keylogging) or by redirecting victims against their will to unsecure websites, where they might be tricked into disclosing security details such as the authentication data they use for banking online or their credit card details.

*Cyber attacks*

Efforts to compromise digital payments users and providers are generally referred to as

cyber attacks, while the defensive manoeuvres used to fend off such attacks are usually known as cybersecurity. Cyber attacks are often highly professional operations conducted by a team of different individuals or groups with specialised "skill sets" which set out to breach the IT security defences protecting the information and communications infrastructure which individual actors use for payments. Cyber attacks aim to damage IT security goals such as confidentiality, integrity and availability or to disable them altogether. Hackers are often aided by the human factor, the weakest link in defence mechanisms.

Cyber attacks, their impact and the damage they cause vary depending on the hackers' capabilities, what they set out to achieve, and the quality and professionalism of their work. Cyber criminals, for instance, largely pursue financial interests. Cyber attacks conducted by intelligence services at a government's instigation, meanwhile, set out to achieve political objectives. Hacktivists or cyber activists, on the other hand, often have the prime intention of gaining media attention to promote a political or ideological agenda. Hackers do not necessarily have to breach systems from the outside, however. Internal hackers within an organisation can likewise gain access to confidential information or sabotage its systems.

*Who are these hackers?*

That is why carefully analysing developments and implementing preventive, risk-mitigating measures are key elements of payment security. But looking to the future, preventive measures will need to be augmented by even greater efforts to ensure that if a system does fall victim to a cyber attack, a back-up facility is in place to restore normal operations as quickly as possible. The general thrust of cybersecurity is to raise customer awareness of cyber attacks and to nudge payment service providers towards meeting even tighter security standards. The swift pace of technological change, the many

*Possible defensive measures*

and varied points at which an attack can occur and the potential vulnerabilities mean that combatting cybercrime – in the field of payments and beyond – will remain one of the foremost challenges in an increasingly digitalised world.

## Regulatory response in Europe

The evolution of the payment services markets and the new scope this has created for misuse and fraud have also made it necessary for legislators to redefine the playing field. On 24 July 2013, the European Commission presented a proposal for the Directive on Payment Services II (PSD II),<sup>27</sup> a legislative initiative which will revise the existing Payment Services Directive. Amongst other things, the PSD II will incorporate technological advances in the field of internet and mobile payments, although its regulatory requirements will need to strike the right balance between specifying security measures, promoting user-friendliness and creating scope for innovation.

*New payment  
service providers  
(PSPs) under  
supervision*

Legislators, mindful of these considerations, have given the new PSD II a broader scope of application to cover previously unregulated payment services including payment initiation services such as those provided in Germany by SOFORT AG<sup>28</sup> and account information services, providers of which are categorised as third-party providers (TPPs). The PSD II will subject these actors to the supervision of institutions, meaning that they shall have the same rights and obligations (eg regarding data protection and liability) as existing payment institutions. To provide their services, TPPs need to be able to access the payment accounts which a user maintains with the PSP administering his/her account. The PSD II will therefore require PSPs administering accounts to allow TPPs to access them.

Not only will the PSD II be broader in scope to cover new services and providers, it will

notably also introduce tighter security standards for customer authentication in electronic payments. One of the safeguards it calls for is known as “strong customer authentication”. Essentially, this comprises two independent elements which must be combined from three categories: “knowledge” (eg a password), “possession” (eg a transaction authentication number (TAN) generator) and “inherence” (eg a fingerprint). The idea is to ensure that the theft of one element alone is insufficient to initiate a fraudulent payment. Strong customer authentication is to be made compulsory for any electronic payment concluded via a distance communication without the simultaneous physical contact between the payment instrument and the acceptance point (eg internet payments, contactless mobile payment procedures or access to payment accounts via TPPs). There is also talk of going one step further and requiring one of the two factors used for strong customer authentication to be tied to the specific transaction. This requirement is already a feature of German online banking applications in which the TAN is generated by a card reader for a specific credit transfer in a certain amount and with a predefined recipient.

*Security  
requirements to  
be significantly  
tightened*

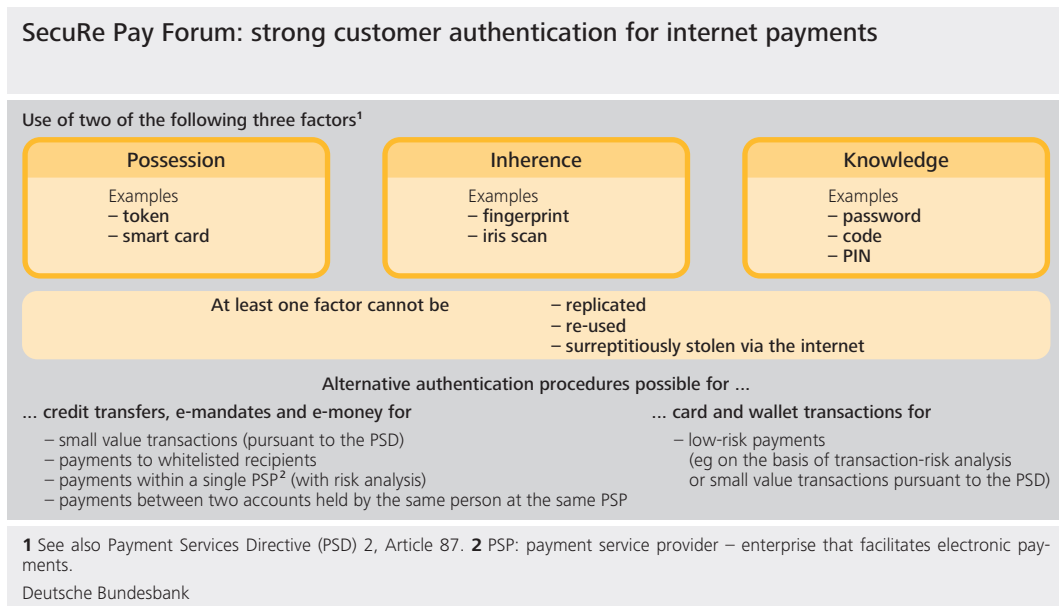
The European Banking Authority (EBA) is to be mandated to draw up a detailed set of regulatory technical standards, and it will also be tasked with drafting standards for secure communications between PSPs administering accounts and TPPs. Furthermore, there are plans for the EBA to develop guidelines for the reporting of major security incidents at PSPs. These guidelines will place the onus on PSPs to report any major security incidents to the national competent authority which, in turn, must forward these incidents to the EBA and the European Central Bank (ECB), which may also notify other national competent authorities in the European Union, if need be.

*European  
Banking  
Authority more  
important for  
payments*

<sup>27</sup> Directive of the European Parliament and of the Council on payment services in the internal market and amending Directives 2002/65/EC, 2013/36/EU and 2009/110/EC and repealing Directive 2007/64/EC.

<sup>28</sup> See p 44.





*SecuRe Pay forum developing security standards for retail payments*

The EBA will be supported in its task of drawing up regulatory technical standards and the EBA guidelines by SecuRe Pay (the Forum on the Security of Retail Payments). Established in 2011, the SecuRe Pay forum counts amongst its members bank supervisors and overseers of PSPs from all over Europe, while Europol and the European Commission have observer status. Its task is to develop harmonised minimum

standards in Europe which increase the safety of retail payment services. The set of recommendations for the security of internet payments which the SecuRe Pay forum presented back in January 2013 will become legally binding in August 2015 in the form of EBA guidelines, and they anticipate the rules set out in the future PSD II.

## ■ Outlook

*Playing field transformed*

The playing field in the payments industry looks set to be radically transformed. Increasing digitalisation is fuelling structural change which will impact on providers and users alike. The rapid ascendancy of online trade, moves by players previously confined to highly segregated sales channels to encroach on each other's turf, and huge steps forward in terms of communications technology have given rise to novel payment situations which create openings for providers that have harnessed the new technological capabilities. Particularly the competition from non-banks, some of which are global players, is blurring what were once distinct boundaries between different market

segments. Compounding this situation, regulation in traditional business areas such as card business is threatening to erode earnings. On the demand side, users expect payment instruments to be more convenient, more secure and faster. Demand pressure is also being ramped up by policy initiatives such as eGovernment, which are pushing public administrations to increasingly digitalise their services and forcing public sector contractors to offer paperless flows such as e-invoicing.

Network effects are a key feature of the payment services market, and the commercial success or failure of payment innovations hinges

*Success hinges on reaching critical mass*

*Banking industry needs to harness strategic edge*

on quickly reaching a critical mass of users (both payers and payees), so payment service providers with a broad user base are clearly at an advantage here. Germany's banking industry appears to be increasingly grasping that its broad customer base and its strong expertise in the field of security give it a strategic edge over non-banks. Credit institutions that fail to adapt their product range to suit today's user habits risk being forced out of the market, allowing international providers such as dotcom businesses to stamp their brand on this prominent line of business, while they languish in the background as mere payment processors. It may still be commonplace for payment innovators to use traditional payment instruments such as credit transfers, direct debits and card payments as a way of processing their transactions, but they cream off the potential earnings on the customer and merchant side via other channels. Equally, it is by no means set in stone that innovative payment methods must be linked to a current account run by a credit institution. Non-banks could most certainly build up alternative solutions to challenge this traditional domain of the banking industry.

*Expertise from different disciplines needed*

As digitalisation advances and payments become ever more specialised, there is a growing need for payment providers to blend expertise from different disciplines if they are to harness the opportunities presented by innovations in the field of payments. This explains why it is becoming increasingly common for credit institutions in Germany to cooperate with specialised financial service providers in an attempt to incorporate these think tanks into their own research and development work on product innovations. For credit institutions, this is the key to staking their claim in a dynamic market where the lines dividing the different players are constantly in flux and to having a decisive stake in shaping the future of payments.

*Technical standardisation a crucial lever*

A major facilitator for market-driven advances in the field of innovative payment instruments, and something the Eurosystem is also calling for, is technical standardisation. This lever is

crucial for ensuring that innovative payment methods achieve sufficient reach and coverage. As a case in point, contactless payment standards currently differ from one card company to the next, so a terminal at the point of sale would only be able to accept all contactless card payments if it supported all the underlying standards. Standardisation is likewise vital for encouraging merchants to accept payment innovations, since it enables them to unlock the increased customer potential besides offering the necessary incentives to invest.

Consumers will only really embrace new payment methods if they are easy to use, cost-effective and, most importantly of all, secure. Only payment innovations which offer more value than the existing instruments will succeed in gaining a foothold in the consumer market. Contactless payment methods, be they card-based or mobile, certainly do offer potential – they could streamline and accelerate the payment process and, more importantly, often take the place of small-value cash payments. However, this potential can only be unleashed if contactless payment instruments are more widely accepted at the point of sale and consumers have much greater access to contactless payment cards and e-wallet apps on their smartphones.

Looking to the future, the trend towards real-time payments in the retail payment system – something which is already a reality in a number of countries – looks set to materialise in Germany and the euro area as well. Ramping up processing speeds in payments business boosts transaction efficiency for payers and payees alike. Thoughts on the topic of real-time payment systems in the euro area may still be sketchy, but both the European System of Central Banks (ESCB) and the Euro Retail Payments Board (ERPB), which is tasked with strategically developing retail payments in Europe, have placed this matter high up on their agendas.

It remains to be seen how the emergence of virtual currencies will impact on the payments

*Consumers want easy-to-use, secure and cost-effective payment methods*

*Real-time payments gaining importance*

*Virtual currencies insignificant hitherto*

business, where they play a wholly negligible role at present. That state of play is unlikely to improve given the risk involved in the virtual currency schemes currently in use. At the current juncture, it is impossible to gauge the extent to which the ledger technology upon which virtual currencies are based will fuel innovations in fields such as payments from one currency area to another.

*Striking a balance between innovation and security*

The evolving supply structure in the payments market and the increasingly complex and “tech-heavy” nature of payment instruments and their access channels mean that regulators, too, face a whole new set of challenges. Their powers are often confined to national or regional jurisdictions, whereas new players

entering the payments market sometimes operate on an international scale. As far as the world of virtual currencies is concerned, merely establishing the identity of a single player is a challenge in itself. Legislators, central banks and supervisors are responding to these developments by stepping up their cooperation and coordination. Their aim must be to foster competition and unleash innovative potential in the payment services market whilst at the same time guaranteeing appropriate security levels. Bearing this in mind, digital structural change in payments business should not be regarded as a threat but grasped as an opportunity to take the security, efficiency and user-friendliness of payments to the next level.



## **Chronology of economic and monetary policy measures**

### 1 January 2014

Latvia becomes the 18th EU member state to adopt the euro as its currency; the Latvijas Banka becomes a member of the Eurosystem.

The basic income tax allowance is raised by €224 to €8,354.

### 23 January 2014

The assistance programme for the Spanish banking sector, which was not tied to a macroeconomic adjustment programme, is officially ended. The European Stability Mechanism (ESM) paid €41.3 billion into Spain's state-owned bank restructuring fund (FROB), which passed the money on to the banks. The overall volume of funds made available under the assistance programme (€100 billion) was therefore far from fully exhausted.

### 24 January 2014

The ECB Governing Council announces that it will cease to conduct US dollar liquidity-providing operations with a maturity of three months as of April 2014 on account of the greatly improved market conditions. These operations had met with very little demand of late.

### 27 January 2014

Ms Sabine Lautenschläger, formerly Deputy President of the Bundesbank, is appointed to the Executive Board of the European Central Bank.

### 7 February 2014

The Federal Constitutional Court announces its intention to pronounce its judgement on the proceedings relating to the ESM and the Fiscal Compact on 18 March. It notes that it has separated the matters that relate to the ECB's outright monetary transactions (OMT) programme and stayed these proceedings. The Court has reason to believe that the OMT programme

may not be compatible with the primary law of the European Union as it exceeds the ECB's monetary policy mandate and violates the prohibition of monetary financing of public budgets. It has referred the case to the European Court of Justice for a preliminary ruling. If the OMT decision were interpreted restrictively, the programme could conform with the law.

### 12 February 2014

According to its Annual Economic Report, the Federal Government anticipates a 1.8% increase in real gross domestic product (GDP) in 2014. Growth is expected to be driven primarily by the domestic economy. Employment is forecast to increase by 0.6% and the unemployment rate is expected to remain virtually unchanged at 6.8%.

### 5 March 2014

The European Commission presents its in-depth review, which assesses whether there are any macroeconomic imbalances in Germany. The review focuses on the causes of the large current account surpluses of recent years, which the Commission interprets as an indication of macroeconomic imbalances. However, it acknowledges that the high level of competitiveness of German exporters is not only buoying domestic economic activity but also benefiting Germany's European trading partners owing to the high degree of integration in production processes. The Commission recommends measures to spur domestic demand and increase the German economy's growth potential.

### 12 March 2014

The Federal Government approves the revised draft Federal budget for 2014. Net borrowing of €6.5 billion is envisaged for 2014. After deducting financial transactions and calculated cyclical burdens, and including both the flood assistance fund as well as the Energy and Climate Fund, the structural surplus amounts to 0.1% of GDP. However, a payment of €1 billion

from the flood assistance fund to central government is taken into account solely for the latter and thus improves the balance in net terms.

Furthermore, the Federal Government sets out benchmark figures for the 2015 Federal budget and the medium-term fiscal plan up to 2018. Net new borrowing is no longer envisaged for the 2015 budget. However, falling burdens from financial transactions and economic activity imply a slight loosening of fiscal policy in structural terms. Forecasts for the entire financial planning period are based on achieving a balanced budget without incurring new debt. The priority measures agreed in the coalition agreement totalling €23 billion up to 2017 are to be financed for the most part from previously planned surpluses and lower interest expenditure.

#### **13 March 2014**

The Bundesbank presents its annual accounts for the 2013 financial year. The profit of €4,591 million is transferred to central government.

#### **18 March 2014**

The Second Senate of the Federal Constitutional Court delivers its judgement on the ESM and Fiscal Compact proceedings. The regulations are not unconstitutional provided it is ensured that Germany can meet capital calls pursuant to the ESM Treaty in time and within the agreed-upon upper limits, so that Germany can exercise its voting rights in the ESM bodies.

#### **8 April 2014**

The Federal Cabinet presents an updated stability programme for Germany. This assumes real GDP growth of 1.8% in 2014, 2.0% in 2015 and 1½% annually in the years thereafter up to 2018. Plans for the general government budget envisage that the balanced budget achieved in 2013 will be maintained, initially until 2016, and that a surplus of ½% of GDP will be recorded in 2017 and 2018. In struc-

tural terms, a surplus of ½% of GDP is projected for 2014 and beyond (2013: +0.7%). The debt ratio is expected to fall significantly from 78.4% in 2013 to 65% in 2018.

#### **14 April 2014**

Hamburg Fiscal Court suspends payments of nuclear fuel tax in parts of Germany. As a result, in May central government refunds €2.2 billion in taxes paid by nuclear power plant operators. However, on 23 December 2014, the Federal Fiscal Court publishes its decision reversing the provisional legal protection for nuclear power plant operators. Taxes due are paid (back) to central government, for the most part in December 2014. At the start of 2015, the Federal Constitutional Court and the European Court of Justice had not yet made their rulings on this matter.

#### **23 April 2014**

The general government deficit and debt figures reported by the EU member states in their spring notifications by the end of March are published under the European budgetary surveillance procedure, after validation by Eurostat. According to these data, in 2013 Germany recorded a general government fiscal balance of 0.0% of GDP coupled with a year-end debt ratio of 78.4%. For 2014, the Federal Government announces a planned surplus of 0.1% of GDP and a fall in the debt ratio to 75.8%.

#### **18 May 2014**

Portugal exits the EU/IMF adjustment programme that was launched in May 2011 before completion of the final review and thus waiving the final tranche of €2 billion (from a total volume of €78 billion). A post-programme review will be conducted every six months.

#### **19 May 2014**

The ECB, the Bundesbank and other European central banks announce the fourth Central

Bank Gold Agreement. Gold remains an important element of global monetary reserves, the signatories will continue to coordinate their gold transactions and, currently, there are no plans to sell significant amounts of gold.

#### **28 May 2014**

In the course of monitoring the structural general government fiscal deficit, the Stability Council finds that the regular ceiling of 0.5% of GDP is being adhered to. The Advisory Board of the Stability Council comes to the same conclusion in its first statement. The Advisory Board was established at the end of 2013 and supports the Stability Council in monitoring compliance with the upper limit for the structural general government fiscal deficit, in particular by issuing statements prior to the Stability Council taking decisions on such matters.

#### **5 June 2014**

The ECB Governing Council cuts its key policy rate: as of 11 June 2014, the interest rate on the main refinancing operations will be set at 0.15%, putting it 10 basis points below its previous level. The interest rate on the marginal lending facility is simultaneously reduced by 35 basis points to 0.4%, while the interest rate on the deposit facility enters negative territory for the first time, falling to -0.10%.

The ECB Governing Council also decides to conduct eight targeted longer-term refinancing operations (TLTROs) with a maturity of up to four years, tied in part to past and future bank lending to the private sector, excluding loans to households for house purchase. The interest rate on the TLTROs will be fixed over the life of each operation at the rate on the Eurosystem's main refinancing operations prevailing at the time of take-up, plus a fixed spread of 10 basis points.

The ECB Governing Council furthermore decides to continue conducting its main refinancing operations as fixed-rate tender procedures

with full allotment at least until the end of 2016.

In addition, it decides to discontinue the tenders with a maturity of one maintenance period, following the operation to be allotted on 10 June 2014, and to suspend the weekly fine-tuning operation sterilising the liquidity injected under the Securities Markets Programme (SMP), which has been conducted since the programme was launched.

The ECB Governing Council also announces its decision to intensify preparatory work related to potential outright purchases in the ABS market.

#### **6 June 2014**

The Bundesbank expects the economy to grow by 1.9% (2.0% in calendar-adjusted terms) in 2014, for this figure to increase slightly to 2.0% in 2015 and to amount to 1.8% in 2016. Consumer price inflation, as measured by the Harmonised Index of Consumer Prices, is forecast to increase to 1.5% in 2015 and 1.9% in 2016, owing to the accelerated rise in wages.

#### **17 June 2014**

The ECB Governing Council, in cooperation with the Bank of England, the Bank of Japan and the Swiss National Bank, decides to continue to offer one-week US dollar liquidity-providing operations after 31 July 2014.

#### **27 June 2014**

The Bundestag approves the 2014 budget. Compared with the draft budget from March, budget estimates for revenue and expenditure are both €2 billion lower. The downward revision of revenue is due to a provisional fund for revenue shortfalls in line with Hamburg Fiscal Court's ruling on nuclear fuel tax from April 2014 and to the official May 2014 tax estimate. In the case of expenditure, it is chiefly the estimated costs of interest payments that



are lower. While the fiscal balance remains unchanged on the draft, the structural surplus is reduced by €0.5 billion to €1.3 billion (excluding burdens agreed for the flood assistance fund) as cyclical strains are now forecast to be lower (although they are still significantly overestimated in the Bundesbank's view).

### 1 July 2014

The Act on Improvements in Statutory Pension Insurance Benefits (*Gesetz über Leistungsverbesserungen in der gesetzlichen Rentenversicherung*) enters into force. Under this Act, child-raising persons are granted two pension points (rather than the previous one) for each child born before 1992. Furthermore, persons that have been contributing to the scheme for 45 years, even if these include years receiving unemployment insurance benefit (I) (with the exception of the two years prior to the start of retirement), may claim a full pension without actuarial deductions from the age of 63. However, this age limit will be raised back up to 65 by 2029. In addition, more generous pensions for persons with reduced earning capacity are introduced and a demographics component is added to the extrapolation rule for the statutory pension insurance scheme's rehabilitation budget. The costs thereof are estimated to total roughly €10 billion per year which, taken in isolation, means that the contribution rate would have to be raised by around 1 percentage point, thus limiting the scope for temporarily cutting said rate. Furthermore, the pension level of insured persons who do not stand to benefit from the special privileges will be lowered.

### 2 July 2014

The Federal Cabinet approves the 2015 draft budget and the medium-term fiscal plan up to 2018. As in the benchmark figures, no net new borrowing is envisaged. Further relief in the debt servicing burden that has been recorded in the meantime is to be used in particular to top up expenditure on education and for planned staff pay and pension increases.

The European Directive establishing a framework for the recovery and resolution of credit institutions and investment firms (Bank Recovery and Resolution Directive: BRRD) enters into force. Member states have until the end of 2014 to pass legislation that will enable an orderly recovery and resolution of banks in the European Union in the future.

The new European Deposit Guarantee Schemes Directive, aimed at harmonising deposit guarantee schemes within the European Union, enters into force. The Directive is to be transposed into national law by the end of May 2016; a number of key requirements will apply as of 4 June 2015.

### 3 July 2014

The ECB Governing Council decides that its meetings dedicated to monetary policy will change to a new six-week cycle from January 2015. Reserve maintenance periods will be extended to match the new frequency of monetary policy meetings. Starting with the January 2015 meeting, the ECB also intends to publish accounts of its monetary policy discussions.

### 11 July 2014

The Bundesrat approves the Act Reinforcing Collective Bargaining Autonomy (*Tarifautonomiestärkungsgesetz*). One of the chief objectives of this Act is to implement a general minimum wage of €8.50 per hour from 1 January 2015 (with transitional periods for certain sectors). A Minimum Wage Commission will review this rate and, if necessary, recommend adjustments. The Commission comprises the chairperson, six voting members (proposed in equal part by employer and employee representatives) and two non-voting academics.

The Bundesrat approves the Act Improving the Financial Structure and Quality of the Statutory Health Insurance Scheme (*GKV-Finanzstruktur- und Qualitäts-Weiterentwicklungsgesetz*). As of 1 January 2015, on the one hand, the flat-

rate additional contribution will be replaced by an income-related additional contribution to be paid solely by members of the statutory health insurance scheme. On the other hand, the special contribution of 0.9%, which had previously likewise been paid by members alone, will be abolished. This obviates the need for the envisaged social equalisation of the flat-rate additional contribution to be funded by the Federal budget.

#### **14 August 2014**

The Federal Statistical Office presents the initial results of the 2014 major revision of the national accounts for the period from 1991 onwards. This revision is primarily due to the change-over to the new European System of Accounts 2010 (ESA 2010). In addition, the data have been fundamentally revised; newly available or additional information sources have been used and, in some cases, new estimation methods have also been applied. More detailed data will be available from 1 September 2014. Consequently, nominal GDP has been pushed up by an average of just over 3% and, in some cases, sizeable revisions have been made to various national accounts components, which has led to some changes in key macroeconomic ratios. Particularly striking changes are discernible in the macroeconomic export and import ratios, as movements of goods without a change of ownership are no longer recorded in the balance of trade. Moreover, the reclassification of spending on research and development as gross fixed capital formation is resulting in significant changes to aggregate investment. This raises the ratio of business investment to GDP in particular. Key fiscal ratios are also affected by the revision, but the overall picture for public finances has not changed fundamentally. Revisions to the general government fiscal balance are minor. Although government revenue and expenditure are now significantly higher, primarily owing to methodological changes, the revenue and expenditure ratios are lower on account of the upward revision to GDP being greater.

#### **4 September 2014**

The ECB Governing Council cuts its key policy rate: as of 10 September 2014, the interest rate on the main refinancing operations will be set at 0.05%, putting it 10 basis points below its previous level. The interest rate on the marginal lending facility is reduced by the same amount to 0.30%, while the interest rate on the deposit facility is lowered to -0.20%. In addition, the Governing Council announces purchase programmes for asset-backed securities (ABSPP) and covered bonds (CBPP3). The objective of the ABSPP is to revitalise the market for simple and transparent ABS, which are backed by claims on the euro-area non-financial private sector. This is intended to further stimulate lending to this sector. Both programmes are due to start in October 2014.

#### **18 September 2014**

Following the second meeting of the ECB Governing Council in September 2014, the ECB announced the result of the draw for the Governing Council's voting rotation system. From January 2015, the group of governors representing the national central banks of the euro area's largest member states, which includes the Bundesbank President as well as the governors of the Spanish, French, Italian and Dutch central banks, will take turns in relinquishing their voting rights for one month at a time.

Furthermore, the first of the eight TLTROs agreed in June is conducted: 255 banks borrow €82.6 billion.

#### **23 September 2014**

The Eurosystem brings the new €10 banknote with improved security features into circulation.

#### **2 October 2014**

The ECB Governing Council publishes further details on the purchase programmes ABSPP and CBPP3. Each programme will last for at

least two years, and the Eurosystem collateral framework for monetary policy refinancing operations will be the guiding principle for eligibility of assets for purchase. Exemptions (with risk-mitigating measures) will apply to Greece and Cyprus, given that securities from these countries cannot obtain the minimum credit assessment required due to their country ratings. Under the ABSPP, the Eurosystem will work together with external service providers.

#### **13 October 2014**

The Federal Government submits its draft budgetary plan for the 2015 general government budget to the European Commission. The plan is based on the draft central government budget and on the Federal Ministry of Finance's summer estimates for state and local government. An updated forecast was made for the social security funds. As outlined in the stability programme, a balanced budget and a structural surplus of ½% of GDP are envisaged for 2014 and 2015 (compared with +0.1% and +0.8% of GDP in 2013). After standing at 76.9% in 2013, the debt ratio is projected to fall to 74% in 2014 and 70½% in 2015.

#### **21 October 2014**

The general government deficit and debt figures reported by the EU member states in their autumn notifications by the end of September 2014 are published under the European budgetary surveillance procedure, after validation by Eurostat. According to these data, in 2013 Germany recorded a general government surplus of 0.1% of GDP coupled with a year-end debt ratio of 76.9%. For 2014, the Federal Government announced a planned surplus of 0.2% of GDP and a fall in the debt ratio to 73.8%. The corrections vis-à-vis the spring notification are also attributable to the changeover to ESA 2010. While the general government fiscal balance is only slightly affected in net terms, the level of debt is markedly higher on account of the revision. Nevertheless, the 2013 debt ratio is now 1.6 percentage points lower, as the up-

ward revision to nominal GDP was considerably greater.

#### **26 October 2014**

The ECB publishes the results of its review of the 130 largest banks in the euro area as at 31 December 2013. 13 banks are given a maximum of two weeks to submit capital plans and six to nine months to cover their shortfalls. Since the review began in July 2013, the 30 largest participating banks have strengthened their balance sheets by €200 billion, with mobilised capital totalling €60 billion.

#### **4 November 2014**

With the launch of the Single Supervisory Mechanism (SSM), the ECB assumes responsibility for banking supervision in the euro area. From now on, the ECB will directly supervise the euro area's 123 largest institutions, which account for more than 80% of the banking sector's total assets.

#### **6 November 2014**

The ECB Governing Council outlines its expectations for balance sheet expansion in the context of the package of measures adopted (comprising TLTROs, ABSPP and CBPP3) and announces that it expects the balance sheet to move towards the dimensions it had at the beginning of 2012.

#### **7 November 2014**

As was the case last year, the ECB Governing Council decides to suspend the early repayment option on the three-year LTROs during the year-end period.

The first Act to Strengthen Long-term Care (*Pflegestärkungsgesetz*) is passed by the Bundesrat. This will see the public long-term care insurance scheme contribution rate raised from 2.05% to 2.35% (plus an extra 0.25% in each case for childless persons) on 1 January 2015.

One-third of the additional revenue will be paid into a precautionary fund for long-term care and two-thirds will go directly to higher benefits. Along with a general automatic adjustment to long-term care benefit rates, benefits for persons suffering from dementia, in particular, will be expanded. Over a period of 20 years, contribution receipts equivalent to 0.1 percentage point are to be built up in the precautionary fund administered by the Bundesbank, later to be dispersed again gradually as a means of limiting the foreseeable increase in the tax burden.

#### **12 November 2014**

In its Annual Economic Report, the German Council of Economic Experts forecasts real GDP growth of 1.0% in 2015 (0.8% in calendar-adjusted terms), which is primarily attributable to domestic factors. Consumer spending is expected to be the main contributor to growth, driven by the favourable labour market situation and the substantial increase in government transfers. The number of unemployed persons is forecast to remain unchanged. Investment in machinery and equipment should rise somewhat more sharply than in 2014, while the strong growth in construction investment is likely to slow. Net exports are expected to decline.

#### **28 November 2014**

The Bundestag approves the 2015 Federal budget. Burdens that have arisen since the Federal Cabinet decision in July 2014 – particularly owing to tax shortfalls according to the official tax estimate from the start of November (which were limited by lower transfers to the EU budget) and the expected higher spending on long-term unemployment – are offset not least by lower interest expenditure estimates. Consequently, the goal of a balanced budget with no net new borrowing remains intact despite the Federal Government's downward revisions to GDP growth expectations.

#### **4 December 2014**

The ECB Governing Council once again outlines its expectations for balance sheet expansion in the context of the measures adopted (TLTROs, ABSPP and CBPP3), this time speaking of its intention to steer the balance sheet towards the dimensions it had at the beginning of 2012.

#### **6 December 2014**

The Bundesbank forecasts growth of 1.0% for 2015 and 1.6% for the following year (0.8% for 2015 and 1.5% for 2016 in calendar-adjusted terms). Bolstered by immigration but dampened by the full pension without actuarial deductions from the age of 63 and the general minimum wage, growth in potential output of just over 1% is estimated for these years. Consumer price inflation, as measured by the Harmonised Index of Consumer Prices, is expected to rise to 1.5% in 2015 and 1.8% in 2016. If energy is excluded, the rate is expected to increase to 2.0% in 2016.

#### **11 December 2014**

The ECB conducts the second of eight targeted longer-term refinancing operations (TLTROs): 306 banks borrow €129.8 billion.

#### **15 December 2014**

In the course of monitoring the structural general government fiscal deficit, the Stability Council finds that the regular ceiling of 0.5% of GDP is being adhered to.

#### **17 December 2014**

The Federal Constitutional Court rules that individual parts of the Inheritance and Gift Tax Act (*Erbschaft- und Schenkungsteuergesetz*) currently in force, namely those which provide for preferential treatment of corporate assets, are unconstitutional. Legislators must correct the relevant provisions by 30 June 2016. In the meantime, the current Act shall remain valid.

### **18 December 2014**

The ECB Governing Council decides to publish accounts of its monetary policy discussions from January 2015. The accounts are intended to offer a reflection of the Governing Council's monetary policy deliberations and will be released four weeks after each meeting. It is also announced that a new six-weekly Economic Bulletin will replace the ECB's Monthly Bulletin.

### **1 January 2015**

Lithuania becomes the 19th EU member state to adopt the euro as its currency; Lietuvos bankas becomes a member of the Eurosystem.

The Single Resolution Mechanism (SRM) commences its preparatory work. As a complement to the Single Supervisory Mechanism (SSM), it will be responsible for the recovery and resolution of credit institutions in the euro area as of 1 January 2016. Use of the SRM will be linked to a Single Resolution Fund, which is being built up with contributions from banks.

The contribution rate to the statutory pension insurance scheme is cut from 18.9% to 18.7%, while the public long-term care insurance scheme contribution rate is raised from 2.05% to 2.35% (plus an extra 0.25% in each case for childless persons). The size of the contribution to be paid by members alone (previously a uniform amount of 0.9%) will henceforth be set by the individual health insurance institutions, while the option of charging flat-rate additional contributions in the form of fixed euro amounts is abolished. Given expected deficits in the statutory health insurance scheme, the new average additional contribution rate is only just under 0.1 percentage point lower than the previous uniform rate, despite the high level of reserves.

### **13 January 2015**

The 2014 Federal budget contained no net borrowing. This constitutes a year-on-year improvement of €22 billion, with reduced ex-

ceptional burdens (elimination of advance payments to the flood assistance fund and lower ESM contributions) accounting for €12½ billion. Rising tax revenue was accompanied by a significant decline in interest expenditure (-€5½ billion). The €6.5 billion improvement compared with the budget plans is mainly attributable to higher tax revenue, provisions for shortfalls arising from the nuclear fuel tax not being required in accordance with the ruling of the Federal Fiscal Court announced on 23 December 2014, and to lower interest expenditure. Taking into account the deficits from both the flood assistance fund and the Energy and Climate Fund, the Federal Ministry of Finance records a structural surplus – adjusted for cyclical burdens and financial transactions – of 0.3% of GDP.

### **14 January 2015**

In response to questions submitted by the Federal Constitutional Court on the ECB's OMT programme, the Advocate-General of the European Court of Justice concludes that the government bond purchase programme adopted in September 2012 does not constitute a violation of EU law. According to the Advocate-General, the OMT programme is a monetary policy measure which requires only limited judicial review. It rules that the ban on monetary financing of public budgets has not been breached. However, it should be ensured that the ECB does not, in parallel to purchasing bonds, exert a major influence when monitoring compliance with the agreed financial assistance programmes.

### **22 January 2015**

The ECB Governing Council announces an expanded asset purchase programme (EAPP), under which government bonds from individual euro-area countries as well as bonds from supranational European institutions will be purchased. This is in addition to the covered bonds and asset-backed securities purchased under the two previous purchase programmes.

A combined monthly purchase volume of €60 billion is envisaged. The purchases are due to commence in March 2015 and are intended to be carried out until September 2016, and in any case until the ECB Governing Council sees a sustained adjustment in the path of inflation that is consistent with its aim of achieving inflation rates close to, but below, 2% over the medium term. Furthermore, the ECB Governing Council decides that 80% of the purchases will not be subject to loss sharing.

The ECB Governing Council also decides that the remaining TLTROs will be settled at the main refinancing rate, meaning that the 10 basis point spread no longer applies.

#### **29 January 2015**

In its Annual Economic Report, the Federal Government anticipates real GDP growth of 1.5% in 2015. The significant influences on demand stem from consumption and private residential

investment, stimulated by sustained employment growth and substantial increases in income. Net exports are expected to rise slightly.

#### **4 February 2015**

The ECB Governing Council decides to lift the waiver of minimum credit rating requirements for marketable instruments issued or guaranteed by Greece, with effect from 11 February 2015.

#### **24 February 2015**

The Federal Statistical Office reports a general government fiscal balance (pursuant to the Maastricht criteria) of 0.6% of GDP for 2014.

#### **12 March 2015**

The Bundesbank presents its annual accounts for the 2014 financial year. The profit of €2,954 million is transferred to central government.

# Annual accounts of the Deutsche Bundesbank for 2014

## Balance sheet of the Deutsche Bundesbank as at 31 December 2014

### Assets

		31.12.2013
	€ million	€ million
1 Gold and gold receivables <i>of which: gold receivables €452,934.56</i>	107,475	94,876 ( 0)
2 Claims on non-euro-area residents denominated in foreign currency		
2.1 Receivables from the IMF	20,624	( 20,798)
2.2 Balances with banks, portfolio investment, external loans and other external assets	<u>30,646</u>	<u>( 28,080)</u>
	51,270	48,878
3 Claims on euro-area residents denominated in foreign currency	–	125
4 Claims on non-euro-area residents denominated in euro	–	–
5 Lending to euro-area credit institutions related to monetary policy operations denominated in euro		
5.1 Main refinancing operations	32,544	( 38,162)
5.2 Longer-term refinancing operations	32,944	( 13,771)
5.3 Fine-tuning reverse operations	–	( –)
5.4 Structural reverse operations	–	( –)
5.5 Marginal lending facility	<u>84</u>	<u>( 122)</u>
	65,572	52,054
6 Other claims on euro-area credit institutions denominated in euro	2,011	4,691
7 Securities of euro-area residents denominated in euro		
7.1 Securities held for monetary policy purposes	50,224	( 55,844)
7.2 Other securities	<u>–</u>	<u>( –)</u>
	50,224	55,844
8 Claims on the Federal Government	4,440	( 4,440)
9 Intra-Eurosystem claims		
9.1 Participating interest in the ECB	1,948	( 2,031)
9.2 Claims arising from the transfer of foreign reserves to the ECB	10,430	( 10,872)
9.3 Claims related to the allocation of euro banknotes within the Eurosystem (net)	–	( –)
9.4 Other claims within the Eurosystem (net)	<u>460,629</u>	<u>( 510,467)</u>
	473,007	523,369
10 Items in course of settlement	1	3
11 Other assets		
11.1 Coins	908	( 879)
11.2 Tangible and intangible fixed assets	799	( 844)
11.3 Other financial assets	12,452	( 11,777)
11.4 Off-balance-sheet instruments revaluation differences	0	( 3)
11.5 Accruals and prepaid expenses	1,354	( 1,747)
11.6 Sundry items	<u>1,330</u>	<u>( 1,503)</u>
	16,842	16,753
	<u>770,842</u>	<u>801,033</u>



		<b>Liabilities</b>	
		31.12.2013	
		€ million	€ million
1	Banknotes in circulation	240,518	237,258
2	Liabilities to euro-area credit institutions related to monetary policy operations denominated in euro		
2.1	Current accounts	81,176	( 83,877)
2.2	Deposit facility	9,019	( 10,712)
2.3	Fixed-term deposits	–	( 46,870)
2.4	Fine-tuning reverse operations	–	( –)
		<u>90,196</u>	<u>141,459</u>
3	Other liabilities to euro-area credit institutions denominated in euro	–	–
4	Liabilities to other euro-area residents denominated in euro		
4.1	General government deposits	1,940	( 2,013)
4.2	Other liabilities	<u>7,930</u>	<u>( 8,453)</u>
		9,870	10,466
5	Liabilities to non-euro-area residents denominated in euro	12,262	52,047
6	Liabilities to euro-area residents denominated in foreign currency	34	1,830
7	Liabilities to non-euro-area residents denominated in foreign currency	788	37
8	Counterpart of special drawing rights allocated by the IMF	14,380	13,486
9	Intra-Eurosystem liabilities		
9.1	Liabilities related to the issuance of ECB debt certificates	–	( –)
9.2	Liabilities related to the allocation of euro banknotes within the Eurosystem (net)	267,914	( 224,251)
9.3	Other liabilities within the Eurosystem (net)	<u>–</u>	<u>( –)</u>
		267,914	224,251
10	Items in course of settlement	1	2
11	Other liabilities		
11.1	Off-balance-sheet instruments revaluation differences	–	( –)
11.2	Accruals and income collected in advance	45	( 226)
11.3	Sundry items	<u>2,695</u>	<u>( 3,079)</u>
		2,739	3,305
12	Provisions	19,696	19,221
13	Revaluation accounts	104,491	88,080
14	Capital and reserves		
14.1	Capital	2,500	( 2,500)
14.2	Statutory reserves	<u>2,500</u>	<u>( 2,500)</u>
		5,000	5,000
15	Profit for the year	<u>2,954</u>	<u>4,591</u>
		<u><u>770,842</u></u>	<u><u>801,033</u></u>

## Profit and loss account of the Deutsche Bundesbank for the year 2014

		2013
	€ million	€ million
1.1 Interest income	4,039	( 7,281)
1.2 Interest expense	<u>- 898</u>	<u>( - 1,715)</u>
1 Net interest income	3,141	5,566
2.1 Realised gains/losses arising from financial operations	488	( 379)
2.2 Write-downs on financial assets and positions	- 12	( - 733)
2.3 Transfers to/from provisions for general risks, foreign exchange risks and price risks	<u>-</u>	<u>( -)</u>
2 Net result of financial operations, write-downs and risk provisions	476	- 353
3.1 Income from fees and commissions	60	( 60)
3.2 Expenses relating to fees and commissions	<u>- 24</u>	<u>( - 21)</u>
3 Net income from fees and commissions	35	39
4 Income from participating interests	485	526
5 Net result arising from allocation of monetary income	213	- 11
6 Other income	<u>98</u>	<u>268</u>
<b>Total net income</b>	<b>4,449</b>	<b>6,035</b>
7 Staff costs	911	745
8 Other administrative expenses	339	330
9 Depreciation of tangible and intangible fixed assets	99	105
10 Banknote printing	98	36
11 Other expenses	<u>48</u>	<u>228</u>
<b>Profit for the year</b>	<b><u>2,954</u></b>	<b><u>4,591</u></b>

Frankfurt am Main, 17 February 2015

DEUTSCHE BUNDESBANK  
Executive Board

Dr Jens Weidmann      Professor Claudia Buch

Dr Johannes Beermann      Dr Andreas Dombret      Dr Joachim Nagel      Carl-Ludwig Thiele

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

We have audited the annual financial statements – consisting of the balance sheet and the profit and loss account – together with the bookkeeping system of the Deutsche Bundesbank for the business year from 1 January 2014 to 31 December 2014. The maintenance of the books and records and the preparation of the annual financial statements in accordance with generally accepted accounting principles and the principles for the accounting of the Deutsche Bundesbank approved by the Executive Board pursuant to section 26 (2) of the Bundesbank Act are the responsibility of the Executive Board of the Deutsche Bundesbank. Our responsibility is to express an opinion on the annual financial statements, together with the bookkeeping system, based on our audit.

We conducted our audit of the annual financial statements in accordance with section 317 HGB [“Handelsgesetzbuch”: “German Commercial Code”] 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 (ISA). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the annual financial statements in accordance with [German] principles of proper

accounting are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Deutsche Bundesbank and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the books and records as well as the annual financial statements are examined primarily on a test basis within the framework of the audit. The audit includes assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall presentation of the annual financial statements. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the annual financial statements comply with the legal requirements and the additional provisions of the principles for the accounting of the Deutsche Bundesbank and 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.

Eschborn/Frankfurt am Main,  
24 February 2015

Ernst & Young GmbH  
Wirtschaftsprüfungsgesellschaft

Müller-Tronnier  
Wirtschaftsprüfer

Kuhlmann  
Wirtschaftsprüferin

## 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 costs 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. The same is true of 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.

### 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 method; they shall be taken into 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 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 cost price or rate of the assets shall be reduced by unrealised losses taken into 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) 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, 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 treated in a similar manner to those from spot transactions.

#### **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 capitalised 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 Euro-system 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 of 31 December 1998 shall be revalued on 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 of 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 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”.<sup>1</sup> An overview of the principles for the accounting of the Deutsche Bundesbank is given on the preceding pages. The annual accounts of the Bundesbank are 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.

### 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.<sup>2</sup> 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 banknote allocation key. 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 2014, the Bundesbank had a 25.7% share in the fully paid-up capital of the

ECB and, therefore, a 23.7% 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.

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.<sup>3</sup> If the value of the euro 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 “Liabilities related to the allocation of euro banknotes within the Eurosystem (net)”. 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 “Claims related to the allocation of euro banknotes within the Eurosystem (net)”. 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

*... of intra-Eurosystem balances arising from the allocation of euro banknotes*

<sup>1</sup> Published as a revised edition in Deutsche Bundesbank Notice No 10001/2015 of 10 February 2015.

<sup>2</sup> 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).

<sup>3</sup> Decision of the European Central Bank of 25 November 2010 on the allocation of monetary income of the national central banks of member states whose currency is the euro (ECB/2010/23), as last amended by the Decision of the European Central Bank of 15 December 2014 (ECB/2014/56).

those in previous years. The adjustments are made by taking into account the differences 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 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 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 Slovakian central bank in 2009, the Estonian central bank in 2011 and the Latvian central bank in 2014. The adjustment relating to the accession of the Slovakian central bank ended on 31 December 2014; the other adjustments will finish accordingly on 31 December 2016 and 2019. 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 profit and loss account of the Bundesbank in item 1 "Net interest income".

In accordance with the provisions laid down in Article 29.3 of the ESCB Statute, the ECB's capital key is adjusted every five years. Accordingly, an adjustment was made to the ECB's capital key with effect from 1 January 2014. The Bundesbank's share of the ECB's subscribed capital decreased from 18.8% to 18.0%, with its participating interest in the ECB falling from €2,031 million to €1,948 million. In the Eurosystem, a compensatory payment is made if a national central bank's share of the accumulated net equity of the ECB (particularly the ECB's revaluation account and the ECB risk provision) falls because of a reduction of its participating interest. The resulting income for the Bundesbank amounting to €240 million is included in item 4 "Income from participating interests" in its profit and loss account. Furthermore, the Latvian central bank and the Lithuanian central bank joined the Eurosystem on 1 January 2014 and 1 January 2015 respectively and paid up their capital shares in the ECB in full. As a result, the Bundesbank's share of the fully paid-up capital of the ECB declined from 27.0% to 25.7% as at 1 January 2014 and to 25.6% as at 1 January 2015.

*Change to the ECB's capital key on 1 January 2014 and 1 January 2015*

*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, the Third Covered Bond Purchase Programme and the Asset-Backed Securities Purchase Programme 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.<sup>4</sup> For the financial year 2014, €841 million of the aforementioned ECB income (2013: €1,370 million) was distributed among the national central banks as interim profit in January 2015. The Bundesbank's share of €216 million (2013: €369 million) is shown under item 4 "Income from participating interests" in its profit and loss account.

The Executive Board drew up the Deutsche Bundesbank's financial statements for the financial year 2014 on 17 February 2015. The financial statements were audited by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Eschborn/Frankfurt am Main. The Executive Board had appointed the firm as external auditors on 25 November 2008 in accordance with section 26 (3) of the Bundesbank Act. The auditors confirmed without qualification on 24 February 2015 that the Bundesbank's financial statements for 2014 – consisting of the balance sheet and the profit and loss account – comply with the statutory provisions and the additional provisions of the principles for the accounting of the Deutsche Bundesbank and give a true and fair view of the net assets, financial pos-

*Preparation and auditing of financial statements*

<sup>4</sup> 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).

ition 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 12 March 2015.

## Notes on the individual balance sheet items

### Assets

*1 Gold and gold receivables*

As at 31 December 2014, the Bundesbank's physical holdings (bars) of fine gold (ozf) amounted to 3,384,225 kg or 109 million ounces. These are supplemented by an additional 14 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 = €31,757.51 or 1 ozf = €987.769). Compared with the previous year's price of 1 kg = €28,010.37 or 1 ozf = €871.220, this represents an increase of 13.4%. The gold holdings declined by just 0.1% in the year under review (by 2,930 kg or 0.1 million ounces). 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 €85 million is shown in sub-item 2.1 "Realised gains/losses

arising from financial operations" in the profit and loss account.

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

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

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 SDR 17,296 million (€20,624 million), are made up of the drawing rights within the reserve tranche, special drawing rights and loans under the New Arrangements to Borrow (NAB).

*2.1 Receivables from the IMF*

The drawing rights within the reserve tranche correspond to the amounts actually paid to the IMF in gold, special drawing rights, foreign ex-

### Gold reserves by storage location

Storage location	31.12.2014		31.12.2013		Year-on-year change			
	Tonnes	€ million	Tonnes	€ million	Tonnes	%	€ million	%
Deutsche Bundesbank, Frankfurt	1,192	37,869	1,073	30,048	120	11.2	7,822	26.0
Federal Reserve Bank, New York	1,447	45,950	1,531	42,896	- 85	- 5.5	3,054	7.1
Bank of England, London	438	13,908	441	12,349	- 3	- 0.7	1,559	12.6
Banque de France, Paris	307	9,747	342	9,583	- 35	- 10.3	164	1.7
<b>Total</b>	<b>3,384</b>	<b>107,475</b>	<b>3,387</b>	<b>94,876</b>	<b>- 3</b>	<b>- 0.1</b>	<b>12,599</b>	<b>13.3</b>

Deutsche Bundesbank



Receivables from the IMF								
Item	31.12.2014		31.12.2013		Year-on-year change			
	SDR million	€ million	SDR million	€ million	SDR million	%	€ million	%
German quota	14,566	17,368	14,566	16,289	–	–	1,079	6.6
less euro balances	12,181	14,525	10,752	12,024	1,428	13.3	2,500	20.8
Drawing rights within the reserve tranche	2,385	2,844	3,813	4,265	– 1,428	– 37.5	– 1,421	– 33.3
Special drawing rights	11,959	14,261	11,479	12,837	480	4.2	1,423	11.1
New Arrangements to Borrow	2,952	3,520	3,305	3,696	– 353	– 10.7	– 176	– 4.8
<b>Total</b>	<b>17,296</b>	<b>20,624</b>	<b>18,597</b>	<b>20,798</b>	<b>– 1,301</b>	<b>– 7.0</b>	<b>– 173</b>	<b>– 0.8</b>
Deutsche Bundesbank								

change and national currency under the German quota. The drawing rights held represent the difference between the German quota of SDR 14,566 million (€17,368 million) and the euro balances amounting to €14,525 million (SDR 12,181 million) at the IMF's disposal at the end of the year. In 2014, there was a net decline of SDR 1,428 million to SDR 2,385 million (€2,844 million) in the holdings of drawing rights within the reserve tranche.

Special drawing rights – by means of which convertible currencies can be obtained at any time – in the amount of SDR 12,059 million were allocated free of charge. A corresponding counterpart is shown as liability item 8 "Counterpart of special drawing rights allocated by the IMF". In 2014, the holdings of special drawing rights went up by SDR 480 million to SDR 11,959 million (€14,261 million).

The NAB are multilateral credit lines with the Fund which serve as a backstop for use in the event of a systemic crisis and have been activated since 1 April 2011. The Bundesbank's NAB credit line amounts to SDR 25.4 billion. At the end of the reporting year, this resulted in receivables from the IMF of SDR 2,952 million (€3,520 million). The additional bilateral credit line of €41.5 billion pledged by the Bundesbank to the IMF in October 2012 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 special drawing rights item amounted to SDR 5,237 million, compared with SDR 6,539 million in 2013. The valuation is based on the reference rate of SDR 1 = €1.1924 (2013: SDR 1 = €1.1183) calculated by the ECB at the end of the year for all central banks participating in the Eurosystem.

The balances with banks, portfolio investment, loans and other foreign currency claims which are shown in sub-item 2.2 amounted to €30,646 million at the end of 2014, compared with €28,080 million on 31 December 2013. These include, in particular, US dollar holdings in the amount of US\$34,239 million (€28,201 million), representing a decline of US\$1,243 million on the year. The sub-item also contains holdings in yen (¥202,558 million equivalent to €1,395 million) and in Australian dollars (A\$1,550 million equivalent to €1,046 million) as well as a very small amount in other currencies. The holdings are interest-bearing. If all items on the assets side and the liabilities side of the balance sheet are taken

*2.2 Balances with banks, portfolio investment, external loans and other external assets*

### Balances with banks, portfolio investment, external loans and other external assets

Item	31.12.2014	31.12.2013	Year-on-year change	
	€ million	€ million	€ million	%
Current account holdings and overnight deposits	1,396	2,595	- 1,199	- 46.2
Claims arising from reverse repurchase agreements	2,328	1,211	1,117	92.2
Marketable securities				
Government bonds	24,208	22,496	1,712	7.6
Supranational institutions	2,586	1,667	919	55.2
Other	127	110	16	14.8
<b>Total</b>	<b>30,646</b>	<b>28,080</b>	<b>2,566</b>	<b>9.1</b>

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into account, the net US dollar item valued at market prices amounted to US\$33,331 million (2013: US\$33,017 million), the net yen item to ¥202,773 million (2013: ¥201,868 million) and the net Australian dollar item to A\$1,569 million (2013: A\$1,483 million). The foreign currency items were valued at the respective end-of-year market rate; in the case of the US dollar item, this amounted to €1 = US\$1.2141 (2013: €1 = US\$1.3791), for the yen item €1 = ¥145.23 (2013: €1 = ¥144.72) and for the Australian dollar item €1 = A\$1.4829 (2013: €1 = A\$1.5423).

*3 Claims on euro-area residents denominated in foreign currency*

In 2013, this item contained €125 million worth of US dollar claims on credit institutions resulting from refinancing operations within the context of the temporary swap agreement with the Federal Reserve. This item contained no holdings as at 31 December 2014.

*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 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 €630,341 million (2013: €752,288 million), of which the Bun-

desbank accounted for €65,572 million (2013: €52,054 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 provided by the latter proves insufficient upon realisation. However, the Governing Council of the ECB has ruled out risk-sharing for certain types of collateral, which the national central banks may nevertheless accept as collateral on their own responsibility. The Bundesbank does not accept such collateral.

Main refinancing operations are regular weekly transactions with a normal 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 €32,544 million, which was €5,619 million less than on 31 December 2013. On a daily average, the outstanding volume of main refinancing operations amounted to €10,984 million (2013: €1,250 million).

In the year under review, longer-term refinancing operations with maturities of three months

and, up until June 2014, one maintenance period were conducted. The operations were carried out as fixed-rate tenders with full allotment at the main refinancing rate. In addition, targeted longer-term refinancing operations (TLTROs) which will mature in September 2018 and which have a mark-up of 10 basis points on the main refinancing rate were conducted in September and December 2014. The volume of all longer-term refinancing operations together amounted to €32,944 million at the end of 2014 and was, therefore, €19,174 million higher than in the previous year. Recourse to the TLTROs in the amount of €19,084 million more than offset the decline in the outstanding volume of liquidity allotted in the three-year tenders at the end of 2011 and the beginning of 2012 (€3,033 million, compared with €7,964 million in 2013) resulting from early repayments. On a daily average, the volume of longer-term refinancing operations amounted to €14,210 million (2013: €20,010 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 2014, recourse to this facility amounted to €84 million (end-2013: €122 million). The extent to which it was being used on a daily average came to €52 million (2013: €24 million).

This item, amounting to €2,011 million (2013: €4,691 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").

This item contains covered bonds denominated in euro as well as bonds of euro-area sovereign issuers which are valued at amortised cost (balance sheet value). The holdings resulting from purchases made within the framework of the Eurosystem's Covered Bond Purchase Programme (CBPP), Securities Markets Programme (SMP), Second Covered Bond Purchase Programme (CBPP2) and Third Covered Bond Purchase Programme (CBPP3), which the ECB Governing Council approved on 7 May 2009, 9 May 2010, 6 October 2011 and 4 September 2014 respectively, are shown under sub-item 7.1 "Securities held for monetary policy purposes".

At the end of 2014, the Eurosystem national central banks' SMP holdings amounted to €134,162 million (2013: €165,846 million), of which the Bundesbank held €33,623 million (2013: €42,400 million). The CBPP3 holdings of the Eurosystem national central banks amounted to €27,333 million, of which the Bundes-

*6 Other claims on euro-area credit institutions denominated in euro*

*7 Securities of euro-area residents denominated in euro*

### Securities held for monetary policy purposes

Item	31.12.2014		31.12.2013		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	3,885	3,523	5,658	5,483	-1,774	-31.3	-1,960	-35.8
Ireland	1,761	2,115	1,748	2,010	13	0.7	105	5.2
Portugal	3,099	3,485	4,060	4,175	-961	-23.7	-689	-16.5
Italy	17,994	20,529	21,558	23,382	-3,564	-16.5	-2,852	-12.2
Spain	6,884	7,770	9,376	9,955	-2,491	-26.6	-2,185	-21.9
<b>Total</b>	<b>33,623</b>	<b>37,423</b>	<b>42,400</b>	<b>45,005</b>	<b>-8,777</b>	<b>-20.7</b>	<b>-7,582</b>	<b>-16.8</b>
CBPP portfolio	6,732	7,256	9,508	10,040	-2,776	-29.2	-2,784	-27.7
CBPP2 portfolio	3,294	3,531	3,936	4,064	-642	-16.3	-533	-13.1
CBPP3 portfolio	6,576	6,587	-	-	6,576	.	6,587	.
<b>Total</b>	<b>50,224</b>	<b>54,796</b>	<b>55,844</b>	<b>59,108</b>	<b>-5,620</b>	<b>-10.1</b>	<b>-4,312</b>	<b>-7.3</b>

bank held €6,576 million. Pursuant to Article 32.4 of the ESCB Statute, all risks from the SMP and CBPP3 operations, provided they materialise, are shared among the Eurosystem national central banks in proportion to the prevailing shares in the capital of the ECB.

The Bundesbank's securities holdings under the CBPP amounted to €6,732 million at the end of 2014 (2013: €9,508 million). The balance sheet value of CBPP2 holdings totalled €3,294 million at the end of 2014 (2013: €3,936 million). Risks from the securities purchased under these two Eurosystem programmes are borne by the individual central banks holding them as the national central banks were able to make use of the available scope for investment decisions when accumulating their portfolio holdings.

The Governing Council of the ECB decided that no write-downs were required for securities contained in the SMP holdings and in the three CBPP portfolios as at 31 December 2014 as it is expected that all payment obligations relating to the government bonds and covered bonds contained in Eurosystem central banks' holdings will continue to be met as agreed.

*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 (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. An adjustment was made to the key for subscribing to the ECB's capital with effect from 1 January 2014 (see General information on annual accounts). On 31 December 2014, the Bundesbank's participating interest in the ECB stood at €1,948 million.

Sub-item 9.2 contains the Bundesbank's euro-denominated claims arising from the transfer of foreign reserves to the ECB. At the beginning of 1999, the central banks participating in the Eurosystem transferred foreign reserves (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. On 31 December 2014, these claims amounted to €10,430 million (2013: €10,872 million). As the transferred gold does not earn any interest, the claims are remunerated at 85% of the respective main refinancing rate.

Sub-item 9.3 "Claims related to the allocation of euro banknotes within the Eurosystem (net)" shows the claims which arise from applying the euro banknote allocation key. Like at the end of 2013, the Bundesbank had no claims at the end of 2014 and instead recorded liabilities, which are shown in liability sub-item 9.2 "Liabilities related to the allocation of euro banknotes within the Eurosystem (net)".

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 part of the Eurosystem's TARGET2 large-value payment system. The return flow of central bank money from the German banking system via TARGET2 continued in the reporting year, albeit to a lesser extent than in 2013. At the end of the year, the Bundesbank's net claim on the ECB had declined by

€49,355 million to €460,846 million, which is shown under sub-item 9.4 "Other claims within the Eurosystem (net)". The net balance is remunerated at the respective main refinancing rate. On a daily average, the interest-bearing net claim amounted to €482,370 million (2013: €590,575 million). This item also contains the liabilities of €434 million arising from the allocation of monetary income to the national central banks (see profit and loss item 5 "Net result arising from allocation of monetary income") and the €216 million claim on the ECB arising from the interim distribution of profit (see General information on annual accounts).

Sub-item 11.3 "Other financial assets" amounted to €12,452 million, compared with €11,777 million in 2013. It contains the Bundesbank's own funds portfolio (euro portfolio) of €12,363 million 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 in fixed-rate covered bonds denominated in euro (mainly German Pfandbriefe), which are usually held to maturity and are, therefore, valued at amortised cost; securities intended for sale are valued at market prices. On 31 December 2014, the value of the own funds portfolio at amortised cost amounted to €12,227 million, while the market value stood at €13,123 million. This item also includes €89 million in participating interests held by the Bundesbank. The latter's participating interest in the BIS, Basel, was unchanged at €50 million at the end of 2014; it holds 50,100 shares. As in the previous year, the balance sheet value of its participating interest in Liquiditäts-Konsortialbank GmbH i. L., Frankfurt am Main, amounted to €38 million; the bank was dissolved on 31 July 2014 and is currently in liquidation. As in 2013, the participating interest in the cooperative society SWIFT, La Hulpe (Belgium), amounted to €1 million.

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 €799 million, compared with €844 million in 2013. It comprises land and buildings, furniture and equipment and computer software.

### Tangible and intangible fixed assets

€ million

Item	Purchase/ production costs 31.12.2013	Additions	Disposals	Accumulated depreciation	Book value 31.12.2014	Book value 31.12.2013	Depreciation in 2014
Land and buildings	2,269	12	– 1	– 1,619	661	693	– 47
Furniture and equipment	758	41	– 43	– 621	135	147	– 48
Computer software	137	2	– 0	– 136	3	5	– 4
<b>Total</b>	<b>3,164</b>	<b>54</b>	<b>– 44</b>	<b>– 2,376</b>	<b>799</b>	<b>844</b>	<b>– 99</b>

In 2013, sub-item 11.4 “Off-balance-sheet instruments revaluation differences” essentially comprised €3 million for the valuation of the US dollar forward liabilities to the ECB arising from the euro/US dollar swap agreement with the ECB in the context of US dollar refinancing operations (see asset item 3 “Claims on euro-area residents denominated in foreign currency”).

Sub-item 11.5 “Accruals and prepaid expenses” contains the accrued and prepaid expenditure calculated as at 31 December 2014. This chiefly consists of (accrued) interest income due in 2015 from securities, refinancing operations for credit institutions and the interest-bearing TARGET2 claim on the ECB which were acquired or transacted in 2014.

As at 31 December 2014, sub-item 11.6 “Sundry items” contained mainly, as in 2013, the nominal value of claims against one counterparty that defaulted from monetary policy operations undertaken by the Eurosystem.

## ■ Liabilities

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 on 31 December 2014, the Bundesbank has a 23.7% 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 €956,185 million to €1,016,616 million, or by 6.3%. According to the allocation key, the Bundesbank had euro banknotes in circulation worth €240,518 million at the end of the year, compared with €237,258 million at the end of 2013. The value of the euro banknotes actually issued by the Bundesbank in 2014 increased by 10.2% from €461,509 million to €508,432 million. As this was more

than the allocated amount, the difference of €267,914 million (2013: €224,251 million) is shown in liability sub-item 9.2 “Liabilities related to the allocation of euro banknotes within the Eurosystem (net)”.

Sub-item 2.1 “Current accounts” contains the deposits of credit institutions, amounting to €81,176 million (2013: €83,877 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 respective business partners 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 €27,788 million on an annual average. Minimum reserve balances are remunerated at the average main refinancing rate in the respective maintenance period. Since 11 June 2014, any deposits exceeding this amount have been subject to a negative interest rate equivalent to the deposit facility rate, where previously they remained unremunerated. On a daily average, the current account deposits decreased from €98,686 million in 2013 to €61,124 million in 2014.

Sub-item 2.2 “Deposit facility”, amounting to €9,019 million (2013: €10,712 million), contains overnight deposits at the deposit facility rate. The deposit facility rate was initially 0% in the reporting year; since 11 June 2014, the rate has been negative. On a daily average, the deposit facility amounted to €8,916 million, compared with €23,856 million in 2013.

Sub-item 2.3 “Fixed-term deposits” contains liquidity-absorbing fine-tuning operations which were conducted as variable-rate tenders with a maximum bid rate to neutralise the liquidity-providing effects of the SMP (as at 31 December 2013: €46,870 million). These operations were suspended in June 2014. On a daily average, the fixed-term deposits amounted to €23,066 million (2013: €82,401 million).

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

<p><i>4 Liabilities to other euro-area residents denominated in euro</i></p>	<p>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 2014, general government deposits totalled €1,940 million (2013: €2,013 million).</p>	<p>together totalled SDR 12,059 million (see asset sub-item 2.1 “Receivables from the IMF”).</p>	<p><i>9 Intra-Eurosystem liabilities</i></p>
	<p>Sub-item 4.2 “Other liabilities” amounted to €7,930 million, compared with €8,453 million on 31 December 2013. It comprises mainly deposits of financial intermediaries and individuals, including European Stability Mechanism (ESM) and European Financial Stability Facility (EFSF) deposits, in particular.</p>	<p>The Bundesbank’s liabilities to the ECB and to the other central banks participating in the Eurosystem are combined in this item.</p>	
		<p>Sub-item 9.1 contains “Liabilities related to the issuance of ECB debt certificates”. The ECB did not issue any such paper in 2014.</p>	
		<p>Sub-item 9.2 “Liabilities related to the allocation of euro banknotes within the Eurosystem (net)” contains the liabilities arising from the application of the euro banknote allocation key (see liability item 1 “Banknotes in circulation”). At the end of the year, these liabilities amounted to €267,914 million (2013: €224,251 million). The increase of €43,663 million in 2014 was caused not only by the adjustment of the banknote allocation key (23.7%, compared with 24.8% in 2013) as a result of the change to the ECB’s capital key on 1 January 2014, but also, in particular, by the Bundesbank’s traditionally disproportionate share of banknote issuance, primarily due to banknote exports to non-euro-area countries (foreign demand from major international banknote wholesale banks) and banknote migration (net outflows through tourism especially).</p>	
<p><i>5 Liabilities to non-euro-area residents denominated in euro</i></p>	<p>This balance sheet item, amounting to €12,262 million (2013: €52,047 million), contains the balances of non-euro-area central banks, monetary authorities, international organisations and commercial banks held, <i>inter alia</i>, 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”).</p>		
<p><i>6 Liabilities to euro-area residents denominated in foreign currency</i></p>	<p>This item, amounting to €34 million (2013: €1,830 million), contains US dollar deposits of banks domiciled in the euro area and of the Federal Government.</p>	<p>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 2014, 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.</p>	
<p><i>7 Liabilities to non-euro-area residents denominated in foreign currency</i></p>	<p>The foreign-currency-denominated liabilities to banks outside the euro area are recorded in this item. These are liabilities in US dollars, amounting to €788 million (2013: €37 million), which have arisen from securities repurchase agreements (repos).</p>		
<p><i>8 Counterpart of special drawing rights allocated by the IMF</i></p>	<p>The counterpart of the special drawing rights allocated by the IMF free of charge corresponds to the allocations of special drawing rights to the Federal Republic of Germany from 1970 to 1972, from 1979 to 1981 and in 2009, which</p>	<p>This item contains the liability items arising from payments still being processed within the Bundesbank.</p>	<p><i>10 Items in course of settlement</i></p>
		<p>Sub-item 11.2 “Accruals and income collected in advance” contains the accrued and collected income calculated as at 31 December 2014. This consists mainly of (accrued) interest</p>	<p><i>11 Other liabilities</i></p>

Provisions				
Provisions for	31.12.2014	31.12.2013	Year-on-year change	
	€ million	€ million	€ million	%
General risks	14,380	14,380	–	–
Direct pension commitments	3,744	3,373	372	11.0
Indirect pension commitments (supplementary pension funds)	427	401	26	6.5
Healthcare subsidy commitments to civil servants	890	778	112	14.4
Partial retirement scheme	58	76	– 18	– 23.3
Staff restructuring schemes	148	169	– 21	– 12.4
Other	48	45	3	6.9
<b>Total</b>	<b>19,696</b>	<b>19,221</b>	<b>474</b>	<b>2.47</b>
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expenditure which is due in 2015 but was incurred in 2014 and which arose in connection with the allocation of banknotes within the Eurosystem.

Sub-item 11.3 “Sundry items” comprises mainly the liabilities arising from the Deutsche Mark banknotes still in circulation. Although Deutsche Mark banknotes are no longer legal tender, 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/la and BBk III/IIla and at the end of 2014 totalled €3,130 million. The banknote series BBk I/la accounted for €1,224 million of this sum and the banknote series BBk III/IIla for €1,906 million. In 2004, part of the liabilities arising from Deutsche Mark BBk I/la series banknotes still in circulation and amounting to €1,237 million was taken off the books and reported as income. Taking account of this partial write-off and the deposits that have been made in the meantime, the liabilities arising from the Deutsche Mark banknotes still in circulation have, since 2013, comprised only notes of the series BBk III/IIla amounting to €1,906 million (2013: €1,938 million). Deposits of Deutsche Mark banknotes in 2014 totalled €41 million, of which €32 million was made up of the BBk III/IIla series and €8 million of

the BBk I/la series (see profit and loss item 11 “Other expenses”).

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 risk provisions 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. In the reporting year, the default risks of the SMP and the credit risks arising from refinancing loans decreased, primarily on account of the decline in holdings of risk-weighted assets. However, the Bundesbank was exposed to additional credit risk as a result of the decision by the ECB Governing Council of 4 September 2014 to purchase asset-backed securities and euro-denominated covered bonds as part of programmes to run for (at least) two years (ABSPP and CBPP3). At the same time, the cuts in key interest rates in June and September 2014 have led to a decline in the anticipated

12 Provisions



annual result for 2015 and thus in the Bundesbank's available financial resources (risk coverage potential). Taking all of the aforementioned factors into consideration, there was no need to adjust the existing risk provisions as at 31 December 2014. The Bundesbank's risks, which are determined using a model, relate, in particular, to exchange rate risks, default risks of the securities purchase programmes and credit risks arising from refinancing loans. This risk analysis does not take account of the Bundesbank's TARGET2 claim on the ECB. The Bundesbank, as an ECB shareholder, could hypothetically be indirectly affected by risks to which the ECB is exposed from TARGET2 claims if a state with a TARGET2 liability were to leave the single currency area without the central bank of this state settling its liability vis-à-vis the ECB. The Bundesbank considers this scenario to be unlikely, however, which means that the credit risks arising from Eurosystem operations to provide liquidity are ultimately the decisive factor.

The provisions for direct pension commitments, for 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 and for healthcare subsidy commitments to civil servants are valued on the basis of an actuarial expert opinion based on current mortality tables (mortality table 2005 G produced by Dr Klaus Heubeck) pursuant to the entry age normal method (*Teilwertverfahren*) (for employees) and pursuant to the present value method (*Barwertverfahren*) (for pensioners), with a discount rate of 4.51% used in the reporting year (2013: 4.74%). For the financial year 2014, it is estimated that there was a wage trend of 2% (2013: 1.75%), a career trend of 0.5% as well as a pension trend of 2% (2013: 1.75%) for civil servants and of 1% for public sector employees. The cost trend for healthcare subsidy commitments to civil servants amounted to 2.75%, compared with 2.5% in the previous year. The provisions for the partial retirement scheme and for pay-

ment commitments arising from staff restructuring schemes that had already been carried out by the balance sheet date are calculated using a discount rate of 3.06% (2013: 3.53%) based on an actuarial expert opinion 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. A wage trend of 2% (2013: 1.75%) is taken into consideration. The discount rate used is, in each case, a maturity-matched average market rate for the past seven years in accordance with the Regulation on the Discounting of Provisions (*Rückstellungsabzinsungsverordnung*).

Expenses in the amount of €383 million from marking up the aforementioned staff provisions (including the effects of changing the discount rate) are contained in profit and loss subitem 1.2 "Interest expense". Other changes to provisions on balance resulted in an expense of €131 million in profit and loss item 7 "Staff costs" (chiefly owing to trend adjustments), in a usage-related relief of €33 million in profit and loss item 11 "Other expenses" as well as in a dissolution-related income of €8 million in profit and loss item 6 "Other income".

The other provisions have been created for remaining holiday entitlement, overtime and positive balances of flexible working hours as well as for other uncertain liabilities.

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 profits arising from market valuation on 31 December 2014 (revaluation items "new").

A revaluation item "old" now remains only for the item gold. It represents the difference between the market value of gold on 1 January 1999 and the lower value of gold prior to that date. In the balance sheet on 31 December 1998, the value for gold was 1 ozf = DM143.8065 (€73.5271) while the market

13 Revaluation  
accounts

Revaluation  
items "old"

## Revaluation accounts

Item	Revaluation items "old"	Revaluation items "new"	Total 31.12.2014	Total 31.12.2013	Year-on-year change	
	€ million	€ million	€ million	€ million	€ million	%
Gold	18,806	80,669	99,475	86,869	12,606	14.5
US dollars	–	4,277	4,277	1,113	3,164	284.3
SDRs	–	369	369	–	369	.
Australian dollars	–	38	38	–	38	.
Securities denominated in foreign currency	–	196	196	99	97	98.5
Securities denominated in euro	–	136	136	–	136	.
<b>Total</b>	<b>18,806</b>	<b>85,685</b>	<b>104,491</b>	<b>88,080</b>	<b>16,410</b>	<b>18.6</b>

Deutsche Bundesbank

value on 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 dissolved under certain circumstances. Besides a dissolution in the case of valuation losses on the gold item, a proportionate dissolution also takes 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 2,930 kg or 0.1 million ozf in the gold holdings resulted in a dissolution amount of €16 million in the year under review. The dissolution amount is included in profit and loss sub-item 2.1 "Realised gains/losses arising from financial operations".

In the case of gold holdings, the net positions in each foreign currency and the securities portfolios in each category of security (securities identification number), the positive difference between their market value on 31 December 2014 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 = €246.370. At the end of 2014, the market value of the gold item exceeded its acquisition value, leading to a revaluation item of €80,669 million

(2013: €68,046 million). In the case of the net foreign exchange items in US dollars, special drawing rights and Australian dollars, the market values at year-end were also above their acquisition values (€1 = US\$1.4398, €1 = SDR 0.8913 and €1 = A\$1.5398), with the result that there were revaluation items. The market value of the yen item at year-end was below the respective acquisition value (€1 = ¥144.65), meaning that a valuation loss was incurred (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 (€165 million); however, for a portion of the US Treasury notes, the relevant acquisition values on the balance sheet date were higher than their corresponding market values, resulting in valuation losses (see profit and loss sub-item 2.2 "Write-downs on financial assets and positions"). In principle, the securities denominated in euro are carried at amortised cost. In the case of the securities earmarked for sale in the own funds portfolio, which are valued at market prices, there were valuation gains of €136 million (see asset sub-item 11.3 "Other financial assets").

Revaluation items "new"

*14 Capital and reserves*

In accordance with section 2 of the Bundesbank Act, the liable capital amounts to €2.5 billion and is attributable to the Federal Government. The statutory reserves are in line with the fixed upper limit which is laid down in section 27 number 1 of the Bundesbank Act and which is likewise €2.5 billion.

The profit and loss account for the year 2014 closed with an annual surplus of €2,954 million. Pursuant to section 27 of the Bundesbank Act, it 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 2014.

*15 Profit for the year*

## ■ Notes on the profit and loss account

*1 Net interest income*

This item shows interest income less interest expense. Net interest income, at €3,141 million, was €2,425 million lower than in the previous year. This was due, in particular, to key interest rates being just over two-thirds lower on an annual average, as well as to the decline in Eurosystem-relevant balance sheet items. On an annual average, the interest-bearing TARGET2 claim on the ECB decreased by 18% and SMP securities holdings fell by 21% on the assets side; liabilities related to monetary policy operations went down by 55% on the liabilities side.

compared with 0.57% in the previous year). Income from securities held for monetary policy purposes (SMP portfolio and CBPP portfolios) decreased by €609 million owing to the €12 billion decline in holdings of these securities on an annual average. On the back of the lower average interest rate (2.84% compared with 3.49% in 2013), the Bundesbank's own funds portfolio saw its interest income reduced by €38 million to €341 million.

*1.1 Interest income*

Interest income in foreign currency rose from €258 million in 2013 to €275 million in 2014. Interest income in euro declined on the year by €3,259 million to €3,765 million. Interest income from monetary policy refinancing operations fell by €90 million. Although the annual average volume of refinancing operations increased by around €4 billion compared with the previous year, lower key interest rates resulted in a considerably reduced average remuneration of 0.18% compared with 0.64% in 2013. Interest income generated by the negative remuneration of credit institutions' deposits (excluding minimum reserves) accrued for the first time in June 2014. Income arising from the TARGET2 claim on the ECB fell by €2,548 million. Along with the decrease in the TARGET2 claim of around €108 billion on an annual average, this was mainly due to the lower average rate of interest (0.17%

There was a year-on-year fall of €817 million to €898 million in interest expense. In the case of interest expense denominated in euro, there was a year-on-year decline of €810 million to €886 million. Owing to the lower average rate of interest (0.16% compared with 0.56% in 2013), the interest expense for intra-Eurosystem balances arising from the allocation of euro banknotes fell by €762 million, despite the fact that liabilities were around €37 billion higher on an annual average (see General information on annual accounts). Interest expense on liabilities related to minimum reserves decreased by €108 million on account of the lower annual average rate of interest (0.16% compared with 0.55% in 2013). Interest expense on fixed-term deposits results from fine-tuning operations to neutralise the liquidity-providing effects of the Securities Markets Programme, which had run their course in June 2014.

*1.2 Interest expense*

The net result of realised gains and losses from foreign currency transactions in sub-item 2.1

<b>Net interest income</b>				
Item	2014	2013	Year-on-year change	
	€ million	€ million	€ million	%
<b>Interest income in foreign currency</b>				
IMF	17	17	1	3.3
Reverse repo transactions	2	3	– 1	– 28.6
Securities	252	226	26	11.6
Claims arising from the provision of foreign exchange liquidity	0	8	– 8	– 95.1
Other	3	4	– 1	– 32.2
<b>Total</b>	<b>275</b>	<b>258</b>	<b>17</b>	<b>6.4</b>
<b>Interest income in euro</b>				
Main refinancing operations	21	4	17	.
Longer-term refinancing operations	24	131	– 106	– 81.5
Deposits of credit institutions (negative interest)	36	–	36	.
TARGET2 claim on the ECB	809	3,357	– 2,548	– 75.9
SMP portfolio	2,089	2,611	– 521	– 20.0
CBPP, CBPP2 and CBPP3 portfolio	340	427	– 87	– 20.4
Claims arising from the transfer of foreign reserves to the ECB	15	52	– 37	– 71.8
Claims arising from central bank services	5	3	2	80.4
Own funds portfolio (financial assets)	341	380	– 38	– 10.1
Other	83	59	25	42.0
<b>Total</b>	<b>3,765</b>	<b>7,023</b>	<b>– 3,259</b>	<b>– 46.4</b>
<b>Interest income</b>	<b>4,039</b>	<b>7,281</b>	<b>– 3,242</b>	<b>– 44.5</b>
<b>Interest expense in foreign currency</b>				
IMF	12	11	1	6.1
Liabilities arising from the provision of foreign exchange liquidity	0	8	– 8	– 95.1
Other	0	0	– 0	.
<b>Total</b>	<b>12</b>	<b>19</b>	<b>– 7</b>	<b>– 37.3</b>
<b>Interest expense in euro</b>				
Minimum reserves	45	153	– 108	– 70.5
Fixed-term deposits	51	59	– 8	– 13.0
Liabilities arising from the allocation of euro banknotes	400	1,162	– 762	– 65.6
Liabilities arising from central bank services	5	2	3	173.8
Marking up of staff provisions	383	318	65	20.5
Other	2	2	– 0	– 19.3
<b>Total</b>	<b>886</b>	<b>1,695</b>	<b>– 810</b>	<b>– 47.8</b>
<b>Interest expense</b>	<b>898</b>	<b>1,715</b>	<b>– 817</b>	<b>– 47.6</b>
<b>Grand total interest income</b>	<b>3,141</b>	<b>5,566</b>	<b>– 2,425</b>	<b>– 43.6</b>
Deutsche Bundesbank				

Net result of financial operations, write-downs and risk provisions				
Item	2014	2013	Year-on-year change	
	€ million	€ million	€ million	%
<b>Realised gains/losses</b>				
Gold	85	123	- 39	- 31.3
Foreign currency	197	100	97	97.5
Securities	206	156	50	31.7
<b>Total</b>	<b>488</b>	<b>379</b>	<b>108</b>	<b>28.5</b>
<b>Write-downs</b>				
Foreign currency	- 6	- 606	600	99.1
Securities	- 6	- 127	121	95.3
<b>Total</b>	<b>- 12</b>	<b>- 733</b>	<b>721</b>	<b>98.4</b>
<b>Transfers to/from provisions for general risks, foreign exchange risks and price risks</b>	-	-	-	-
<b>Grand total</b>	<b>476</b>	<b>- 353</b>	<b>829</b>	<b>.</b>
Deutsche Bundesbank				

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

essentially concerns transactions with special drawing rights (€98 million) and US dollars (€97 million); the realised gains from sales of securities are mainly related to US Treasuries (€138 million) and euro-denominated securities (€59 million).

Write-downs in sub-item 2.2 chiefly result from losses on currency holdings in Japanese yen and on US Treasuries.

3 Net income from fees and commissions

Net income from fees and commissions came to €35 million compared with €39 million in the previous year.

4 Income from participating interests

This item contains the Bundesbank's income from its participating interests in the ECB, the BIS and Liquiditäts-Konsortialbank GmbH (in liquidation). The total income of €485 million (2013: €526 million) includes, in particular, the Bundesbank's share of the ECB's profit distribution for the financial years 2013 and 2014. The share of the ECB's interim distribution of profit for the 2014 financial year is €216 million (previous year: €369 million for the 2013 financial year); a further €16 million came from the (remaining) distribution of profit for the 2013 financial year, which took place in February 2014 (previous year: €115 million for the 2012 financial year). Furthermore, in connection with a reduction of the participating interest in the

ECB, the item contains a compensatory payment of €240 million (2013: €24 million) for the smaller share of the ECB's net assets (see General information on annual accounts).

This item comprises income of €213 million overall in 2014 (2013: expense of €11 million).

The monetary income of the Eurosystem national central banks is allocated in accordance with a decision taken by the Governing Council of the ECB.<sup>5</sup> 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 "Liabilities related to the allocation of euro banknotes within the Eurosystem (net)"

<sup>5</sup> Decision of the European Central Bank of 25 November 2010 on the allocation of monetary income of the national central banks of member states whose currency is the euro (ECB/2010/23), as amended by the Decision of the European Central Bank of 15 December 2014 (ECB/2014/56).

5 Net result arising from allocation of monetary income

Net income from fees and commissions				
Item	2014	2013	Year-on-year change	
	€ million	€ million	€ million	%
<b>Income</b>				
Cashless payments	24	25	- 1	- 2.5
Cash payments	9	10	- 1	- 9.2
Securities business and security deposit business	10	9	2	17.4
Other	16	16	- 1	- 3.5
<b>Total</b>	<b>60</b>	<b>60</b>	<b>- 1</b>	<b>- 1.0</b>
<b>Expense</b>				
Securities business and security deposit business	16	15	1	3.7
Other	8	6	3	44.0
<b>Total</b>	<b>24</b>	<b>21</b>	<b>3</b>	<b>14.7</b>
<b>Grand total</b>	<b>35</b>	<b>39</b>	<b>- 4</b>	<b>- 9.5</b>
Deutsche Bundesbank				

and the TARGET2 net liability contained in liability sub-item 9.3 "Other liabilities within the Eurosystem (net)". All interest expense which a national central bank has paid on the listed items of the liability base reduces the amount of monetary income to be transferred by the national central bank concerned.

A national central bank's earmarked assets consist 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 arising from the transfer of foreign reserves to the ECB", asset sub-item 9.3 "Claims related to the allocation of euro banknotes within the Eurosystem (net)", 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. Gold is considered to generate no income, and securities purchased as part of both the Covered Bond Purchase Programme (CBPP) and the Second Covered Bond Purchase Programme (CBPP2) generate income according to the respective interest rate for the main refinancing instrument.

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 applying 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 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; 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.

The allocation of monetary income resulted in net income of €213 million for the Bundesbank. Pursuant to the decision adopted by the Governing Council of the ECB, incoming payments arising from the realisation of monetary policy collateral in the context of default by Eurosystem counterparties – which, as a precaution, were treated as a deferred item and recorded in sub-item 11.3 "Sundry items" – were recognised as income in the amount of

**Staff costs**

Item	2014	2013	Year-on-year change	
	€ million	€ million	€ million	%
Salaries and wages	499	482	18	3.7
Social security contributions	87	85	3	3.4
Expenditure on retirement pensions	324	179	145	80.8
<b>Grand total</b>	<b>911</b>	<b>745</b>	<b>165</b>	<b>22.2</b>
Deutsche Bundesbank				

€647 million. In particular, owing to the subsequent redistribution of this income to the other national central banks for past years, the resulting expense from the allocation of monetary income amounted to €434 million compared with €104 million in 2013. This represents the difference between the €3,186 million in monetary income paid by the Bundesbank into the common pool and the Bundesbank's claim of €2,752 million – corresponding to the Bundesbank's share of the ECB's paid-up capital – on the common pool.

**6 Other income**

Other income amounted to €98 million compared with €268 million in 2013. Of this amount, €25 million was attributable to the reimbursement of costs by the national central banks of the ESCB, in particular for the development and operation of TARGET2, €24 million to rental income and a further €8 million to the release of provisions, in particular in the area of human resources (see liability item 12 "Provisions"). In 2013, €121 million was collected from the quota share distributed to Germany from the IMF's "windfall gold sales profits" (this amount was retransferred in 2013 from the Federal budget to the IMF for loans to developing countries).

**7 Staff costs**

Staff costs rose year on year from €745 million to €911 million. In particular, expenditure on

transfers to staff provisions (see liability item 12 "Provisions"), saw a year-on-year increase of €133 million net; of this amount, €136 million was for retirement pensions owing chiefly to trend adjustments for salaries and pensions as well as to cost trend adjustments for healthcare assistance. The number of staff was virtually unchanged on the year.

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 2014, the President of the Bundesbank received a pensionable salary of €346,585.20, a special non-pensionable remuneration of €76,693.78 and a standard expenses allowance of €5,112.96, amounting to a total of €428,391.94. The Deputy President of the Bundesbank (in office since 13 May 2014) received a pensionable salary of €176,703.48, a special non-pensionable remuneration of €38,858.19 and a standard expenses allowance of €1,946.24, amounting to a total of €217,507.91. The other members of the Executive Board each received a pensionable salary of €207,951.18, a special non-pensionable remuneration of €46,016.27 and a standard expenses allowance of €2,556.48, amounting to a total of €256,523.93 for 2014. One member

of the Executive Board was replaced in 2014. For the period from 1 January 2014 until she left office on 26 January 2014, the previous Deputy President received a pensionable salary of €18,937.09, a special non-pensionable remuneration of €4,431.20 and a standard expenses allowance of €214.42, amounting to €23,582.71.

Total payments to serving and former members of the Executive Board, former members of the Bundesbank's Directorate and of the Executive Boards of Land Central Banks, including their surviving dependants, amounted to €11,586,346.45 in 2014.

*8 Other administrative expenses*

The other (non-staff) operating expenditure was almost unchanged on the year and stands at €339 million. This item shows not only operating expenditure but also, in particular, expenditure on computer hardware and software (€100 million) and buildings (€81 million).

The depreciation of land and buildings, of furniture and equipment and of computer soft-

ware amounted to €99 million compared with €105 million in 2013 (see asset sub-item 11.2 "Tangible and intangible fixed assets").

Expenditure on banknote printing increased year on year by €62 million to €98 million owing to a larger procurement volume in the reporting year.

Other expenses amounted to €48 million compared with €228 million in 2013, and contained, in particular, expenditure on staff restructuring schemes amounting to €19 million and on residential buildings in the amount of €17 million as well as expenditure on the encashment of the BBkI/la series D-Mark banknotes, which are no longer shown on the balance sheet, in the amount of €8 million (see liabilities sub-item 11.3 "Sundry items"). In 2013, this item contained the final transfer (spread on a pro rata basis across the annual accounts from 2010 to 2013) to staff provisions owing to the transition to the provisions of the Act to Modernise Accounting Law (*Bilanzrechtsmodernisierungsgesetz*) totalling €190 million.

*9 Depreciation on tangible and intangible fixed assets*

*10 Banknote printing*

*11 Other expenses*



## ■ Annex

## The Deutsche Bundesbank: key figures

Staff <sup>1</sup>	2013	2014
Core staff (full-time equivalents)	9,547	9,532
– contraction since 31 December 2001 <sup>2</sup>	5,253 (= 35.5%)	5,268 (= 35.6%)
Locations/core staff (full-time equivalents) <sup>1</sup>	2013	2014
Central Office	1 / 4,215	1 / 4,318
Regional Offices	9 / 2,584	9 / 2,602
Branches	41 / 2,748	41 / 2,612
Annual accounts <sup>1</sup>	2013	2014
Profit for the year	€4,591 million	€2,954 million
Net interest income	€5,566 million	€3,141 million
Balance sheet total	€801,033 million	€770,842 million
Foreign reserve assets (total)	€143.8 billion	€158.7 billion
– foreign currency	€28.1 billion	€30.6 billion
– receivables from the IMF	€20.8 billion	€20.6 billion
– gold	(3,387 t) €94.9 billion	(3,384 t) €107.5 billion
Allocation across the various storage locations		
Frankfurt	(1,073 t) €30.0 billion	(1,192 t) €37.9 billion
New York	(1,531 t) €42.9 billion	(1,447 t) €46.0 billion
London	(441 t) €12.3 billion	(438 t) €13.9 billion
Paris	(342 t) €9.6 billion	(307 t) €9.7 billion
ECB capital key <sup>1</sup>	2013	2014
Share of subscribed capital	18.7603%	17.9973%
Share of paid-up capital	26.9707%	25.7184%
Amount of the participating interest in the ECB	€2.03 billion	€1.95 billion
Foreign reserve assets transferred to the ECB	€10.87 billion	€10.43 billion
Money market transactions <sup>3</sup>	2013	2014
<b>Open market operations</b>		
– Main refinancing operations in the euro area	€107.14 billion	€111.28 billion
– Longer-term refinancing operations in the euro area	€739.33 billion	€472.21 billion
– <i>of which</i> counterparties of the Bundesbank	€21.26 billion	€25.19 billion
– Banks participating in the main refinancing operations in the Eurosystem (average)	76	150
– <i>of which</i> counterparties of the Bundesbank	10	60
<b>Standing facilities</b>		
– Marginal lending facility in the euro area	€0.47 billion	€0.24 billion
– Deposit facility in the euro area	– €100.21 billion	– €30.75 billion

<sup>1</sup> On 31 December. <sup>2</sup> Core staff (full-time equivalents) on 31 December 2001 (year before the structural reform began): 14,800. <sup>3</sup> Daily average of the individual amounts outstanding.

	2013	2014
<b>Cash payments</b>		
Volume of euro banknotes in circulation (Eurosystem) <sup>1</sup>	€956.2 billion	€1,016.5 billion
Volume of coins in circulation (Eurosystem) <sup>1</sup>	€24.2 billion	€25.0 billion
Value of DM/euro exchange transactions	DM85.7 million	DM84.4 million
Unreturned DM banknotes and coins	DM13.04 billion	DM12.93 billion
<b>Incidence of counterfeit money in Germany</b>		
Euro banknotes (number)	38,800	63,000
Euro coins (number)	52,000	45,900
<b>Cashless payments</b>		
Payments via the Bundesbank (number of transactions)	3,165.5 million	4,122.9 million
– of which via RPS	3,115.5 million	4,075.3 million
– of which via TARGET2-BBk	45.8 million	44.0 million
Payments via the Bundesbank (value)	€155.4 trillion	€161.2 trillion
– of which via RPS	€2.7 trillion	€3.5 trillion
– of which via TARGET2-BBk	€151.6 trillion	€156.9 trillion
Share of TARGET2-BBk transactions in EU-wide TARGET system	~ 50%	~ 49%
<b>Banking supervision</b>		
Number of institutions to be supervised	3,548	3,466
On-site inspections	239	182
Inspection reports processed	5,601	4,956
Meetings with senior management	3,174	2,761
<b>Cooperation with foreign central banks</b>		
Training and advisory events	270	249
– number of participants (total)	3,119	2,885
– number of participating countries (total)	96	86
<b>Selected economic publications (editions/circulation)</b>		
Annual Report	1 / 10,000	1 / 9,500
Financial Stability Review	1 / 9,000	1 / 8,000
Monthly Report	12 / 8,000	12 / 7,700
Statistical Supplements	52 / 1,300	52 / 1,150
Research Centre Discussion Papers	57 / 300	46 / 300
Publications in academic journals	33	61
<b>External communication/public relations</b>		
Visitors to the Money Museum	40,731	28,728 <sup>4</sup>
Written answers to queries	17,941	11,963
Press releases	339	345
Visits to the website (www.bundesbank.de)	6,860,723	6,342,742
Training sessions on counterfeit prevention	2,500	2,400
– number of participants	52,000	50,000
4 January to August 2014 due to renovation.		

### Branches of the Deutsche Bundesbank on 1 April 2015

Locality number	Bank location	Locality number	Bank location
720	Augsburg	860	Leipzig
773	Bayreuth <sup>1</sup>	545	Ludwigshafen
100	Berlin	810	Magdeburg
480	Bielefeld	550	Mainz
430	Bochum	700	Munich
290	Bremen <sup>1</sup>	150	Neubrandenburg
870	Chemnitz	760	Nuremberg
570	Coblenz	280	Oldenburg
370	Cologne	265	Osnabrück
440	Dortmund	750	Regensburg
300	Düsseldorf	640	Reutlingen
820	Erfurt	130	Rostock
360	Essen	590	Saarbrücken
500	Frankfurt/M	600	Stuttgart
680	Freiburg	630	Ulm
260	Göttingen	694	Villingen-Schwenningen
450	Hagen	790	Würzburg
200	Hamburg		
250	Hanover		
660	Karlsruhe		
210	Kiel <sup>1</sup>		

<sup>1</sup> Closure date 30 September 2015.

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### Staff of the Deutsche Bundesbank on 31 December 2014\*

Item	Staff numbers <sup>1</sup>				Year-on-year changes			
	Total	Regional Offices	Branches	Central Office	Total	Regional Offices	Branches	Central Office
Civil servants	5,392	1,511	1,201	2,680	- 54	- 19	- 83	48
Salaried staff	5,466	1,453	1,639	2,374	90	44	- 57	103
<b>Total</b>	<b>10,858</b>	<b>2,964</b>	<b>2,840</b>	<b>5,054</b>	<b>36</b>	<b>25</b>	<b>- 140</b>	<b>151</b>
of which Trainees	550	129	0	421	26	5	0	21
Remainder Core staff	10,308	2,835	2,840	4,633	10	20	- 140	130
Memo item Core staff <i>pro rata</i> (full-time equivalents)	9,531.7	2,601.5	2,612.0	4,318.2	- 15.7	17.4	- 136.1	103.0

\* Not included:

Members of staff on secondment

Members of staff on unpaid leave

Members of staff in the second phase of the partial retirement scheme

<sup>1</sup> Of which part-time employees

Of which staff with temporary contracts

End-2014

End-2013

186

134

304

326

617

573

2,279

2,140

146

126

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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.<sup>1</sup>

The Board members hold the offices indicated below.

- Dr Jens Weidmann, President:  
Member of the Board of Directors, BIS;<sup>2</sup>  
Member of the Financial Stability Board (FSB);<sup>2</sup>  
Vice-President of Deutsches Aktieninstitut<sup>2</sup>
- Ms Sabine Lautenschläger, Deputy President until 26 January 2014:  
Member of the Administrative Council, LIKO-Bank<sup>3</sup>
- Professor Claudia Buch, Deputy President since 13 May 2014:  
Alternate, Board of Trustees, Monetary Stability Foundation
- Dr hc Rudolf Böhmler:  
Member of the Supervisory Board of ARADEX AG, Lorch;  
Alternate, Administrative Council, LIKO-Bank (in liquidation);<sup>3</sup>  
Member of the Board of Trustees, Monetary Stability Foundation
- Dr Andreas Dombret:  
Member of the Board of Directors, BIS;  
Member of the Administrative Council (since 4 April 2014), LIKO-Bank (in liquidation);<sup>3</sup>  
Alternate, Board of Trustees, Monetary Stability Foundation
- Dr Joachim Nagel:  
Alternate, Board of Directors, BIS;<sup>2</sup>  
Senior Vice-Chairman of the Administrative Council, LIKO-Bank (in liquidation);<sup>3</sup>  
Vice-Chairman of the Credit Committee, LIKO-Bank (in liquidation);<sup>3</sup>
- Mr Carl-Ludwig Thiele:  
Alternate, Administrative Council, LIKO-Bank (in liquidation);<sup>3</sup>  
Member of the Board of Trustees, Monetary Stability Foundation

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<sup>1</sup> Membership of other official bodies is not listed. <sup>2</sup> Ex officio. <sup>3</sup> Partnership agreement.