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We mourn the death of the following members of our staff

Sylvia Beiersdorff	10 January 2011
Ernst Bollen	11 February 2011
Uwe Schneider	19 April 2011
Ilona Gundelwein	26 April 2011
Dr Fred Ramb	29 April 2011
Stephan Maile	2 May 2011
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Matthias Pitzer	22 August 2011
Michael Morck	11 September 2011
Petra Tiepoldt	26 September 2011
Florian Burkhardt	7 November 2011
Petra Urlass	28 November 2011

We also remember the retired staff members
of the bank who died in 2011.

We will honour their memory.

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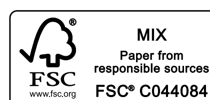

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Abbreviations and symbols

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 Figure unknown, not to be published or not meaningful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

Discrepancies in the totals are due to rounding.

Foreword by the President of the Deutsche Bundesbank

Foreword

The year 2011 was characterised by the persisting sovereign debt crisis in the euro area. It not only influenced economic developments and events in the financial markets but also confronted the euro area with its biggest challenge since the euro was launched. The crisis also revealed structural weaknesses in the existing framework of monetary union. Thus however urgent it may be to tackle the symptoms of the crisis, its lasting solution requires finding convincing answers to fundamental questions regarding the future institutional design of the euro area. As the largest Eurosystem central bank, the Bundesbank has been playing a major role on both fronts, ie containing the immediate crisis as well as eliminating its root causes. What makes the sovereign debt crisis so virulent is the combination of waning confidence in the sustainability of public finances and the uncertain implications for the euro area's institutional structure. That is why the Bundesbank is focusing all its efforts on cementing the foundations of a stability-oriented monetary policy and thereby underpinning public confidence in the euro's stability.

Bundesbank staff from almost every business unit were involved both in the efforts to resolve the sovereign debt crisis and in the ongoing work of analysing the preceding financial and economic crisis. The Bundesbank's activities and structure have been continuously adapted to meet the particular challenges of the last five years, and this process is set to continue, not least with a view to the implementation of the regulatory agenda that is currently underway. The *Annual Report* 2011, which details the Bundesbank's range of activities as well as the economic and financial environment in the past year, thus additionally encapsulates this transformation process.

After a buoyant start to 2011, global economic momentum increasingly waned as the year progressed under the impact of the oil price hike and the sovereign debt crisis, which particularly affected the euro area, especially after it escalated in the summer. World economic activity slowed perceptibly towards the end of the year. However, there are growing signs that the global upturn will pick up speed again over the course of 2012.

The weaker global economic dynamics and the fall-out from the sovereign debt crisis inevitably had an impact on the German economy, too. Towards the close of the year, in particular, the pace of macroeconomic expansion started to falter. However, this is likely to be just a temporary dip. The underlying momentum of economic activity remains remarkably intact, not least because the upturn is now being increasingly driven by domestic demand. As 2011 progressed, GDP climbed back to the peak it had reached during the preceding upswing and clawed back the production losses sustained in the severe economic slump of 2008 and 2009.

The sovereign debt crisis likewise cast its shadow over the financial markets in 2011. Market players' nervousness regarding future developments was particularly evident in the second half of the year. On the bond markets, investment decisions were increasingly differentiated on the basis of perceived quality. The huge demand for highly liquid, safe-haven bonds pushed German Bund yields down to their lowest ever levels. By contrast, the yields on the government bonds of some peripheral euro-area countries touched new record highs for a time. The growing uncertainty on the markets was engendered in part by widespread scepticism concerning the efficacy of the measures taken by the euro-area heads of state or government to overcome the crisis, so that stock markets rebounded only temporarily each time such measures were announced. Market sentiment was lifted more durably only after the political leaders signalled their willingness to stiffen the fiscal framework, individual euro-

area countries outlined resolute steps towards reform and consolidation – in some cases following a change of government – and the Eurosystem injected massive liquidity into the market. The search for a lasting solution to the sovereign debt crisis and the endeavour to safeguard stability throughout the euro area are, however, predicated on speedy and rigorous implementation of the measures designed to restore and secure fiscal discipline as well as to stabilise the banking system.

Against the background of mounting tensions in the financial and monetary system, the G20 and the International Monetary Fund (IMF), too, stepped up their efforts to reform the international monetary system. The IMF's lending capacity was expanded and the question of increasing its financial resources was debated. The Bundesbank supports the principle that the IMF should have the funds it needs to provide effective crisis resolution assistance within the framework of its mandate. In this particular case, however, strict conditionality must be imposed to ensure compliance with the rules stipulated in the EU treaties prohibiting the monetary financing of governments. However, a more important requirement in the field of crisis prevention is to improve the IMF's surveillance function. An equally pressing need is to transpose into national law the regulatory reforms of the international financial system adopted by the Financial Stability Board (FSB). This includes issuing a macroprudential mandate, ie defining and conferring on a designated national authority a legal mandate to monitor the stability of the financial system. German legislators are currently in the process of drawing up legislation on a national macroprudential mandate. The importance of the Bundesbank's role should be underscored in this context by assigning it responsibility for independent macroprudential oversight and ongoing analysis.

Significant headway was also made in 2011 at the microprudential level, ie in the supervision of individual financial institutions, in the process of analysing and learning from the financial crisis. On 1 January 2011, the newly established European Banking Authority (EBA) began its work. Its mandate is to help regulate and monitor deposit-taking credit institutions in the EU in an effective and coherent manner, while taking due account of the particularities of the national financial systems. Furthermore, in certain cases, the EBA can issue direct instructions to the competent supervisory authorities and, if need be, to individual institutions, for instance in crisis situations that could seriously jeopardise the functioning of the financial markets or the stability of the financial system in Europe. In addition, the EBA's brief in 2011 included performing the EU-wide bank stress test and carrying out an exercise on potential recapitalisation needs of large complex banking groups. The Bundesbank was involved in conducting these exercises together with the Federal Financial Supervisory Authority (BaFin).

Progress was also made last year in transposing the new Basel III capital and liquidity rules into European law. On 20 July 2011, the European Commission adopted a legislative package designed to overhaul the supervision of credit institutions and investment firms in the form of the amended Capital Requirements Directive (CRD IV). The package encompasses a proposal for a directive and a proposal for a regulation. The proposals are currently under debate in the Council and the European Parliament and, like Basel III, are due to come into force in the EU member states on 1 January 2013. The main objective of the EU regulation is to transpose the rules on minimum capital requirements (Pillar 1) and on market discipline (Pillar 3) into European law, thus creating a "single rule book" so as to eliminate regulatory differences among the EU member states. The directive on supervisory approaches (Pillar 2) has to be transposed into national law once it has been approved by the Council and the European Parliament.

One of the Bundesbank's core business areas is to ensure the efficient and smooth flow of cash and cashless payment operations at all times. In the field of cash management, the Bundesbank's

strategy, in keeping with its statutory mandate, is to retain a level of direct involvement in banknote handling that is sufficient to ensure the quality and security of the cash supply. As hitherto, this goal necessitates an efficient branch network, in view of which the Executive Board decided in May 2011 to merge five existing branches in the Dortmund area to form a new superbranch. At the same time, the Bundesbank is giving commercial cash handlers more scope to process and reissue banknotes and is concentrating its own role on wholesale functions and on overseeing the private cash handlers.

In the field of cashless payments, the Single Euro Payments Area (SEPA) is close to becoming reality. Uniform standards and rules for euro-denominated national and cross-border credit transfers and direct debits will be introduced with binding effect on 1 February 2014. The Bundesbank believes that maximum account should be taken of consumer interests during the migration process by using the options allowed under the European regulation. In the year under review, further progress was also made on the TARGET2-Securities (T2S) project, the aim of which is to create a single European settlement platform for securities.

The financial and sovereign debt crisis has thrown up new challenges for central banks' statistics, too. The demand for reliable, timely and detailed data has risen considerably. Dependable statistics are essential for the early detection of systemic risks. Data on corporate affiliations and consolidated balance sheets in both the financial and the non-financial sector are gaining increasing importance. The national banking statistics have therefore been modified in line with international standards in order to better capture German banks' affiliations with their branches and subsidiaries abroad.

Two general requirements for a central bank to perform its role successfully are a highly qualified workforce and an awareness on the part of the general public of the importance of price stability. The Executive Board took an initiative in mid-2011 to combine these two goals by setting up a new Department for Economic Education, University of Applied Sciences and Technical Central Bank Cooperation. The new department brings together the Bundesbank's in-house professional development activities, specialist and foreign language training and its interactive knowledge transfer with other central banks across the globe. Its staff also create dedicated educational material and courses for the public at large so as to enhance their knowledge of monetary policy and the key importance of price stability.

Over the past decade, the Bundesbank has significantly reduced its headcount. This consolidation process is set to continue, though at a more modest pace as the growing range of activities and challenges in the wake of the financial and sovereign debt crisis necessitates the hiring of new staff.

I would like to take this opportunity to thank all members of staff, both on behalf of the Executive Board and also personally, for their input in 2011. The Bundesbank is the sum of its employees, and without their continuous intense dedication and motivation, the Bundesbank would not have been able to cope with the increasing demands it faced. My thanks also go to the staff representation committees for their invariably constructive cooperation.

Frankfurt am Main, March 2012

Dr Jens Weidmann
President of the Deutsche Bundesbank

Monetary policy and economic developments

After a buoyant start to 2011, global economic momentum waned during the course of the year. One of the main factors weighing on the world economy was a sharp rise in oil prices that began in the latter part of 2010 and continued into the early part of 2011. This was compounded over the summer by the escalation of the sovereign debt crisis in several euro-area countries. The muted pace of overall economic growth in the euro area was dampened further by increased fiscal retrenchment, declines in wealth and nervousness heightened by the tensions on the financial markets. Overall, therefore, the world economy was relatively weak at the turn of 2011-12. However, leading indicators suggest that the global upturn will gradually pick up speed over the course of the current year.

Events on the financial markets, too, were increasingly overshadowed in 2011 by the sovereign debt crisis in the euro area. In the second half of the year, the financial markets were perceptibly unnerved by growing uncertainty about the evolving sovereign debt crisis in several euro-area countries. This prompted investors to focus on safe, liquid assets, thus causing intra-euro-area spreads to widen further. The measures agreed by the heads of state or government at the EU summits in July and October calmed investors' nerves only temporarily. It became increasingly evident that the sovereign debt crisis, over and above short-term crisis resolution responses, also raises fundamental questions about the future institutional framework for monetary union. The change of government in Italy, Spain and Greece, the new Italian government's austerity programme and the Franco-German proposal for stricter budgetary rules finally helped to pacify the jittery markets. Tensions were also eased slightly by the Eurosystem's announcement at the end of November that it was introducing longer-term refinancing operations with a three-year maturity.

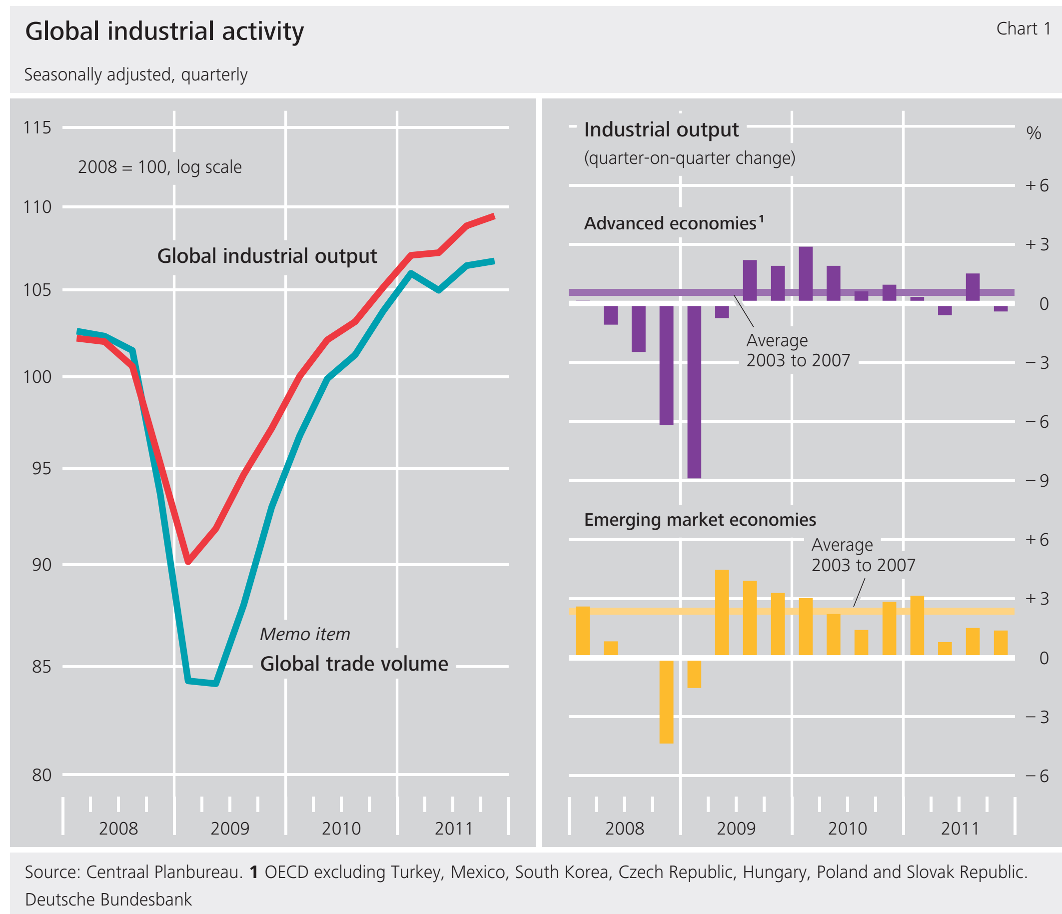
The German economy was buoyed in 2011 by a broad-based upturn across the real sector, although its thrust was perceptibly blunted towards the end of the year by the faltering global economic dynamics and the escalating European sovereign debt crisis. Over the course of the year, real gross domestic product matched the peak it had reached during the preceding economic upturn and the output gap was closed. While external demand in 2011 did not maintain the galvanic growth it had achieved in 2010, domestic demand strengthened progressively, so that overall economic activity remained remarkably resilient. Consumer price inflation in Germany accelerated perceptibly, mainly because crude oil exerted strong upward pressure on prices.

I International setting

1 Global economy making faltering progress

Global upturn slowed by shocks

After a buoyant start to 2011, global economic momentum waned during the course of the year. One of the main factors weighing on the world economy was a sharp rise in oil prices that began in the latter part of 2010 and continued into the early part of 2011. Higher energy bills considerably sapped household and business purchasing power in oil-importing countries. This was exacerbated by some major natural disasters. While the massive earthquake in Japan in March and the large-scale flooding in Thailand in October were, first and foremost, human tragedies, they also had a severe impact on economic activity which, in turn, had noticeable repercussions beyond the national borders owing to international value chains. Japanese automobile firms, in particular, suffered delivery bottlenecks in the wake of both tragedies, forcing them to curtail their manufacturing activity worldwide for a time. This was compounded over the summer by the escalation of the sovereign debt crisis in several euro-area countries. The muted pace of overall economic growth in the euro area was dampened further by increased fiscal retrenchment, contracting wealth and nervousness heightened by the tensions on the financial markets. Economic growth likewise decelerated in the emerging markets. Flagging foreign demand was not the only cause. Domestic dynamics, too, were constrained by tighter monetary policy. The US economy, by contrast, proved relatively robust, accelerating appreciably following a lacklustre performance in the first half of the year.

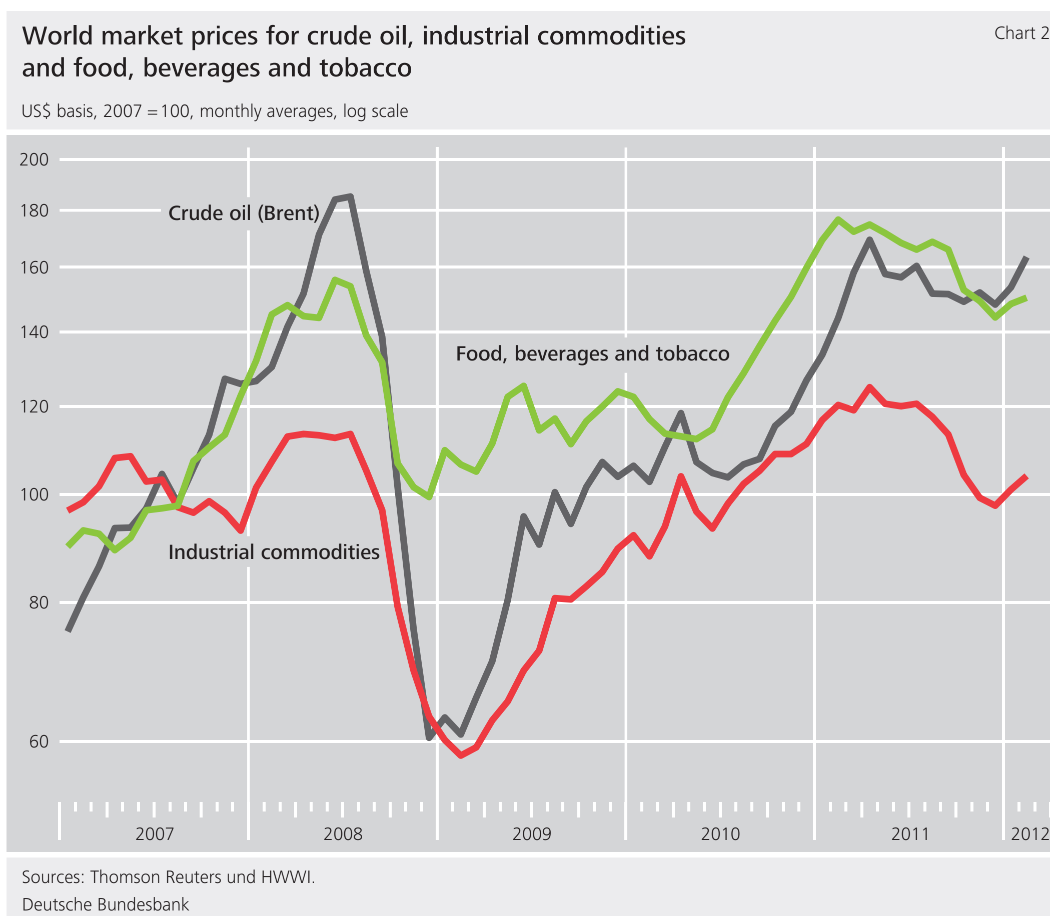


Source: Centraal Planbureau. 1 OECD excluding Turkey, Mexico, South Korea, Czech Republic, Hungary, Poland and Slovak Republic.
Deutsche Bundesbank

World market prices for crude oil, industrial commodities and food, beverages and tobacco

Chart 2

US$ basis, 2007 = 100, monthly averages, log scale



Sources: Thomson Reuters und HWWI.
Deutsche Bundesbank

Gradual pick-up expected for 2012

Overall, the world economy was in a rather sluggish state at the turn of 2011-12. However, leading indicators suggest that the global upturn will gradually pick up speed over the course of the current year. For 2012 as a whole, the IMF's latest, fairly cautious forecast of January predicts that the rate of growth of gross domestic product (GDP) will contract globally by ½ percentage point to 3.3%.

Slower growth notably in global industry and world trade

The economic slowdown in 2011 was particularly pronounced in industry. Production growth almost halved to 5½% on an annual average, but this actually masks the true extent of the deceleration. Delivery problems resulting from the earthquake in Japan even temporarily curtailed production in the advanced economies. While the production shortfall of the second quarter was recouped during the third quarter, momentum subsequently evaporated. Another handicap was the more muted pace of industrial growth in the emerging markets following a brisk start to the year. Consequently, global output exceeded its prior-year level by just 4% in the final quarter of the year. At the same time, world trade also started to falter during 2011. On an annual average, it expanded by 5½% vis-à-vis 2010, when growth had measured 15%.

Crude oil prices still high, but easing of price pressures on other markets

The slackened industrial momentum was also reflected in the commodity markets. As measured by the HWWI non-energy commodity price index for the industrial countries, industrial commodities were 12% cheaper in December 2011 than a year earlier at US dollar prices; food, beverages and tobacco prices were almost 9% down. Nonetheless, the remarkable price surge in the latter part of 2010 and first months of 2011 made industrial commodities 14½% dearer on an annual average. Year-on-year inflation of food, beverage and tobacco costs actually reached double that figure. Crude oil bucked the general trend towards abating commodity prices as the year wore on. In December 2011, a barrel of Brent crude cost

Macroeconomic benchmark figures of selected economies Table 1

Countries or economic areas	Real GDP		Consumer prices [1]		Current account balance		Unemployment rate [2]	
	2010	2011	2010	2011	2010	2011 pe	2010	2011 pe
	Annual percentage change				As a percentage of GDP		As a percentage	
Euro area	1.9	1.4	1.6	2.7	− 0.5	[3] − 0.3	10.1	10.2
United Kingdom	2.1	0.8	3.3	4.5	− 3.3	[4] − 2.7	7.9	[4] 7.8
United States	3.0	1.7	1.6	3.2	− 3.2	[4] − 3.1	9.6	8.9
Japan	4.4	− 0.7	− 0.7	− 0.3	3.6	2.1	5.1	[5] 4.5
China	10.4	9.2	3.3	5.4	5.1	2.8	.	.
India	10.3	7.3	12.0	8.9	3.1	[4] − 2.2	.	.
Brazil	7.5	2.7	5.0	6.6	− 2.2	− 2.1	6.7	6.0
Russia	4.3	4.3	6.9	8.5	4.8	5.5	7.5	6.6

Sources: IMF, ECB, Eurostat, national statistics. **1** HICP for the euro area and the United Kingdom. **2** Unemployment rate based on national definition; for euro area standardised rate. **3** ECB preliminary estimate. **4** IMF forecasts (World Economic Outlook, September 2011). **5** Areas affected by the earthquake are not included.

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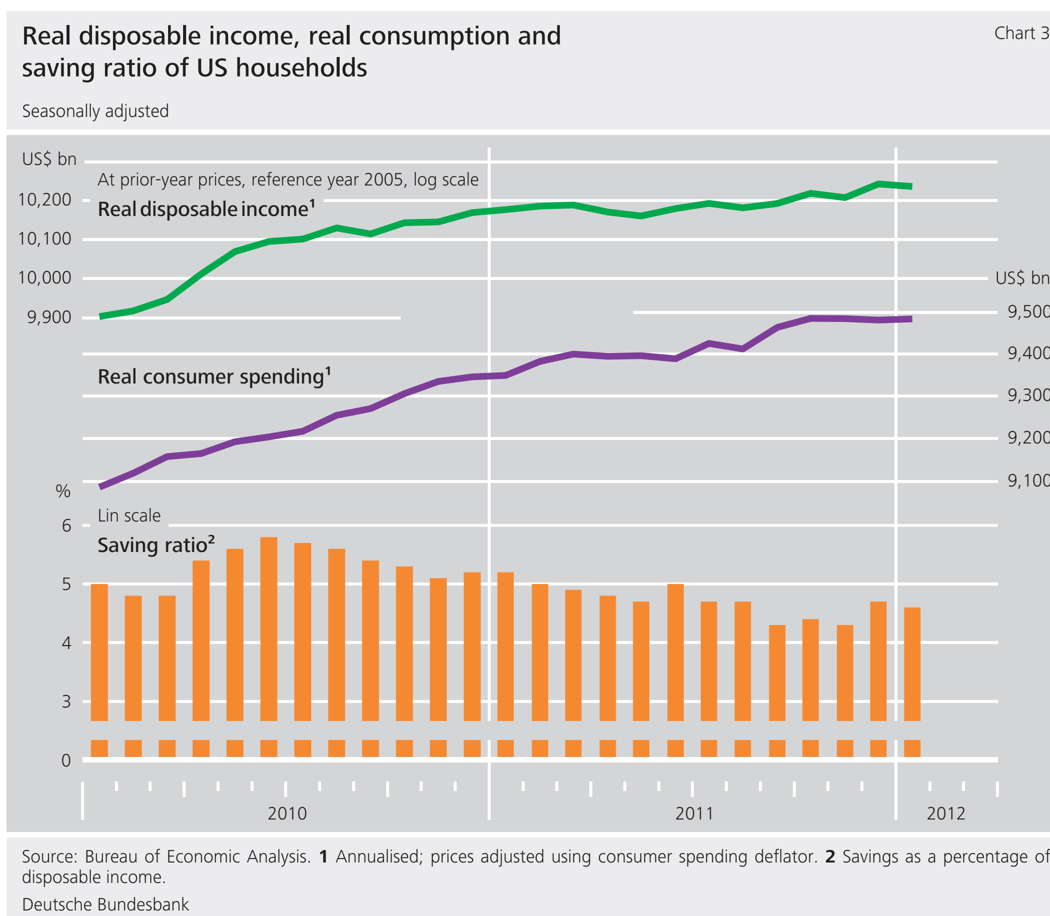
US$108, which was 17% more than at the end of 2010. Although Brent prices did not soar to the short-lived peaks seen in summer 2008, persistent inflationary pressure lifted them to a record level of US$111 (+38%) on an annual average. Unlike in previous, demand-driven rounds of inflation, oil price developments were mostly due to a supply squeeze this time. After political unrest in several North African and Middle Eastern countries had undermined supply confidence during the winter months, military conflict in Libya caused massive production shortages during the second and third quarters. Moreover, supply-side bottlenecks were further aggravated by unscheduled production interruptions elsewhere.

Surge in consumer price inflation in industrial countries

The surge in energy costs was an important, though by no means the only, reason for increased consumer price inflation in the industrial countries. On an annual average, energy prices rose by 12.3% on the year in 2011, having already appreciated by 7.7% in 2010. Headline inflation climbed by more than 1 percentage point to 2.7%, before peaking at 3.1% late in the summer. Even excluding the volatile components energy and food, however, consumers still paid significantly more for their basket of goods. Core inflation in this definition rose from 0.9% a year earlier to 1.5%. At the end of 2011, the rate of price increase worked out at 1.7%; excluding Japan, which experienced falling prices, it even came to 2.2%. In addition to the effects of the temporary supply shocks last year, higher headline inflation was probably due mainly to the delayed impact of previous rounds of commodity price inflation. At any rate, the deflationary risks that were perceived just a year earlier based on the supposition of significant overall capacity underutilisation in the industrial countries, particularly in the United States and United Kingdom, have dissipated.

US economy overcomes dip

Concerns in the United States that the economy could slip into recession, which had emerged in 2010, resurfaced towards the middle of 2011. Prior to that, real household consumer spending had stagnated for several months. This was mainly due, first, to problems with deliveries of passenger cars by Japanese companies, which were also forced to interrupt production in North America following the severe Tohoku earthquake. Second, households saw their disposable income stagnate in real terms – chiefly, but not exclusively, as a result of higher energy prices. The rate of inflation as measured by the consumer price index (CPI) peaked at 3.9% in September; on an annual average, the consumer goods basket was 3.2% more expensive. The fact that the macroeconomic difficulties spilled over to the labour



Real disposable income, real consumption and saving ratio of US households

Seasonally adjusted

Source: Bureau of Economic Analysis. **1** Annualised; prices adjusted using consumer spending deflator. **2** Savings as a percentage of disposable income.
Deutsche Bundesbank

market also temporarily restrained nominal income growth. The impression of a cyclical slowdown in mid-2011 was further fuelled by the annual revision of official statistical data, which showed that the US economy had virtually stagnated in the fourth quarter of 2010. Fears of a pending insolvency in the United States, the escalating sovereign debt crisis in Europe and the potential repercussions of falling financial markets additionally depressed confidence. But the US economy then defied the gloomy sentiment by rebounding in the second half of the year. Once the delivery problems relating to passenger cars had been overcome, households clearly raised their real consumption, for which they were willing to reduce saving. Enterprises responded to a favourable earnings situation and sharply expanded their investment in machinery and equipment and finally also stepped up hiring again. The unemployment rate eased from 9.4% in December 2010 to 8.5% 12 months later. The higher level of economic activity in the second half of the year allowed real GDP to rise by an annual average of 1¾% in 2011 compared with 2010.

Japan copes with extraordinary challenges

The Tohoku earthquake in March 2011 hit the Japanese economy just as it was starting to regain momentum. Following a period of rapid expansion, real GDP had stagnated at the end of 2010 after fiscal support measures were phased out. In the first few months of 2011, economic indicators were already pointing upwards again. Subsequently, however, real GDP was severely dented not only by the direct damage to production facilities caused by the natural disaster but also by the interruption to economic activity. Industrial production, especially in the automobile sector, and exports were particularly badly affected. However, economic activity largely returned to normal as early as the third quarter. This was, however, only achieved thanks to remarkable efforts to restore the infrastructure and maintain the energy supply. In the fourth quarter, the export

industry in particular faced new challenges as global demand dynamics weakened and the yen appreciated. On top of that, automobile groups with an international focus suffered renewed production outages as a result of the devastating floods in Thailand. Overall, annual average aggregate output in 2011 fell ¾% short of 2010, when it had grown by 4½%. The deflationary tendencies at the consumer price level have probably abated only temporarily as a result of energy inflation and higher indirect taxes. The consumer price index decreased by 0.3% on the year in 2011, after declining by 0.7% in 2010.

Sluggish growth in the UK

In the United Kingdom, the economic recovery continued at a sluggish pace in 2011. Following the onset of severe winter weather at the end of 2010 and the drag that this placed on economic activity, real GDP in the first quarter of the year fell slightly short of its level of the third quarter of 2010. In the second quarter of 2011, growth was depressed by other exceptional factors, in particular a special bank holiday to celebrate the royal wedding. The perceptible expansion in the third quarter therefore largely represented a natural rebound of activity from its depressed level and probably overstates the underlying strength of economic growth. This is further borne out by the fact that the unemployment rate climbed to 8.4% by November, its highest level since 1995. In the final quarter of the year the economic recovery in the United Kingdom then suffered a setback in the face of the global slowdown. On an annual average, real GDP expanded by the modest margin of just under 1%. Private consumption actually contracted in price-adjusted terms. The fact that consumers tightened their belts is probably due, not least, to higher inflation, which appreciably eroded households' real disposable income. As measured by the Harmonised Index of Consumer Prices (HICP), average annual inflation was 4.5% in 2011; at its peak, it reached 5.2%.

EU 7 remain on course for economic recovery

The process of economic recovery in the new EU countries as a whole (EU 7)[1] progressed well in 2011. Real GDP rose by 3¼% as compared with +2% in 2010. Poland, the largest economy in the region, again achieved strong growth, at 4¼%. The country continued to benefit from robust domestic demand. Investment especially, which had dropped slightly in 2010, accelerated sharply. In the Czech Republic, economic growth slowed perceptibly over the course of the year, in part because export dynamics weakened. The full-year growth rate amounted to just 1¾%. The Hungarian economy expanded at a similar rate. In the fourth quarter, Hungary's financial markets were buffeted by considerable tensions as public finances deteriorated. This prompted the government in Budapest to approach the European Commission and the IMF for financial assistance. Although the labour market situation in the EU 7 overall has continued to stabilise, it has not improved significantly. On an annual average, the unemployment rate came to 9.4%, which is 3 percentage points higher than before the financial and economic crisis. Consumer price inflation (as measured by the HICP) increased from 3.2% in 2010 to 4.0% in 2011, notably owing to the sharp rise in energy and food prices but also as a result of higher indirect taxes and duties in individual member states.

Russian economy growing robustly

Real GDP in Russia increased by 4¼% on an annual average in 2011, repeating its growth performance from 2010. On the demand side, this was largely driven by the sharp jump in private consumption (+6½%), which was bolstered by rising employment and appreciably higher real wages. This is somewhat surprising as consumer price inflation edged up over 12 months to 8.5%. Gross fixed capital formation also grew at a dynamic pace, but was still well below pre-crisis levels. A key milestone for the Russian economy, and one which is likely both to have a positive impact on investment and to dampen inflation in the medium term, was that the country was granted approval in December

1 This group comprises the non-euro-area countries that joined the European Union in 2004 and 2007.

2011 to join the World Trade Organisation (WTO). Russia, which has yet to ratify the accession package, is the last major emerging market economy to join the WTO.

Waning momentum in emerging economies in south and east Asia

The economic upturn in the south and east Asian emerging market economies levelled off perceptibly in 2011 compared with 2010, when real GDP in the region as a whole had expanded by almost 10%. For one thing, the measures to tighten monetary policy that several central banks had taken from mid-2010 to rein in burgeoning inflationary pressure dampened growth in domestic demand. For another, weaker export dynamics, particularly in the second half of the year, provided a much smaller stimulus to overall economic activity. This notably dulled aggregate output in several smaller, strongly export-oriented economies. Although consumer price inflation in most countries of the region was appreciably higher on an annual average in 2011 than a year earlier, it has, in many countries, eased off distinctly, especially in recent months, as food prices have dropped. Against this backdrop and given a slower pace of economic activity, several central banks in south and east Asia have meanwhile loosened their monetary policy stance.

Slower upswing in China

In China, real GDP growth decelerated from 10½% in 2010 to 9¼% in 2011. According to official data, growth in demand was driven in equal parts by gross capital formation and by (private and public) consumption, while net exports made a slightly negative contribution. Specifically, consumption accelerated considerably, whereas investment momentum slackened substantially, probably reflecting *inter alia* credit constraints and the cooling of the housing market. Investment dynamics would have weakened even more without the central government's sharply expanded public residential construction programme designed to help meet the growing demand for affordable housing. Chinese exports of goods (on a US dollar basis) expanded by 20% last year, although part of this expansion was presumably attributable to higher prices. Nominal imports rose by 25%. As a result, the trade surplus narrowed to just over US$240 billion, its lowest level since 2006. At 5.4% in 2011, annual average consumer price inflation was well above the government's target of 4%. Alongside higher food prices, this was due in part to a marked rise in prices for other goods and services, for instance housing. Towards year-end, however, inflationary pressure eased appreciably.

Growth in India curbed by restrictive monetary policy

The growth rate of the Indian economy was perceptibly curbed last year. Real GDP rose by 7¼% vis-à-vis 2010 (when the economy had swelled by as much as one-tenth), largely because of stagnating investment. This can probably be explained by the less favourable funding conditions as a result of the sharp hikes in the key interest rates. Resolute monetary policy tightening was necessitated by a persistently high rate of inflation. As measured by the consumer price index relevant for industrial workers, the rate of price appreciation was 8.9% in the full year.

Slackening momentum in Latin America

In Latin America, the pace of overall economic growth slackened noticeably over the course of the year. This is particularly true of Brazil. Real GDP growth virtually stalled there in the second half of 2011 after a fairly dynamic start. Brazil's economic output grew by 2¾% on an annual average. Output in industry, where competitiveness has fallen in recent years due to the strong appreciation of the national currency and large wage increases, more or less stagnated in 2011. In Mexico, passenger car production, in particular, grew at a very brisk pace thanks to a flourishing domestic business and improved car sales in the United States. Aggregate output expanded by 4%. Inflation rates in the two largest Latin American economies moved in opposite directions. In Brazil, consumer price inflation accelerated from 5.0% to 6.6% on an annual average, largely on the back of sharply higher prices for food and services. In Mexico, by contrast, inflation dropped from 4.2% to 3.4%.

2 Change of perspective on the foreign exchange market

US dollar unchanged on balance

During the course of the reporting year, a gradual change of perspective took place on the foreign exchange markets, which burdened the euro without having a lasting effect on the value of the US dollar. Whereas, in the early months of the year, the markets still focused on the global economic recovery and, therefore, on possible monetary policy tightening measures, sovereign debt subsequently played an increasingly important role on both sides of the Atlantic. This shifted perspective was also reflected in the US dollar exchange rate, which was at the centre of developments in the foreign exchange markets. The US dollar's effective exchange rate against 20 partner countries depreciated in the first third of the year. This was partly attributable to the fact that the US Federal Reserve – despite higher inflationary pressures – apparently continued to focus on economic risks and the difficult labour market situation, which led to low real interest rates in the United States. Moreover, the US dollar was subsequently weighed down by the controversy in Congress over raising the legal limit for government borrowing. Following a period of several months when the effective US dollar exchange rate was relatively constant, it appreciated on balance over the final four months of the year. During this time, the escalation of the euro-area debt crisis directly benefited the US dollar. The US currency also profited indirectly, however, from the growing uncertainty pervading the financial markets worldwide and the attendant search for safe-haven investments. On a weighted average, the value of the US dollar was virtually unchanged on balance over 2011 as a whole.

Euro with exchange rate losses against the US dollar, …

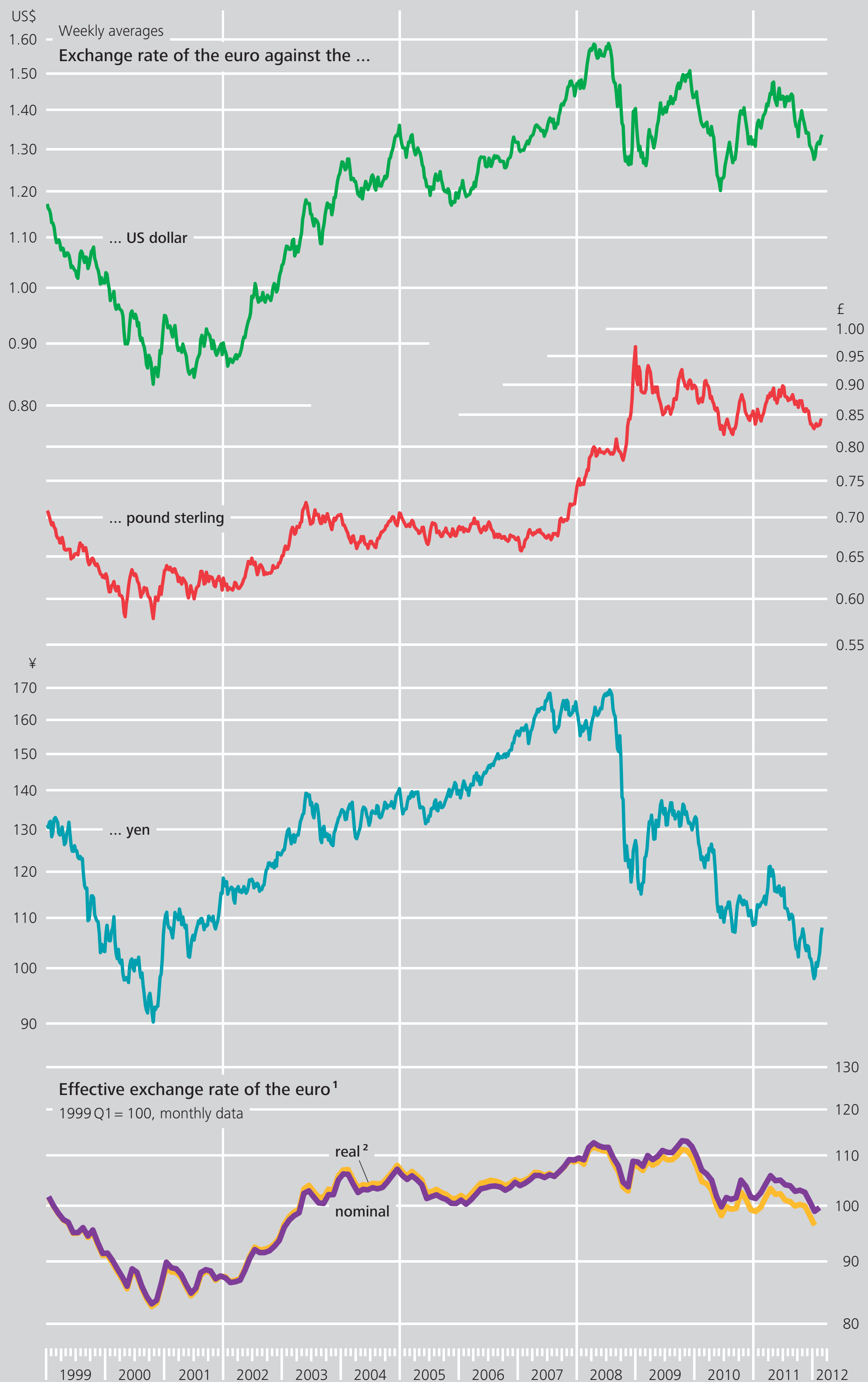
The above developments also affected the euro-US dollar exchange rate. In the opening months of last year, the euro was supported by the hitherto uninterrupted economic recovery in the euro area. The euro area's interest rate advantage over the United States rose in all maturity segments, and the euro gained against the US currency. However, amid growing concerns over the sustainability of Greek public finances, the appreciation of the euro ran out of steam during the summer months. When the debt crisis then spread to other euro-area countries, and their government bonds were burdened by ever higher risk premiums, the euro came under downward pressure. The gloomier economic outlook for the euro area towards the end of the year likewise contributed to the euro's exchange rate losses. At year-end, the euro stood at US$1.29; this was equivalent to a depreciation of 3% over the course of the year.

… pound sterling …

As it did against the US dollar, the euro also advanced against the pound sterling on balance in the first third of the year. The UK currency suffered in part because the Bank of England, although inflation was above the target corridor and rising further, continued its expansionary monetary policy and so prevented expectations of higher interest rates. As a consequence, real interest rates in the United Kingdom fell well into negative territory. As the year proceeded, however, the euro-sterling exchange rate also increasingly felt the impact of the euro-area debt crisis. Particularly in the last two months of the year, the euro lost ground against the pound sterling. At the turn of the year, the euro stood at £0.84, which was 3% down on the end of 2010.

… and the yen

The single currency began the year with temporary gains against the yen, too. Directly after the Japanese natural and nuclear power plant disaster in March, speculation about a repatriation of capital to Japan triggered a short-lived yet pronounced appreciation of the Japanese currency. Yen were sold in a concerted intervention by the G7 central banks in foreign exchange markets, however, thereby reversing this development. Although the yen initially continued to depreciate under the economic burdens caused by the disaster, this trend was gradually reversed as global investor uncertainty grew over the course of the year. The



1 According to ECB calculations against the currencies of 20 countries. 2 Based on consumer price indices.
Deutsche Bundesbank

market's view that yen-denominated investments entail relatively little risk helped the Japanese currency achieve exchange rate gains from May onwards. Later in the year, the yen also benefited from Japan's rapid economic recovery. In August and October, the Japanese central bank intervened unilaterally to temper the strength of the yen. At the end of 2011, the euro was worth ¥100, its low for the year, and was 8% weaker than one year before.

Euro weaker in effective terms

The weighted average euro exchange rate against 20 major trading partners depreciated by 2% last year. Losses against the currencies of commodity-exporting industrialised countries (Australia, Canada, New Zealand and Norway) were relatively small. In 2011, the euro appreciated, in some cases considerably, against the currencies of the central European EU countries Poland, the Czech Republic and Hungary. These currencies themselves came under pressure from the fourth quarter onwards, as tensions in the European financial markets triggered capital outflows.

Exchange-rate policy measures

For a time, the European sovereign debt crisis and the associated turmoil on the financial markets sent the euro sharply lower against the Swiss franc, and it fell to an all-time low of CHF1.05 in August. Because the Swiss National Bank still considered the Swiss franc to be immensely overvalued after depreciating slightly in early September, it set a minimum exchange rate of CHF1.20 per euro and announced that it would buy foreign currency in unlimited quantities to defend it. During the course of the year the renminbi, which Chinese monetary authorities regulate strictly against the US dollar, appreciated moderately (5%) against the US anchor currency. Other emerging market economies, whose currencies – as in the two previous years – faced upward pressure until into the summer, tried to mitigate this pressure in some cases through foreign market interventions and heightened capital controls. As uncertainty on the financial markets grew, however, capital was increasingly withdrawn from many emerging market economies, causing their currencies to depreciate – in some cases, considerably. For example, in the course of 2011 the Brazilian real and the Mexican peso each shed 9% of their value against the euro, the Indian rupee 15%, the Turkish lira 18% and the South African rand 18½%. The global holdings of foreign exchange reserves grew by 10% last year, mainly as a result of the interventions, and totalled US$10,196 billion at the end of 2011.

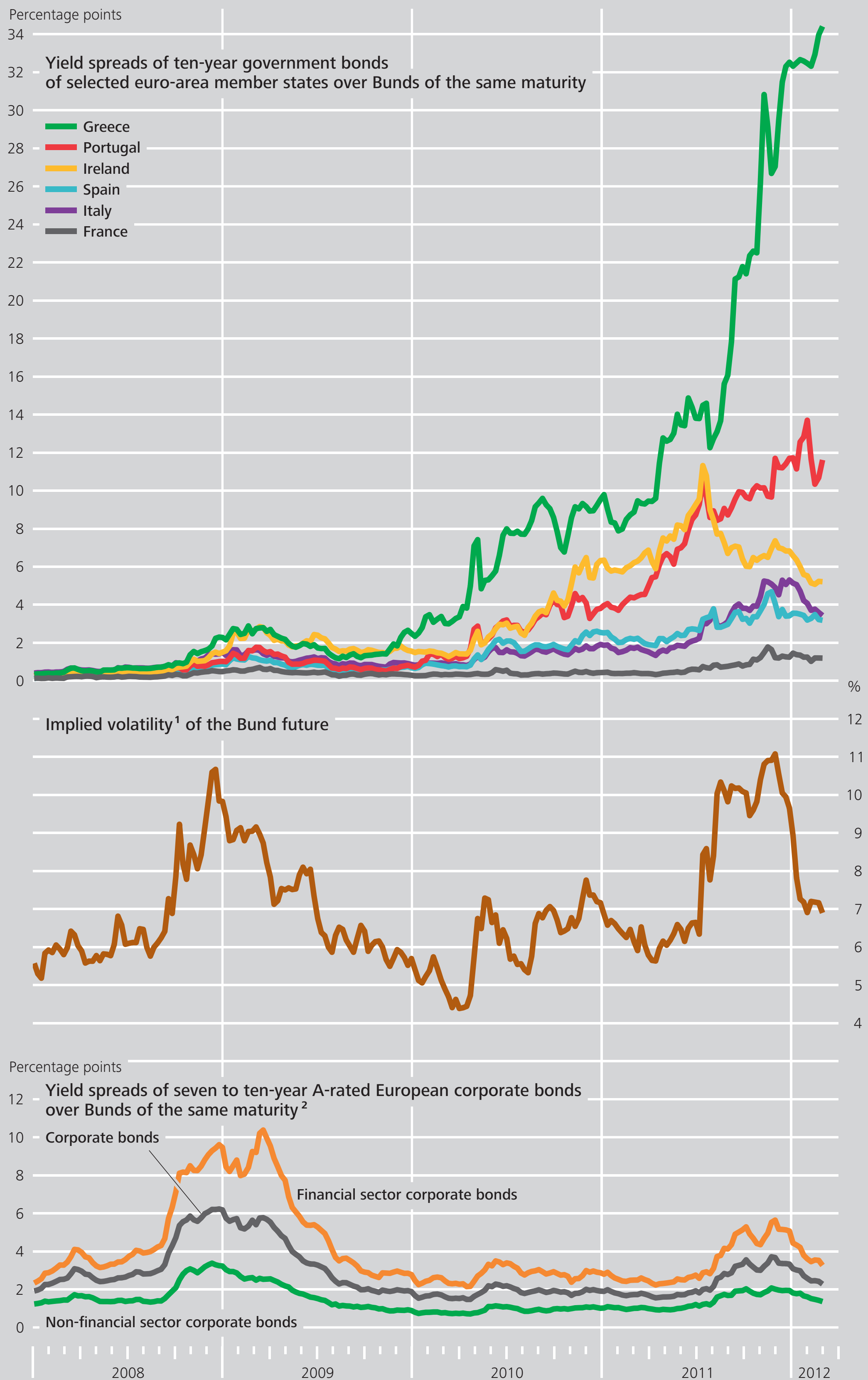
3 Capital markets in the shadow of the sovereign debt crisis and global economic downturn

Sovereign debt crisis and deepening economic pessimism set tone of financial markets

In the year under review, events on the financial markets were increasingly overshadowed by the sovereign debt crisis in the euro area. After the stabilising effect of the global economic recovery in the first half of the year, heightened uncertainty over the future developments in the debt crisis in several euro-area countries increasingly spilled over into the financial markets in the second half. At the same time, global growth prospects grew dimmer.

Italian and Spanish government bond yields rise

Initially, yields on Italian and Spanish government bonds were comparatively stable; but amid uncertainty over the political will to consolidate and the threat of rating downgrades, market participants also demanded substantially higher yield markups for these debt securities in the second half of the year. The measures adopted by the heads of state or government at the July EU summit, which included relaxed credit conditions for programme countries, extended powers for the EFSF and a second support package for Greece, had only a brief calming effect on investors. The unravelling of the planned austerity package by the Italian government in August, the hesitant progress being made in Greece and the announcement of a voluntary haircut for Greece's private creditors produced a feeling of deep insecurity on the bond markets. During the summer months, the implied volatility of options on the Bund future reached levels last seen in 2008



1 Expected future volatility calculated from options prices. **2** Sources: iBoxx and Bundesbank calculations.
Deutsche Bundesbank

Political uncertainty and doubts about implementation of crisis measures

(see chart on page 27). The turnaround in investor sentiment, which was reflected by a heightened level of perceived insolvency risk and higher liquidity premiums, was probably reinforced by nascent fears of recession. Negative growth prospects also fuelled market participants' doubts concerning debt sustainability in Greece and Portugal. This contributed to the considerable price losses sustained by the government bonds of these countries. The EU summit at the end of October, where, among other things, greater voluntary private sector involvement in a Greek aid programme still to be negotiated and an extension of the EFSF's powers were resolved, raised investor confidence again. However, this confidence waned with the announcement of a Greek referendum and amid growing scepticism that the resolutions would be implemented. As a result, government bond yields of euro-area countries rose across the board in November. Top-rated bonds were also affected. Financial institutions which were heavily exposed to euro-area government bonds found themselves faced with considerably poorer financing conditions on the bond and equity markets (see charts on pages 27 and 29).

Safe-haven flows and declining growth expectations

Preference for liquid top-notch investments increased as uncertainty rose, causing intra-euro-area bond spreads to widen further. Looking at 2011 as a whole, GDP-weighted yield dispersion grew by more than 100 basis points to reach a new high of 164 basis points at the end of the year. Besides Bunds and US Treasuries, demand for Swiss and UK government bonds was also especially strong. Yields on ten-year Bunds and corresponding US paper fell during the course of the year by close to 120 and 143 basis points to 1.7% and 1.9% respectively. At the same time, the yield differential vis-à-vis matching-maturity bonds issued by public promotional banks moved up by around 30 basis points in each case. This more pronounced liquidity gap between public sector debtors with the same credit rating points to stronger safe-haven flows to liquid markets. Moreover, the weaker economic outlook drove interest rates lower. According to Consensus Forecast, real GDP growth expectations for 2012 diminished over the course of the year by 130 basis points for Germany and 120 basis points for the United States.

US and UK central banks launch purchase programmes

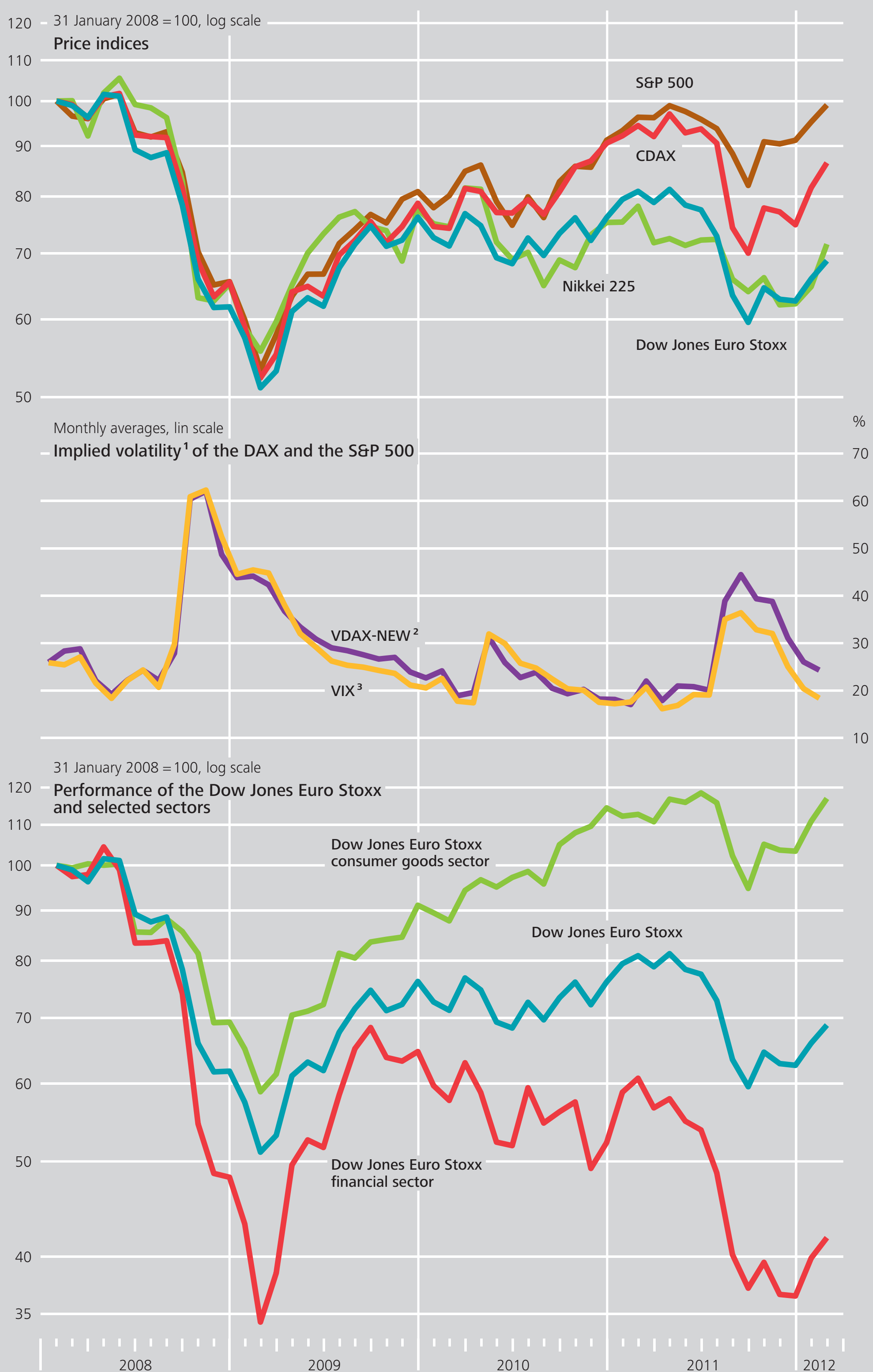
In the United States and the United Kingdom, additional downward pressure on yields came from the central banks, which continued their government bond purchase programmes as part of their basically expansionary monetary policy to shore up the economy.

Slight easing at year-end

The change of government in Italy, Spain and Greece, the new Italian government's austerity programme and the Franco-German proposal of stricter budgetary rules ultimately helped calm the markets to a certain extent. Furthermore, the situation relaxed somewhat following the announcement at the end of November of the Eurosystem's three-year refinancing operations. At end-2011, investors demanded lower yields than at the beginning of the year for Spanish bonds with a maturity of more than one year. By contrast, at the end of 2011, Italian government bonds were yielding between 1½ and 2½ percentage points more than in the first half-year in all maturities. However, they did decrease towards the end of the reporting year.

Mixed developments in financing conditions for enterprises with capital market access

In the first half of 2011, funding costs for enterprises with capital market access largely matched the previous year's level before they increased as the sovereign debt crisis escalated. For example, on balance, yields on corporate bonds with an investment grade rating of A and a residual maturity of seven to ten years climbed more than 20 basis points on the year as measured by the iBoxx bond indices. Interestingly, this increase was attributable exclusively to financial sector enterprises. Whereas non-financial corporations in this rating class were even able to refinance themselves at better terms at the end of 2011 than one year before, yields on financial institutions' bonds were clearly above their end-2010 levels and also exceeded their five-year averages. This would indicate that players close to the financial mar-



Sources: Thomson Reuters and Bundesbank calculations. **1** Expected future volatility calculated from options prices. **2** Based on options on the DAX 30. **3** Based on options on the S&P 500.

Deutsche Bundesbank

kets judged the risk position to be more fragile. This must be seen in the context of the heightened risk of losses from exposures to government bonds. In several euro-area peripheral countries, notably in Italy, financing conditions for non-financial corporations also deteriorated from mid-year onwards, however. Even so, there is no sign of developments in the sovereign debt markets of the euro-area peripheral states having a stable systematic impact on the financing conditions for the respective non-financial corporations.

Substantial price losses on most international stock markets

For the most part, the stock markets of the industrial countries suffered substantial price losses in 2011. For instance, the German CDAX share index and the Japanese Nikkei share index both fell by 17% for 2011 as a whole, and equity prices of the enterprises in the euro area-wide Dow Jones Euro Stoxx shed 18% on average. The US S&P 500 performed relatively well by comparison, closing 2011 virtually unchanged year on year. This was mainly because fears that arose just after the mid-year mark that the US could slip into recession subsided perceptibly in the fourth quarter, when economic data proved to be better than expected. The European markets, however, were dampened in the second half of the year, above all by the renewed escalation of the European sovereign debt crisis and by growing uncertainty over the economic outlook. This led to sharply declining equity prices and an, at times, high level of uncertainty among market participants, which was reflected, for instance, in the higher implied volatility of equity options (see chart on page 29). Although earnings expectations for the next 12 months (IBES earnings estimates) are up on the year for German blue chips, unlike for the enterprises listed in the Euro Stoxx, they were unable to shake off the negative trend described above. One likely reason for this is that the longer-term expectations of earnings growth for German enterprises over the next three to five years have deteriorated sharply, in keeping with other European enterprises. In 2011, European bank equities significantly underperformed the market as a whole (-38%). This applied, in particular, to the bank indexes for Greece, Ireland, Portugal and Italy. Not least of all, this was the result of banks' heavy exposure to sovereign debt in peripheral countries.

II Economic and monetary developments in the euro area

1 Pick-up in activity came to a halt at the end of the year

Marked slowdown in economic activity over the course of 2011

The cyclical upturn in the euro area that had begun in mid-2009 flattened out noticeably in the second and third quarters of 2011 after a buoyant start to the year and came to a standstill in the final quarter. The strong growth at the beginning of last year was affected, among other things, by catch-up effects following weather-related losses in industrial and construction output at the end of 2010, which mainly affected the euro-area countries in central and northern Europe. One key reason for the weaker expansion in the second and third quarters was the considerable strain on consumers' purchasing power posed by the sharp rise in energy prices; this persisted until the end of April and then corrected again only gradually. Demand was also dampened by the increased efforts to consolidate, principally in the peripheral countries of the euro area that are at the heart of the sovereign debt crisis. Following marked growth at the beginning of the year, gross fixed capital formation began a downward movement, with shrinking construction investment roughly offsetting the initially on-

Economic performance in the euro area Table 2

Country	Real GDP		Consumer prices[1]		Unemployment rate[2]	
	2010	2011	2010	2011	2010	2011
	Year-on-year percentage change				As a percentage	
Euro area	1.9	1.4	1.6	2.7	10.1	10.2
Belgium	2.3	1.9	2.3	3.5	8.3	7.2
Germany	3.7	3.0	1.2	2.5	7.1	5.9
Estonia	2.3	7.5	2.7	5.1	16.9	12.5
Ireland	– 0.4	[3] 0.9	– 1.6	1.2	13.7	14.4
Greece	– 3.5	– 6.8	4.7	3.1	12.6	[4] 16.6
Spain	– 0.1	0.7	2.0	3.1	20.1	21.7
France	1.5	1.7	1.7	2.3	9.8	9.7
Italy	1.8	0.4	1.6	2.9	8.4	8.4
Cyprus	1.1	0.5	2.6	3.5	6.2	7.8
Luxembourg	2.7	[3] 1.1	2.8	3.7	4.6	4.8
Malta	2.9	[3] 2.1	2.0	2.4	6.9	6.4
Netherlands	1.7	1.2	0.9	2.5	4.5	4.4
Austria	2.3	3.1	1.7	3.6	4.4	4.2
Portugal	1.4	[5] – 1.5	1.4	3.6	12.0	12.9
Slovenia	1.4	– 0.2	2.1	2.1	7.3	8.1
Slovakia	4.2	3.3	0.7	4.1	14.4	13.4
Finland	3.7	2.9	1.7	3.3	8.4	7.8

1 Harmonised Index of Consumer Prices (HICP). **2** Standardised unemployment rate. **3** European Commission projections (interim forecast, February 2012). **4** European Commision projection (autumn forecast, November 2011). **5** Provisional figure based on seasonally adjusted data.

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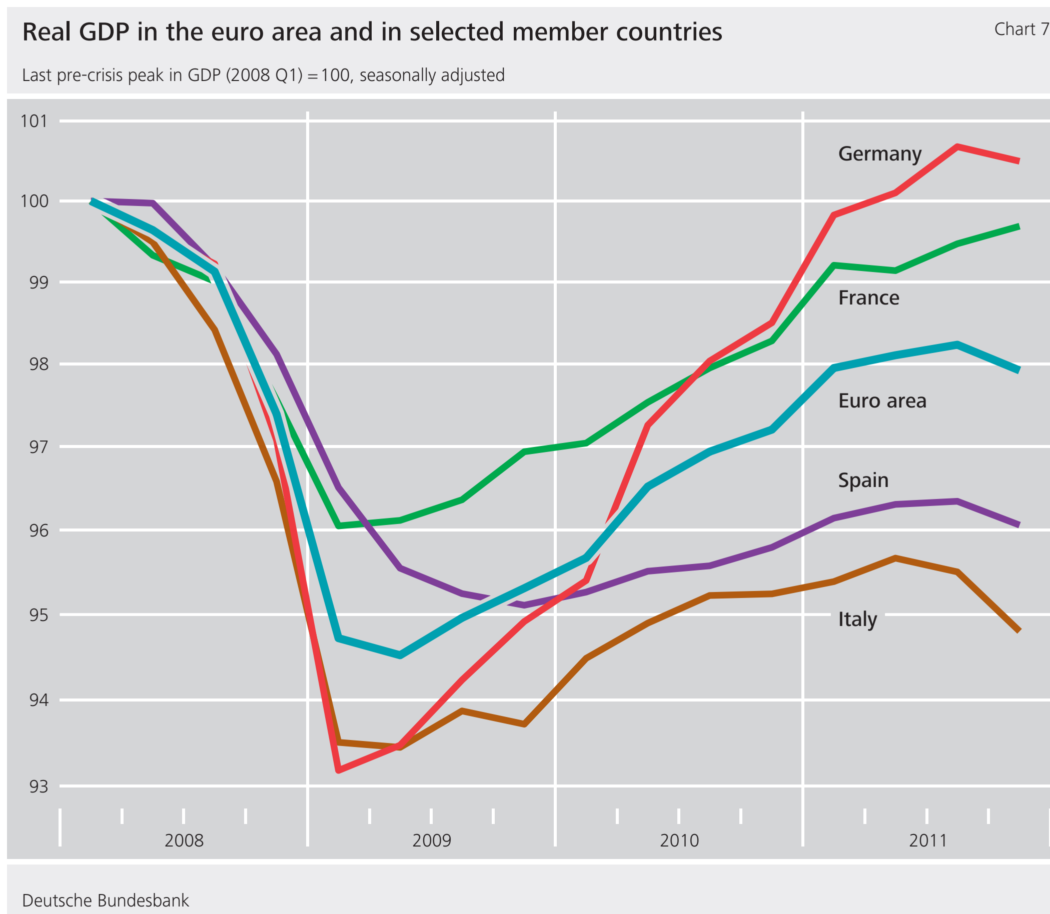
going rise in spending on new machinery and equipment. The perceptible increase in exports still outweighed the decline in domestic demand in the second and third quarters. In the final quarter of the year, however, sluggish developments in major export markets halted the external stimuli, causing real GDP to decline for the first time in two and a half years (by a seasonally adjusted ¼%). The shortfall compared with the pre-crisis level thus went back up to 2%. Nonetheless, thanks to a strong carry-over from 2010 and buoyant activity in the first quarter, there was still growth of 1½% for 2011 as a whole. Given a continuing flat medium-term growth path, there was a further rise in overall capacity utilisation, although it remained noticeably down on its normal level.

Continuing large growth disparity in the euro area

As in 2010, Germany was a major driver of growth in the euro area last year. The rate of expansion in Germany was roughly three times as high as in the euro area as a whole excluding Germany (+1%). Austria, Slovakia and Finland likewise generated above-average growth. The very sharp 7½% rise in GDP in Estonia was due to dynamic investment and a strong increase in exports to non-euro-area countries. Among the larger member countries, only German GDP was up on its pre-crisis level at the end of 2011, while France almost achieved this with growth of 1¾%. By contrast, the economies of Italy and Spain, which grew by only ½% and ¾% respectively in 2011, were still well down on their levels before the crisis. Among the crisis countries, Ireland posted the best result, with a roughly 1% rise in GDP. The key factor in this was buoyant exports, while domestic demand continued to contract. Portugal, with its rather weak export sector, was far less able to offset the contraction in domestic activity and slipped back into recession in the reporting year (-1½%). In Greece, the adjustment recession that had begun in late 2008 became more severe. Economic output fell by 6¾% and, at the end of last year, was 15¾% down on its level in the fourth quarter of 2008.



The unsatisfactory economic development in the peripheral countries is due, first, to their governments' increased efforts to consolidate public finances, which are needed to regain investors' lost confidence in the financial markets. Second, with the exception of Ireland, the losses in price competitiveness over the past decade had not yet been significantly corrected. Added to this were ongoing processes of structural adjustment, leading to a sharp rise in unemployment and increasing uncertainty among consumers and businesses. The renewed escalation of the sovereign debt crisis in the second half of 2011 also had a strong knock-on effect on the banks in the countries concerned, which probably made them less willing to provide loans. Overall, however, the growth disparities in the euro area – measured by the weighted standard deviation – increased only slightly year on year.

Projections revised downwards

The available indicators show that the economic situation in the euro area has stabilised again somewhat over the past few months, although there have been no identifiable significant expansionary forces so far. In their most recent projection, the ECB staff assume virtually stagnant economic output (mean of the projection range) for 2012 as a whole. This is based on the expectation that there will be no further escalation of the sovereign debt crisis in the euro area, that there will be no major change in the situation on the crude oil markets, and that the expansionary forces in the world economy will become stronger again during 2012. What all current projections for the euro area have in common is that the downside risks are seen as significantly higher than the chances of developments improving.

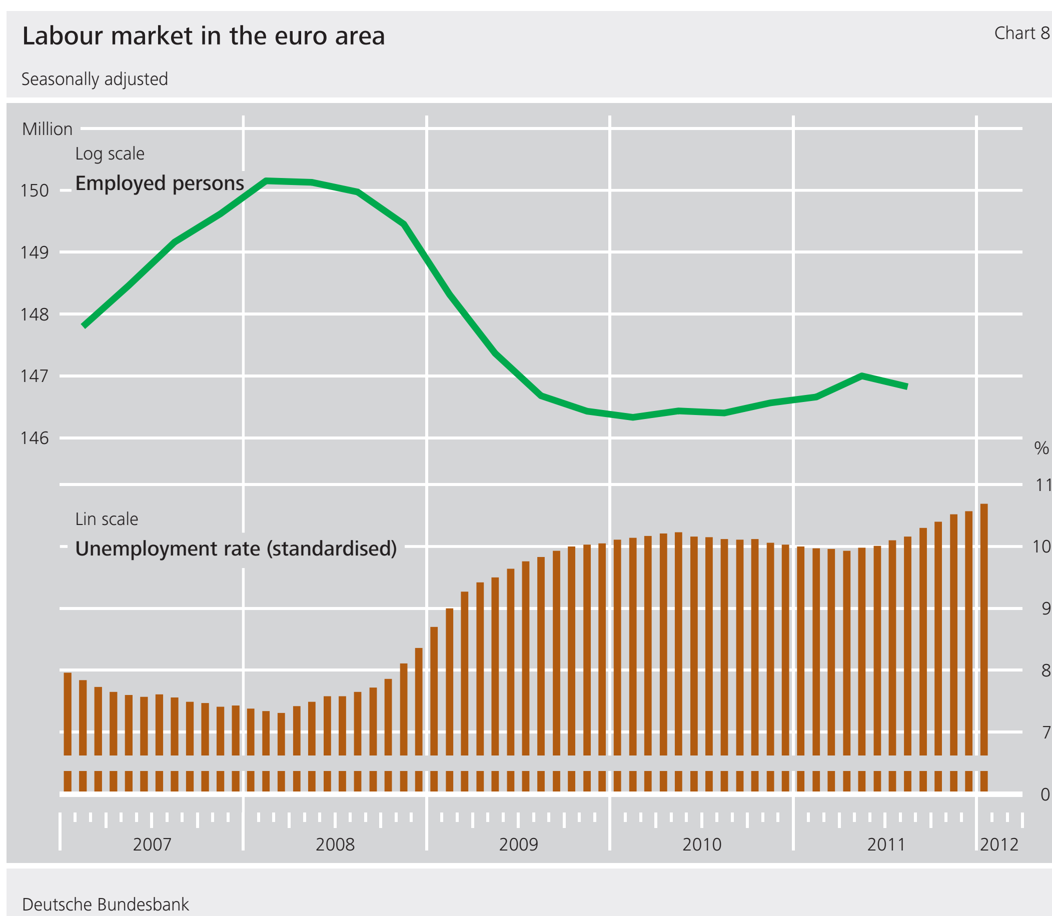
Further deterioration in already difficult labour market situation

The already weak recovery in the labour market began to falter around mid-year. The number of persons in work, which had shown a slight rise in the first two quarters, fell again in the third quarter. The final quarter, for which no data are available at present, probably saw a

Labour market in the euro area

Chart 8

Seasonally adjusted



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greater reduction in jobs. On an annual average, employment is nevertheless likely to have been ¼% up on its 2010 level. In this context, the often sharp falls in employment in the crisis countries, which amounted to as much as 5½% in Greece in the first three quarters of 2011, stood in contrast with quite notable increases in most other member countries. At the head of these – as in economic growth – was Estonia, at +6¾% in the first nine months. In the period from last year's low in April up to January 2012, the number of persons out of work in the euro area rose by a seasonally adjusted 1,280,000 to 16.9 million and the unemployment rate went up 0.8 percentage point to 10.7%. There was an especially dramatic deterioration in the labour market situation for young people under 25 years of age. In this group, the unemployment rate was 21.6% at the beginning of this year, compared with 20.5% in April 2011 and 15.1% before the crisis. Furthermore, the differences across the member states in this respect were much more clearly marked than in unemployment as a whole. At the end of the period under review, the figures ranged from 7.8% in Germany to 49.9% in Spain.

Faster rise in consumer prices

Consumer price inflation in the euro area accelerated considerably in 2011. Annual average HICP inflation was 2.7%, compared with 1.6% in 2010. On an average of the past five years – encompassing the economic boom, the global recession and the cyclical recovery – the figure was 2.0%. Roughly half of the stronger upward price pressure last year can be explained by both immediate and lagged effects of the sharp rise in crude oil prices over the past two years, as a result of which energy became almost 12% more expensive for consumers within the space of one year. Owing to developments on the international commodity markets, the rate of price increase for food, at 2.7% on an annual average, was also up on the year. The trend prices of other industrial goods were more subdued, although their reporting

On the expansion of economic policy coordination in the European Union

Against the backdrop of the financial and economic crisis, the heads of state or government of the European Union in March 2010 instructed a task force chaired by the President of the European Council, Herman van Rompuy, to draw up suggestions on how to improve economic governance together with the European Commission. The task force's final report, which the European Council endorsed in October of the same year, called for, among other things, a European semester for ongoing policy coordination, surveillance of macroeconomic imbalances, a reform of the Stability and Growth Pact (SGP)[1] and a permanent financing mechanism to cope with crises.[2]

Ongoing policy coordination

The European semester demanded by the Van Rompuy task force is already being implemented since January 2011, but was not codified in the legal foundations of the Stability and Growth Pact until the trilogue discussions reached an agreement. The aim of the semester is to achieve greater consistency among the individual procedural approaches and thereafter to improve implementation of recommendations by the member states by grouping together the economic and budgetary policy coordination processes in the first six months of a year. The European Commission presented its first Annual Growth Survey in January 2011, which contained ten priority actions to realise the EU2020 economic strategy. This included, in particular, fiscal consolidation, correcting macroeconomic imbalances and stabilising the financial sector as well as labour market reforms and promoting growth. These recommendations were approved as general guidelines for the stability and convergence programmes and national reform programmes by the European heads of state or government at the end of March 2011. In addition, the Council endorsed specific recommendations for the individual member states and the euro area as a whole in June.

As the schedule for the European semester 2011 proved too tight, the European Commission published its second Annual Growth Survey for 2012 as early as the end of November 2011. In this report, the Commission concludes that there was an "implementation gap" regarding the recommendations of the 2011 Annual Growth Survey. Though progress had, it said, been made in terms of fiscal consolidation and labour market reforms, the member states had taken hardly any measures to tackle growth obstacles in the areas of services and communications. The European Commission proposes the following five priority areas for 2012: country-specific and growth-friendly fiscal consolidation, restoring normal lending to the economy, promoting competitiveness and growth, tackling unemployment and the social consequences of the crisis and modernising public administration.

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1 To create the respective legal framework in budgetary policy and surveillance of economic policies (macroeconomic imbalances), the European Commission had shortly beforehand suggested six regulations and directives ("six pack"). Upon conclusion of the trilogue negotiations between representatives of the European Parliament, the Council and the Commission, these regulations came into force on 13 December 2011.
2 See also comments in Deutsche Bundesbank, Decisions taken by the heads of state or government of the euro area and the institutions of the European Union on 21 July 2011, Monthly Report, August 2011, pp 62-65; and Deutsche Bundesbank, European Council decisions on the prevention and resolution of future sovereign debt crises, Monthly Report, April 2011, pp 53-58 as well as Deutsche Bundesbank, The fiscal compact and the European Stability Mechanism, Monthly Report, February 2012.

At a special summit at the beginning of March 2011, the euro-area heads of state or government agreed on the "Euro Plus Pact" as an additional annual reform agenda. Besides the 17 euro-area countries, Bulgaria, Denmark, Latvia, Lithuania, Poland and Romania also joined the initiative. The aim of the pact is to improve competitiveness and the employment situation, to achieve sustainable public finances and to strengthen financial stability. It is the responsibility of each individual member state to select the areas of economic policy in which they wish to take concrete action in any one year. The commitments made by the individual member states are incorporated in the national reform agendas and stability and convergence programmes. The implementation of these commitments is thereafter monitored by the participating countries' heads of state or government. At the European Council meeting on 9 December 2011, all participating countries agreed to carry out an initial assessment the following spring and to introduce measurable targets in the national reform programmes for each of the areas covered by the Pact in future.

Surveillance and correction of macroeconomic imbalances

The new procedure for the surveillance and correction of macroeconomic imbalances is to be implemented for the first time in the 2012 European semester. It should help to diagnose unsound macroeconomic developments in EU member states and formulate recommendations on how to correct them.[3] Euro-area countries with serious imbalances that pose a threat to the proper functioning of the monetary union can be penalised if they show an insufficient willingness to correct them. Surveillance is based on a range of early warning indicators and thresholds endorsed by the Ecofin Council in November 2011.[4] Regarding the treatment of current account balances, deficits upwards of 4% of GDP are closely scrutinised, while the threshold for surpluses is set at 6% of GDP. Moreover, current account surpluses that are permanently above the threshold do not trigger "excessive imbalance procedures" as they pose no threat to the proper functioning of monetary union. With regard to the early indicator "real effective exchange rate", a similar procedure would have made sense for the euro-area member states; however, exchange rate gains and losses are to be treated strictly symmetrically.

Change of fiscal rules

The aim of the SGP reform is to ensure the long-term sustainability of public finances so as to avoid sovereign debt crises more reliably in the future. Important changes were made to the debt criterion, which has been specified. A general sanction procedure is now, as with the deficit criterion, to be applied in the event of failure to comply, which, in theory, would previously also have been possible. However, owing to numerous exceptions, there is no guarantee that it will have a more binding effect. In addition, the sanction mechanism for the event of a continuous breach of the deficit or debt criterion was extended. In future, it will be possible to impose sanctions under the preventive arm of the Pact, which means that the aim of a structurally (close-to) balanced budget will become more important. However, the introduction of a new expenditure

3 See also Deutsche Bundesbank, Germany's external position against the background of increasing economic policy surveillance, Monthly Report, October 2011, pp 41-59.
4 This includes the average current account balance and the net external position as a percentage of GDP; changes in export market shares, in nominal unit labour costs and in the real effective exchange rate; debt and borrowing by the private sector as a percentage of GDP, changes in real estate prices; the government debt ratio and the unemployment rate.

rule will render the relevant procedures very complicated and thus opaque. In addition, the preventive arm only imposes interest-bearing deposits, which have a relatively low deterrent effect. Overall, however, the SGP states that sanctions can, in the event of continued misconduct, be gradually stepped up from increased reporting requirements via interest-bearing and non-interest-bearing deposits to fines, which can be imposed at an earlier stage now. Furthermore, the European Commission will occupy a somewhat stronger position in decision-making under the amended SGP as the voting rules now stipulate in some cases that the Council can only reject recommendations or proposals made by the European Commission with a qualified majority ("reverse qualified majority"). Even in such cases, however, a preceding decision by the Council remains binding, which means that no significantly greater automatic penalisation was achieved. On the whole, the reform is too cautious. The effectiveness of the rules will, given numerous exemption clauses and a high degree of complexity, continue to hinge on the political will to apply them strictly.

Not least in the light of ongoing tensions in the financial markets, the heads of state or government of the euro area agreed to further strengthen budgetary discipline on 9 December 2011. The Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, which also includes the fiscal compact, was finalised by all EU countries apart from the Czech Republic and the United Kingdom on 30 January 2012 and signed on 2 March 2012. With the United Kingdom vetoing a change to the EU treaties from the very beginning of the negotiations, the agreement was concluded outside EU law. If possible, the treaty will enter into force on 1 January 2013. It includes a commitment, under which all decisions in the excessive deficit procedure of the SGP regarding failure to comply with the deficit criterion are basically to be made by means of reverse qualified majority voting. Another key component of this international treaty is that the medium-term budgetary objective contained in the SGP of a structurally close-to-balance budget or surplus is to be anchored in national legislation. In the event of targets being missed significantly, a predefined correction mechanism should set in. The objective of the fiscal compact is welcome. If it were possible, by anchoring it more firmly in legislation, to render compliance with the medium-term budgetary objective the norm, this would be an important contribution to securing the sustainability of public finances. However, much hinges on details which are yet to be finalised. For example, it remains to be determined at what pace existing structural deficits are to be reduced. Moreover, the fundamental requirements of the automatically triggered correction mechanism have not yet been agreed. Nevertheless, the success of the fiscal compact will ultimately depend on its implementation and application in the national context. However, although the fiscal compact potentially strengthens fiscal rules, it does not introduce a fiscal union.

Crisis resolution mechanisms

The crisis has shown that, in contingencies in which the preventive instruments prove insufficient, a crisis resolution mechanism is required in order to avert a threat to the stability of the euro area. The temporary mechanism – the European Financial Stability Facility (EFSF) –, which was introduced against this backdrop in 2010 and enables the provision of loans to ailing countries, was modified several times during the course of the crisis. This included an increase in the effective lending volume to

€440 billion and an extension of the range of instruments. The latest decision was to further increase lending capacity by means of two leverage models designed additionally to mobilise private capital, although the leverage effect is of course dependent on market participants' assessment.

The European Stability Mechanism (ESM) is to act as the permanent crisis resolution mechanism as of mid-2012. As a rule, the ESM should be able to provide financial assistance subject to strict conditionality if the stability of the entire euro area is threatened. The ESM's total capital should encompass €700 billion. Initially, the effective lending volume will be €500 billion. Before the ESM becomes operational, however, the option of increasing its volume is to be looked into. ESM loans are generally to be issued at practically no margin over ESM funding and administration costs. Besides loans, the instruments are also to include precautionary credit lines, interventions in the primary and secondary market and loans to ESM countries for the specific purpose of recapitalising financial institutions. Uniform collective action clauses are envisaged for all euro-area government bonds with a maturity of more than one year, which should help make it easier to bail in the private sector in the event of solvency problems. This will, however, only be considered under exceptional circumstances, and modalities should then be based on IMF practice. ESM loans are to receive preferred creditor status. In principle, assistance programmes are to be agreed by mutual agreement (ie without taking abstentions into account).

Some of the (planned) agreements are problematic. Five aspects are of particular importance with regard to their proper functioning. First, the absence of an interest rate margin on assistance loans makes recourse to rescue programmes relatively attractive and does not create sufficient incentives for a swift return to the capital market. Second, in order to limit such moral hazard, it is even more important that assistance be conditional. Third, extending the range of ESM (and EFSF) instruments is questionable to some extent. Secondary market purchases, in particular, are an expensive and not very effective instrument. Loans to ESM countries for the specific purpose of recapitalising financial institutions are problematic in that they can be provided to countries which themselves have access to the capital market. Precautionary credit lines could be useful if they were used exclusively to bridge the gap until detailed conditions have been agreed. They should, however, be strictly limited in time and volume. Primary market purchases can be an appropriate option when access to the capital markets is uncertain – provided that this does not extend the agreed assistance volume. Fourth, financial support in the context of a potential default should only be granted to remedy liquidity problems. Assistance in the context of solvency problems contravenes the no-bail-out clause. Involving private creditors in achieving solvency is an important aspect in curbing fiscal policymakers' and financial market players' expectations of the debt being assumed by a third party – thereby maintaining the disciplinary function of the market. Fifth, the preferred creditor status of ESM loans is intended to limit the cost to the taxpayers of the countries providing assistance. It is unclear, however, in particular how to ensure that this status applies to interventions in the primary and secondary market.

in the statistics was considerably impaired in some cases because of changes in the methodology used for seasonal goods. Here, the annual rate of inflation was 0.8%. As in the case of services, which became 1.9% more expensive on average, a likely factor in this context was that indirect taxes had been increased in a number of euro-area countries as a result of the fiscal consolidation measures. The rate of inflation tended to flatten out as 2011 progressed, but the annual HICP rates still went up to 3.0%. In February 2012, the HICP rate was 2.7% according to an initial estimate.

2 Monetary policy and money market developments

Following a sharp rise in aggregate output in the first quarter, the pace of growth in the euro area slackened more and more during 2011. This was due mainly to the renewed escalation of the sovereign debt crisis and the resulting financial market tensions. Not only did this lead to heightened uncertainty regarding the macroeconomic outlook, it also increased the risk of a substantial economic downturn. At the same time, the HICP inflation rate remained well above 2% through to the end of 2011 (+2.7% on an annual average). In view of the dampened outlook for the economy, the Governing Council of the ECB nonetheless expects the rate of inflation to return to its price stability corridor in the coming months.

Increasing uncertainty affected macroeconomic setting from mid-2011

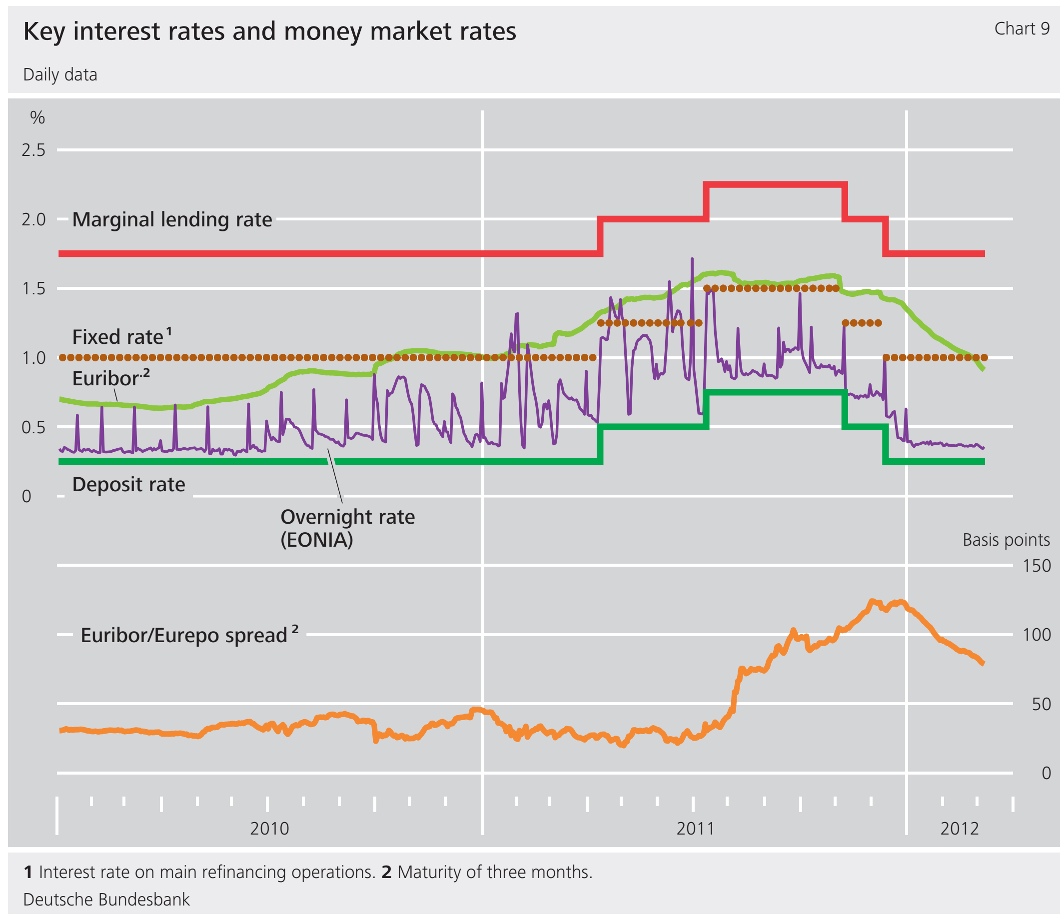
The ups and downs of macroeconomic developments were also reflected in the Governing Council's interest rate policy. Given the cyclical recovery and the continued increase in commodity prices, it raised the Eurosystem policy rate in two stages in April and July by a total of 50 bp in order to counteract potential inflation risks. However, the escalation of the sovereign debt crisis and the resulting financial market tensions, along with a subdued outlook for

Course of the crisis reflected in interest rate policy

Key interest rates and money market rates

Daily data

Chart 9

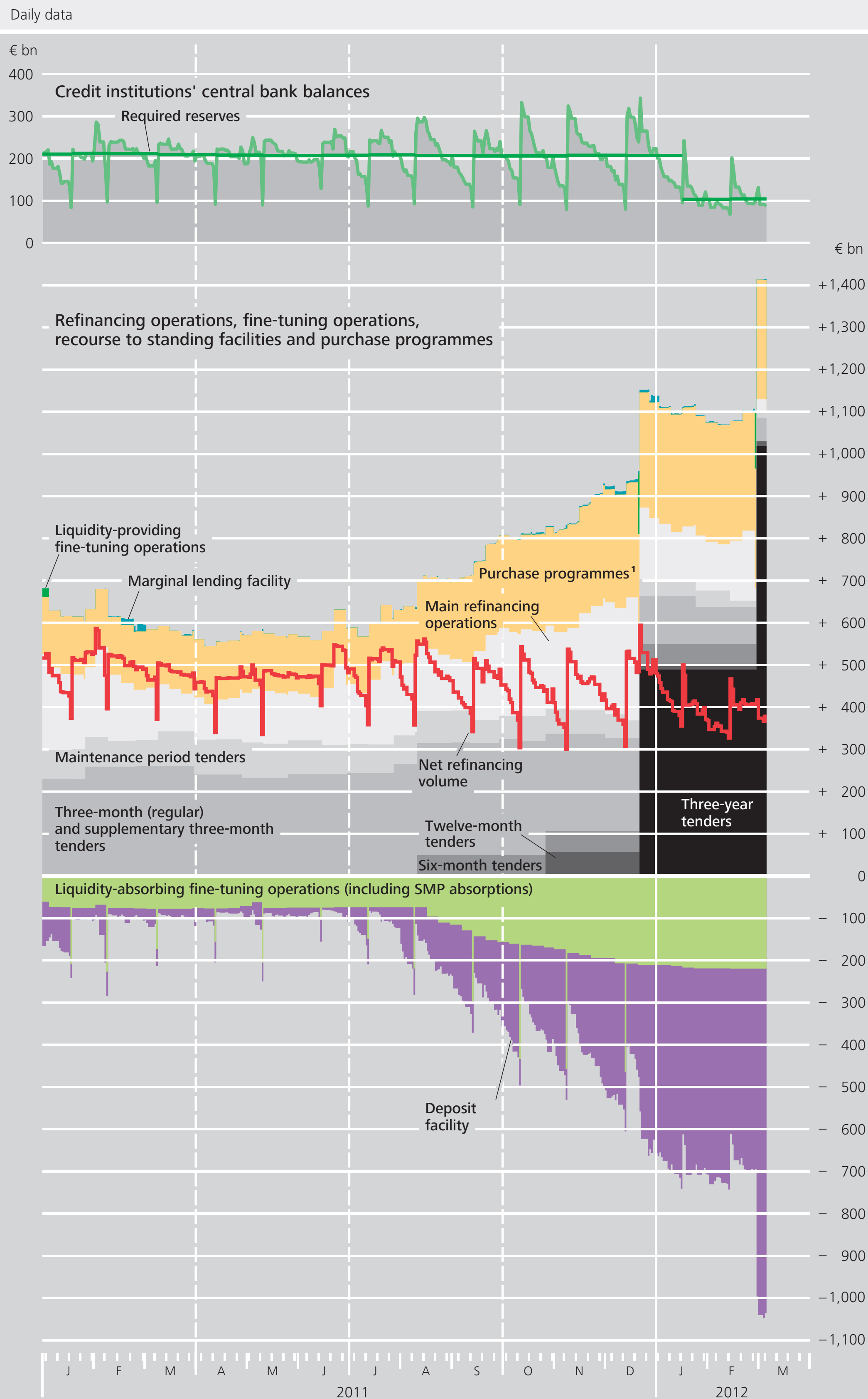


1 Interest rate on main refinancing operations. **2** Maturity of three months.
Deutsche Bundesbank

Liquidity management of the Eurosystem

Daily data

Chart 10



1 Securities Markets Programme (SMP), Covered Bond Purchase Programme (CBPP), Second Covered Bond Purchase Programme (CBPP2).

Deutsche Bundesbank

Money market management and liquidity needs

In 2011, the Eurosystem continued to provide banks with a generous supply of liquidity. The fixed rate and full allotment policy, which has now been in place for over three years, enabled the Eurosystem to fully meet banks' demand for liquidity. The provision of central bank liquidity increased significantly during the second half of the year as the sovereign debt crisis widened, almost doubling by the end of the year. The Eurosystem expanded its refinancing measures through six-month tenders, 12-month tenders and, for the first time, a 36-month tender. As a result, the percentage of longer-term refinancing operations rose from 55% at the beginning of the year to 82% at the end of the year. A small amount of additional liquidity was injected through the Second Covered Bond Purchase Programme (CBPP2), which was launched in November 2011. Long-term liquidity had previously been provided through the first CBPP (mid-2009 to mid-2010). The significant increase in the supply of liquidity though the Securities Markets Programme (SMP), which has been running since May 2010, was accompanied by a similarly large increase in absorption measures. Segmentation on the money market became more entrenched. Overall, the supply of liquidity enabled all credit institutions in the euro area to meet their minimum reserve requirements smoothly and led to a much greater use of the deposit facility.

Lower demand for liquidity in first half of year

Refinancing operations in the first few months of the year saw waning demand for central bank liquidity, which reached an annual low of around €400 billion in April. The banks were thereby also reacting to the reduced need for liquidity related to the autonomous factors and the reserve requirement. The Eurosystem's activity on the debt markets (under the SMP) was restrained; only a few purchases were made from February to March 2011 and none at all from the end of March to the beginning of August 2011. Excess liquidity (according to the benchmark calculation) reached its lowest level in the reporting year in the April-May 2011 reserve maintenance period. Recourse to the deposit facility averaged €23 billion, as against around €100 billion at the start of the year. This led to a more stable EONIA, which stood at 1.12% on average and was therefore closer to the main refinancing rate of 1.25%; the same was true of the collateralised average overnight rate on GC Pooling (ECB Basket). During this period, the number of bidders per main refinancing operation (MRO) declined (from, for example, 260 bidders on average in February to an average of 185 bidders in April).

Rising demand for liquidity due to spreading sovereign debt crisis

In the second half of the reporting year, the provision of liquidity increased hugely, almost completely decoupling from the development of the autonomous factors. Mid-August 2011 can be viewed as the turning point, when an additional six-month tender was conducted for the banks. In addition, SMP purchases were expanded considerably because tensions on the markets for Spanish and Italian government bonds in particular, preceded by a discussion in July-August 2011 about private creditors taking voluntary haircuts on Greek debt, had increased significantly. From mid-September to mid-October, there was a clear rise in demand in MROs. However, the additional demand was focused on specific countries and banks, leading to increased money market segmentation. The deposit facility, used mainly by banks from another group of countries, increased from an average of €57 billion in the July-August 2011 maintenance period to €254 billion in the November-December 2011 maintenance period. Because some banks applied, at times, heavy front-loading in order to fulfil their reserve requirements, recourse to the deposit facility increased steadily over the respective reserve

maintenance periods. Despite this, from mid-September, elevated use was made of the Eurosystem's marginal lending facility on a daily basis, which had a liquidity-providing effect. The average usage in the second half of 2011 was €2.3 billion, compared to an average of €1.4 billion in the first half of the year. The at times considerable amounts drawn mainly reflected uncertainty about developments in the collateral value of the eligible collateral used in the period between two MROs in the case of institutions with less collateral available overall.

Towards the end of the year, there was an exceptional increase in bank funding by the Eurosystem. At €489 billion, bids for the three-year tender, an operation with a longer-than-usual money market maturity, which was concluded for the first time in December, were even higher than for the first one-year tender at the end of June 2009. The three-year tender also had a significant impact on excess liquidity (according to the benchmark calculation), which increased by €277 billion (from €295 billion to €572 billion) compared with +€214 billion (from €16 billion to €230 billion) during the first one-year tender. This exceptional demand reflected greater uncertainty among banks. After allotment, 81% of central bank liquidity originated from longer-term operations, with the three-year tender accounting for 56% of the total refinancing volume. The growing role of the Eurosystem as an intermediary led to falling rates on the unsecured overnight market. EONIA turnover fell from an already low average of €37 billion in the first half of 2011 to €30 billion in the second half. By contrast, secured overnight turnover (ECB Basket) on the Euro GC Pooling electronic trading platform rose from €11 billion to €14 billion on average.

Short and longer-term money market rates

The considerable build-up of excess liquidity linked to the allotment of the first three-year tender caused the EONIA to fall to 0.40%, thus approaching the deposit facility rate. Overall, the spread between the EONIA and the key interest rate widened from an average of -25 bp in the first half of the year to -51 bp in the second half. Fluctuations became significantly less pronounced in the second half of the year; volatility, measured as the standard deviation of the spread between the EONIA and the main refinancing rate, fell from 25 bp to 15 bp. The volatility of GC Pooling collateralised overnight rates (ECB Basket) also subsided (from 29 bp to 15 bp). At the same time, however, the interest rate cuts in November and December and the considerable increase in liquidity also caused the longer-term euro money market rates to fall from their peaks – the three-month Euribor dropped 11 bp from its peak to 1.36% at the end of the year, for example, although it still remained well above its rate of 1.00% at the beginning of the year. During the year, the Euribor/Eurepo spread for three-month money widened significantly from 41 bp to 96 bp. Overall, this shows a further increase in money market segmentation between banks that were able to borrow overnight money at rates below the EONIA and those that had to borrow at significantly higher rates or were heavily dependent on liquidity provided by the Eurosystem.

Development of the factors determining bank liquidity

During crisis-plagued 2011, credit institutions' regular liquidity needs averaged €469.7 billion overall. This included the minimum reserve requirement of €208.3 billion (€211.9 billion in 2010) and the autonomous factors of €261.4 billion (€348.0 billion in 2010). The decrease in general government deposits, especially in Italy, was one factor that contributed to the significant €86.6 billion reduction in liquidity requirements related to the autonomous factors. The resultant need for liquidity fell by a sizeable €37.6 billion (see table on next page). The changes in net foreign assets and in the other factors injected an additional €87.7 billion (net) into the market. In addition to the, in some cases, slight step-up of reserves by a few national central banks, contributory fac-

Factors determining bank liquidity in the euro area

Year-on-year changes in annual average values, in € billion

Item	2010	2011
I Provision (+) or absorption (–) of central bank balances owing to changes in autonomous factors		
Banknotes in circulation (increase: –)	– 43.9	– 38.7
Government deposits with the Eurosystem (increase: –)	+ 25.9	+ 37.6
Net foreign assets [1]	+ 19.9	+ 75.9
Other factors [1]	+ 30.0	+ 11.8
Total	+ 32.0	+ 86.6
II Monetary policy operations of the Eurosystem		
Open market operations		
Main refinancing operations	– 20.2	+ 27.6
Longer-term refinancing operations	– 29.8	– 171.1
Other operations	+ 51.8	+ 9.3
Standing facilities		
Marginal lending facility	– 0.2	+ 1.2
Deposit facility (increase: –)	– 36.5	+ 43.8
Total	– 35.0	– 89.1
III Change in credit institutions' credit balances (I+II)	– 3.1	– 2.5
IV Change in the minimum reserve requirement (increase: –)	+ 4.3	+ 3.6

1 Including liquidity-neutral valuation adjustments at the end of the quarter.

tors included individual emergency liquidity assistance measures and individual national central banks increasing their non-monetary-policy holdings of euro-denominated securities by around €20 billion. By contrast, the €38.7 billion increase in banknotes in circulation absorbed liquidity. This, in turn, caused the demand for cash to continue its remarkable increase, especially in the second half of the year in the wake of the spreading sovereign debt crisis. On 23 December 2011, the volume of banknotes in circulation reached €890.9 billion, its peak level since the introduction of the euro. At a rate of around 5%, the average growth of banknotes in circulation in 2011 was only slightly lower than one year earlier (6%).

Against the backdrop of an overall reduction in the autonomous factors, main and longer-term refinancing operations decreased by €143.5 billion on an annual average (2010: -€50 billion), whereas the other operations (fine-tuning operations including liquidity-absorbing tenders under the SMP and CBPPs) increased by €9.3 billion on balance. Recourse to the deposit facility, which was concentrated in the second half of the year, decreased by an annual average of €43.8 billion to €102.0 billion. Average use of the marginal lending facility rose by €1.2 billion to €1.9 billion.

On an annual average of 2011, credit institutions' central bank balances were down €2.5 billion on the year, roughly equivalent to the decrease in the minimum reserve requirement. Given the weak monetary growth, the reserve requirement decreased by 1.7%, compared with a 2.0% decrease in 2010.

All in all, the Eurosystem's money market management in 2011 once again proved reliable in implementing the ECB Governing Council's monetary policy stance in an eventful environment. The integration of Estonia into the euro area went smoothly with regard to liquidity management.

Refinancing and eligible assets

There were signs of stabilisation in the financial markets in the first half of the year. The Governing Council of the ECB responded to this by limiting its full allotment commitment for open market operations, which were still being carried out as fixed-rate tender operations, to one quarter at a time.

As a result of the developments on the government bond markets in the peripheral countries, which were increasingly threatening to spill over to the core countries of the euro area, the Governing Council of the ECB saw itself compelled to expand its non-standard measures once again in the second half of the year. Besides the guaranteed full allotment until January 2012, a longer-term operation with a maturity of six months was initially carried out in August. In October, the Eurosystem offered two additional refinancing operations at maturities of 12 and 13 months respectively. In December, the ECB Governing Council decided to calm the markets by offering, *inter alia*, two operations with a maturity of three years as well as the option of early repayment for these particular operations.

Furthermore, the Governing Council announced the active implementation of the existing Securities Markets Programme (SMP) with the aim of restoring better transmission of monetary policy decisions. In addition, a new programme for the purchase of covered bonds (CBPP2) with a target value of €40 billion was initiated in October.

In order to sterilise the SMP purchases, weekly liquidity-absorbing fine-tuning operations were also carried out last year. In three cases, the volume of fixed-term deposits in the form of a variable-rate tender was underbid. Additionally, a fine-tuning operation was launched on the last day of each reserve maintenance period in order to neutralise the cumulated liquidity imbalances on these days.

With tensions not only being felt in the euro money markets but also increasingly placing a strain in the second half of the year on the refinancing of European institutions in US dollars, the USD swap agreement between the ECB and the Federal Reserve was prolonged until the beginning of 2013. Alongside the one-week US dollar operations, liquidity-providing operations in US dollars with a maturity of three months at more attractive lending rates were carried out in the fourth quarter. Moreover, the ECB established mutual swap agreements with the central banks of Canada, Japan, the United Kingdom and Switzerland, which enabled the participating central banks to provide liquidity in the relevant currencies, too, if needed.

In the Eurosystem as a whole, an average of 192 institutions, of which 69 submitted bids via the Bundesbank, took part in the MROs in 2011. Up to the beginning of June 2011, allotment volumes decreased to an average of around €129 billion. In the second half of the year, however, the volume rose again to around €178 billion on average. Participation in the regular longer-term operations with a maturity of three months was very volatile; allotment volumes stood between roughly €30 billion and €141 billion. The allotment volume of the two additional longer-term refinancing operations of six and 12 months offered in the second half of the year amounted to approximately €50 billion and €57 billion respectively. Through-

out the Eurosystem, as at 22 December 2011, about €210 billion of the outstanding open market credit volume was shifted into the former of the two three-year maturity operations with the option of early termination, to which a total of €489 billion was allocated.

At the end of the year, the total outstanding volume of open market credit in the Eurosystem amounted to around €849 billion and was thus considerably up on the previous year's volume of €547 billion. At around €56 billion, the German share amounts to approximately 6.6%.

After recourse to the marginal lending facility in the Eurosystem had averaged €0.6 billion in 2010, €1.9 billion was provided on average in 2011. Use of the deposit facility showed a large difference between the first and second half of the year. Whereas the use of the facility up to mid-year was only €30 billion on average, recourse in the second half of the year increased to €173 billion (2010 average: €146 billion).

The total value of collateral submitted to the Bundesbank was down slightly on the year from €648 billion to €630 billion (end-of-year levels at market values). Of this, €214 billion was held in custody in other member states and was therefore used on a cross-border basis.

The relatively stable overall value of collateral submitted is due mainly to fixed-term deposits being accepted as eligible assets. At the end of 2011, the Bundesbank's counterparties held fixed-term deposits to the amount of €86 billion. However, the amount of other eligible assets submitted was down to €544 billion. Both developments reflect a reduced need for refinancing among German institutions. The agreement reached by the Governing Council of the ECB on 8 December 2011 concerning the temporary lowering of the minimum ratings requirements for certain ABS which fulfil additional standards did not have any effects on the use of collateral in 2011. Until further notice, the Bundesbank will refrain from the option of introducing specific eligibility criteria for credit claims that was agreed at the same ECB Governing Council meeting. Nevertheless, the composition of eligible assets submitted at the Bundesbank changed considerably over the course of the year.

At the end of 2011, marketable securities accounted for 73% of submitted eligible assets. The shares of uncovered bank bonds and government bonds were down to 22% and 16% respectively (2010: 29% and 27%). At 18% and 7%, the shares of Pfandbriefe and ABS remained largely constant. The share of other marketable assets went up slightly to 10% (2010: 7%). Credit claims and fixed-term deposits accounted for 13% and 14% of the total value of collateral respectively.

prices, prompted the Governing Council to fully reverse the interest rate hikes in two stages, beginning in November. As a result, the policy rate returned to its all-time low of 1% at the end of the year. Balances held in the Eurosystem's deposit facility have been remunerated at ¼% since 14 December, while the interest rate on the marginal lending facility has been 1¾%.

Rise in money market risk measure from mid-year on

The course of the crisis and the Governing Council's interest rate decisions were also reflected in the euro money market rates. The upward revision of interest rate expectations in the first half of the year initially entrenched and reinforced the upward movement in secured and unsecured money market rates that had begun in 2010. The calming of the situation in the money market led to a narrowing of the yield differentials between unsecured and secured money market rates (depo-repo spreads) across all maturities. This positive development came to an end from mid-June, however. In the second half of the year, banks' growing uncertainty about the soundness of their counterparties led to a further sharp increase in depo-repo spreads, which became entrenched at a high level through to the end of the year. In early July, the spread for three-month maturities was still roughly 25 basis points, and thus close to its lowest level since the financial market crisis began in August 2007, but it increased again to around 120 basis points as the financial market setting deteriorated towards the end of 2011.

Introduction of further non-standard measures in 2011 H2

The course of the crisis also strongly influenced the deployment of non-standard measures. The Governing Council did not see the easing of the situation in the first half of the year as sufficient to begin phasing out the existing non-standard monetary policy measures. Nevertheless, no further measures were taken and purchases carried out under the Securities Markets Programme were also almost entirely dispensed with in the first half of 2011. This changed with the spreading and escalation of the sovereign debt crisis in the summer months. In early August, the Governing Council responded to the renewed tensions in the money market by deciding to conduct a supplementary longer-term refinancing operation (LTRO) to provide liquidity again for approximately six months. Moreover, it reactivated the Securities Markets Programme and extended the purchases to other euro-area member states. The substantial expansion of purchases led to an almost threefold increase in the overall volume of the programme.

Furthermore, the Governing Council decided in October to conduct two 12-month operations and introduce a Second Covered Bond Purchase Programme (CBPP2). In December, the ongoing crisis and the banks' major difficulties in obtaining wholesale market funding finally prompted the Governing Council, for the first time, to provide central bank liquidity in the form of two operations with a maturity of three years, to be remunerated at the average rate over the life of the operation. Additionally, it decided to lower the reserve ratio to 1% with effect from 18 January 2012.

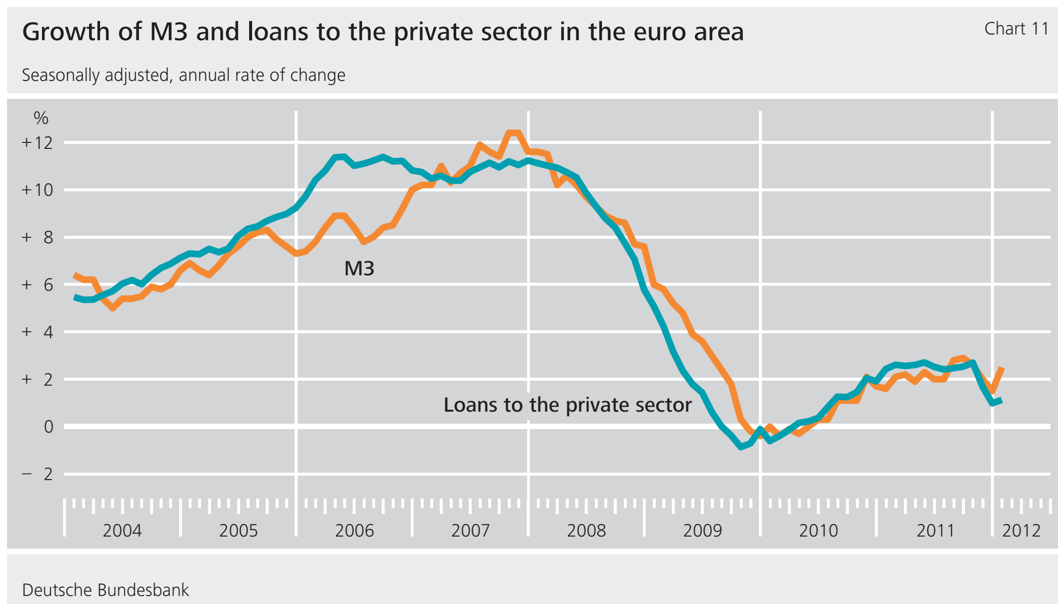
3 Contrasting monetary developments during 2011

Monetary growth slower in H2

The recovery in the broad monetary aggregate M3 that had begun in spring 2010 continued overall in 2011. However, from mid-year onwards, developments in the components and counterparts of M3 were strongly affected by the resurging tensions in the financial markets, which led to substantial fluctuations in the monthly M3 growth rates. While monetary growth had accelerated in the third quarter as a result of uncertainty-related inflows, there was a sharp fall in M3 in the last few months of the year, encompassing all of its components. On balance, the 12-month rate of M3 in December 2011 (1.5%) was very close to the level recorded a year earlier (1.7%), after having peaked at 2.9% in September 2011.

Portfolio shifts from mid-year onwards

The continuing recovery of M3 in the first half of 2011 was aided by shifts in the yield curve, which encouraged growth in short-term time



and savings deposits (M2-M1). By contrast, heightened uncertainty on the financial markets determined monetary developments in the second half of the year. In the summer months, the growing tensions in the financial markets initially increased demand for highly liquid and secure bank deposits (M1) and triggered a reallocation of funds to marketable instruments (M3-M2). Secured money market transactions cleared via central counterparties (repos) were the main reason for the sharp rise in this subaggregate. However, the large inflows to repo transactions were short-lived; they were offset by outflows from October onwards. The steep decline in the final quarter of 2011 in repos and the secured money market transactions they entail can probably be attributed to the Eurosystem's longer-term refinancing operations towards the end of the year, which provided ample liquidity. There were thus net outflows from this M3 component throughout 2011. By contrast, short-term bank debt securities (with a maturity of up to two years), which are also contained in (M3-M2), rose appreciably over the course of 2011, while outflows from money market funds ground to a halt as the year progressed. As the monetary subcomponents contained in (M3-M2) declined only slightly overall during 2011, the growth rate for this component of M3 rose from -2.2% in 2010 to -0.5% in the reporting year.

Portfolio shifts into short-term deposits

The 12-month rate of the narrow monetary aggregate M1 fell perceptibly on balance to 1.6% in 2011, compared with 4.3% in 2010. The decline in the annual growth rate of M1, which lasted until July, was mainly due to much weaker inflows to overnight deposits, especially from non-financial corporations and households. This was probably the result of rising interest rates on other short-term deposits (M2-M1) in the reporting year, while interest rates on overnight deposits remained largely stable. From August on, however, the interest-related shifts between M1 and (M2-M1) were increasingly outweighed by the effects of portfolio shifts, in which institutional investors in particular moved their funds from riskier assets to especially liquid forms of investment, such as overnight deposits. In addition, towards the end of the year both overnight deposits and short-term time deposits suffered perceptible outflows as a result of renewed portfolio shifts back into non-monetary assets and sharper deleveraging by businesses and households. Nonetheless, the short-term time and savings deposits contained in (M2-M1) grew in net terms, and their 12-month rate rose from -0.4% in December 2010 to 1.9% in December 2011.

Total lending subdued

Of the counterparts of M3, total lending to non-banks in the euro area was very subdued in the reporting year, with an annual growth

rate of 1.0% (compared with an appreciable rise of 3.5% in 2010). This was due, firstly, to the fact that credit to general government decreased in the first half of the year; its 12-month rate fell from 12.1% in 2010 to 3.5% at last report, largely because of the extremely sharp decline in loans to sovereign debtors.

Weak growth in loans to the private sector over the course of 2011

Secondly, developments in lending to the domestic private sector in 2011 were also markedly weaker than in 2010, partly as a result of the perceptible decline in securitised lending (including shares). Moreover, loans to the domestic private sector – still the most important source of money creation in the euro area – recorded only slight annual growth of 1.0%, compared with 1.9% at the end of 2010; the noticeable expansion in the period up to October was partly offset by sharp declines, especially in December. Up to October 2011, non-financial corporations in particular increased their borrowing from euro-area banks. One striking development in the reporting year was that lending to non-financial corporations was not just focused on long-term loans, as usual in recent years, but also increasingly involved the shorter-term segment. This was probably partly because many corporations went back to using more bank loans to finance their working capital as the economic slowdown in some euro-area countries reduced their income. However, the generally positive development in loans to non-financial corporations over 2011 was marred by a decrease in lending at the end of the year, which again mainly affected loans with short maturities. Nonetheless, the steep decline in December was probably at least partly brought about by increased redemptions by enterprises towards the end of the year. Having stagnated in the previous year, loans to non-financial corporations saw their 12-month rate rise to 1.1% overall during 2011. By contrast, growth in loans to households lost pace in the reporting year, decreasing from 2.9% at the end of December 2010 to 1.5% in December 2011. There was further growth in loans for house purchase, a major component of household borrowing, although this expansion decelerated considerably over the course of the year. Consumer credit and other loans to households fell in net terms, however.

Monetary developments in the euro area — Table 3

Changes in the course of the year[1]

Item	2010	2011
	as a percentage	
I Growth of the monetary aggregates		
M1[2]	4.3	1.6
M2[3]	2.2	1.8
M3[4]	1.7	1.5
	€ billion	
II Money stock and its counterparts		
M3 (=1+2–3–4–5)	157.2	143.4
Currency in circulation and overnight deposits	194.7	76.2
Other short-term deposits	– 12.8	72
Marketable instruments	– 24.7	– 4.8
Balance sheet counterparts		
1 Total credit to non-MFIs in the euro area	564.5	162.9
Credit to general government	355.2	105.4
Credit to private-sector non-MFIs in the euro area	209.3	57.4
2 Net claims on non-euro-area residents	– 84.9	162
3 Central government deposits	14.5	– 2.1
4 Longer-term financial liabilities to other non-MFIs in the euro area	252.4	219.7
5 Other counterparts of M3[5]	55.5	36.1

1 Seasonally adjusted. 2 Currency in circulation and overnight deposits held by euro-area residents with MFIs in the euro area. 3 M1 plus other short-term deposits held by euro-area residents with MFIs in the euro area (deposits with an agreed maturity of up to two years and deposits redeemable at up to three months' notice). 4 M2 plus marketable instruments held by euro-area residents (repurchase agreements concluded by MFIs with non-MFIs in the euro area, money market fund shares/units and debt securities issued with a maturity of up to two years by MFIs in the euro area). 5 Calculated as a residual.
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Loans to other financial intermediaries declined in 2011, posting an annual growth rate of -2.0%. Nonetheless, the majority of these loans were ultimately offsetting positions to the secured interbank transactions contained in (M3-M2) (reverse repos), which have been highly volatile in recent years in particular, and have no direct impact on lending to the private non-bank sector.

TARGET2 balances in the Eurosystem

The TARGET2 balances that have arisen at some Eurosystem national central banks (NCBs) since the onset of the financial crisis have sparked a broad public debate. The discussion has mainly focused on the causes of these balances and the risks associated with them.

TARGET2 is a payment system that enables the speedy and final settlement of national and cross-border payments in central bank money.[1] An average of around 350,000 payments with a value of just under €2½ trillion are processed using TARGET2 each working day,[2] a figure which is broadly equivalent to the size of Germany's GDP. These payment transactions can take a wide variety of forms, such as payment for a goods delivery, the purchase or sale of a security, the granting or repayment of a loan or the depositing of funds at a bank, among many others. Whenever the banks of a given country are net recipients of central bank money, the national central bank (NCB) in question records a positive TARGET2 balance, as is the case with the Bundesbank. This represents a claim not on another NCB but rather on the European Central Bank (ECB), which acts as a clearing house that settles transactions among NCBs.

Commencing in 2007, larger positive and negative TARGET2 balances have accumulated within the Eurosystem as a result of the financial crisis. Since then, the redistribution of liquidity among credit institutions via the money market has ceased to operate normally owing to mutual mistrust among banks. Another factor is that wholesale funding on the financial markets has become harder and dearer for the banks. Some institutions have effectively been cut off from the market and so are reliant on liquidity assistance from central banks. Ultimately, the TARGET2 surpluses and deficits result from disequilibria in the balance of payments of several euro-area countries. This may entail current account deficits or capital exports by the private sector, which are then reflected in liquidity outflows from these countries.

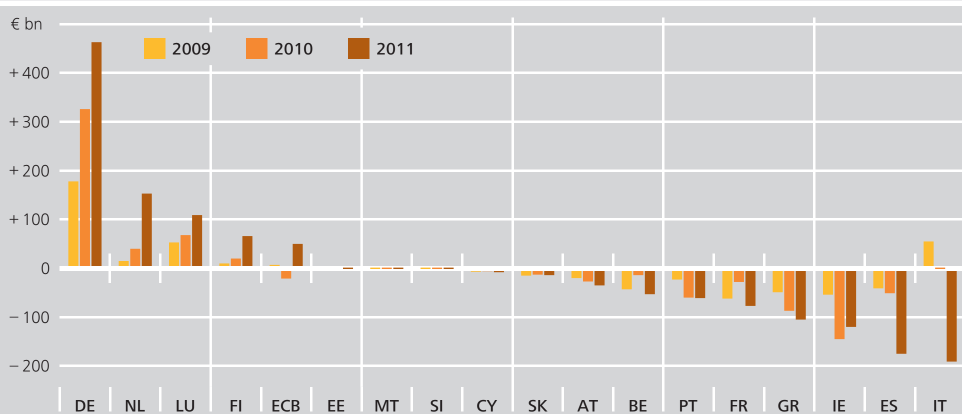
The chart on page 49 gives an overview of the level of TARGET2 claims and liabilities at the end of 2009, 2010 and 2011. Alongside Germany (€463 billion on 31 December 2011), the Netherlands, Luxembourg and Finland all showed net claims in the most recent balance sheet. These claims increased strongly in the course of 2011, particularly in the second half of the year as the financial and sovereign debt crisis grew more acute. Concurrently, Spain and Italy amassed sizeable liabilities, while the deficit recorded by the Irish central bank, for example, declined.[3] Viewed in relation to GDP,[4] Luxembourg (around 260%), Finland (35%) and the Netherlands (25%) posted the largest positive balances, ahead of Germany at 18%. The largest negative balances were recorded by Ireland (77%), Greece (48%) and Cyprus (45%).

Banking systems that receive inflows of central bank money through TARGET2 have a lesser need to seek funding from their domestic central bank. Institutions in Germany have therefore steadily reduced the volume of their refinancing from the Bundesbank

1 The ECB publishes detailed information on TARGET2 every year in its TARGET Annual Report, the most recent of which can be downloaded from http://www.ecb.int/pub/pdf/other/targetar2010en.pdf.
2 TARGET2 stands for Trans European Automated Real-time Gross Settlement Express Transfer System. See also the chapter "Cashless payments and securities settlement" in this Annual Report on pp 105-110.
3 The positive balance posted by the ECB at the end of 2011 is largely attributable to claims on the NCBs arising from tender operations denominated in US dollars.
4 Source: European Commission.

TARGET2 balances in the Eurosystem

Year-end data



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and now actually have a large credit balance on their Bundesbank account. Consequently, they are parking excess inflows of central bank money in the Eurosystem's deposit facility or are investing them in Eurosystem liquidity-absorbing operations. This has the effect of extending the Bundesbank's balance sheet. A sale of assets, for example of reserve assets, is not necessary to compensate for the influx of central bank money. Nevertheless, a dysfunctional interbank market featuring institutions that are heavily dependent on central bank financing is not a desirable situation.

TARGET2 cannot be used to create liquidity. Instead, the sole purpose of TARGET2 is to transfer liquidity (ie central bank money) that is already at the disposal of the participating banks. Providing liquidity is one of the key tasks of any central bank. The exact manner in which this is achieved in the euro area is decided by the Governing Council of the ECB as part of its monetary policy mandate. Banks are primarily provided with central bank money through refinancing operations, but also *inter alia* by national central banks acquiring securities portfolios and conducting operations on their own responsibility.

With regard to the risks attached to the Eurosystem's business activities, the debate surrounding TARGET2 balances is in danger of diverting attention from the real challenges. No steps to directly limit TARGET2 balances are envisaged at present. Moreover, any measures that tend to promote a segmentation of the money market or restrict the free movement of capital run counter to the principles upon which monetary union and the single European market rest.

Risks emanate from the operations through which central bank liquidity is created. In order to participate in Eurosystem refinancing operations, the counterparty has to be both solvent and able to post adequate collateral. Losses may potentially arise if the counterparty defaults and the collateral provided by the latter concurrently proves insufficient upon realisation. These losses are customarily borne jointly, dependent on a decision of the ECB Governing Council, by the partner central banks in line with their capital share in the ECB. Such risk-sharing is explicitly ruled out in the case of certain kinds of transactions. These include, for example, the provision of emergency liquidity assistance (ELA). A new provision was introduced by the Governing Council in Decem-

ber 2011 allowing national central banks to accept credit claims as collateral under certain conditions. In this case, too, risk-sharing is ruled out and any potential losses are to be borne solely by the respective national central bank.

The Eurosystem's exposure to risk increased significantly during the financial crisis following its assumption of more and more banking intermediation functions and, in particular, the decision to dilute the collateral standards for monetary policy operations, the build-up of securities portfolios for monetary policy reasons and the granting of ELA by individual countries. Ultimately, monetary policymakers always have to tread a careful path between taking crisis-related measures and seeking to mitigate the risks for central banks. It is not the task of an independent monetary policy to redistribute the solvency risks of banking systems, or indeed of sovereigns, among taxpayers across the euro area. Such risk-taking and decisions pertaining to risk redistribution fall within the remit of fiscal policymakers.

The financial risks that have arisen from the expanded refinancing operations and the purchase of covered bonds and, more especially, of government bonds are also mirrored in the Bundesbank's higher risk provisioning. Furthermore, the Eurosystem's short-term non-standard liquidity policy measures to contain the acute consequences of the financial crisis should not delay, let alone substitute, the necessary adjustment processes in individual countries. Any extraordinary crisis measures initiated by the central banks should therefore be kept within narrow bounds and reversed as soon as possible. This applies irrespectively of the growth of TARGET2 balances.

One hypothetical case under public debate in which parts of the negative TARGET2 balances might be transformed into actual balance sheet risks could occur if a member state were to exit monetary union. Such a case is unlikely and not provided for in the terms of the Treaty on the Functioning of the European Union. However, should a country with TARGET2 liabilities opt to leave the euro area, any claims the ECB might have on the national central bank of that country would initially persist in the same amount. If the exiting central bank proved unable to repay its liabilities despite loss-offsetting within the Eurosystem and the collateral available, it would be necessary to devise a solution for the outstanding amount. Only if and when a residual claim were deemed unrecoverable would the ECB actually recognise a loss by virtue of writing it off as a bad debt. Compensation for any losses incurred by the ECB would be decided by the NCBs in their capacity as shareholders on the ECB Governing Council, based on a capital majority. Any participation in the ECB's loss would have the effect of reducing the profits of the NCBs and, for example in the case of Germany, reduce the Bundesbank's TARGET2 claims on the ECB. In reality, the Bundesbank expects monetary union to persist in its present form.

The tensions in the financial markets will abate once confidence in the euro-area banking sector as a whole and in individual banks has been restored and those banks that are currently experiencing major liquidity problems have been restructured or disappear from the market. The recapitalisation of solvent banks, if necessary through government assistance, and the winding-up of non-viable institutions are key prerequisites for this. In addition, countries that have forfeited the confidence of the capital markets need to remedy their structural shortcomings and boost their competitiveness with the ultimate aim of improving their public finances and their current account situation and hence of being able to attract private capital once again.

Significant boost to monetary growth from cross-border payment transactions

Cross-border payment transactions significantly boosted monetary growth in 2011. Euro-area banks' net external position vis-à-vis non-euro-area residents increased by €162 billion net over the course of 2011, following a decline of €85 billion in 2010. This figure combines strong inflows to net external assets in the first half of 2011 and sizeable outflows in the last few months of the year. The rise in the banking sector's net external position seen in the first part of the year was chiefly due to strong inflows of capital to the euro area as a result of non-resident investors acquiring large amounts of securities issued by euro-area banks and non-banks. This development was also partly reflected in a marked increase in shorter-term bank deposits held by the euro-area non-bank sector (part of M3) and a perceptible decline in securitised lending to the euro-area private sector. The ensuing fall in net external assets reflects the fact that euro-area banks repatriated funds from abroad in the second half of the year and that non-residents withdrew funds which they had previously provided to resident banks.

Slight decrease in monetary capital formation

For the other counterparts of M3, year-on-year growth in longer-term financial liabilities decelerated slightly over the course of 2011, which, in itself, contributed to the positive monetary dynamics. The waning growth in monetary capital formation is mainly explained by the perceptibly weaker inflows to longer-term time deposits, for which the annual rate of growth declined from 4.7% in 2010 to 2.5% in the reporting year. In addition, sales of long-term bank debt securities were also significantly down on the year in net terms. There were strong outflows, particularly towards the end of the year. This was probably because market issues became less attractive as a result of the heightened tensions in the euro-area government bond markets. By contrast, there were substantial inflows to capital and reserves (as another component of monetary capital formation), which may have been connected with the stricter capital requirements (Basel III) applicable to the banking sector.

Underlying monetary dynamics do not signal risks to price stability

Considered as a whole, the underlying monetary dynamics – ie those components of monetary growth that are ultimately relevant to inflation – accelerated somewhat in the first nine months of 2011 but were muted from October onwards. From a monetary perspective, this means that there are no pronounced risks to price stability in the euro area over the medium term.

III Economic trends in Germany

1 Strong economic upswing

Underlying trends

In 2011, the German economy was characterised by a broad-based upturn across the real sector, although its thrust was perceptibly blunted towards the end of the year by the faltering global economic dynamics and the escalating European sovereign debt crisis. Once again, overall economic output grew very substantially on an annual average (+3.0%), following an exceptionally strong rebound in the previous year (+3.7%). Over the course of the year, real GDP matched the peak it had reached during the preceding economic upturn and the overall output gap was closed. While foreign demand in 2011 did not maintain the vigorous growth it had achieved in 2010, domestic demand strengthened gradually, so that underlying economic activity proved remarkably resilient. There was a sharp expansion in corporate investment against the backdrop of high capacity utilisation, generally more optimistic business prospects and favourable financing conditions. Housing construction also recorded a marked increase owing to the perceptible pick-up in demand in the housing markets.

Strong impetus was also provided by household consumption. Not only did consumers appear to be largely unperturbed by the disruptive influences in the financial markets, but the propensity to purchase also benefited from the ongoing labour market recovery and the substantial growth in income. Dampening effects were generated by the strong inflationary pressure stemming from commodity price rises. Domestic price rises remained moderate, however.

Broad-based upswing

The economic upswing in 2011 was once again driven primarily by industrial activity. This also worked to the advantage of wholesale and foreign trade as well as the transport and business services sectors. The construction sector also considerably stepped up its activity in 2011. The energy sector suffered a major loss in capacity, however, which was due to the decommissioning of a number of nuclear power plants. Retail trade and the hotel and restaurant sector recorded a marked increase in turnover owing to the pick-up in consumer demand, whereas the public services sector expanded only modestly.

Strong export growth driven by global economic recovery

The growth in output in 2011 was attributable to a substantial increase in exports of goods and services by a total of 8.2%. German-manufactured products were in great demand internationally on the back of the global economic upturn, despite the fact that foreign demand receded somewhat towards the end of the year. Once again, German industry profited from its range of high-quality capital and intermediate goods as well as consumer durables. Exports of machinery and motor vehicles grew particularly strongly in price-adjusted terms. The metal and metal processing industry along with manufacturers of information and communications technology products, including electrical equipment, were also able to considerably boost their volume of exports. Supported by better price competitiveness, German exporters were able to gain market share. Sales to non-euro-area countries were the strongest driving force behind this. Exports to China and to central and eastern Europe, including Russia, continued to drive German export business. Exports to the euro area also picked up perceptibly; the percentage growth in exports to this region in 2011, which is the most important market for German exports, was, however, not even half as high (in price-adjusted terms) as growth in sales to non-euro-area markets.

Business investment driven by expansion

Business investment expanded significantly in 2011 by 7.2%. The momentum evident in the case of machinery and equipment was not quite as pronounced as in 2010. One contributory factor is likely to have been a natural counterswing to frontloading effects in connection with the expiration of the improved tax depreciation conditions at the end of 2010. By contrast, enterprises invested more in new buildings than at any other point in the last decade. In the context of rising capacity utilisation and the generally favourable business outlook, the further improvement in the earnings situation and the exceptionally advantageous financing conditions were not only used for investment in replacements, but also to an increasing extent for investment in capacity extensions.

Strong stimuli from housing construction

In 2011, growth in housing construction, at 6.3%, was almost twice as strong as in the previous year. There was a rise in households' demand for owner-occupied housing owing to the low financing costs and good income prospects. Furthermore, a large number of investors were active again in the housing market, which supported the construction of apartment blocks in sought-after locations, in particular. By contrast, there was only a slight rise in government construction investment in 2011 once the main impetus of the government stimulus package initiated during the financial crisis to modernise the infrastructure had abated.

Marked rise in private consumption

Private consumption, which had previously been marked by an underlying trend of stagnation, rose perceptibly in 2011 (+1.5%) for the first time in years. Although inflation-induced losses in purchasing power, especially in the

Key economic variables in Germany Table 4

Annual percentage change

Item	2008	2009	2010	2011
Growth (real) [1]				
Private consumption	+ 0.6	− 0.1	+ 0.6	+ 1.5
Government consumption	+ 3.1	+ 3.3	+ 1.7	+ 1.4
Machinery and equipment	+ 3.6	− 22.8	+ 10.5	+ 7.6
Premises	− 0.7	− 3.0	+ 2.2	+ 5.8
Other investment	+ 7.0	+ 0.6	+ 4.7	+ 4.8
Domestic demand	+ 1.3	− 2.6	+ 2.4	+ 2.3
Exports [2]	+ 2.7	− 13.6	+ 13.7	+ 8.2
Imports [2]	+ 3.3	− 9.2	+ 11.7	+ 7.4
Gross domestic product	+ 1.1	− 5.1	+ 3.7	+ 3.0
Contribution to GDP growth in percentage points				
Domestic demand (excluding inventories)	+ 1.2	− 1.6	+ 1.6	+ 2.2
Changes in inventories	0.0	− 0.9	+ 0.6	0.0
Net exports	0.0	− 2.6	+ 1.5	+ 0.8
Employment				
Employed [3]	+ 1.2	+ 0.0	+ 0.5	+ 1.3
Average working time per employed person	− 0.0	− 2.8	+ 1.8	+ 0.4
Total number of hours worked	+ 1.2	− 2.7	+ 2.3	+ 1.7
Unemployed (in thousands) [4]	3,258	3,415	3,238	2,976
Western Germany	2,138	2,314	2,227	2,026
Eastern Germany	1,120	1,101	1,011	950
as a percentage of the civilian labour force	7.8	8.1	7.7	7.1
Western Germany	6.4	6.9	6.6	6.0
Eastern Germany	13.1	13.0	12.0	11.3
Prices				
Consumer prices	+ 2.6	+ 0.4	+ 1.1	+ 2.3
Producer prices of industrial products [5]	+ 5.5	− 4.2	+ 1.6	+ 5.7
Construction prices [6]	+ 3.4	+ 1.2	+ 0.9	+ 2.9
Import prices	+ 4.6	− 8.6	+ 7.8	+ 8.0
Export prices	+ 1.7	− 2.2	+ 3.4	+ 3.7
Terms of trade	− 2.6	+ 6.8	− 4.0	− 4.0
GDP deflator	+ 0.8	+ 1.2	+ 0.6	+ 0.8
Productivity and labour costs				
GDP per hour worked by employed persons [1]	− 0.1	− 2.5	+ 1.4	+ 1.3
Compensation per hour worked by employees [3]	+ 2.1	+ 3.4	− 0.1	+ 2.5
Labour costs per unit of value added in real terms in the economy as a whole [7]	+ 2.3	+ 6.0	− 1.5	+ 1.2

Sources: Federal Statistical Office, Federal Employment Agency. **1** At previous year’s prices, chain-linked (2005 = 100). **2** Balance of transactions in goods and services with the rest of the world. **3** Domestic concept. **4** As defined by the Federal Employment Agency. **5** Domestic sales. **6** Calculated by the Bundesbank on the basis of Federal Statistical Office data. **7** Gross compensation generated in Germany per hour worked by employees divided by real GDP per hour worked by employed persons.

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case of energy, were having a dampening effect on household consumption *per se,* this was offset by a greater scope for expenditure brought about by the improved labour market situation and a rise in actual earnings. Household’s disposable income went up by 3.2% in the reporting year. The fact that there was only a slight deterioration in income expectations despite the unfavourable economic outlook was reflected in a persistently high propensity to purchase. This benefited, in particular, manufacturers of durable consumer goods, such as cars, furniture and furnishings. The reduction of the private savings ratio to 11.0% should also be seen as an indication that consumers might have viewed the economic dampener around the turn of 2011-12 as relatively insignificant for medium to long-term income developments.

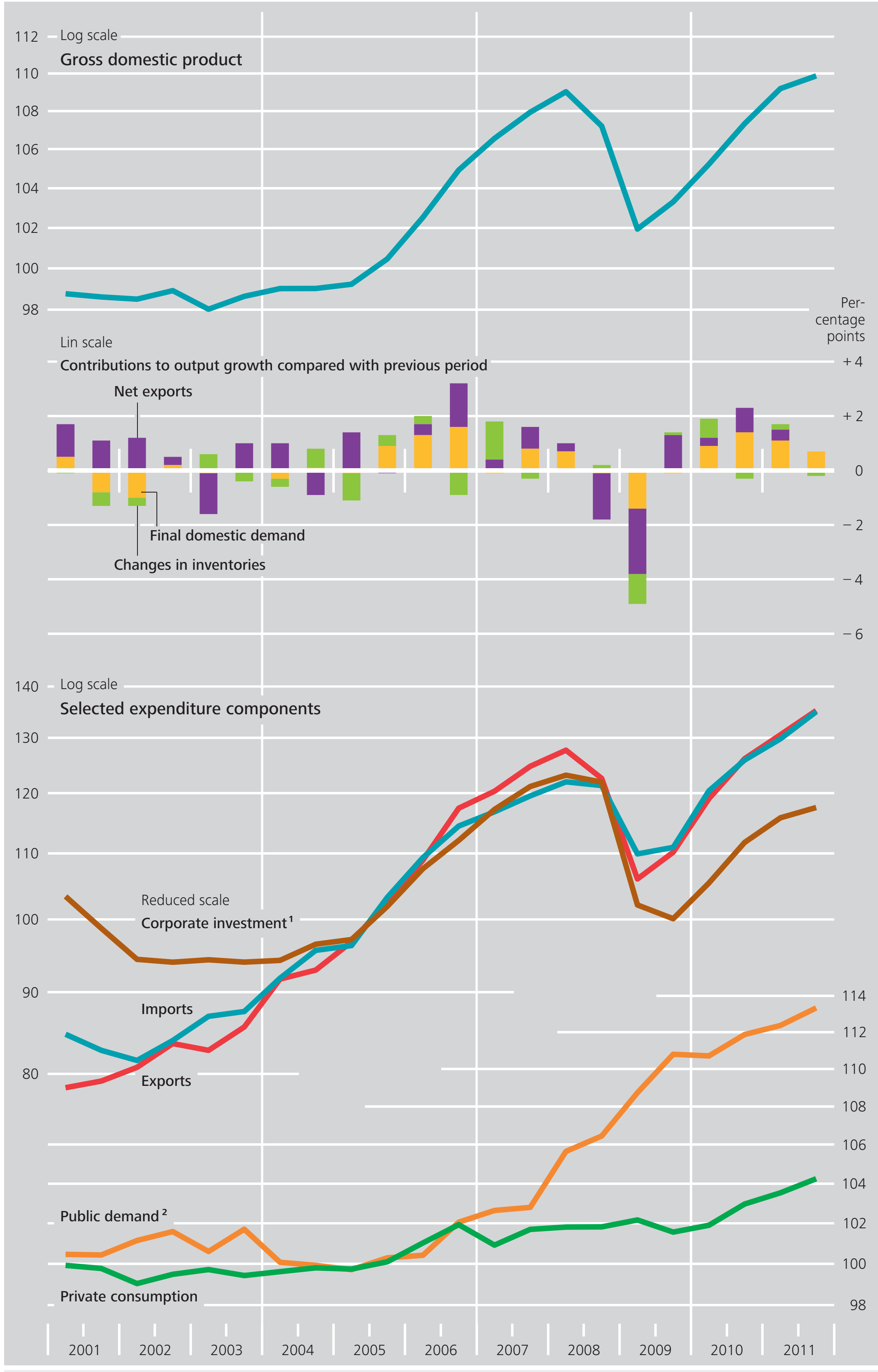
Sharp rise in imports owing to dynamic overall demand

The dynamic developments in overall demand, above all the strong growth in exports and the buoyant domestic investment activity – amplified by growing international production links – led to considerable growth in imports. The 7.4% increase in imports of goods and services was almost as pronounced as in the case of exports, with motor vehicles and machinery a top purchase priority for German importers. Imports of other capital and intermediate

Overall economic output and demand

Chart 12

2005 = 100, price and seasonally adjusted, half-yearly



1 Private investment in machinery, equipment and other plant as well as in commercial construction. 2 Government consumption and gross public investment.

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goods were also in particular demand, such as metals and metal products, computers, electronic and optical products, as well as electrical equipment manufactured abroad. Imports from euro-area countries rose even more sharply than those from non-euro-area countries in price-adjusted terms. They also grew by a much stronger margin than exports to the euro area. This underlines Germany's role as a major provider of stimulus for the euro-area economy. On balance, nominal net exports made a positive contribution to GDP in 2011. However, owing to the marked deterioration in the terms of trade, both net exports and the current account surplus in relation to GDP fell slightly to 5% and 5¾% respectively.

Sharp rise in regular employment

There was a sharp rise in employment in 2011 thanks to the strong economic growth. The number of persons in work in Germany on an annual average in 2011 went up by 547,000, or 1.3%. What is striking is that a large number of jobs subject to social security contributions were created. The number of persons employed on these "normal" work contracts in the reporting period went up by 682,000 on the year. At 2.5%, this increase was even higher than in the boom year of 2007, for example. The largest increase was recorded in manufacturing, business-related services (excluding temporary work) and in the health and social work sectors. By contrast, the similarly sharp annual average rise in the number of temporary workers is largely the statistical consequence of the level that was already reached back at the end of 2010, as almost no additional gains have been recorded in this area since the second quarter of 2011. This suggests that the build-up of a flexibility reserve, which took place primarily in the early stages of the economic recovery, is now likely to have been largely completed. The number of self-employed persons also increased sharply, while other forms of employment, such as persons working exclusively in low-paid part-time employment and especially one-euro workfare jobs, became less important. Furthermore, the working hours of employees have largely returned to normal. In addition, working time accounts were being topped up in sectors benefiting from the upturn and a greater number of overtime hours were being worked again.

Ongoing decline in unemployment

With the strong growth in employment, registered unemployment also went down to 2.98 million, or 7.1% of the labour force, thereby falling to its lowest level in 20 years. Underemployment, which includes persons taking part in labour market policy measures, declined even more sharply than registered unemployment. Cyclically induced short-time work was again perceptibly down on the year and, at the end of the period under review, was not much above its pre-crisis level. The labour market supply shortages are likely to have become more acute as, despite the thriving demand for workers, the labour supply was still lagging behind. Labour market participation rose only marginally. However, some relief was afforded by the regionally broad-based migration of workers from other European countries. Contrary to the expectations of some, the lifting of restrictions on workers from eight central and east European EU member states in May 2011 has not played a pivotal role in this context.

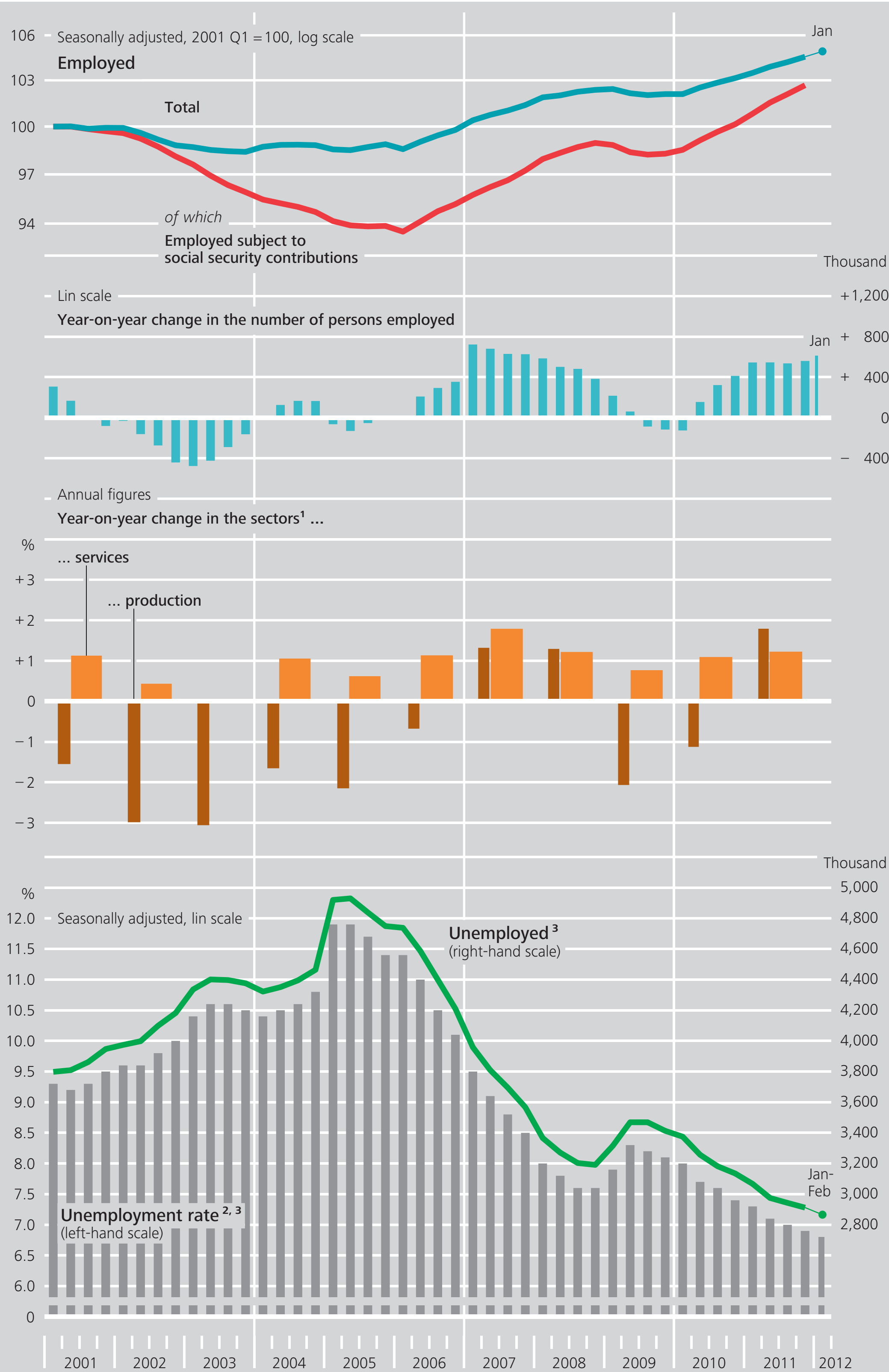
Sharp rise in actual earnings

Wage agreements in 2011 were characterised by the favourable economic situation. In most sectors, the negotiated rates were among the highest seen for many years. In economically less favoured branches of industry and the services sectors, the scheduled increases in pay rates were extended over longer periods in order to lighten the cost burden on companies. On balance, the 2011 pay round remained within the bounds of a stability-oriented framework, not least because great importance continued to be attached to sector-specific factors relating to job security. On an annual average for 2011, the rise in negotiated rates of pay, at 1.7%, was not significantly higher than in 2010, as a number of older wage agreements were still in effect. There were, however, some signs of acceleration in basic rates of pay in the course of 2011. Growth in actual earnings was much more pronounced. This was attributable

Labour market

Chart 13

Quarterly



1 Column width proportional to the percentage of all persons employed. **2** Unemployed as a percentage of the civilian labour force. **3** As defined by the Federal Employment Agency. From January 2004, unemployed excluding participants in aptitude testing and training schemes. From January 2005, including recipients of social assistance fit for work. From May 2009, excluding persons newly registered on the books of private employment agencies.

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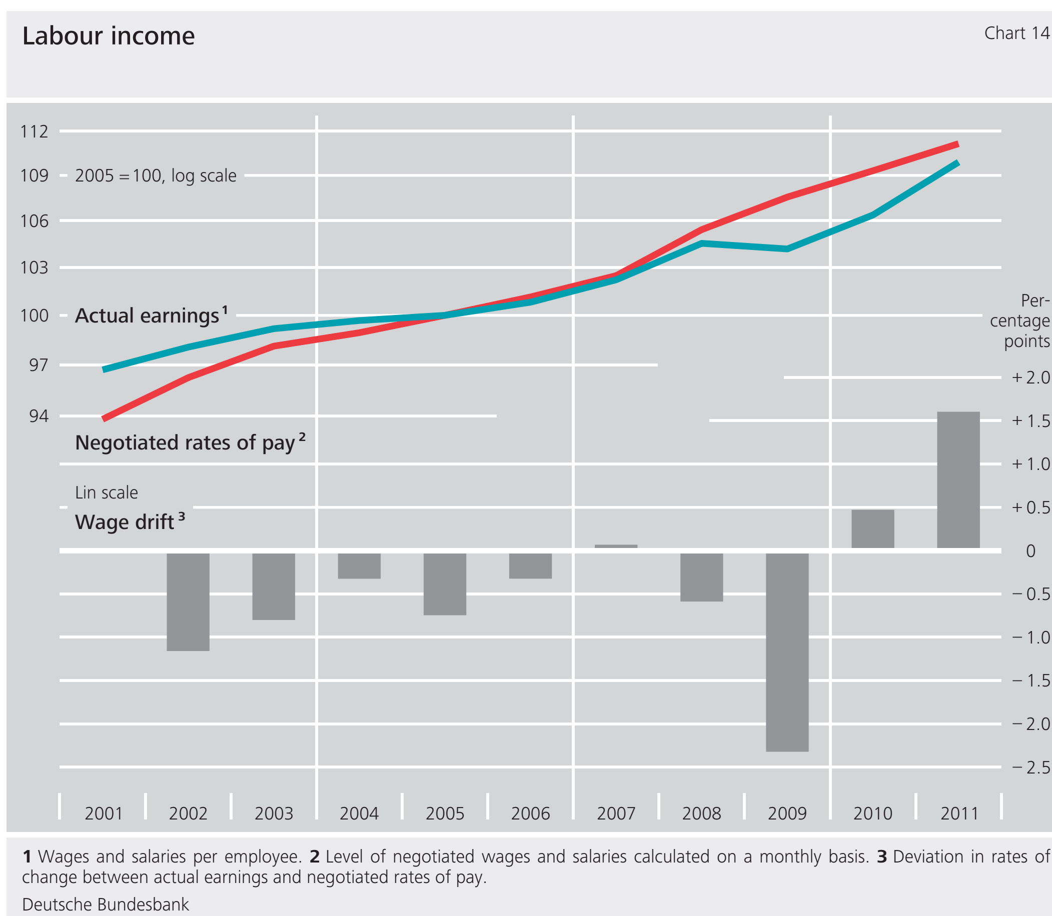
Labour income

Chart 14



1 Wages and salaries per employee. **2** Level of negotiated wages and salaries calculated on a monthly basis. **3** Deviation in rates of change between actual earnings and negotiated rates of pay.

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to generous bonus payments that were made in a number of economic sectors – the metal-working and electrical engineering industries as well as the chemical and pharmaceutical industries – which allowed employees to partake in the surprising economic success of 2010. With regard to monthly wages, the further normalisation of working hours also had a positive impact on wages. Overall, actual earnings went up by 3.3%. Calculated on an hourly basis, this figure was 2.8%. The fact that unit labour costs rose by just 1.2% was due to the further recovery in hourly productivity, which went up by 1.3% in the reporting year. Consequently, the crisis-induced rise in unit labour costs has thus far decreased only marginally during the cyclical upturn. Enterprises nevertheless managed to return profitability to around its pre-crisis level. Price adjustments also played a part in this. The deflator of aggregate output went up by 0.8% in 2011, compared with 0.6% one year earlier.

Growing price pressure

There were initially sharp price rises across all stages of the economy in 2011 in the wake of the global economic recovery. The rate of price increase flattened out considerably over the course of the year on account of the global economic slowdown and the fact that the economic catching-up process is now nearing completion. Strong upward pressure on prices was exerted in the main by crude oil and other commodities. Prices for imported energy alone increased by almost one-third. The prices of other imported goods also went up appreciably. Although German industrial enterprises were able to impose significantly higher prices both at home and abroad, there was a consequent further noticeable deterioration in the terms of trade. Consumer energy prices rose by one-tenth on an average for the year. Food products also became more expensive. Although there was also a gradual increase in the prices of other goods and services owing to the economic upturn in Germany, the rate of increase remained moderate. Overall, annual

Prices at various levels of the economy

Table 5

Annual percentage change

Item	2010 Q4	2011 Q1	Q2	Q3	Q4
Import prices	10.4	11.6	8.0	7.0	5.5
Export prices	4.7	5.3	3.8	3.2	2.7
Terms of trade	– 5.2	– 5.7	– 4.0	– 3.5	– 2.7
Industrial producer prices	4.7	6.1	6.0	5.6	4.8
Construction prices	1.5	2.5	2.9	3.0	3.1
of which					
Residential buildings	1.6	2.6	2.7	2.9	2.9
Prices for owner-occupied housing according to vdp	1.5	3.1	2.3	2.7	2.3
Consumer prices	1.5	2.1	2.3	2.4	2.4
Energy	6.1	9.8	9.6	10.6	10.0
Refined petroleum products	11.7	14.9	13.3	14.9	12.8
Gas, electricity and heat energy	1.8	5.6	6.7	7.2	7.7
Food products	3.4	2.8	2.3	2.4	2.4
Industrial goods (excluding energy)	0.7	0.8	1.1	1.4	1.4
Services (excluding rents)	0.5	0.9	1.7	1.4	1.1
Housing rents	1.2	1.3	1.2	1.2	1.2
Memo items					
GDP deflator	0.3	0.3	0.9	0.9	1.0
Use of domestic product deflator	1.4	1.7	1.9	1.7	1.9
Deflator of imported goods and services	6.4	8.1	5.6	4.0	3.6

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average consumer price inflation stood at 2.3% according to the Consumer Price Index (CPI) and at 2.5% according to the Harmonised Index of Consumer Prices (HICP). These figures were therefore up significantly on the previous year, when they had amounted to 1.1% and 1.2% respectively. At the start of 2012, the year-on-year rates stood at 2¼% (CPI) and 2½% (HICP).

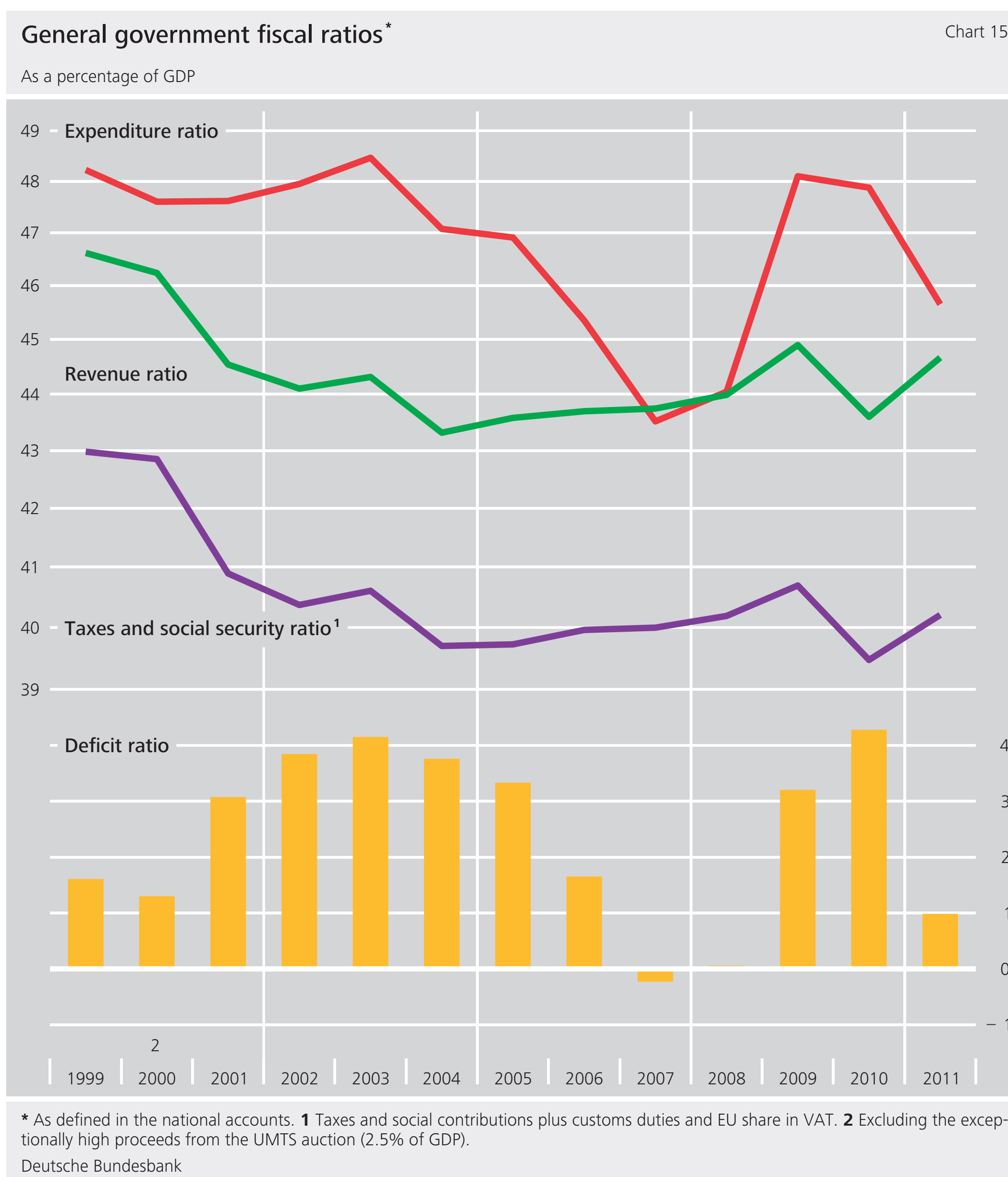
Marked rise in house prices

The pick-up in demand in the housing market, which was bolstered by the favourable financing conditions and the optimistic income expectations of households, drove up the prices of new and existing residential property considerably. According to calculations based on data provided by BulwienGesa AG, prices were up by 5½% in 2011, compared with 2½% one year earlier. Price rises were particularly marked in urban centres. Some relief was afforded by the growth in supply. Nevertheless, construction firms were able to push through perceptible price increases owing to the limited available capacity. Residential construction prices increased by 2.7% in 2011. Housing rents also increased by a wide margin, especially in the case of new rental contracts.

2 In 2011, general government deficit much lower, but debt level high

Clear fall in deficit ratio in 2011

2011 saw a clear fall in the deficit ratio to 1.0% (compared with 4.3% in 2010). The deficit thus fell back below the 3% threshold two years before the deadline set under the excessive deficit procedure. Positive cyclical developments made a major contribution to this decline, and the favourable economic situation is likely to have pushed down the level of the deficit ratio, too. As in previous upturns, moreover, growth in tax revenue was particularly buoyant. Deficit-reducing measures also had an impact in net terms. One particularly important factor was the near-absence of very large capital transfers



***** As defined in the national accounts. **1** Taxes and social contributions plus customs duties and EU share in VAT. **2** Excluding the exceptionally high proceeds from the UMTS auction (2.5% of GDP).
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to support financial institutions (which had amounted to just under 1½% of GDP in 2010). The debt ratio is likely to have fallen from the level attained at the end of 2010 (83.2%), although it was probably still in excess of 80% at the end of 2011, thus remaining well above the 60% reference value. Major contributors to the decline were the relatively low deficit in combination with rather strong nominal GDP growth as well as a reduction in the risk assets – and associated liabilities – assumed by the government sector to support the financial markets and the scaling back of capital assistance. These factors clearly outweighed the rise in debt caused by stepping up assistance to euro-area countries.

Rising revenue ratio due to discretionary increases in taxes and social contributions and buoyant growth in tax receipts

The government revenue ratio rose by 1.1 percentage points to 44.7%. Higher taxes and social contributions, such as the increase in contribution rates to the statutory health insurance scheme and to the Federal Employment Agency and the discretionary tax increases arising from the central government consolidation package that was agreed in 2010, were an important factor in this development. Furthermore, growth in tax revenue in the wake of the upturn was perceptibly stronger than that in its macroeconomic reference variables. Non-tax

General government as defined in the national accounts*

Table 6

Item	2009	2010	2011 pe	2009	2010	2011 pe
				Year-on-year change		
	€ billion			as a percentage		
Expenditure	1,142.1	1,185.8	1,173.5	4.8	3.8	– 1.0
of which						
Social benefits	622.6	632.3	630.9	5.5	1.6	– 0.2
Compensation of employees	189.7	194.5	199.8	4.0	2.5	2.7
Interest	63.8	61.9	67.7	– 6.6	– 3.1	9.3
Gross capital formation	41.4	40.8	42.3	6.5	– 1.5	3.6
Memo item						
Old-age provision[1]	299.2	303.8	306.5	2.4	1.5	0.9
Healthcare[2]	175.0	179.8	183.7	6.2	2.7	2.2
Revenue	1,066.0	1,079.8	1,148.2	– 2.0	1.3	6.3
of which						
Taxes	546.3	548.9	587.8	– 4.6	0.5	7.1
Social contributions	409.8	418.7	435.3	0.2	2.2	4.0
				€ billion		
Balance	– 76.1	– 106.0	– 25.3	– 74.7	– 29.9	80.7
Memo item						
As defined in the Maastricht Treaty				as a percentage		
Debt level	1,767.7	2,061.8	. . .	7.2	16.6	. . .
	as a percentage of GDP			in percentage points		
Debt ratio	74.4	83.2	. . .	7.8	8.8	. . .
Budget balance[3]	– 3.2	– 4.3	– 1.0	– 3.1	– 1.1	3.3

* In accordance with ESA 95. **1** In particular, expenditure of the statutory pension insurance scheme and on civil servants' pensions. **2** Expenditure of the statutory health insurance scheme and on government assistance towards civil servants' medical bills. **3** In contrast to the budget balance in the national accounts, the balance as defined in the Maastricht Treaty is calculated taking into account interest payments from swap transactions and forward rate agreements.

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revenue also rose more rapidly than GDP. In particular, interest income from the financial market support measures increased considerably, although this was accompanied by higher interest expenditure on the liabilities assumed in this context.

Decreasing expenditure ratio due to both cyclical and structural factors

The expenditure ratio fell significantly by 2.2 percentage points to 45.6%. The favourable cyclical developments mainly lowered the ratio via increased GDP in the denominator. Furthermore, the aforementioned absence of capital transfers to financial institutions also made a major contribution to this decline. Other factors included the structural fall in unemployment and the fact that spending on pensions rose only moderately, which both dampened expenditure.

The combined deficit of central, state and local government as defined in the budgetary accounts fell significantly from its very high 2010 level and probably amounted to €25 billion. Overall, state and local government's core budgets concluded the year with a funding gap of just over €10 billion, with the deficit for 2011 being only roughly half that for 2010. The development of central government's budgetary situation was even more favourable. The core budget deficit fell to €17½ billion (compared with €44½ billion in 2010), thus remaining well below the target of €49 billion. This was mainly thanks to tax receipts being higher than originally estimated but also to labour market-related spending and interest expenditure being lower than planned. Tax revenue was 8½% up on the year, while expenditure fell significantly, primarily because no payment was made to offset the Federal Employment Agency's deficit. After recording a deficit of €7 billion in 2010, central government's off-budget entities concluded 2011 with a surplus of €6 billion. While the Investment and Repayment Fund, which was set up in 2009 to combat the economic crisis, again recorded sizeable outflows for investment, this was ultimately outweighed, in par-

Clear improvements in central, state and local government budgets, but further consolidation needed

General government finances*

Table 7

Item	2009 pe	2010 pe	2011 pe	2009 pe	2010 pe	2011 pe
	€ billion			Year-on-year change		
Central, state and local government				as a percentage		
Expenditure	720.9	732.7	730	6.4	1.6	− 0.5
of which						
Central government (core budget)	317.1	332.4	325	4.4	4.8	− 2.5
State government (core budgets)	284.8	286.6	294.5	4.0	0.6	2.5
Revenue	631.4	650.5	705.5	− 5.6	3.0	8.5
of which						
Taxes	524.0	530.6	573	− 6.6	1.3	8
				€ billion		
Balance	− 89.5	− 82.2	− 24.5	− 81.0	7.3	57.5
of which						
Central government (core budget)	− 34.5	− 44.4	− 17.5	− 22.7	− 9.9	26.5
State government (core budgets)	− 25.5	− 21.5	− 9.5	− 26.2	3.9	12
Social security funds				as a percentage		
Expenditure	505.9	512.9	511	5.6	1.4	0.5
Revenue	492.0	516.9	526	1.3	5.1	2
				€ billion		
Balance	− 13.9	4.0	15	− 20.5	17.9	11
of which						
Statutory pension insurance scheme	0.1	1.9	4.5	− 3.5	1.8	3
Statutory health insurance scheme	− 1.3	3.7	9.5	− 2.2	4.9	5.5
Federal Employment Agency	− 13.5	− 2.6	0.5	− 15.1	10.9	3

* As defined in the government's budgetary accounts. This differs from the definition of the government account within the national accounts.

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ticular, by the fact that credit institutions made extensive repayments to SoFFin for past capital injections.

Social security funds posted high budget surplus

The social security funds recorded an exceptionally high budget surplus of just over €15 billion in 2011 (compared with +€4 billion in 2010). The major insurance schemes improved their budget outcomes, aided by favourable employment and wage developments. In addition, the statutory health insurance scheme's general contribution rate had been raised from 14.9% to 15.5%, while growth in expenditure turned out to be significantly weaker than forecast. In the statutory pension insurance scheme, both the zero adjustment of pensions in mid-2010 and the relatively small increase of close to 1% in mid-2011 meant that pensions grew at a slower pace than earnings subject to contributions. Furthermore, growth in the number of pensions was negligible, particularly because the cohorts currently entering retirement are still relatively small. On the expenditure side, the Federal Employment Agency profited from the falling demand for unemployment benefits and lower spending on active labour market policy measures. As in 2010, the public long-term care insurance scheme recorded a slight surplus.

Deficit unlikely to change significantly in 2012

Assuming a limited economic slowdown and barring any major additional impact from the financial and sovereign debt crisis, the general government deficit ratio should remain virtually unchanged this year. In that case, moderate cyclical strains on the budget could be roughly neutralised by a further slight structural improvement. The perceptible incremental consolidation originally planned will be interrupted in 2012. However, a number of temporary economic stimulus measures brought in during the 2008-09 crisis are being discontinued this year, most notably the investment programmes, which were implemented with sometimes substantial time lags. Structurally lower unemployment figures and muted pension increases

could also continue to dampen social payments. While the ground for reducing the debt ratio has essentially been laid, assistance for euro-area countries (including capital transfers to the ESM) and possibly also for German financial institutions[2] will increase debt, meaning that the ratio may even rise beyond the high level that it has already reached.

3 Investment and financing

Financial investment up from 2010 …

According to the financial accounts data, financial investment by the domestic non-monetary sectors in the first three quarters of 2011 was up on the year,[3] amounting to €525 billion, compared with €430 billion in 2010. This rise was sustained by non-financial corporations and the government sector, while households and financial corporations (excluding monetary financial institutions (MFIs)) reduced their financial investment.

In particular, there was a marked rise in non-financial corporations' financial investment. They increased their financial assets by almost €215 billion, and thus invested €96 billion (net) more worth of financial resources than in the previous year. More than anything, this development was the reflection of a marked increase in short-term credit claims within the corporate sector. There was growth in financial investment by general government, too, which amounted to just under €9 billion net in the first three quarters of 2011, whereas the same period of 2010 had seen a €4 billion reduction in the financial assets of general government. This increase was due mainly to an inflow of €20 billion into deposits (including cash holdings).

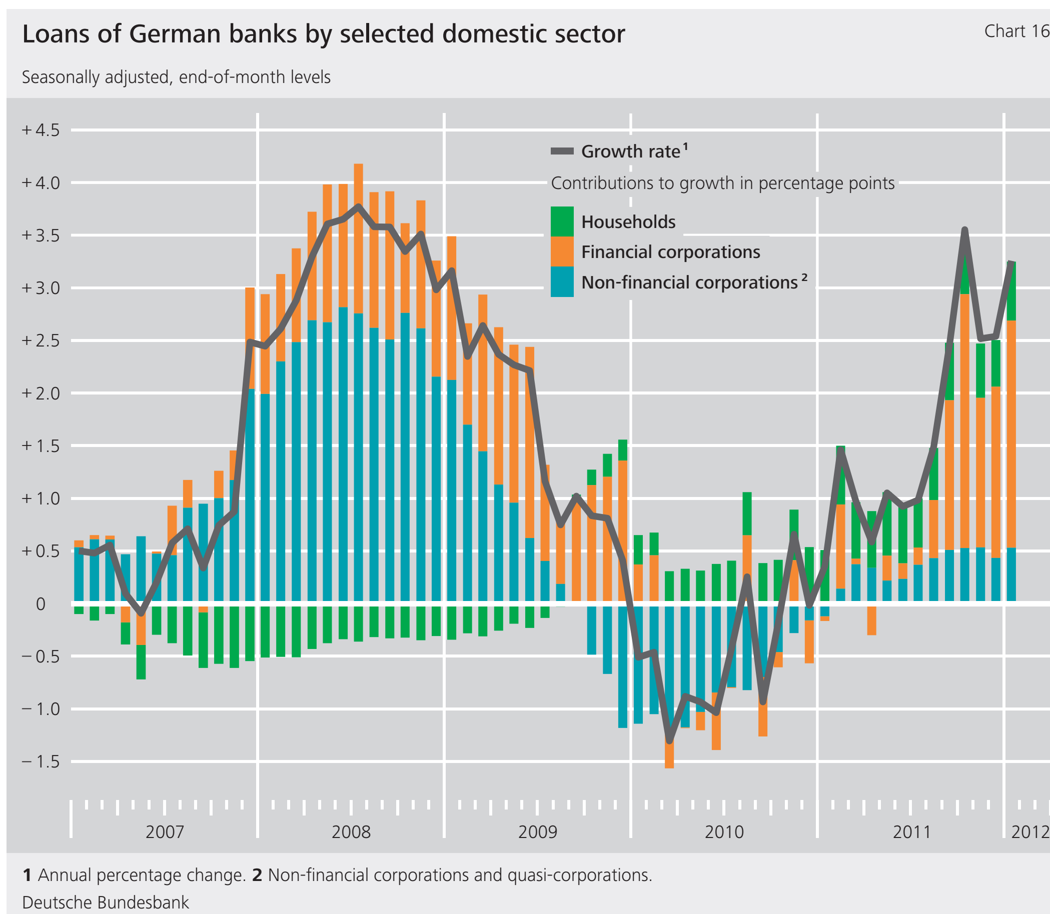
At €116 billion, households' financial investment, too, was more than €5 billion down on the year. This was the outcome of a marked reduction in the acquisition of equity instruments, among other factors. The reasons for this probably lay in the gloomier expectations for the economy as well as the heightened general uncertainty in the wake of the European sovereign debt crisis, which discouraged households from investing in equities. Non-financial corporations (excluding MFIs) likewise, reduced their financial investment. They acquired €186 billion in financial assets, almost €7 billion less than in 2010.

… with a considerable increase in bank deposits

A large part of this financial investment was accounted for by the increase in deposits held on bank accounts. The total deposits of the domestic non-monetary sector (excluding central government) at German banks rose by €95 billion, or 3½%, in 2011. This was a sharper rise than in 2010, when the increase was €60 billion, or just over 2%. As in 2010, this development was sustained by the higher demand for short-term deposits. Unlike in 2010, however, there was also an increase in short-term time deposits, which was due to the comparatively favourable interest rate trends in this segment.

The situation was different with regard to long-term time deposits, which decreased appreciably – and thus somewhat more strongly than a year earlier. In this respect, the lower financial investment by pension funds and insurance corporations as well as by other financial intermediaries made itself felt; they clearly reduced their activity in this area. By contrast, long-term time deposits were in demand from households throughout the year. The remuneration of time deposits became more attractive, especially around mid-year; it is likely that households took this opportunity to shift funds between the various types of deposits. An indiration of this is that, as in 2010, households withdrew from long-term savings deposits. Additionally, households invested especially

2 In particular, the possibility of the government sector assuming further assets and liabilities in connection with the liquidation of WestLB is being discussed. The precautionary reinstatement of SoFFin has created the option of supporting financial institutions in new cases of distress. However, specific cases where this facility might be used are not currently under discussion.
3 The financial accounts data are available up to the third quarter of 2011.



1 Annual percentage change. 2 Non-financial corporations and quasi-corporations.
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heavily in overnight deposits, particularly towards the end of the year.

Moderate acquisition of securities

Financial capital market investment by domestic non-monetary sectors in 2011 featured a €9 billion increase in bond investment. In 2010, this form of financial investment had amounted to as much as €181 billion, not least owing to a special effect of more than €100 billion due to the FMS Wertmanagement resolution agency. In the reporting year, domestic non-banks invested solely in foreign debt securities on balance. Besides bonds, the domestic non-monetary sectors bought shares in mutual investment funds for €45 billion, compared with €100½ billion in 2010. Specialised funds, which manage funds for institutional investors, were in particular demand. Acquisition of shares, at €30 billion, was roughly at the same level as in 2010 (€30½ billion). Interest in both mutual investment funds and shares was centred on domestic instruments.

Rise in external financing

According to the financial accounts, the volume of external financing in the domestic non-monetary sectors in the first three quarters of 2011 was almost €387 billion and thus higher than in the same period of 2010 (€352 billion). This increase was attributable mainly to non-financial corporations, the external financing of which amounted to just under €170 billion in the reporting period, which was more than twice as high as in the comparable period of 2010. Borrowing from non-banks and non-residents totalled more than €122 billion. Households, too, borrowed more from banks and insurers. The volume of their external financing amounted to just under €9 billion, while just over €4 billion was borrowed in the first three quarters of 2010. The general government sector's external borrowing was distinctly more muted; its external financing in the first three quarters of 2011 amounted to just over €29 billion net, compared with €90 billion in the same period of 2010. Financial corporations (excluding MFIs) borrowed just under

€180 billion from external sources (2010: €186 billion).

Lending to the domestic private sector …

German banks' overall lending business (standard and securitised loans) in Germany showed a marked decline. At €42 billion, there was a significant increase in German banks' loans to the domestic private sector, but this was outweighed overall by the virtually continuous reduction in loans to general government. Such loans declined by more than €74 billion in the reporting year, after having been expanded by €122 billion in 2010 in connection with the establishment of two resolution agencies. Their annual rate of growth fell to -11½% from as much as 24½% in 2010.

… driven by loans to financial corporations

The growth in loans to the private sector was driven mainly by unsecuritised loans to financial corporations (excluding MFIs), which fluctuated strongly from month to month but grew strongly overall. Most of these inflows were short-term loans to other financial intermediaries (OFIs), predominantly secured interbank loans settled through central counterparties. The increased importance of these transactions reflects the growing uncertainty as well as the loss of confidence resulting from the further escalation of the sovereign debt crisis.

But also rise in loans to households …

Unsecuritised loans to the non-financial private sector were much less volatile, showing a positive underlying trend throughout the year. Given steady support by the lending of savings banks and credit cooperatives, loans to households, at 0.7%, grew by roughly the same extent last year as in 2010, thus continuing their moderate rise. This development was due almost entirely to loans for house purchase, which showed a clear acceleration in growth. While consumer loans slowed down considerably, other lending to private households, with growth of 0.1%, did not approach the 2010 figure.

… as well as in loans to non-financial corporations

Loans to non-financial corporations picked up in 2011 after having largely stagnated in the previous year. This is likely to have been due to strong growth in investment in machinery and equipment as well as the comparatively favourable financing conditions. The slight decline in loans in the medium-term maturity segment was more than offset by growth in both short and long-term lending. This was abetted by the fact that long-term lending rates became more favourable for borrowers, especially from mid-year onwards. The renewed tensions in the financial markets had no noticeable adverse effects on German banks' domestic lending, particularly to non-financial corporations.

Survey results show little overall change in lending policy …

This is also consistent with the information provided by German banks as part of the Bank Lending Survey (BLS), according to which credit standards were eased considerably at the beginning of the year and remained largely unchanged as the year progressed (see chart on page 65). The initial easing was due to an improvement in the institutions' perception of risk. In the second and third quarters, however, neither wholesale funding costs, nor the competitive situation, nor the perception of risk gave the banks cause for adjusting their credit standards; however, the higher liquidity costs as well as industry and firm-specific factors had, in and of themselves, a slightly restrictive effect in the final quarter. There were much more marked adjustments in credit conditions, however, especially in terms of margins, which, according to the surveyed banks, were narrowed somewhat at first for average loans and then widened considerably in the second half of the year.

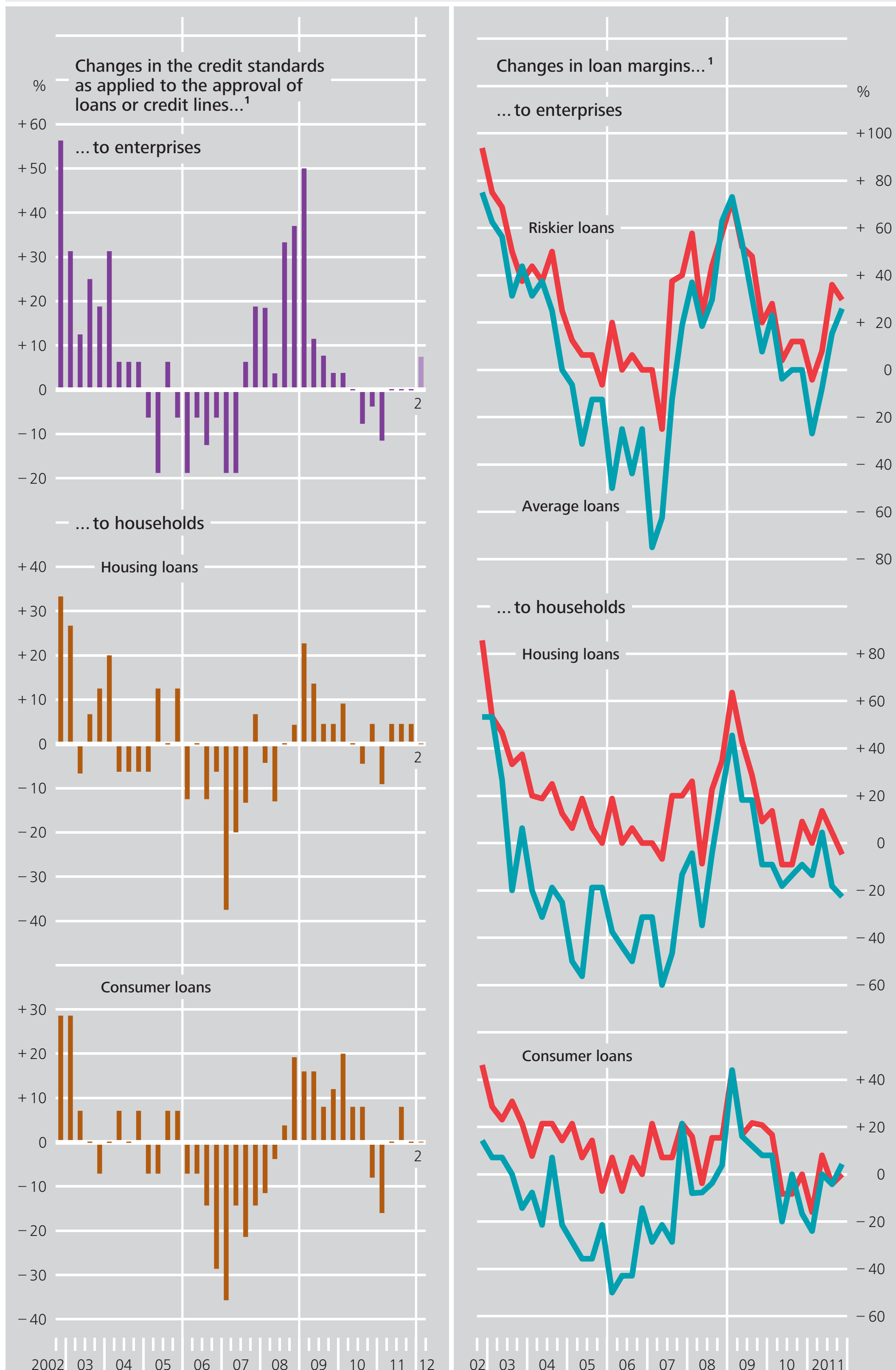
… along with a simultaneous increase in demand for funds

At the same time, the banks participating in the BLS reported a pick-up in the demand for loans, particularly in the first half of the year. This was due mainly to increased fixed investment in lending to enterprises as well as the positive outlook on the housing market and households' higher consumer confidence. Enterprises' wide scope for internal financing had a dampening impact in 2011.

This information provided by bank managers on their lending policies is corroborated for the

Bank Lending Survey
Results for Germany

Chart 17



1 Difference between the respondents reporting "tightened considerably" and "tightened somewhat" and the respondents reporting "eased somewhat" and "eased considerably" as a percentage of the responses given. — 2 Expectations for Q1.

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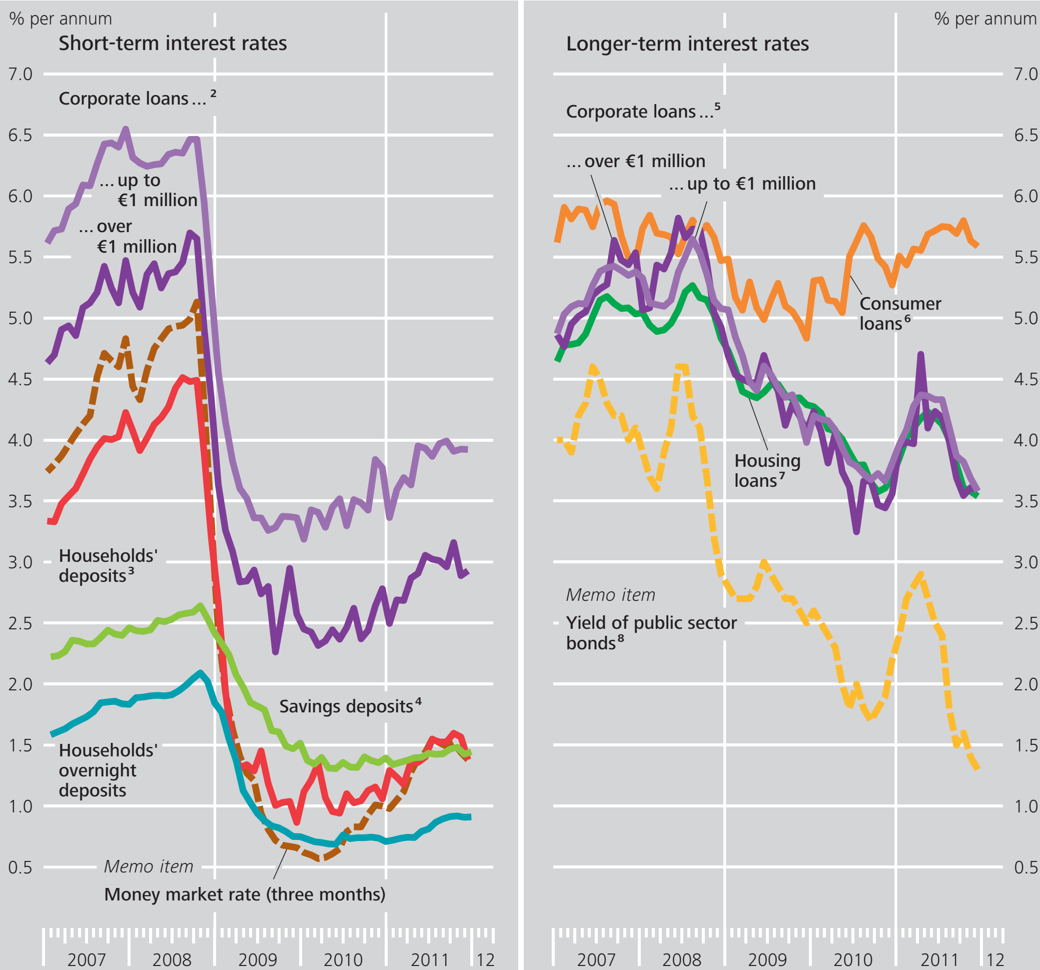
Bank interest rates in Germany

Chart 18

New business[1]



1 According to the harmonised MFI interest rate statistics. **2** To non-financial corporations with an initial rate fixation of up to one year. **3** With an agreed maturity of up to one year. **4** Deposits of the non-financial private sector, redeemable at notice of up to three months. **5** To non-financial corporations with an initial rate fixation of over five years. **6** To households with an initial rate fixation of over one year and up to five years. **7** To households with an initial rate fixation of over five years and up to ten years. **8** Residual maturity of over five years and up to six years.

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Enterprises report good financing conditions

past year by surveys among non-financial corporations regarding their access to bank loans. The Ifo Institute's credit constraint indicator reached an all-time low in 2011, for example. This is remarkable especially in light of the escalating sovereign debt crisis and banks' waning mutual trust. Accordingly, corporate financing in Germany was unaffected by these factors, even though financing conditions were tending to deteriorate somewhat in the second half of the year.

Interest rates likewise comparatively low

Lending rates initially rose in the reporting year. However, these increases were reversed in the second half of the year, especially in the case of long-term contracts (see chart above). At the end of the year, the average rates of interest for loans to enterprises with an interest rate fixation period of more than five years was 3.6% irrespective of the size of the loan. Loans for house purchase with an interest rate fixation period of between five and ten years were priced almost identically at 3.5%. Interest on long-term consumer loans fell considerably in December in line with its seasonal pattern and, at 7.6%, was trending at its level of a year earlier. The conditions for households' and non-financial corporations' deposits rose compared with 2010. This was possibly also due to the

more difficult situation for banks' wholesale funding in the second half of the year.

Net bond market issuance

Domestic borrowers issued bonds worth €13½ billion net on the bond market in 2011. This was due chiefly to government sector issues. Including the resolution agencies, the public sector tapped the capital market for €59½ billion net in 2011, following redemptions of €17½ billion in 2010. Central government issued mainly Federal notes (Bobls, €18 billion) as well as 10-year and 30-year Bunds (€11½ billion and €7½ billion respectively). In return, it redeemed Treasury discount paper (Bubills) for €27½ billion. The Federal states increased their capital market borrowing by €25 billion net.

Improved financing conditions prompt firms to expand capital market debt

German enterprises issued €1 billion worth of instruments on the domestic capital market. In effect, this was due almost entirely to non-financial corporations using the improved financing conditions to issue bonds worth €7½ billion (2010: €2½ billion). Domestic enterprises predominantly issued debt securities with maturities of less than one year.

Continuing reduction in credit institutions' capital market borrowing

The credit institutions continued to reduce their capital market borrowing in 2011, by €47 billion after a decline of €7½ billion in 2010. Once again, the focus was on redemptions of public Pfandbriefe (-€43 billion) and of other bank debt securities that can be structured flexibly (-€29½ billion). This contrasted with additional sales of debt securities issued by specialised credit institutions (€24½ billion). While the outstanding volume of public Pfandbriefe has been declining markedly for some time because public authorities have been pursuing other financing channels, there was hardly any demand for other bank debt securities – which often feature elements of derivatives – especially while the sovereign debt crisis was escalating.

Almost no change in equity issuance

Issuing activity in the German equities market continued with scarcely any change in 2011. At €21½ billion, domestic corporations raised somewhat more equity capital than in 2010 (€20 billion). The majority of issues were by listed enterprises (€20 billion). In most cases, this involved capital increases of existing enterprises.

Inflows to domestic mutual funds

The German mutual investment fund sector recorded comparatively moderate inflows of funds in 2011 at €45 billion, compared with €85 billion in 2010. These injections of funds benefited exclusively specialised funds (which are reserved for institutional investors), which sold fund shares for €46½ billion. Among funds open to the general public, only equity funds and open-end real estate funds sold their own share units (€3 billion and €1½ billion respectively). By contrast, bond-based funds, in particular, as well as mixed securities-based funds, recorded slight outflows (€3½ billion and €1½ billion respectively).

German net external assets

Unlike in earlier years, German net external assets showed a decline in 2011. In the first three quarters of the year, for which data on the international investment position are currently available, German net external assets declined by €74 billion. The key factors behind this decline, along with statistical adjustments[4] and exchange rate-related changes, were market price effects. For example, Bunds held by non-residents alone achieved gains amounting to €65½ billion. The valuation-related falls were partly offset by the positive effects from balance of payment transactions. In 2011 as a whole, Germany's current account surplus was €148 billion and was thus somewhat lower than in the year before (€150½ billion).

4 The statistical adjustments refer to changes in stocks, which are not recorded as transactions in the balance of payments for methodological reasons. In 2011, their net impact on German external assets was negative.

Chronology of economic and monetary policy measures

1 January 2011

Estonia becomes the 17th country to join the euro area.

The general contribution rate to the statutory health insurance scheme is raised from 14.9% to 15.5% and the contribution rate to the Federal Employment Agency is put up from 2.8% to 3.0%. At the same time, contributions for insolvency benefit payments are suspended. The Nuclear Fuel Tax Act *(Kernbrennstoffsteuergesetz)* and the Bank Restructuring Act (*Restrukturierungsgesetz,* which envisages, in particular, the establishment of a restructuring fund for credit institutions as well as the introduction of annual and, where necessary, special contributions by credit institutions to the fund) enter into force. Beginning in 2011, an air traffic tax is generally imposed on flights departing from German airports.

19 January 2011

In its Annual Economic Report, central government expects a 2.3% increase in real gross domestic product (GDP) in 2011. External impulses are forecast to be weaker than in 2010, whereas domestic demand is expected to rise strongly. The development of private consumption is forecast to be stable. Central government predicts that investment will strongly support growth, but that this will be somewhat subdued for a short time at the start of the year when the more generous tax depreciation rules come to an end. The normalisation of productivity and unit labour costs is likely to continue. The report states that the number of employed persons will increase to 40.8 million and the unemployment rate (as defined by the Federal Employment Agency) will fall to 7.0%. Consumer prices are forecast to rise by 1.8%.

24 February 2011

The Federal Statistical Office reports a general government deficit ratio (pursuant to the Maastricht criteria) of 3.3% for 2010, thus exceeding the European reference value.

25 February 2011

The Bundesrat approves the final version of the Act on Calculating Standard Requirements and Amending the Second and Twelfth Book of the Social Security Code *(Gesetz zur Ermittlung von Regelbedarfen und zur Änderung des Zweiten und Zwölften Buches Sozialgesetzbuch).* In particular, a new methodology is adopted for determining basic allowance requirements, with the increase in the standard rates remaining relatively limited overall. In a protocol statement, central government commits to gradually assuming the costs of the basic allowance for the elderly and disabled from local government (in full from 2014 onwards). Parallel to this, central government announces its intention to gradually halve its rule-based grant to the Federal Employment Agency.

3 March 2011

In light of ongoing financial market tensions, the Governing Council of the ECB decides to continue conducting its main refinancing operations as fixed-rate tender procedures with full allotment until 12 July 2011.

8 March 2011

The Bundesbank presents its annual accounts for 2010. The profit of €2,206 million is transferred in full to central government.

15 March 2011

The Constitutional Court for the State of North Rhine-Westphalia finds that the state's supplementary budget for 2010 is unconstitutional. In spite of the more favourable macroeconomic developments, the supplementary budget envisaged a significant increase in the previously planned level of net borrowing, thereby causing the reference value to be ex-

ceeded by an even greater amount. The Constitutional Court raises doubts about the stated justification that this served to avert a serious disruption of the macroeconomic equilibrium at the end of 2010. However, the main reason highlighted is that the measures, which are officially justified as serving to avert such a disruption, are found to be ineffective. Any transactions already made on the basis of the supplementary budget are to be reversed.

16 March 2011

As part of a change in the way that the budget plans are drawn up, the Federal Cabinet sets out benchmark figures for the 2012 central government budget and the medium-term financial plan up to 2015. Net borrowing of €31.5 billion is envisaged for 2012. Compared with the old financial plan from the summer of 2011, net borrowing is estimated to be around €9 billion lower for each of the years between 2012 and 2014 and is forecast to fall to just over €13 billion in 2015. The improvement in the budgetary situation that has occurred in the meantime is therefore only partially reflected in the revised figures.

18 March 2011

Following the Tohoku earthquake in Japan, at the request of the Japanese authorities, the Eurosystem participates in the G7's concerted intervention in the foreign exchange markets to limit the volatility of the yen.

25 March 2011

The European Council adopts the Euro Plus Pact, the "six pack" and the European Stability Mechanism (ESM). The latter establishes a permanent rescue shield for countries with financing difficulties.

31 March 2011

The Governing Council of the ECB decides to suspend the application of the minimum credit rating threshold in the collateral eligibility requirements for the purposes of the Eurosystem's credit operations in the case of marketable debt instruments issued or guaranteed by the Irish government. The suspension is based on a positive assessment of the assistance programme for Ireland agreed in November 2010 and the Irish government's decision of 31 March 2011 to ensure a capital increase for four large Irish banks.

7 April 2011

The key interest rate is changed for the first time since 7 May 2009. In view of the upside risks to price stability, the Governing Council of the ECB raises the key interest rate by 25 basis points to 1.25% while keeping the width of the corridor unchanged.

11 April 2011

Portugal requests financial assistance. The European Council sets out the terms and conditions of this financial assistance on 17 May.

13 April 2011

The Federal Cabinet presents an updated stability programme for Germany. This is based on real GDP increasing by 2.3% in 2011, 1.8% in 2012 and 1½% annually in the years thereafter up to 2015. A deficit ratio of 2½% is forecast for 2011. The structural deficit ratio, which was estimated at around 2% for 2010, is to be reduced by an annual average of slightly less than ½ percentage point and the debt ratio is to be lowered to 75½% by 2015.

15 April 2011

Following the agreements with Saxony-Anhalt and Schleswig-Holstein, the Federal Ministry of Finance concludes an administrative agreement with each of the other states that are to receive consolidation aid: Berlin, Bremen and Saarland. The respective agreements lay down the starting structural deficits for 2010 as well as the graded deficit limits in subsequent years, until the budgets are completely balanced in 2020. In this context, it is agreed that financial transactions are to be excluded, the cyclical adjustment procedure is to be relatively closely linked to that of central gov-

ernment, and off-budget entities that are attributable to the government sector and have borrowing authorisations are to be included as well.

26 April 2011

The general government deficit and debt figures reported by the EU member states on 31 March 2011 are published by the European Commission under the European budgetary surveillance procedure. Germany submits a deficit ratio of 3.3% and a debt ratio of 83.2% for 2010. On balance, the sharp year-on-year rise in the debt ratio of almost 10 percentage points is mainly due to the measures to support financial institutions (which have only a limited impact on the deficit). For 2011, central government announces a planned deficit ratio of 2.5% and a fall in the debt ratio to 81.8%.

1 May 2011

Jens Weidmann succeeds Axel A Weber as President of the Deutsche Bundesbank.

23 May 2011

The Stability Council agrees with the assessment of the evaluation committee that it created and declares impending budgetary hardship for the Federal states of Berlin, Bremen, Saarland and Schleswig-Holstein.

1 June 2011

Sabine Lautenschläger becomes a member of the Executive Board of the Bundesbank. She succeeds Franz-Christoph Zeitler as Deputy President of the Deutsche Bundesbank.

9 June 2011

The Eurosystem announces that its monetary policy refinancing operations will continue to be conducted as fixed-rate tender procedures with full allotment in the third quarter.

29 June 2011

The Eurosystem, the Bank of Canada, the Bank of England, the Swiss National Bank and the Bank of Japan decide to extend the liquidity swap arrangements established with the Federal Reserve in May 2010 until August 2012. The Eurosystem continues to conduct US dollar liquidity-providing operations with a maturity of seven days.

6 July 2011

The Federal Cabinet approves the draft central government budget for 2012 and financial plan up to 2015. Vis-à-vis the benchmark figures from March, these include, in particular, the more favourable results from the official May tax estimate, but also burdens in connection with the faster withdrawal from nuclear energy that has since been agreed, the postponement of a financial transaction tax that had been due to be introduced in 2012, and the slower-than-intended reduction in the personnel costs of the Federal Armed Forces. Overall, net borrowing for 2012 is lowered by €4.3 billion to €27.3 billion vis-à-vis the benchmark figures. This appears to be due, above all, to higher forecasts for proceeds from the realisation of financial assets and an additional €2 billion compared with the result of the May tax estimate. By contrast, net borrowing is expected to increase during the financial plan period, mainly owing to the inclusion of annual capital transfers (which are treated as financial transactions) of €4.3 billion to the ESM from 2013 onwards. In the final year, 2015, net borrowing is forecast to be €1.4 billion higher than estimated in the benchmark figures from March.

7 July 2011

For the second time in 2011, the Governing Council of the ECB increases the key interest rate by 25 basis points to 1.50% in view of the upside risks to price stability. The interest rates on the marginal lending facility and the deposit facility are raised by the same amount to 2.25% and 0.75%, respectively.

After the Portuguese government approves a consolidation and reform programme (which was negotiated with the European Commission and the IMF – in liaison with the ECB – and considered to be appropriate), the ECB Governing Council decides to suspend the application of the minimum credit rating threshold also in the case of marketable debt instruments issued or guaranteed by the Portuguese government.

21 July 2011

The European Council decides to lengthen the maturity of and lower the interest rate on European Financial Stability Facility (EFSF) loans. Furthermore, the set of tools available to the EFSF or the ESM is to be extended. A second rescue package of €109 billion is assembled for Greece, including a voluntary bail-in of private creditors.

4 August 2011

The Eurosystem announces that it will continue to provide unlimited liquidity in its refinancing operations in the fourth quarter of 2011, in order to counteract renewed tensions in some financial markets in the euro area. Furthermore, the Eurosystem announces that it will conduct a supplementary longer-term refinancing operation with a maturity of six months and, together with other central banks, it will reactivate currency swaps with maturities of one week and three months.

7 August 2011

In a "Statement on key issues for the euro area", the Governing Council of the ECB welcomes the announcements made by the governments of Italy and Spain concerning new measures and reforms in the areas of fiscal and structural policies. It announces that it will actively implement the Securities Markets Programme (SMP).

24 August 2011

The Constitutional Court of the Free Hanseatic City of Bremen announces its ruling that the budget of the Free Hanseatic City of Bremen is compatible with the state constitution. It states that the overshooting of the borrowing limit resulted "from the unwritten state constitutional justification that it served to combat extreme budgetary hardship" and that this is acceptable for a transitional period under the binding deficit reduction provisions pursuant to the administrative agreement with central government of 15 April 2011.

25 August 2011

The Governing Council of the ECB extends its liquidity swap arrangement with the Bank of England by one year up to 28 September 2012.

1 September 2011

As part of the summer revision of the national accounts from previous years, the reporting population of the government account is extended by several units that had previously been outsourced from the core budgets of state and local government in particular. This has a limited impact on the deficit and debt level. However, the 2010 deficit ratio is now 1 percentage point higher, at 4.3%. This is mainly due to an upward valuation of the capital transfers in connection with offloading risky assets of Hypo Real Estate to FMS Wertmanagement, which is assigned to the general government sector.

6 September 2011

The Swiss National Bank announces that it will no longer tolerate a EUR/CHF exchange rate below the minimum rate of CHF1.20.

7 September 2011

The Federal Constitutional Court announces its ruling that the measures taken in spring 2010 to support Greece and the establishment of the EFSF are, in principle, compatible with the provisions of the Basic Law. However, German legislators must ensure that the budgetary law of the Bundestag is not undermined by the systematic assumption of obli-

gations vis-à-vis other countries. It is thus essential that Germany's key aid measures are approved by the Bundestag's budget committee.

15 September 2011

The Governing Council of the ECB, in coordination with the Federal Reserve, the Bank of England, the Bank of Japan and the Swiss National Bank, decides to conduct three US dollar liquidity-providing operations with a maturity of approximately three months covering the end of the year.

16 September 2011

The Federal Constitutional Court announces its decision of 19 August 2011 that the motion brought by the state parliament of Schleswig-Holstein against the 2009 incorporation of the debt brake for Federal states into the Basic Law is invalid. Only governments are entitled to make a claim in a dispute between central and state government.

29 September 2011

By virtue of the Act Amending the Act on the Assumption of Guarantees in Connection with a European Stability Mechanism *(Gesetz zur Änderung des Gesetzes zur Übernahme von Gewährleistungen im Rahmen eines europäischen Stabilitätsmechanismus),* the Bundestag agrees to extend Germany's maximum volume of guarantees to just under €212 billion, thereby increasing the EFSF's potential lending capacity.

6 October 2011

The Governing Council of the ECB decides on a number of new non-standard measures: two exceptional longer-term refinancing operations with maturities of 12 and 13 months, full allotment for all refinancing operations until 10 July 2012 as well as a Second Covered Bond Purchase Programme (CBPP2) with an intended amount of €40 billion over 12 months.

21 October 2011

Under the European budgetary surveillance procedure, in line with the summer revision of the national accounts, the general government deficit is increased to 4.3% of GDP vis-à-vis the spring notification of March. The debt ratio remains unchanged vis-à-vis the spring figure, at 83.2%. The upward effects stemming from the revision of the national accounts owing to the downward correction of GDP and the (re)integration of units into the government sector are compensated for by a substantial revision to FMS Wertmanagement's 2010 financial statement, which lowers the debt level. In light of the favourable intra-year developments, the Federal Government announces a lower planned deficit of 1.3% of GDP and a reduced debt ratio of 81.1% for 2011.

26 October 2011

The European Council agrees to extend the set of tools available to the EFSF, which will allow the effective lending capacity to be increased by means of leveraging. Moreover, the EFSF and, at a later date, the ESM are to be allowed to issue precautionary credit lines to certain countries, buy up government bonds in the primary and secondary markets, and grant countries special-purpose loans for bank recapitalisation. Furthermore, private creditors are asked to voluntarily forego half of their claims vis-à-vis the Greek government.

1 November 2011

Mario Draghi succeeds Jean-Claude Trichet as President of the ECB. As Governor of Banca d'Italia, Mr Draghi had been a member of the ECB Governing Council since 2006.

3 November 2011

Given the foreseeable decrease in inflation, the moderate underlying monetary growth, ongoing tensions in the financial markets and increased downside risks to economic growth, the Governing Council of the ECB decides to lower the key interest rate by 25 basis points

to 1.25% while keeping the width of the corridor unchanged.

6 November 2011

The coalition committee agrees on key points for various budget-burdening measures. They opt for a rightward shift in the income tax rates in 2013 and 2014 (in light of the generally required tax exemption up to the minimum subsistence level and to compensate for cold progression), a childcare supplement beginning in 2013 (following the period of entitlement to parental benefit, a transfer will be made for children up to the age of three cared for at home), higher expenditure on transport infrastructure (particularly in the 2012 central government budget) as well as additional payments under the public long-term care insurance scheme for persons suffering from dementia and an increase in the contribution rate by 0.1 percentage point from 2013.

9 November 2011

In its Annual Report, the German Council of Economic Experts forecasts a slowdown in growth. Real GDP is likely to rise by only 0.9% in 2012. Owing to the uncertainty stemming from the sovereign debt crisis, two less favourable scenarios were additionally analysed. If the crisis continues but is confined to the euro area, it is estimated that growth in Germany will fall to 0.4%. If, by contrast, global trade stagnates, German GDP is expected to drop by 0.5%. In the baseline forecast, net exports are expected to be negative, at -0.3% of GDP. Private consumption is likely to increase by 0.9% as a result of robust labour market developments and the improving income situation. Investment in machinery and equipment is forecast to rise by 3.1%. Commercial construction is likely to decrease slightly and public construction investment is forecast to stagnate. By contrast, housing construction is expected to increase by 2.9%. The labour market situation is likely to continue to improve and the unemployment rate will probably fall slightly to 6.9%.

25 November 2011

The Bundestag approves the 2012 central government budget. In particular, given the fact that the November tax estimate is even more favourable, net borrowing can be reduced by €1.1 billion to €26.1 billion, despite the additional budgetary burdens that have been agreed in the meantime (increasing investment in infrastructure and returning special payments for public sector employees with civil servant status and retired civil servants to their original level). However, compared with the deficit of around €22 billion forecast by the Federal Ministry of Finance for 2011, this represents a renewed rise in structural terms, too.

The Bundesrat passes the Act to Increase the Financial Strength of Local Government *(Gesetz zur Stärkung der Finanzkraft der Kommunen)*. Central government consequently assumes a greater share of the costs of the basic allowance for the elderly and disabled. At the same time, the rule-based central government grant to the Federal Employment Agency is reduced. Central government's full assumption of these basic allowance costs and the halving of the grant to the Federal Employment Agency are to be regulated in a separate legislative procedure.

30 November 2011

In a coordinated action, the Eurosystem, the Bank of Canada, the Bank of England, the Bank of Japan, the Federal Reserve and the Swiss National Bank agree to lower the interest rate on US dollar liquidity swap arrangements by 50 basis points and to extend the authorisation of these swap arrangements to February 2013.

1 December 2011

The Stability Council agrees on restructuring programmes for the period from 2012 to 2016 with the Federal states of Berlin, Bremen, Saarland and Schleswig-Holstein. These are aimed at averting the impending budgetary hardship which the Stability Council had previ-

ously diagnosed for these states. However, in some cases, the budgetary consolidation measures to be taken by the Federal states are not specified in much detail, meaning that it is not yet possible to discern any effective action to combat the crisis.

8 December 2011

The Governing Council of the ECB decides to lower its key interest rate by a further 25 basis points while keeping the width of the corridor unchanged. The key interest rate is now set at 1.00%, the interest rate on the marginal lending facility at 1.75% and the interest rate on the deposit facility at 0.25%. Moreover, the Governing Council decides on further non-standard measures: two refinancing operations with maturities of 36 and 37 months, reducing the rating threshold for certain asset-backed securities and temporarily accepting additional performing credit claims as collateral. Finally, the reserve ratio is reduced from 2% to 1%, while the fine-tuning operations on the last day of the respective reserve maintenance period are discontinued for the time being.

9 December 2011

The European Council agrees on an international treaty on a fiscal compact for the 17 euro-area countries and other EU member states. The members of the compact are to commit to introducing national debt brakes, accepting a stronger automatic system of sanctions for deficit procedures, allowing the European Commission to monitor structural reforms and, if their debt ratios exceed the 60% reference value, to reducing the difference by at least one-twentieth per year. Furthermore, the Council agrees to activate the ESM in mid-2012, one year earlier than planned.

14 December 2011

The Federal Cabinet adopts a bill reactivating the Financial Market Stabilisation Fund (SoFFin), which was set up in autumn 2008 and, in principle, came to an end in 2010. In 2012, the aid instruments to support German financial institutions are to be available again for new cases, too, and it will also be possible to offload government bonds to resolution agencies. SoFFin's loan authorisations are to be used for this purpose and will increase by €20 billion to €70 billion. These funds will apparently not be included in the calculation of the constitutional limit for structural new borrowing *ex ante,* but rather when drawing up the next budget in the year after they have been drawn down. This is a broad interpretation of the debt brake rules enshrined in the Basic Law.

21 December 2011

Under the first three-year tender, the Eurosystem issues €489 billion in liquidity.

1 January 2012

At the beginning of the year, the contribution rate to the statutory pension insurance scheme is cut by 0.3 percentage point to 19.6%.

Benoît Cœuré and Jörg Asmussen take office as new members of the Executive Board of the ECB.

12 January 2012

The Federal Ministry of Finance presents the provisional figures for the 2011 central government budget. Net borrowing amounts to a mere €17.3 billion, rather than the estimated €48.4 billion. As well as additional tax revenue of €19 billion, this is chiefly attributable to expenditure cuts of €9½ billion, particularly for labour market-related benefits and interest expenditure. Given net sales of financial assets amounting to just under €2 billion and a positive cyclical effect of almost €1 billion, structural new borrowing is calculated at €20 billion.

18 January 2012

In its Annual Economic Report, central government expects a 0.7% increase in real GDP

in 2012. A temporary economic slowdown is forecast for the beginning of the year, but this is expected to be overcome during the course of the year. Growth is likely to be driven primarily by the domestic economy. Exports will probably rise only moderately, while imports will see more dynamic growth. This results in a negative growth contribution from foreign trade. Private consumption is expected to rise sharply. Investment in machinery and equipment and construction are also forecast to increase, but not on as large a scale as in the previous year.

21 February 2012

The Eurogroup approves a second assistance package for Greece in the amount of €130 billion. However, payment of the loans is conditional on a positive assessment of the implementation of prior measures as well as a successful private sector bail-in.

24 February 2012

The Federal Statistical Office reports a general government deficit ratio (pursuant to the Maastricht criteria) of 1.0% for 2011. Germany thus undershoots the European reference value two years before the deadline set under the excessive deficit procedure.

28 February 2012

In connection with the private sector bail-in for Greece and rating developments, the ECB Governing Council decides to temporarily suspend the eligibility of marketable debt instruments issued or fully guaranteed by the Greek government for use as collateral in Eurosystem monetary policy operations. Affected counterparties can still make use of emergency liquidity assistance. The aforementioned debt instruments will become eligible again in principle upon activation of the collateral enhancement scheme agreed by the heads of state or government of the euro area.

29 February 2012

Under the second three-year tender, the Eurosystem issues €529 billion in liquidity.

1 March 2012

The control account introduced as part of the debt brake is booked for the first time with the difference between the constitutional borrowing limit and the actual level of structural net borrowing in the previous year. Given an actual value of €20 billion and a limit of €45½ billion, the Federal Ministry of Finance calculates a credit item of €25½ billion. By contrast, if, as is actually required in line with the debt brake's intention, the actual structural result for 2010 is taken as a starting value for the borrowing limit in the transitional period, this produces a credit item of only around €10 billion.

13 March 2012

The Bundesbank presents its annual accounts for the 2011 financial year. The profit of €643 million is transferred in full to central government.

Financial and monetary system

In 2011, the financial and monetary system continued to be dogged by severe tension and heightened uncertainty. Against this background, the G20 and the International Monetary Fund (IMF) stepped up their efforts to reform the international monetary system. At the same time, the IMF's lending toolkit was expanded and – in a related development – the question of increasing its financial resources was debated.

The Bundesbank believes the IMF should have the funds it needs to provide effective crisis resolution assistance within the framework of its mandate and subject to strict conditionality. However, it rejects global financial safety nets owing to the moral hazard that they entail. Instead, it is important to further improve crisis prevention by strengthening the IMF's surveillance function and also by maintaining suitable incentives for governments to pursue stability-oriented fiscal and monetary policies. In addition, it is vital that the extensive reforms to the framework of the international financial system adopted as part of the agenda set by the Financial Stability Board (FSB) be translated into national rules in a timely and globally consistent manner. In Germany this includes formulating and assigning a macroprudential mandate, ie a national legal mandate to monitor the stability of the financial system.

In view of the continued escalation of the European sovereign debt crisis in the past year, the measures introduced in the EU and the euro area to restore and safeguard fiscal discipline and to stabilise the banking system need to be implemented speedily and rigorously. German banks managed, on the whole, to strengthen their resilience amid an increasingly adverse environment. Even so, the results available for the first three quarters of 2011 indicate that the impact of the sovereign debt crisis, combined with the deteriorating economic outlook, weighed more and more heavily on profitability and the risk situation as the year progressed. This makes it harder for banks to comply with the need to strengthen their capital base, which they must try to do without squeezing the credit supply. Credit institutions therefore crucially need now to use all available options to increase their capital, beginning with the mobilisation of internal and private sources of own funds. Should German banks be unable to meet the prescribed target of 9% of core tier 1 capital by mid-2012 through their own efforts, they will be able to apply for public funding from the reactivated Financial Market Stabilisation Fund (Sonderfonds für Finanzmarktstabilisierung, or SoFFin).

I International financial and monetary system – international cooperation

1 International monetary system and IMF issues

Spotlight on reform of international monetary system and IMF resources

In the year under review, international financial and monetary policy cooperation was again shaped by the aftermath of the global financial crisis and the escalation of the European sovereign debt crisis. At their Cannes summit in November 2011, the G20 leaders reaffirmed their resolution to continue the reforms aimed at securing a stable and resilient international monetary system. They also agreed on the ongoing need to ensure adequate resources for the IMF so that it can fulfil its systemic responsibilities and asked the G20 finance ministers to study options for a timely increase in the IMF's financial resources. On 19 December 2011, the EU finance ministers reaffirmed their willingness to support a substantial increase in the IMF's resources by pledging a total of €150 billion. The additional funds will be provided to the IMF on the basis of broad and equitable international burden-sharing. In this context, the Bundesbank has signalled its willingness to provide a new bilateral credit line of €41.5 billion subject to certain conditions.

Extension of PCL to PLL not a panacea for systemic crises

Discussion within the G20 and IMF about global financial safety nets led to the expansion of the IMF's toolkit for financial assistance. The Precautionary Credit Line (PCL), which was only introduced in 2010, was converted to the Precautionary and Liquidity Line (PLL). Unlike the purely precautionary PCL, the PLL can be used to make large volumes of liquidity immediately available, with only little economic policy conditionality, to eligible countries with an acute balance of payments problem. The IMF hopes that this extension of the PCL will enable it to respond more quickly and flexibly to systemic crises in order to contain contagion across national borders. As with the PCL, the PLL needs to strike a balance between necessary internal adjustments and temporary IMF financial support so as to minimise moral hazard for governments and markets and avoid magnifying the IMF's financial exposure even further.

"Global Stabilisation Mechanism" inappropriate

During the debate in the G20 on a global financial safety net, policymakers also discussed the idea of setting up a Global Stabilisation Mechanism (GSM) under which the IMF would mobilise resources to unilaterally offer large volumes of liquidity simultaneously to multiple countries whenever the Fund's Executive Board identifies a systemic liquidity crisis. However, the proposal to establish such a mechanism failed to win majority backing. The Bundesbank is critical of this approach as it could require the IMF to expend considerable amounts of funding, eventually overwhelming the IMF's limited resources. This might well then entail quasi-automatic recourse by the Fund to the resources of the national central banks, thereby infringing their independence. Moreover, given the moral hazard that such an approach would entail, it would tend to undermine rather than reinforce the stability of the international financial system. In the view of the Bundesbank, countries' responsibility for ensuring their own economic stability needs to be maintained.

IMF lending at new all-time high

The IMF's lending business expanded significantly owing to the crisis. The Fund's loans, at 87.3 billion special drawing rights (SDR) (€103.6 billion as at 30 December 2011), hit a new all-time high for the third consecutive year and are more than double their 2009 levels (see the table on page 79 and the chart on page 80). The five largest exposures at the end of 2011, accounting for nearly 70% of total lending, were once again concentrated on Europe, with the three euro-area nations of Greece, Portugal and Ireland accounting for a combined share of nearly 46%.

IMF lending

Table 8

Item	30 December 2011		30 December 2010		31 December 2009	
	SDR bn					
Credit commitments		163.4		137.4		108.0
of which Precautionary (Colombia, Mexico, Poland)		70.3		47.5		52.2
Credit committed but not yet disbursed		116.0		103.8		77.1
Lending		87.3		55.6		37.2
Concentration of lending	Per cent					
Largest exposure	Greece	20.0	Romania	17.6	Hungary	20.4
Three largest exposures	Greece, Portugal, Ireland	45.9	Romania, Ukraine, Greece	50.7	Hungary, Ukraine, Romania	55.6

Deutsche Bundesbank

Ample IMF resources available

As at 30 December 2011, the Fund still had around SDR250 billion or €298 billion at its disposal for new lending during the coming 12 months. This includes the resources under the New Arrangements to Borrow (NAB), activated on 1 April and again on 1 October 2011, which represent a multilateral contingency reserve to cope with systemic crises and totalled around €440 billion as at the end of 2011. The Bundesbank's net external asset position vis-à-vis the IMF stood at €8 billion at the end of 2011, as against €4.8 billion a year earlier.

Important to strengthen financial sector surveillance and intensify multilateral surveillance

Important as it is to ensure that the IMF is adequately funded and suitably equipped to provide financial assistance in the context of crisis resolution, its primary task comprises bilateral and multilateral surveillance with a focus on crisis prevention. It is therefore gratifying, particularly in the light of the financial crisis, to note that the importance of the IMF's financial sector surveillance has grown significantly in the past few years. The Fund's Financial Sector Assessment Programs (FSAPs) have now become an integral part of its surveillance. For Germany, an update to the FSAP initiated in 2003 was conducted in 2011. In addition, the IMF is accelerating work to further strengthen its multilateral surveillance. In July 2011 the IMF published its inaugural Spillover Reports for systemically important countries or regions (United States, China, Japan, United Kingdom, euro area). These reports analyse the impact of domestic economic developments and policy actions on other countries. In addition, the first Consolidated Multilateral Surveillance Report was submitted to the IMF's International Monetary and Financial Committee (IMFC) for the 2011 Annual Meetings. This report presents the central policy recommendations from IMF surveillance in a single paper. Moreover, the Fund will, in future, analyse its member countries' foreign reserve holdings more intensively and, together with the Bank for International Settlements, monitor trends in international liquidity.

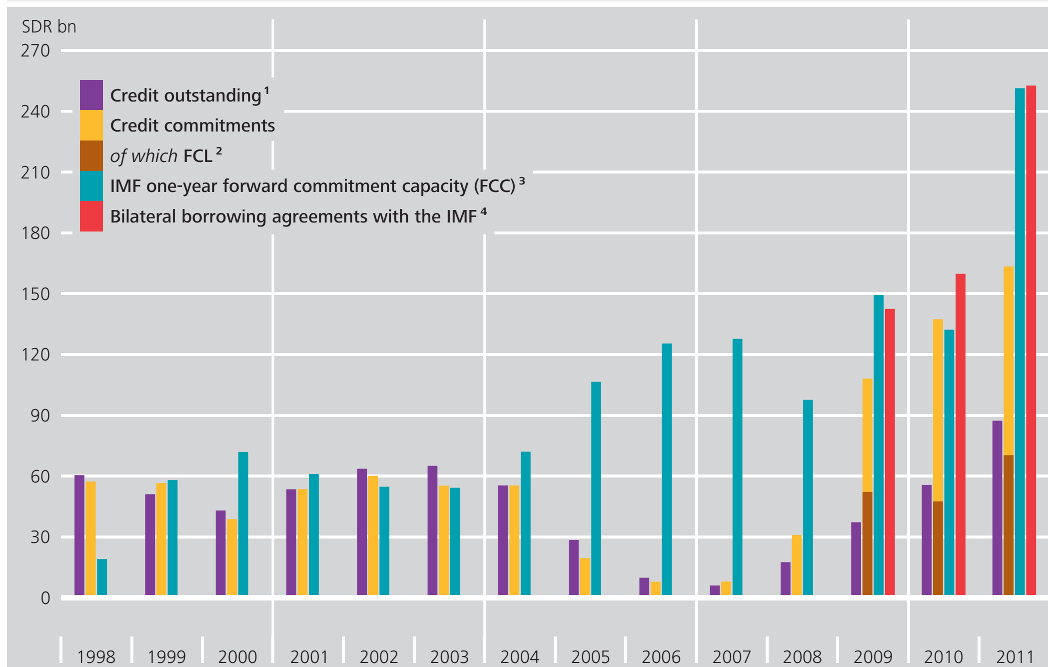
Regularly scheduled surveillance review completed

The IMF completed its Triennial Surveillance Review in October 2011. Along with the necessity of a deeper analysis of cross-border economic and financial repercussions, the Fund identified a need for action in several other areas. This concerns, above all, possible ways of improving the analysis of stability risks, the integration of financial sector surveillance into bilateral and multilateral surveillance, the analysis of member countries' external stability and enhancing the effectiveness of surveillance. In order to achieve these goals, consideration is also being given to adjusting the legal framework for surveillance.

IMF liquidity and lending

Chart 19

End-of-year levels



Source: IMF. **1** Large loans in 1998 to Brazil; in 1999 to Turkey; in 2000 to Argentina; in 2002 to Brazil and Turkey; in 2003 to Argentina; in 2008 to Hungary and Iceland; in 2010 to Greece and Ireland; in 2011 to Portugal. **2** Flexible Credit Line; agreed with Mexico, Poland and Colombia. **3** Comprises quota resources, the New Arrangements to Borrow, bilateral borrowing agreements and note purchase agreements less a prudential balance. **4** Bilateral borrowing agreements and note purchase agreements included in the FCC. The FCC includes a sizeable prudential balance; the bilateral lending volume given here is reported in nominal terms.

Deutsche Bundesbank

Composition of SDR currency basket reaffirmed

Last year the Fund, at the invitation of the G20 and IMFC, examined criteria for broadening the basket of currencies that make up the SDR. The idea behind this was to facilitate the swifter inclusion of the currencies of dynamic emerging market economies in the SDR basket in acknowledgement of their growing stature in the global economy. Key criteria for adding a country's currency to the SDR basket are a high share of the country in global exports and wide use and unconstrained usability of the currency in question. New eligibility criteria, such as use as an international reserve currency, were also on the table. However, owing to the current shortcomings of such new indicators, these proposals did not attract overall support. But agreement was reached on improving the indicators for identifying potential component currencies for the SDR basket; the IMF has already taken an initiative in this direction. Moreover, the Cannes G20 summit proposed a review of the composition of the SDR basket in 2015. Such a review may also be conducted earlier if the criteria for adding a currency to the basket are met.

2 International cooperation

G20 agreements on fiscal policy, growth and employment

European sovereign debt crisis took centre stage at G20 meetings

The renewed outbreak of tension in the international financial markets since the summer of 2011 and the further escalation of the European sovereign debt crisis took centre stage at the G20 meetings in the past year. During the G20 deliberations, the Bundesbank's main emphasis was on supporting suitable measures for regaining the lost confidence of the capital markets by pursuing a sustainability-oriented fiscal policy. Monetary policy must continue to ensure price stability but can also be deployed in support of economic growth – provided this is possible without jeopardising the primary ob-

jective of price stability – and thereby facilitate the process of fiscal consolidation.

Intensification of global economic policy dialogue through Mutual Assessment Process

The Cannes summit adopted an "Action Plan for Growth and Jobs". Its objectives include eliminating internal and external imbalances among the G20 nations. The plan assigns policy measures and objectives to individual countries under what is called a Mutual Assessment Process (MAP). One key self-commitment is fiscal consolidation, with the G20 advanced economies (excluding Japan) resolving to halve their budget deficits between 2010 and 2013 and to reduce or stabilise their government debt-to-GDP ratios by 2016. Germany has also committed to take suitable measures to strengthen private consumption and investment in order to make a medium-term contribution to reducing global current account imbalances. However, Germany has explicitly rejected the setting of quantitative targets for, say, current account balances or wage developments since these cannot be directly influenced by government action. On balance, as a core element of the Framework for Strong, Sustainable and Balanced Growth, the MAP has been firmly established as a global economic policy dialogue which envisages mutual surveillance and is scheduled to be continued in the coming years.

Agreement on principles for collaboration between IMF and RFAs

Non-binding broad principles for collaboration have been agreed between the IMF and Regional Financial Arrangements (RFAs). They are designed to stake out a framework that optimises the institutions' specific features, taking due account of the various RFAs' different objectives, organisational forms and service portfolios.

Agreement on conclusions for international capital flows

In addition, the G20 agreed on a set of "Coherent Conclusions for the Management of Capital Flows Drawing on Country Experiences" for dealing with capital flow management measures. Such controls should be primarily oriented towards maintaining financial stability, with macroeconomic and macroprudential measures taking precedence over capital controls. The G20 also reiterated that free capital movements should remain the long-term goal.

Action plan to develop local bond markets in emerging market economies

Developed local currency bond markets in the emerging and developing world can strengthen national and thus global financial stability. The G20 countries endorsed an "Action Plan to Support the Development of Local Currency Bond Markets" in order to better diversify local financial systems and thereby increase their capacity to absorb the impact of high and volatile capital flows. Building on previous initiatives, the G20 action plan stresses the improvement of technical assistance and the data base. Moreover, the relevant international institutions are urged to present an annual progress report.

Implementing the regulatory reform agenda for the international financial system

Key components of the reform agenda agreed

The financial sector reform agenda commissioned by the G20 leaders and coordinated by the FSB is designed to increase the financial system's resilience to systemic crises and to contain the costs of resolving such crises. The G20 leaders endorsed a tiered system of capital surcharges aimed at bolstering the loss-absorbency capacity of banks identified as global systemically important financial institutions (SIFIs). Moreover, they adopted rules designed to enable even large, complex financial institutions to be resolved without endangering systemic stability. The development of recommendations for the regulatory treatment of the shadow banking sector will be continued in 2012 in several workstreams being coordinated by the FSB.

Globally consistent transposition into national rules and laws crucial

To be effective, the agreed reforms have to be transposed into national rules and laws in a timely and globally consistent manner. Consequently, the reform agenda was barely expanded in 2011; rather, the focus now is increasingly on implementing the agreed reforms and monitoring implementation progress. At their summit in Cannes, the G20 leaders endorsed the Coordination Framework for

Moving towards a more robust financial system – implementing the G20 reform agenda in Europe and Germany

Since the onset of the crisis, a raft of measures have been taken at a global level, especially at the G20 summits, to strengthen the international financial system. 2011 saw further progress in implementing these decisions in Europe and Germany alike.[1]

The establishment of the European Systemic Risk Board (ESRB) on 1 January 2011 significantly strengthened macroprudential oversight in the EU. This new institution is tasked not only with identifying systemic risks at an early stage but also with issuing specific recommendations for effective remedial action in response to such risks. Three microprudential supervisory authorities for banks, insurers and securities markets (EBA, EIOPA, ESMA) were set up to work alongside the ESRB. This new European System of Financial Supervisors (ESFS) also required amendments to existing European financial market regulations, which were specified in two "omnibus" directives.

Alongside amendments to the regulatory framework for credit institutions,[2] the EU measures taken in 2011 to implement the G20 agenda affected, most notably, the regulation of securities markets, especially OTC derivatives markets. One key component of future legislation for these markets will be the regulation put forward by the European Commission in September 2010 on OTC derivatives, central counterparties and trade repositories (European Market Infrastructure Regulation). This regulation aims to reduce existing systemic risks in OTC derivatives trading by making the use of central counterparty (CCP) clearing obligatory and introducing rigorous standards for CCPs. Another key component will be the mandatory reporting of derivatives transactions to trade repositories, designed to aid the analysis of risk distribution within the financial system. Improving transparency in the financial markets is also one of the main objectives of the review of the Markets in Financial Instruments Directive (MiFID) proposed by the European Commission in October 2011. The MiFID review envisages, among other measures, applying existing pre-trade and post-trade transparency requirements to additional financial instruments. Moreover, the review aims to transpose into EU law the G20 commitment to ensure that all standardised OTC derivative contracts are traded on exchanges or electronic trading platforms.

The crisis has also clearly illustrated that both market integrity and its effective enforcement by supervisory authorities are essential to safeguarding confidence in the proper functioning of the markets. On 20 October 2011, the European Commission therefore put forward a proposal for a regulation revising the existing EU legislation on market abuse. In particular, the proposal extends the scope of the market abuse framework and introduces minimum rules on criminal sanctions for insider dealing and market manipulation offences. Rules on short selling and credit default swaps, which are often thought to involve market abuse, are specified in a separate regulation,[3] on which the Council and the European Parliament reached an agreement in autumn 2011 and which is due to come into force in November 2012.

Another response to the ongoing crisis was to expand the regulation of credit rating agencies at the European level. Following on from the 2009 EU regulation on credit rating agencies, which introduced special authorisation and supervisory procedures for such agencies, oversight of credit rating agencies registered in the EU was fully transferred to the European Securities and Markets Authority (ESMA) with effect from July 2011. In November 2011,

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1 See also Implementation of the reform agenda for the regulatory framework of the international financial system, Deutsche Bundesbank, Annual Report 2009, p 87.
2 See section on banking supervision on pp 89-100.
3 Regulation of the European Parliament and of the Council on short selling and certain aspects of credit default swaps.

the European Commission put forward a proposal to further amend the regulation on credit rating agencies, thus seeking, in particular, to facilitate competition between rating agencies and further improve the quality of their ratings.

Another important G20 initiative – stricter regulation for hedge funds – was implemented in the EU by means of a directive on alternative investment fund managers (AIFMD), which came into force in July 2011. As well as introducing an authorisation and registration requirement for alternative investment fund managers and stipulating compliance with organisational standards, this directive also lays down extensive transparency and disclosure requirements vis-à-vis investors and supervisory authorities.

In addition to transposing the relevant European directives into national law, new German legislation in 2011 was mainly focused on strengthening investor protection. For instance, the Investor Protection and Capital Market Functionality Improvement Act *(Anlegerschutz- und Funktionsverbesserungsgesetz)* promulgated in April introduced, among other measures, a registration requirement for investment advisors and sales and compliance coordinators, made stealth strategies in corporate takeovers more difficult and tackled design-related liquidity problems among open-end real estate funds. Furthermore, the Act Reforming the Laws on Intermediaries for Financial Investments and on Investment Products *(Gesetz zur Novellierung des Finanzanlagenvermittler- und Vermögensanlagerechts)* announced in December extends the scope of information, consultancy and documentation standards in the Securities Trading Act *(Wertpapierhandelsgesetz)* to include financial products on the "grey capital market" (eg closed-end funds). In addition, independent investment brokers and advisors are to be made subject to more stringent authorisation requirements.

Implementation Monitoring developed by the FSB. The state of implementation will be monitored particularly closely in priority areas, which notably include the Basel framework, OTC derivatives markets, compensation practices, policy measures for dealing with SIFIs, resolution regimes and shadow banking. The implementation of agreed reforms was also continued in 2011 in the EU and Germany (see box on pages 82 and 83).

3 Developments in the institutional framework

Institutionalisation of FSB agreed

The G20 has decided in principle to put the FSB on a more permanent institutional footing. However, it still has to flesh out the details, especially relating to its legal form and financial autonomy.

ESRB has started its work

The establishment of the European Systemic Risk Board (ESRB) on 1 January 2011 has significantly strengthened macroprudential oversight in the EU. The primary task of this new institution is to detect systemic risk at an early stage. The ESRB issues warnings and recommendations, develops specific proposals for action to effectively counter the identified risks and monitors their implementation. Important ESRB topics in 2011 were interaction between the sovereign debt crisis and the financing of the banking sector, potential contagion effects, stress tests and foreign currency lending.

National macroprudential mandates being enacted

Many EU central banks already perform macroprudential tasks as part of their mandate. The ESRB has developed recommendations for the enactment of national macroprudential mandates which, in particular, set standards for macroprudential objectives, tasks, powers, structure and instruments. Owing to their experience and expert knowledge, central banks should be given a prominent role in the institutional structure of macroprudential oversight, albeit without jeopardising their primary mon-

etary policy role or their independence. German lawmakers are currently in the process of drawing up legislation on a national macroprudential mandate. The importance of the Bundesbank's role should be underscored by assigning it responsibility for independent macroprudential oversight and ongoing analysis, which entails granting the Bundesbank access to all the relevant data and information.

II Current issues relating to the financial system

1 International financial system

Increasing doubts over government bonds' status as a safe haven

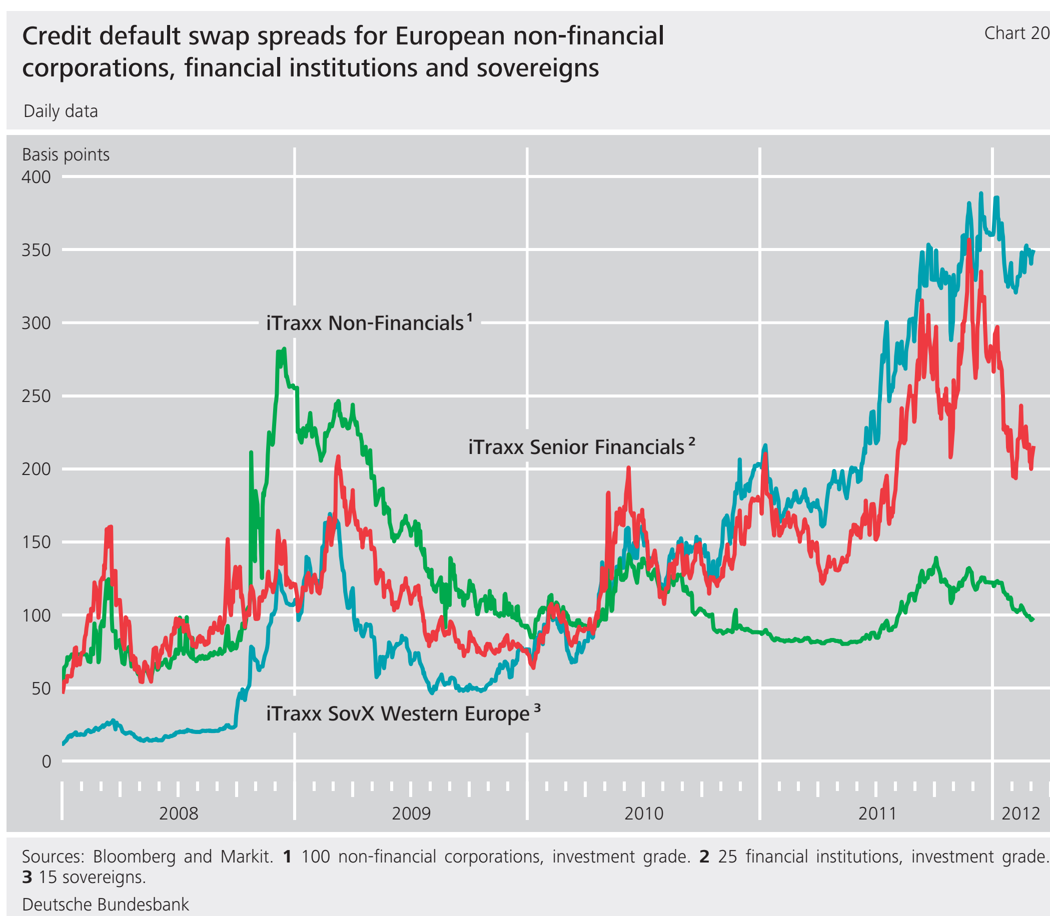
The European sovereign debt crisis, which continued to worsen over the course of 2011, sapped confidence in the proper functioning of the international financial system. Investors questioned the status of a number of countries' government bonds as risk-free investments, which entailed a substantial rise in risk premiums. Although one rating agency's decision to strip the United States of its AAA credit rating at the beginning of August marked a historical turning point, it had little impact on the country's financing conditions. By contrast, a number of euro-area countries faced tough market conditions when issuing bonds. In May 2011, Portugal became the third euro-area state after Greece and Ireland to receive financial assistance from the international community. Over the summer, there were growing signs that the economic adjustment programme for Greece would not go to plan and that financial institutions should expect haircuts on Greek government bonds in both the trading and banking book. The combination of uncertainty over the situation in Greece, concerns about further initiatives to involve private creditors in resolving the crisis, gathering downside risks to economic activity and country-specific developments in Italy and Spain led to a reassessment of credit risk on the markets – even for larger euro-area issuers of government bonds.

Close link between risks for governments and for banks

The tensions in the government bond markets were amplified by lower risk appetite and falling liquidity in other market segments; above all, however, they highlighted the close link between the perceived default risk for governments and for banks (see chart on page 85). Rising haircuts on government bonds not only impaired their use as generally accepted, liquid collateral in the financial system; they also raised growing doubts among market participants about the size of banks' liquidity and capital buffers. Investor groups such as US money market funds markedly reduced their lending to European banks, and uncovered bank bonds with fairly long maturities became extremely difficult to sell in the second half of the year. Many European banks had to accept very unfavourable market conditions, even for secured instruments, to cover their funding needs. The ECB adopted non-standard liquidity measures in response to the growing money market frictions over the course of the year (see box on pages 40 to 44).

Acute risk of negative repercussions on real economy in some countries

The European initiative to recapitalise the banking system and guarantees to safeguard credit institutions' long-term funding helped to combat the loss of confidence (see page 85). Given the extent of the ongoing market tensions, however, there is a substantial risk of disruptions to credit flows in the international financial system having fairly severe repercussions on the real economy in some countries.



Credit default swap spreads for European non-financial corporations, financial institutions and sovereigns

Chart 20

Daily data

Sources: Bloomberg and Markit. **1** 100 non-financial corporations, investment grade. **2** 25 financial institutions, investment grade. **3** 15 sovereigns.
Deutsche Bundesbank

2 Stability of the German financial system

Risk situation worse despite positive domestic stimuli

In 2011, the German financial system remained comparatively stable – although the risk situation in a number of euro-area countries deteriorated sharply, especially in the second half of the year. Positive stimuli in Germany limited domestic credit risks and thus the contagion effects stemming from the intensification of the European sovereign debt crisis, which German banks were not completely immune to, however.

Strengthened resilience due to improved capitalisation and …

In the first three quarters of 2011, the major German banks with an international focus were able to strengthen their resilience by improving the quality and quantity of their regulatory tier 1 capital. This involved raising the quality of the existing capital base, increasing capital and retaining earnings. The latter was aided by a positive earnings performance in the first half of the year.

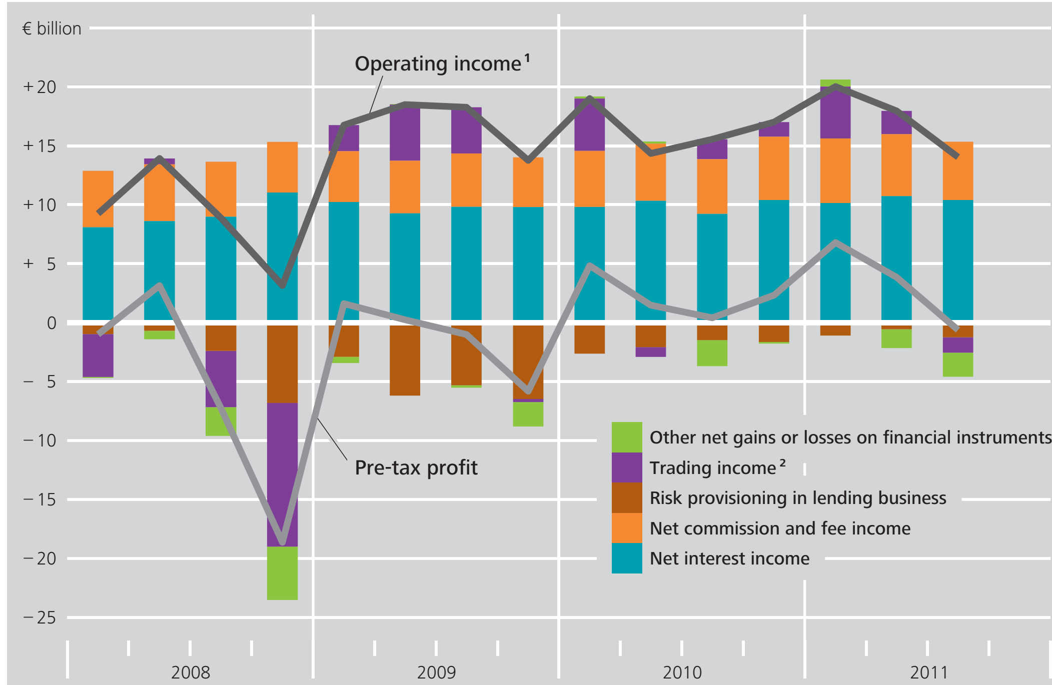
… declining total assets

The major German banks with an international focus also increased their average tier 1 capital ratio in the year under review by reducing their holdings of risky assets. Adjusted for the one-off effects of applying the Accounting Law Modernisation Act *(Bilanzrechtsmodernisierungsgesetz)* for the first time, aggregate total assets fell distinctly for this sample of banks. The conditions that the European Commission imposed on a number of banks as well as the transfer of assets at serious risk of default to resolution agencies played a particular role.

Recapitalisation resolved upon

In order to boost investors' confidence in European financial stability, in October 2011 the European heads of state or government resolved, *inter alia*, on a recapitalisation programme for banks. Under this programme, major European banks must hold core tier 1 capital of at least 9% of risk-weighted assets for a temporary period starting 30 June 2012, taking into consideration the market value of the respective institutions' sovereign exposures

Earnings situation of major German banks with an international focus* Chart 21



* The figures cover 12 major German banks with an international focus (big banks as well as selected Landesbanken and mortgage banks) and are based on the published intra-year group accounts in accordance with IFRS. **1** Sum of net interest income, net commission and fee income, and trading income. **2** Including net gains or losses on financial assets/liabilities designated at fair value through profit or loss.

Deutsche Bundesbank

towards European Economic Area (EEA) countries as at 30 September 2011. According to the European Banking Authority, this means that German banks need to raise €13.1 billion in new capital.

SoFFin reactivated

If institutions cannot meet these requirements using their own resources, they will be provided with funds from national budgets. In Germany, the EU Council's decision has been transposed into national law in the form of the second Financial Market Stabilisation Act. In addition to reactivating the Financial Market Stabilisation Fund (SoFFin), this Act grants Germany's Federal Financial Supervisory Authority (BaFin) more extensive rights. In an extraordinary risk situation, BaFin can demand that an institution maintain higher own funds than required under the Solvency Regulation *(Solvabilitätsverordnung)*. The institutions in question must present a transparent plan outlining how they intend to achieve this, which will be reviewed by BaFin and the SoFFin steering committee.

Focus on increasing capital, not reducing risky assets

In order to limit negative repercussions on the flow of credit to businesses and households and thus to prevent far-reaching feedback effects between the overall economic situation and financial stability, the core tier 1 capital ratio set by the European Council is to be achieved chiefly by raising core tier 1 capital and not by reducing holdings of risky assets. However, if non-performing loans are not extended and adjustments that are necessary in the longer term are also accelerated, a certain reduction in holdings of risky assets is a welcome development in terms of financial stability.

German insurers robust

In light of the challenges posed by the European sovereign debt crisis and the low level of interest rates, German insurance companies performed relatively well in the year under review. For instance, the stress test conducted by

the European Insurance and Occupational Pensions Authority revealed no acute risks to the financial stability of the German insurance industry.

3 Profitability of German banks

Following stabilisation of earnings situation in 2010, …

After the earnings situation of the German banking system had started to stabilise in 2010, a sideways tendency was seen throughout 2011. The escalation of the European sovereign debt crisis in spring 2011 weighed considerably on operating income, which also put the resilience of the German banking industry to the test again.

… growing strains in 2011

However, in the first quarter of 2011, the sample of major German banks with an international focus was able to improve quarterly pre-tax profits by €4.4 billion compared with the previous quarter to a total of €6.7 billion (see the chart on page 86). This was due to the continued moderate increase in net interest income as well as a clear rise in profits from own-account trading. While interest business thereafter had a stabilising effect and risk provisioning in domestic lending was also low due to the intact economy and high employment, renewed turmoil on the financial markets had a major impact on income statements. Trading income plummeted in the third quarter and was €1 billion in negative territory. A loss was also reported for the item "Other net gains or losses on financial instruments", probably chiefly because of high write-downs on Greek government bonds. However, the more favourable situation at the beginning of the year meant that pre-tax profits – calculated over the first three quarters – amounted to €10 billion and were thus still €3.3 billion higher than in the prior-year period. Nonetheless, in light of the uncertainty that continues to plague the European and international financial system as well as the muted economic outlook for the euro area, profitability is forecast to deteriorate further.

Banking supervision

At the international level, in 2011 the Bundesbank helped to carry out follow-on work from and supplement Basel III, which is to further strengthen financial stability and ensure an international level playing field. Special rules for (global) systemically important banks are key to this: besides increasing banks' ability to absorb losses, a harmonised framework is also to be established in the future with the intention of allowing these credit institutions to be wound up at no expense to the taxpayer. Moreover, the European Banking Authority started work at the beginning of 2011; its activities last year centred on an EU-wide bank stress testing exercise and on a capital exercise with regard to banks' recapitalisation needs. At the national level, a tight schedule meant that work on implementing the Capital Requirements Directive (CRD) IV was begun even though the consultations in Brussels have not yet been finalised.

Within Germany, the Bundesbank is responsible for the ongoing monitoring of institutions pursuant to the German Banking Act (Kreditwesengesetz) and the Payment Services Oversight Act (Zahlungsdiensteaufsichtsgesetz). In 2011, a particular focus was placed on insights gained in the joint BaFin and Bundesbank risk committee being translated into supervisory strategy and specific supervisory action, thus ensuring an integrated approach to microprudential and macroprudential aspects. The key instrument is the regular risk profile, in which all information of relevance for a risk assessment is brought together and evaluated for every institution, thus making the risk profile the mainstay of supervisory action. In 2011, the Bundesbank also carried out 225 audits of banking operations to ascertain compliance with the Minimum Requirements for Risk Management (Mindestanforderungen an das Risikomanagement) and to approve banks' internal models. The intensity of supervisory activities was furthermore reflected in a significant increase in the number of meetings with senior management.

I Development of the international prudential supervisory standards

1 Basel III: follow-on work and implementation

The Bundesbank was again actively involved in the negotiations of the Basel Committee on Banking Supervision (BCBS) last year. The BCBS' attention centred on supplementary work relating to the Basel III regulatory framework, which was published at the end of 2010, and on preparatory work on monitoring implementation.

Follow-on work from Basel III

The follow-on work required in various areas covered by the new framework related, for example, to the definition of capital, which now demands that all supervisory capital instruments must fully absorb losses at the point of non-viability.[1] Moreover, some minor adjustments were made to the way in which capital requirements to cover the risk of a potential deterioration in the creditworthiness, or an increase in the risk premiums, of counterparties are calculated for derivatives that are not settled via a central counterparty (credit valuation adjustment capital charge).[2] By regularly publishing answers to interpretation questions, the BCBS helps to elaborate frequently asked questions (FAQs) relating to the Basel III framework.

FAQs on Basel III

Internationally consistent implementation of Basel III

At the Seoul summit in 2010, the G20 leaders committed themselves to a parallel and consistent implementation of the Basel III regulatory framework. This includes transposing it into national legislation by the end of 2012 and phasing in application of the rules from 2013 onwards. It is very important for the credibility of the relevant international agreements and as a signal to the markets that this commitment be met.

Overseeing implementation of Basel III

The BCBS will conduct a comprehensive multistage procedure to review the status of implementation in the individual member states. It thereby hopes to identify where the national supervisory requirements deviate from the Basel rules and thus potentially pose a risk to an international level playing field and financial stability. In addition to the supervisory framework, it will also examine whether, in supervisory practice, the application of the rules leads to uniform capital requirements for banks. The results of this review process are to be published.

Consultations

Towards the end of last year, the BCBS issued a consultative document on the treatment of valuation gains in common equity tier 1 capital in the fair value accounting of liabilities from derivative transactions that are due to a deterioration in the bank's own credit risk or an increase in its risk premiums (debit valuation adjustments). In addition, proposals were made for changing the disclosure requirements relating to regulatory capital.[3] Moreover, the stipulations for the short-term liquidity coverage ratio (LCR) and the structurally oriented net stable funding ratio (NSFR) as well as the leverage ratio have not yet been finally agreed. The BCBS is currently collecting data in order to review both the assumptions on which the stipulations are based and the calibration, and to fine-tune the rules which will enter into force in 2015 and 2018 respectively.

Finalisation of work on liquidity rules and leverage ratio

Work on refining the international prudential supervisory standards and harmonising supervisory practices was stepped up significantly in 2011, with the Bundesbank representing its position in more than 60 working groups.

1 Press release issued by the Central Bank Governors and Heads of Supervision in January 2011 (www.bis.org/press/p110113.pdf).
2 Revised version of the Basel III regulatory framework, June 2011 (www.bis.org/publ/bcbs189.pdf).
3 BCBS publications of 19 December and 21 December 2011 (www.bis.org/publ/bcbs212.pdf (19 December) and www.bis.org/publ/bcbs214.pdf (21 December)).

2 Impact study on Basel II and III

Basel III implementation monitoring

In order to analyse continuously the probable impact of the Basel III requirements on the banking industry, semi-annual data surveys have been carried out since the beginning of 2011 (Basel III implementation monitoring); 34 German credit institutions are currently taking part on a voluntary basis. Monitoring, which is to continue until Basel III has been fully implemented in 2022, provides early insights into whether the calibration of the new supervisory requirements is adequate. The Bundesbank provides the BCBS with comprehensive technical support in its data collection and analysis activities, and is also responsible on behalf of the European Banking Authority for implementation and data analysis within the EU. At the same time, it provides the German institutions with a lot of support and evaluates the national results.

3 Trading book

Interpretive issues and fundamental review

From 2012 onwards, credit institutions must observe stricter rules on monitoring risks in the trading book. In drawing up the new requirements, the BCBS has addressed significant problems that were identified during the subprime crisis. In February 2011, the BCBS first published a document on interpretive issues with respect to stressed value-at-risk, the incremental risk charge, the comprehensive risk capital charge and the standardised measurement method. As part of a fundamental review being carried out by the BCBS, an in-depth look is currently being taken at the overall Pillar 1 market risk framework. The focus of this work lies on creating a more exact distinction between the trading book and the banking book and on developing new rules for both the standardised and the model approach, taking into consideration market liquidity and the treatment of complex products.

Reviewing the implementation of the Basel regulatory framework (the "RWA initiative")

In 2011, the Basel Committee on Banking Supervision decided to review whether its members were correctly implementing the Basel II, Basel 2.5 and Basel III rules for calculating regulatory capital ratios for risk-weighted assets (the "RWA initiative"). The first level of the initiative will consider the extent to which the Basel regulatory framework has been transposed into national law, the second will review the consistency of this legal implementation with the international agreements and the third will establish whether the banks' internal models, taking account of their economic and legal setting, are conducive to ensuring internationally comparable regulatory capital requirements that are consistent with the Basel rules. The bulk of the work will be carried out off-site using information available to supervisors and data collected at the participating banks. However, similarly to the procedure used in the IMF's Financial Sector Assessment Program, an international team of assessors, accompanied by the national supervisory authorities, will additionally look into selected implementation issues on-site in the individual countries. In performing this work, the BCBS wants to ensure that the Basel framework is truly regarded as a global capital standard. Initially, work will be carried out in Japan, the United States and – based on the European Commission's proposal for a directive to implement Basel III (CRD IV) – in Europe.

The RWA initiative is taking the BCBS into new territory, where it now not only sets international standards but also actively monitors their implementation in its member countries. In Germany, the review will look at the largest complex financial institutions. The European Banking Authority is considering conducting a study that is similar but confined to the calculation of capital ratios, probably involving a greater number of banks.

4 Global systemically important financial institutions

Regulation for global systemically important banks

At the Cannes summit in the autumn of 2011, the G20 leaders decided on extensive measures to handle systemically important financial institutions. Moreover, in Basel III, the BCBS has laid down a special regulation for global systemically important banks (G-SIBs): the systemic importance of banking groups with global operations is evaluated using an approach based on five indicator categories (size, global activity, interconnectedness, lack of substitutability and complexity). Of a sample of 73 banks, 29 were identified as being G-SIBs using this method. Depending on the degree of their systemic importance, these G-SIBs are classified as belonging to one of four buckets, which are allocated common equity capital surcharges of between 1.0 and 2.5 percentage points. A fifth category with a surcharge of 3.5%, which will initially remain empty, is intended to discourage banks from trying to become even more systemically important. In exceptional cases, adjustments may be made at supervisors' discretion.

5 Basel Core Principles for Effective Banking Supervision

Lessons from the financial crisis and development of supervisory standards

In addition, the BCBS decided to issue for consultation the draft of the revised Core Principles for Effective Banking Supervision. As with the 2006 version, the aim in revising the Core Principles was to reflect both the lessons learned from the financial crisis and developments in supervisory standards. Principles on corporate governance and disclosure have been included for the first time. Moreover, the document stresses that the supervisory approach must be commensurate with banks' risk profile and systemic importance. It also underlines the supervisors' obligation to intervene early and to cooperate with resolution authorities and other bodies in the event of a crisis. Finally, the Core Principles lay down the way in which macroeconomic trends are recognised in the supervisory process and regulate cooperation with the authorities responsible for monitoring macroeconomic supervision.

Supervision to be commensurate with risk profile and systemic importance

II European work on strengthening supervisory cooperation

1 The European Banking Authority

New supervisory authorities for stronger "Europeanisation" of supervision

In line with the creation of the new European System of Financial Supervisors (ESFS), the European Banking Authority (EBA) also started work on 1 January 2011, taking over from the Committee of European Banking Supervisors (CEBS). The EBA is organised as an EU authority. Nonetheless, it is to remain independent, for example, through the member organisations playing a major role in its activities. As was the case with CEBS in the past, the Bundesbank and the Federal Financial Supervisory Authority (BaFin) are actively involved in the work of the EBA and its working groups.

EBA has coordinating role, but also powers of intervention

The EBA is equipped with much more extensive powers than CEBS to allow it – in cooperation with the national supervisory authorities – to improve the coherence of banking supervision, strengthen the supervision of cross-border groups and introduce a single European rule book for credit institutions. For instance, the EBA is instrumental in developing binding, directly applicable rules (known as regulatory technical standards and implementing technical standards) and is to ensure the uniform

application of European banking supervisory legislation. Within the supervisory colleges, the EBA has been given a mediation role to settle disagreements between national supervisory authorities in the EU with binding effect. In crisis situations that could seriously jeopardise the proper functioning of the financial markets or the stability of the financial system in Europe as a whole or in part, in cases where EU supervisory legislation has been breached, or in settling disagreements, the EBA can in individual cases – if necessary – issue direct instructions to the competent supervisory authorities and, potentially, to individual institutions.

2 Stress tests and stability studies

2011 EU-wide bank stress test

In the business year under review, the Bundesbank and BaFin jointly contributed to the development and implementation of the EU-wide bank stress testing exercise coordinated by the EBA. The participating banks from Germany accounted for more than 60% of the German banking system as measured by the balance sheet total on a consolidated basis. The 2011 bank stress testing exercise included an adverse scenario which assumed a marked deterioration in macroeconomic variables. Liquidity risks in refinancing that have an impact on income were also taken into consideration. The EBA's strict definition of core tier 1 capital was used as a benchmark for the stress test. All 12 German banks, whose results were published on 15 July 2011, achieved the core tier 1 capital ratio of at least 5% under the adverse scenario, a requirement for passing the stress test.

Capital exercise among European banks

In October/November of the business year under review, the Bundesbank and BaFin jointly helped to carry out an EBA exercise on potential recapitalisation needs. This exercise put into practice the European Council decision that requires a group of large complex financial institutions to achieve a core tier 1 capital ratio of at least 9% by the end of June 2012 taking into account hidden losses from claims on EEA member states, a figure which is well above the regulatory requirements. The exercise involved 70 European credit institutions, 13 of which were from Germany. Based on the credit institutions' quarterly accounts as at 30 September 2011, on 1 December 2011 the EBA stated that capital requirements at EU level totalled €114.7 billion, with six German credit institutions accounting for €13.1 billion of that figure.

3 Supervisory colleges

Supervisory colleges set up and functioning

The main task of supervisory colleges is the ongoing and timely exchange of prudential supervisory information. Supervisory colleges are set up if a credit institution has subsidiaries or significant branches in other countries. The German supervisory authorities act as the consolidating supervisor in supervisory colleges for a total of 19 banking groups and also participate in 27 supervisory colleges as a host supervisor.

Legal requirements for supervisory colleges in Europe

In 2011, full compliance with the processes detailed in the Banking Directive[4] was required for the first time. The joint decision on the adequacy of own funds pursuant to Article 129 (3) of Directive 2006/48/EC, taken on the basis of a joint risk assessment drawn up beforehand, was particularly important. The supervisory colleges' activities are based on the guidelines[5] developed by CEBS in 2010, which the EBA must translate into binding technical standards.

4 Directive 2006/48/EC relating to the taking up and pursuit of the business of credit institutions in conjunction with Directive 2006/49/EC on the capital adequacy of investment firms and credit institutions.
5 In particular the Guidelines for the Operational Functioning of Supervisory Colleges (GL34) and the Guidelines for the Joint Assessment of the Elements Covered by the Supervisory Review and Evaluation Process (SREP) and the Joint Decision Regarding the Capital Adequacy of Cross-Border Groups (GL39).

III Development of the national prudential supervisory standards

1 Transposition of the amended Banking Directive and the amended Capital Adequacy Directive

Transposition of amended international prudential supervisory standards into national law

The Second Regulation to Further Implement the Amended Banking Directive and the Amended Capital Adequacy Directive *(Zweite Verordnung zur weiteren Umsetzung der geänderten Bankenrichtlinie und der geänderten Kapitaladäquanzrichtlinie)* came into force on 31 December 2011, thus transposing the provisions of Directive 2010/76/EU (CRD III) into national law. These amendments – also known as Basel 2.5 – mainly affect the provisions of the Solvency Regulation *(Solvabilitätsverordnung)* regarding the capital requirements for risk exposures in the trading book and for securitisation positions, and are based on lessons learned by supervisors both nationally and internationally during the financial crisis. For instance, the financial crisis exposed the clear shortcomings in banks' internal market risk models. In future, institutions will therefore have to fulfil additional capital requirements for migration risk and counterparty credit risk (incremental risk charge) and for stress conditions (stressed value-at-risk) when using internal models. Furthermore, the amendments limit the institutions' ability to treat securitisation positions using approaches based on internal models, and stipulate a standardised and thus stricter capital requirement for these positions. For resecuritisation positions held in the banking book, separate risk weights that are much higher than those for simple securitisation positions are to be introduced. In addition, the disclosure requirements (Pillar 3) are to be extended substantially in order, notably, to improve transparency in the area of securitisation.

Stricter requirements for internal market risk models and resecuritisations

2 Capital Requirements Directive IV

Proposals of 20 July 2011 for a directive and a regulation

On 20 July 2011, the European Commission adopted a legislative package designed to overhaul the supervision of credit institutions and investment firms (CRD IV). The package comprises a proposal for a directive and a proposal for a regulation. These proposals are currently under debate in both the Council and the European Parliament and, like Basel III, are due to come into force in the EU member states from 1 January 2013 onwards.

Regulation is directly applicable, …

The EU regulation aims, in particular, to transpose the Basel III rules into European law. As EU regulations are directly applicable in the member states, they do not need to be transposed into national law. Through this regulation, the European Commission is seeking to create a single rule book to eliminate regulatory differences between the EU member states. By contrast, the directive will have to be transposed into national law once it has been adopted by the Council and the European Parliament. The proposal for a directive includes revised provisions on taking up and pursuing the business of credit institutions as well as on the freedom of establishment and the freedom to provide financial services. It introduces new provisions on corporate governance and prudential sanctioning regimes, as well as proposals for reducing reliance on external ratings in the supervisory framework.

… whereas directive has to be transposed into national law

3 Crisis management

German Bank Restructuring Act

In passing the Bank Restructuring Act,[6] which came into effect at the beginning of 2011, German legislators implemented the first crisis management provisions in national law. The Act is designed to enable the difficulties of a distressed systemically important bank to be overcome without jeopardising the stability of the financial system or burdening the taxpayer. The Credit Institution Reorganisation Act *(Gesetz zur Reorganisation von Kreditinstituten),* which was introduced as part of the Bank Restructuring Act, envisages a procedure for restructuring and reorganising credit institutions. New provisions have been added to the German Banking Act *(Kreditwesengesetz)* which provide the authorities with the option of issuing a transfer order (sections 48a *et seq* of the Banking Act) – a resolution measure which allows the systemically important components of an institution to be transferred, for example, to a bridge bank in order to safeguard financial stability. Further changes, such as measures to improve the adequacy of institutions' own funds and their liquidity position or the option of appointing a special representative, have enhanced the prudential toolkit for tackling crises. Moreover, a restructuring fund was set up at the Financial Market Stabilisation Agency *(Finanzmarktstabilisierungsanstalt,* or FMSA) to provide financial backing, where necessary, for measures to stabilise the financial market. The banking industry will finance this fund via the banking levy.

The Bank Restructuring Act is likely to be amended in 2012 once the European Commission has presented its expected proposal for a directive on crisis management in the financial sector. The work of the Financial Stability Board, which is focused on the urgent task of harmonising crisis management and resolution regimes in the context of its SIFI project, will also give rise to amendments.

4 Minimum Requirements for Risk Management

Resilience: supervisory authorities publish consistency considerations

In the course of 2011, institutions in Germany were obliged to implement the amendments to the Minimum Requirements for Risk Management (*Mindestanforderungen an das Risikomanagement,* or MaRisk) that were made at the end of 2010. In particular, changes were needed in the areas of liquidity risk management, strategy processes, stress testing, risk concentrations and resilience. There was great uncertainty on the part of institutions regarding the benchmarks that supervisors would apply when assessing institutions' individual approaches to ensuring resilience. Following a request from the central associations representing the banking sector, the supervisory authorities summarised their considerations on the matter in a paper on the assessment of banks' internal approaches to ensuring resilience, which was published on 7 December 2011.

5 Circular on interest rate risk in the banking book

Revised requirements for calculating prudential metrics

In order to bring the interest rate scenarios specified by the supervisory authorities into line with the provisions which will apply throughout the EU in future, Circular 11/2011 (BA), which was published on 9 November 2011, outlines the revised requirements that institutions must apply when they assess the effects of a sudden and unexpected change in interest rates. Moreover, in future, supervisors expect regular reports from all institutions on the calculated effects of such a change.

6 Act on the Restructuring and Orderly Resolution of Credit Institutions, on the Establishment of a Restructuring Fund for Credit Institutions and on the Extension of the Limitation Period for the Liability of Governing Bodies under Company Law (Gesetz zur Restrukturierung und geordneten Abwicklung von Kreditinstituten, zur Errichtung eines Restruktuierungsfonds für Kreditinstitute und zur Verlängerung der Verjährungsfrist der aktienrechtlichen Organhaftung), Federal Law Gazette (Bundesgesetzblatt) 2010, part 1, number 63, p 1900.

6 Implementation of the Second E-Money Directive

New oversight act for e-money institutions

The Act Implementing the Second E-Money Directive *(Gesetz zur Umsetzung der Zweiten E-Geld-Richtlinie)* (2009/110/EC) came into force on 30 April 2011. The Directive's aim is to create a harmonised legal framework for e-money issuance, to remove barriers to market entry and to promote the use of e-money. The Directive and the Act transposing it into German law stipulate that the prudential supervisory regime for e-money institutions should be aligned with the rules applicable to payment institutions under Directive 2007/64/EC on payment services. Particularly given that e-money business is no longer the sole preserve of credit institutions, the prudential regulations were transferred from the Banking Act to the Payment Services Oversight Act *(Zahlungsdiensteaufsichtsgesetz).*

IV Ongoing monitoring

1 Current developments

Streamlining of the German banking network

At the end of 2011, 2,048 domestic credit institutions were registered as being subject to the German Banking Act, down from 2,084 at the end of 2010.[7] E-money institutions (12) are no longer included in this figure as these institutions are now supervised pursuant to the provisions of the Payment Services Oversight Act. The moderate streamlining of the German banking network continued in 2011, with 24 fewer credit institutions than in the previous year (the number of institutions fell by 22 in 2010). A total of 39 credit institutions closed down, owing predominantly to mergers; 17 of these institutions were credit cooperatives and three were savings banks. These closures were partly offset by 15 new institutions, mainly regional banks and branches of foreign banks from the European Economic Area (EEA) as well as three new housing enterprises with a saving facility. In addition to credit institutions, financial services institutions are also subject to supervision pursuant to the Banking Act. With

7 Credit institutions pursuant to section 1 (1) of the Banking Act (including institutions which are in liquidation or resolution). For the sake of systematic classification, all 41 securities trading banks are also included here.

Ongoing monitoring of institutions — Table 9

Number of operations conducted

Item	2009	2010	2011
1 Reports, monthly and other returns			
Individual reports pursuant to sections 13 to 14 of the Banking Act	95,014	85,140	91,396
Single borrowers listed in the summary reports submitted pursuant to sections 13 to 14 of the Banking Act	2,146,240	2,157,927	2,208,220
Reports pursuant to sections 24 and 24a of the Banking Act	20,997	26,398	44,732
Monthly returns and other data pursuant to section 25 of the Banking Act	30,291	30,598	30,023
Reports pursuant to the Solvency Regulation	8,684	8,584	8,388
Reports pursuant to the Liquidity Regulation	26,052	25,752	24,964
2 Audit reports and reports on activities	6,328	6,137	5,707
3 Meetings with senior management	2,345	1,957	2,738
4 Audits of banking operations	223	214	225
5 Audits pursuant to the Deposit Guarantee and Investor Compensation Act	.	32	37

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Credit register of loans of €1.5 million or more Table 10

Third quarter	Volume of loans of €1.5 million or more		Number of loans of €1.5 million or more reported		Number of reporting		
	€ billion	Percentage change	Number	Percentage change	institutions 1	financial enterprises	insurance corporations
2001	7,087	+ 9.2	525,020	+ 2.9	2,946	955	644
2002	7,161	+ 1.0	526,552	+ 0.3	2,777	1,075	621
2003	6,995	− 2.3	514,433	− 2.3	2,624	1,174	633
2004	7,125	+ 2.0	504,111	− 2.2	2,552	1,270	635
2005	7,843	+ 10.8	504,202	− 0.0	2,519	1,430	622
2006	8,067	+ 2.9	507,839	+ 0.7	2,491	1,360	615
2007	8,622	+ 6.9	504,095	− 0.7	2,405	981	619
2008	9,989	+ 15.9	518,331	+ 2.8	2,328	982	634
2009	9,375	− 6.2	517,339	− 0.2	2,322	959	622
2010	9,267	− 1.2	527,375	+ 1.9	2,446	965	606
2011	9,446	+ 1.9	537,423	+ 1.9	2,411	940	596

1 Credit institutions and financial services institutions.
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a view to ensuring comprehensive supervision of the market for financial services in the broader sense, not only the activities of investment services enterprises (in particular, proprietary trading as a service for third parties, contract and investment broking, investment advice and portfolio management) but also non-EEA deposit broking, foreign currency dealing, factoring and finance leasing are regarded as financial services requiring authorisation under the Banking Act. The number of supervised financial services institutions fell to 1,479 at the end of 2011, down from 1,601 at the end of 2010, owing predominantly to relinquishments of authorisation to engage in factoring and finance leasing, and the expiry of the transitional period pursuant to the Payment Services Oversight Act, in particular for money transmission services. Moreover, at the end of 2011, 31 domestic payment institutions were registered as being subject to the Payment Services Oversight Act.

Ongoing supervision

The Bundesbank's Regional Offices are responsible for the ongoing monitoring of credit institutions, financial services institutions and payment institutions pursuant to section 7 of the Banking Act. The key instrument in the assessment of credit institutions and for establishing the annual supervisory schedule is the risk profile drawn up by the Bundesbank. A risk profile is created by regularly and systematically pooling information from audit reports, other reports and returns as well as other sources with the knowledge obtained from direct contact with the institutions and condensing all these data to create a "big picture" of each institution's risk situation.[8] The supervisory process also includes findings from the risk committee set up in 2009, in which BaFin and the Bundesbank regularly discuss the risk situation of the banking system from the angle of ongoing monitoring and financial stability. The insights gained feed into the joint supervisory strategy developed by BaFin and the Bundesbank as well as into specific supervisory action.

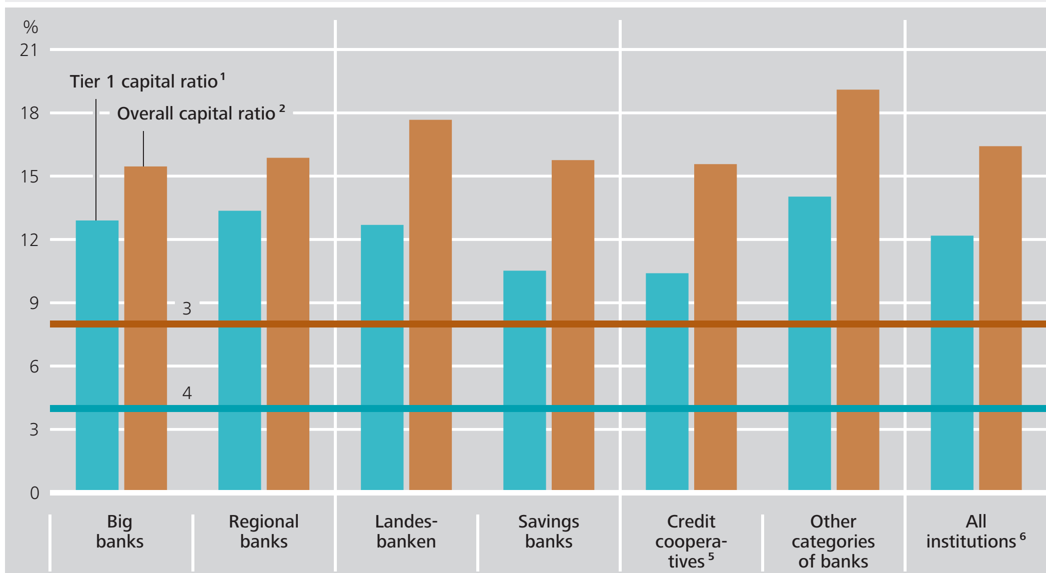
In addition, extensive work to overhaul the prudential reporting system has begun; in future, supervisors will receive better and more up to date information about the situation regarding the banks, thus enabling them to identify possible undesirable developments at an earlier stage. This also includes the lowering of the re-

8 See the Prudential Supervisory Guideline (Aufsichtsrichtlinie) – Guideline on the Implementation of and Quality Assurance for the Ongoing Monitoring of Credit Institutions and Financial Services Institutions by the Deutsche Bundesbank (Richtlinie zur Durchführung und Qualitätssicherung der laufenden Überwachung der Kredit- und Finanzdienstleistungsinstitute durch die Deutsche Bundesbank) – of 21 February 2008.

Overall capital ratio and tier 1 capital ratio of institutions from the whole banking sector submitting reports pursuant to the Solvency Regulation*

Chart 22

December 2011 levels



* Single-entity reports from credit institutions and financial services institutions plus reports submitted by groups of institutions and financial holding groups that are parent-waiver institutions pursuant to section 2a (6) of the Banking Act less the single-entity reports submitted by institutions that are subordinated to a parent-waiver institution (the aforementioned definition covers the "whole banking sector"). **1** Tier 1 capital ratio = (total tier 1 capital for solvency purposes ÷ capital charges for counterparty risk, market risk and operational risk pursuant to the Solvency Regulation) x 8. **2** Overall capital ratio = (total own funds ÷ capital charges for counterparty risk, market risk and operational risk pursuant to the Solvency Regulation) x 8. **3** The minimum overall capital ratio is 8% under the Solvency Regulation. **4** The minimum tier 1 capital ratio is 4% pursuant to section 10 of the Banking Act. **5** Excluding regional institutions of credit cooperatives. **6** Including regional institutions of credit cooperatives.

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porting threshold pursuant to section 14 of the Banking Act to €1 million.

2 Audits

Minimum Requirements for Risk Management

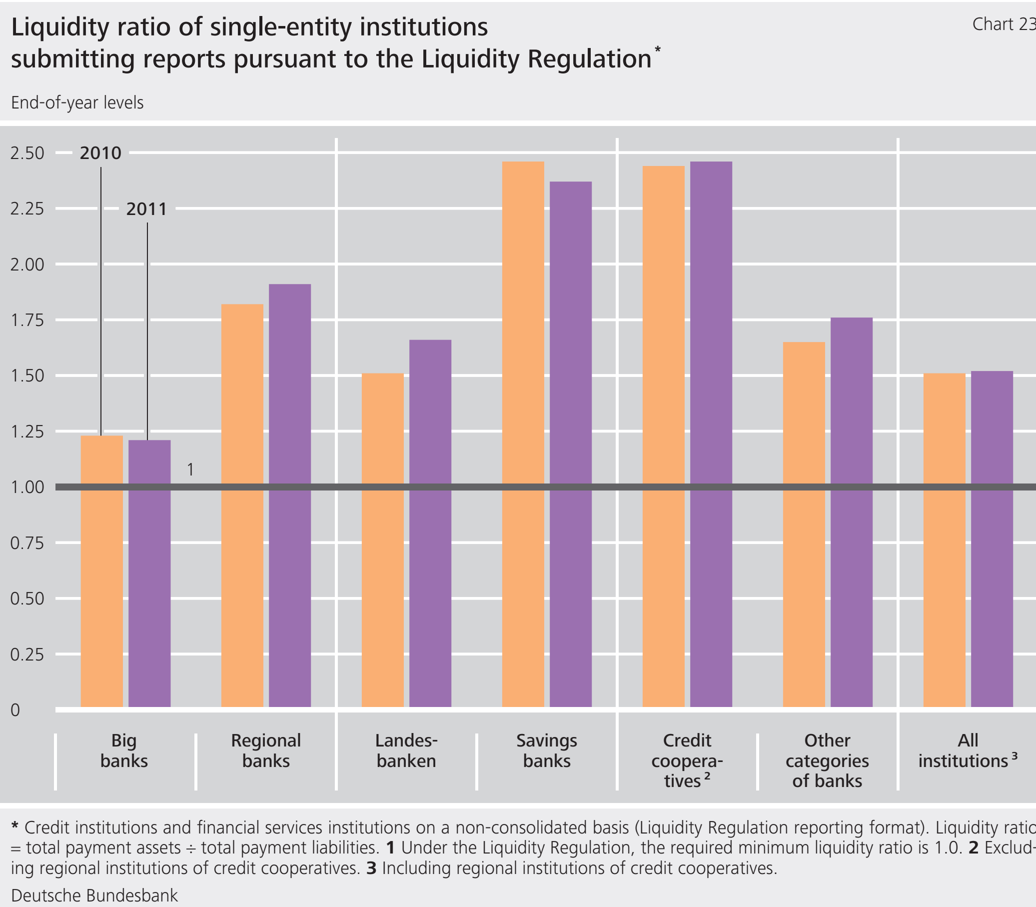
In 2011, the Bundesbank performed 172 on-site inspections on the basis of the Minimum Requirements for Risk Management as entrusted to do so pursuant to section 44 (1) sentence 2 of the Banking Act. These risk and process-oriented system audits examined the organisation of risk management practices pursuant to section 25a (1) of the Banking Act. Supervisors focused, in particular, on the assessment of banks' internal approaches to ensuring their resilience and on the adequacy of business organisation in credit business.

Audits of internal risk models

Furthermore, as in 2010, a total of 53 audits of banking operations for approval of internal risk models were conducted in 2011. These concerned the use of an Internal Ratings-Based Approach (IRBA procedures), market risk models, Advanced Measurement Approaches (AMA) for operational risk and liquidity risk models. The specification of new supervisory rules in Basel 2.5 entailed a greater need for inspections at institutions with an approved market risk model to ensure that the necessary supervisory notifications could be issued on time by 31 December 2011. In addition, intensive evaluations of the approaches to calculating the stressed value-at-risk were carried out, mainly on the basis of questioning.

Audits on the basis of the Deposit Guarantee and Investor Compensation Act

The Bundesbank also conducted 37 audits as a result of orders issued by the compensation scheme for securities trading firms on the basis of the Deposit Guarantee and Investor Compensation Act *(Einlagensicherungs- und Anlegerentschädigungsgesetz)*. Pursuant to section 9 (1) of this Act, the compensation scheme is tasked with carrying out audits at the enterprises in its sphere of responsibility on both a



* Credit institutions and financial services institutions on a non-consolidated basis (Liquidity Regulation reporting format). Liquidity ratio = total payment assets ÷ total payment liabilities. **1** Under the Liquidity Regulation, the required minimum liquidity ratio is 1.0. **2** Excluding regional institutions of credit cooperatives. **3** Including regional institutions of credit cooperatives.

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regular and *ad hoc* basis for the purpose of assessing the risk of compensation events occurring. As the compensation scheme for securities trading firms does not have staff of its own to perform such audits, section 9 (4) of the Deposit Guarantee and Investor Compensation Act stipulates that the Bundesbank shall conduct these audits.

3 Reports

In the period from 30 September 2010 to 30 September 2011, the number of loans of €1.5 million or more to be reported on a quarterly basis pursuant to section 14 of the Banking Act rose by just under 1.9% to 537,423 reports. Meanwhile, over the same period, the total volume of reported loans of €1.5 million or more increased by 1.9% from €9,267 billion to €9,446 billion. By the reporting date of 30 September 2011, 2,411 institutions, 940 financial enterprises and 596 insurance corporations had submitted reports on loans of €1.5 million or more. This included 81,997 individual reports pursuant to sections 13 to 14 of the Banking Act (3,244 more than a year earlier), while 2,054,281 single borrowers were listed in summary reports submitted pursuant to sections 13 to 14 of the Banking Act (32,816 more than in 2010).

Slight rise in capital adequacy levels

On 31 December 2011, the average overall capital ratio, which gives the ratio of all risk positions that have to be backed by capital to own funds, was 16.42% for all institutions required to submit reports. The average tier 1 capital ratio, which gives the ratio of all risk positions that have to be backed by capital to tier 1 capital, was 12.18%. This includes all institutions reporting on a non-consolidated basis – provided they are not exempt from supervision on a solo basis pursuant to section 2a of the Banking Act – as well as groups of institutions and financial holding groups whose superordinated enterprise is subject to section

2a of the Banking Act (see the definition of the "whole banking sector" in the chart on page 98). Again, effects from government support measures and transfers of assets have to be considered.

Liquidity ratio unchanged on the year

Under the Liquidity Regulation, institutions must demonstrate that they have adequate liquidity for payment purposes at all times by maintaining a liquidity ratio of at least 1. On 31 December 2011, the average liquidity ratio was 1.52.

Cash management

The European Union and the ECB have changed the underlying legal conditions for cash processing outside central banks, thereby establishing a binding and harmonised legal framework. In Germany, the Bundesbank Act (Gesetz über die Deutsche Bundesbank) and the Coinage Act (Münzgesetz) have been amended accordingly to incorporate these new provisions. Like previous years, 2011 saw a further rise in banknote recycling by credit institutions. Furthermore, in May 2011 the Bundesbank's Executive Board gave its approval for the construction of a new branch in the Dortmund area, which is to consolidate the business operations of five existing branches. There was a sharp decline in the incidence of counterfeit euro banknotes and coins recorded by the Bundesbank in 2011.

Euro currency in circulation in the Eurosystem — Table 11

Trend; € million

End of	Currency in circulation	Banknotes in circulation	Coins in circulation [1]
2009	827,728	806,412	21,316
2010	861,973	839,702	22,271
2011	911,702	888,629	23,073

Breakdown at year-end 2011

Banknotes in circulation			Coins in circulation		
Banknotes of €	€ million	Percentage of total	Coins of €	€ million	Percentage of total
500	299,589	33.7	2	9,484	41.1
200	36,262	4.1	1	6,458	28.0
100	164,995	18.6	0.5	2,633	11.4
50	302,257	34.0	0.2	1,863	8.1
20	57,069	6.4	0.1	1,206	5.2
10	20,729	2.3	0.05	794	3.4
5	7,728	0.9	0.02	389	1.7
			0.01	246	1.1
Total	888,629	100.0	Total	23,073	100.0

1 Circulation of euro coins excluding commemorative coins.
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Euro currency in circulation in the Eurosystem

The volume of banknotes in circulation issued by the Eurosystem went up by 5.8% to €888.6 billion in 2011. The volume of coins in circulation rose by 3.6% to €23.1 billion.

In the financial year 2011, the Bundesbank paid out 15.5 billion euro banknotes with a value of €493 billion. During the same period, the Bundesbank received lodgements from its customers of 14.9 billion euro banknotes with a value of €467 billion.

Euro counterfeits

The number of counterfeit euro banknotes detained in German payments and recorded by the Bundesbank was significantly lower than in 2010 (see Table 12). A decline was also recorded in the number of counterfeit euro coins.

Number of counterfeit banknotes and coins detained in German payments and recorded by the Bundesbank — Table 12

Year	Banknotes: Number (thousand)	Banknotes: € thousand	Coins: Number (thousand)	Coins: € thousand
2009	53	3,134	79	142
2010	60	3,381	67	121
2011	39	2,085	53	90

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The €50 banknote was again the most frequently counterfeited denomination in Germany in 2011, accounting for 42% of the total volume of counterfeits. Despite the overall declining trend in the number of counterfeits, there was an increase in counterfeit €20 notes, especially in the second half of the year. These accounted for a share of 36%. In relative terms, the incidence of counterfeit banknotes was exceptionally low in Germany at around five counterfeits per 10,000 inhabitants per year.

Counterfeit prevention

The training courses offered free of charge by the Bundesbank on how to recognise counterfeit money were again very well attended by the banking industry, the retail sector and other interested parties in 2011. In total, more than 1,700 training courses were organised across Germany, attracting over 35,000 participants.

Damaged and mutilated banknotes and coins

In the financial year 2011, the National Analysis Centre for damaged banknotes and coins received around 21,000 applications (2010: 20,200). The table on page 103 shows the amount of Deutsche Mark and euro coins and notes that were submitted for reimbursement.

Deutsche Mark and euro banknotes and coins submitted to the Bundesbank's National Analysis Centre for reimbursement — Table 13

Year	Banknotes Number (thousand)	Banknotes € million	Coins Number (thousand)	Coins € million
2009	571	22.0	160	0.05
2010	547	23.2	124	0.04
2011	857	32.3	115	0.03

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Deutsche Mark currency in circulation

The volume of Deutsche Mark currency in circulation fell to DM13.3 billion by the end of 2011 (see Table 14). Banknotes accounted for around DM6.4 billion of this amount and coins for roughly DM6.9 billion.

New legal framework conditions for banknote recycling

The amended Regulation (EC) No 1338/2001 laying down measures necessary for the protection of the euro against counterfeiting, which entered into force in January 2009, requires credit institutions and any other related institutions to withdraw from circulation all euro notes and coins received by them which they know or have sufficient reason to believe to be counterfeit and hand them over to the competent national authorities. Moreover, these institutions are obliged to ensure that the euro notes and coins that they receive and intend to put back into circulation are checked for authenticity and that counterfeits are correctly identified. Furthermore, the Regulation requires member states to draw up legal provisions to sanction infringements. The Bundesbank Act was amended accordingly with effect from 29 December 2011. Hence, the Bundesbank is authorised to impose sanctions on credit institutions which do not comply with their checking duties, as well as to carry out on-site inspections and collect statistical data. The details regarding the monitoring and reporting of statistical data can be regulated in a statutory order.

Deutsche Mark currency in circulation — Table 14

DM million

End of	Currency in circulation	Banknotes in circulation	Coins in circulation
2009	13,608	6,635	6,973
2010	13,435	6,509	6,926
2011	13,290	6,394	6,896

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Private banknote recycling

In 2011, there was a further rise in the volume of private banknote recycling. The German banking industry employed around 8,000 customer-operated combined deposit and withdrawal systems and some 900 staff-operated systems for the purpose of banknote processing.

Phased implementation of the EU Regulation concerning authentication of euro coins and handling of euro coins unfit for circulation

Since the beginning of 2012, those institutions required to carry out authenticity checks on euro coins in accordance with Regulation (EU) No 1210/2010 have been permitted to use only coin-processing machines that have been successfully tested by the designated national authority; in Germany this is the Bundesbank. A list of these machines is published on the European Commission's website. The Bundesbank has also transposed the amended provisions into its "Guidelines for the packaging of coin rolls in foil packs". A transitional period until the end of 2014 is envisaged for coin-processing machines that are already in use as well as for the control measures which are to be carried out on an annual basis. On the basis of the amendments to the Coinage Act adopted in December 2011, the Bundesbank is authorised to impose sanctions on institutions which do not comply with these regulations.

The provisions contained in the Regulation regarding the handling of euro coins unfit for circulation entered into force on 11 January 2011. The Bundesbank will, however, continue to replace free of charge euro coins which have become damaged due to long circulation or accidentally.

New Bundesbank branch in the Dortmund area

In May 2011, the Bundesbank's Executive Board gave its approval for the construction of a new branch in the Dortmund area. According to current planning, the new branch is unlikely to be completed before 2017. The new branch is to merge the business operations of five of the Bundesbank's older branches in Bochum, Dortmund, Düsseldorf, Essen and Hagen, which are located relatively close to each other. The branch is to be constructed on a site of 80,000 square meters and has a scheduled investment volume of over €200 million. The processing procedures at the new branch have been designed to take full advantage of technological advances in automation. The new branch will therefore make a key contribution to efficient cash processing in the Rhine-Ruhr region and to raising the local potential for rationalisation. With the operational launch of the new branch, the Bundesbank will have reduced the number of its branch offices to 31 from the peak of 210 at the time of German reunification. Further to its decision on building a new branch, the Executive Board has decided that a branch network has to be maintained on this scale in order for the Bank to fulfil its tasks. This will also essentially conclude the consolidation of the Bundesbank's branch network. Pursuant to section 3 of the Bundesbank Act, the Bundesbank has a statutory mandate to ensure an efficient supply of cash. The Bundesbank fulfils this statutory mandate through its nationwide branch network, thereby guaranteeing a sufficient supply of cash to the economy, also in times of crisis.

Standard container successfully established in coin operations

Since 1 January 2011, standard containers have been the sole packaging unit for lodgements and withdrawals of coins that are accepted free of charge by the Bundesbank. This amendment is a reflection of the Bundesbank's greater emphasis on its role as a wholesaler in coin operations. The Bundesbank will, for a transitional period, also continue to accept – for a fee – lodgements and withdrawals of coins which do not conform to a standard container.

End of the transitional period for the Payment Services Oversight Act

On 30 April 2011, with the end of the transitional period in accordance with the Payment Services Oversight Act *(Zahlungsdiensteaufsichtsgesetz),* Bundesbank current accounts for cash-in-transit (CIT) companies without authorisation to provide payment services were closed. Independent cash recycling is not performed by CITs at present as, so far, no CIT companies have been granted the required authorisation by the German Federal Financial Supervisory Authority (BaFin) pursuant to the Payment Services Oversight Act. A large number of cooperations have emerged between CITs and credit institutions, especially in the coin supply business.

Bundesbank research and analyses into cash payments

In 2011, the Bundesbank also continued its research into payment and withdrawal behaviour in Germany. One study estimates the foreign share of Bundesbank-issued euro banknotes at around 70% of the total volume of banknotes in circulation, most of which is accounted for by non-euro-area countries.

Cashless payments and securities settlement

With respect to cashless payments and securities settlement, the Bundesbank strives to fulfil its statutory mandate and strategic objectives by making settlement as secure and efficient as possible as well as by promoting innovation. In doing so, the Bundesbank also makes a significant contribution to the stability of the German financial market infrastructure. On the one hand, the Bundesbank works towards achieving these goals by acting as a catalyst in actively helping to shape payment policy at the national, European and international level. On the other, it contributes by providing its own efficient and competitively neutral interbank payment systems. Lastly, the Bundesbank is involved in the oversight of payment and securities settlement systems as well as payment instruments.

In 2011, the Bundesbank's activities were focused on contributing to the TARGET2-Securities project, preparing for the completion of the Single Euro Payments Area (SEPA) and further enhancing TARGET2. As in preceding years, the Bundesbank expanded its activities in the area of payment and securities settlement oversight. Above and beyond this, the Bundesbank was actively involved in the field of payments research and analysis.

Single European payments market nearing completion

The Single Euro Payments Area (SEPA) is close to becoming reality. An efficient European payments area is a key factor in ensuring that the European Union – the strongest economic area in the world – remains competitive on an international scale. Work on SEPA makes a valuable contribution to this goal. SEPA creates a single market offering more choice, better services and greater cost efficiency in the area of payments. The European Regulation establishing the technical requirements for credit transfers and direct debits in euros and amending Regulation (EC) No 924/2009, which is scheduled to enter into force in the second quarter of 2012, stipulates binding end-dates for the national payment schemes for credit transfers and direct debits. Uniform standards and rules for euro-denominated national and cross-border credit transfers and direct debits shall subsequently apply from 1 February 2014. The Bundesbank believes that consumer interests should be considered to the greatest possible extent during the changeover process. Member states can make the changeover user-friendlier by allowing the continued use of national account identifiers at the customer-bank interface for a transitional period until 1 February 2016. In addition, with effect from February 2014 in the case of national payments and as of February 2016 for cross-border transactions, it should be sufficient for the customer to specify the IBAN (International Bank Account Number) as a means of identifying the account.

German SEPA Council created

At the Bundesbank's initiative, the German SEPA Council was established in May 2011 to ease the changeover to SEPA. Under the chairmanship of the Bundesbank and the Federal Ministry of Finance, this body brings together the most important interest groups engaged in the SEPA migration with a view to ensuring that developments are adequately transparent to all the parties involved (eg banking industry, trade and consumer protection associations) in Germany. It also serves as a platform for them to discuss the key political and technical aspects concerning the migration as well as to push for a cost-effective, user-friendly SEPA.

SEPA services offered specifically by the Bundesbank

With the Retail Payment System (RPS) SEPA-Clearer, the Bundesbank is facilitating the active use of SEPA schemes by offering its own range of services to credit institutions and public administrations. Not least because of the migration activities of public administrations, the volume of payment transactions settled via the SEPA-Clearer was up in 2011 compared with 2010. By the end of the year, around 136,000 SEPA transactions were being processed per working day. This number is likely to increase considerably over the next few years as national payment schemes are phased out as a statutory requirement. Furthermore, in 2012 the Bundesbank will migrate its current fee collection activities for cashless payments to the SEPA B2B direct debit scheme.

Intensified use of TARGET2

In compliance with a decision of the ECB Governing Council, the Bundesbank is transferring additional business areas to the TARGET2 single shared platform. In a first step, at the beginning of 2011 the option of indirect participation via the Bundesbank was discontinued, as a result of which the last few remaining individual payments rendered using the Bundesbank's home account facility were migrated to TARGET2. Moreover, since November 2011 both the Retail Payment System and the SEPA-Clearer have been using TARGET2 accounts for the purpose of settlement. In the wake of these two moves, more than 70 additional institutions in Germany decided to become direct participants in TARGET2. Third, in June 2013, all bank accounts (with the exception of those used for the settlement of cash operations) are due to be migrated to TARGET2. From then on, the provision of intraday credit, recourse to the standing facilities and activities relating to open market operations and the minimum reserve holdings will be effected exclusively via accounts belonging to the TARGET2 platform's payments module.

Advances in TARGET2 services

Given the strong momentum evident in the area of payments, TARGET2 must constantly evolve, too, in order to safeguard competitiveness. One example of such evolution is the

Cashless payment systems

In 2011, an average of around 348,500 payments with a value of €2,384 billion were processed each working day by the TARGET2 real-time gross settlement system, which is jointly operated by the Bundesbank, Banque de France and Banca d'Italia on behalf of the Eurosystem. This represented a slight increase compared with the previous year. Using TARGET2 it is possible to settle urgent payments between around 1,100 direct participants. In total, almost 59,000 financial institutions across the world can be addressed via the system. In July 2011, the number of banking communities participating in TARGET2 went up and now stands at 23 countries. Since this date, along with the central banks of the euro-area countries (including the ECB) and of Bulgaria, Denmark, Latvia, Lithuania and Poland, TARGET2 has also been used by the Rumanian central bank as well as 22 direct Rumanian participants.

In total, 241 institutions in Germany and the European Economic Area are directly connected to TARGET2, while 2,463 institutions are linked to it indirectly via the German component. During the reporting year, the percentage of customer payments rose slightly to 62%. In terms of volume, Germany's share of payments settled via TARGET2 remained stable at about 50%, while its share in terms of value fell slightly from 36% in 2010 to 34%.

In addition, the Bundesbank is actively involved in German interbank clearing by offering its Retail Payment System (RPS) for the clearing and settlement of retail payments in the national DTA format and the SEPA-Clearer for retail payments in the SEPA format as a complement to other providers' services.

Cashless payments of the Deutsche Bundesbank

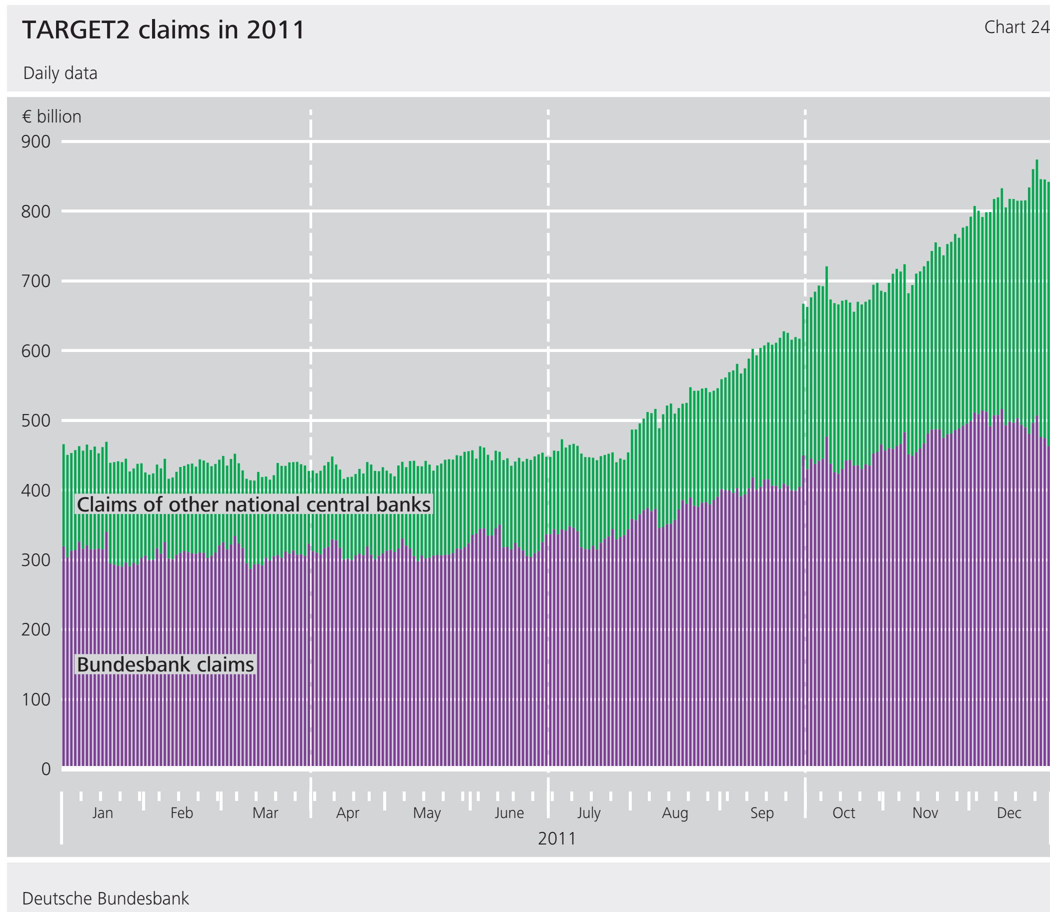
	2010		2011			
Item	Volume (million)	Value (€ billion)	Volume (million)	Percentage change	Value (€ billion)	Percentage change
Individual payments	45.2	216,959	44.8	– 0.9	212,995	– 1.8
TARGET2-BBk	44.7	213,841	44.4	– 0.6	209,911	– 1.8
National	33.9	158,029	33.2	– 2.0	149,857	– 5.2
Cross-border	10.8	55,811	11.2	3.7	60,054	7.6
Other [1]	0.5	3,118	0.4	– 23.7	3,084	– 1.1
Retail payments	2,666.6	2,302	2,694.0	1.0	2,414	4.9
RPS	2,662.9	2,300	2,690.1	1.0	2,412	4.9
National	2,637.8	2,239	2,658.8	0.8	2,319	3.5
Cross-border [2]	2.7	4	0.4	– 86.9	1	– 70.1
SEPA credit transfers [3]	22.4	56	30.7	37.5	90	59.3
SEPA direct debits [3]	0.1	0	0.1	.	3	.
Other [4]	3.7	2	3.9	6.4	2	– 9.7
Total	2,711.8	219,261	2,738.8	1.0	215,409	– 1.8

1 In particular CAM: Customer Access Mechanism (access to TARGET2-BBk, correspondent banking). **2** The procedure used for settlement was discontinued on 5 December 2011. **3** National and cross-border payments via the SEPA-Clearer. **4** Exclusively MASSE: procedure for cross-border retail payments effected by public authorities.

TARGET2 claims in 2011

Chart 24

Daily data



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contingency network that is being implemented as a mechanism to cushion the effect of a (highly unlikely) breakdown in communications between SWIFT and TARGET2. The steadily growing importance of the financial industry global standard, ISO 20022, has likewise been considered in the medium-term development strategy, initially with respect to linking up with TARGET2-Securities and later for the execution of urgent customer payments.

Claims arising from TARGET2

On account of the financial crisis, those credit institutions that participate in TARGET2 via the Bundesbank saw sizeable net inflows of liquidity in the course of the year. Overall, the Bundesbank's claims on the ECB arising from the settlement of cross-border transactions using TARGET2 increased from €325,556 million to €463,135 million. The ECB, for its part, has claims on other Eurosystem national central banks. Total TARGET2 claims of individual national central banks rose by approximately €384 billion to €842 billion, predominantly in the second half of the year.

In a monetary union with an unchanged group of participants, such TARGET2 balances do not constitute a risk in themselves. Risks primarily arise from the operations used for creating the central bank liquidity in the respective country. The asymmetric development of TARGET2 balances reflects, in particular, the different degrees to which individual national banking communities are affected by the financial crisis. A number of banks are no longer able to cover their funding requirements on the interbank market and have to increasingly call on the Eurosystem for refinancing. Other banks, including German banks, are considered to be "safe havens". They receive large amounts of liquidity enabling them to greatly reduce their Eurosystem refinancing operations. This is intensified by disinvestment on the part of international investors from a number of peripheral countries.

TARGET2-Securities

The Eurosystem's TARGET2-Securities (T2S) project achieved some major milestones in 2011. For instance, October 2011 saw the publication of the User Detailed Functional Specifications for T2S, on the basis of which central securities depositories (CSDs), NCBs and other directly connected participants can now adapt their IT systems to communicate and interact smoothly with T2S. Similarly good progress is being achieved in the area of applications development. More than half of the development work has already been completed.

Connecting T2S users to the network

In 2011, important decisions were made in terms of connecting future users to the T2S service. The three network providers envisaged for T2S offer two licences for value-added network services. These licences were issued to SWIFT and SIA/COLT on the basis of a tender procedure. The relevant contracts were signed at the end of January 2012. As a third option for technical communication, the users can be connected to the T2S service directly, in which case use would be made of the existing ESCB network (CoreNet).

Operational launch in 2015

According to current plans, T2S will no longer be launched in September 2014 as originally scheduled. Instead, operations will commence in June 2015. In making this decision, the ECB Governing Council has taken particular account of the additional requirements of market participants regarding the functional features of T2S and the need for an extended test phase. Moreover, delays in the tender procedure for the network services compounded the need for a reschedule.

Collateral management

In the reporting year, pivotal levers were set to enhance the efficiency of collateral management in connection with Eurosystem monetary policy operations. In this context, it was decided to dispense with the repatriation requirement applying to the cross-border use of collateral as of 2014. This means, for example, that in future German counterparties will be able to make more flexible use of collateral. Furthermore, from then on the Eurosystem will also make it possible to use tri-party collateral management services on a cross-border basis. The Europe-wide use of, say, the XEMAC service offered by Clearstream Banking Frankfurt will greatly increase the efficiency of European collateral management.

Comprehensive revision of principles for financial market infrastructures

With the involvement of the Bundesbank, a joint working group established by the CPSS (Committee on Payment and Settlement Systems) and IOSCO (International Organization of Securities Commissions) is working intensively on devising a new set of principles for financial market infrastructures. These represent a single set of standards for and enhancements of the separate oversight principles for payment systems, securities settlement systems and central counterparties that currently apply. The intention is to reflect the lessons learned from the crisis since 2007. In future, the resulting principles will apply to trade repositories as well.

Use of data on OTC derivative transactions

A further joint working group set up by the CPSS and IOSCO and assisted by the Bundesbank produced a set of minimum requirements for reporting over-the-counter (OTC) derivative transactions to trade repositories. In its report, the working group outlined concepts for reporting on a global basis and identified other duties yet to be analysed. These steps constitute a major contribution to achieving greater transparency in the OTC derivatives market.

Financial sector assessed by IMF

In 2011, as part of its Financial Sector Assessment Program, the International Monetary Fund (IMF) conducted an assessment of the central counterparty Eurex Clearing, which is subject to supervision and oversight by the Federal Financial Supervisory Authority (BaFin) and the Bundesbank. Overall, Eurex meets all the requirements stipulated in the CPSS-IOSCO recommendations.

Focus of oversight activities

The ongoing activities of the Bundesbank were primarily characterised by its involvement in the cooperative oversight of the global Continuous Linked Settlement (CLS) system for international foreign exchange transactions and of the

world's most important financial communications service provider, SWIFT, as well as of the privately operated large-value payment system, EURO1. Among these areas of focus, special attention was paid to general risk assessment, risk provisioning and future strategic orientation. Much time and effort was also devoted to the continued oversight of card systems throughout the Eurosystem. Owing to the overriding importance of the girocard system in Germany, work of this kind is of special interest to the Bundesbank.

Efforts to enhance monitoring methodologies in the Eurosystem

In the course of 2011, previous Eurosystem endeavours were continued and new work began on revising the oversight standards for retail payment systems and e-money. Moreover, the Eurosystem worked on developing detailed assessment methodologies and guidelines based on the oversight standards for credit transfers and direct debits that were published in October 2010.

European forum on retail payment security

In collaboration with the Eurosystem, the European Forum on the Security of Retail Payments (SecuRe Pay Forum) was established. The Bundesbank participates in this voluntary cooperation between supervisory and oversight authorities aimed at facilitating a common understanding of security issues relating to retail payments. The first activities of the Forum took the form of defining a set of EU-wide minimum security requirements for card-not-present payments (ie card payments executed without having to present the relevant card) and credit transfers on the internet.

Focus on analysis of TARGET2

The payment system analysis focused heavily on TARGET2. One research project quantified the economic benefit of the liquidity-saving mechanisms incorporated in TARGET2 and compared this with a model used by the US Federal Reserve and the Bank of England.

CPSS working group on innovations

Chaired by the Bundesbank, a CPSS working group has been compiling a report on innovations in the area of retail payments. Based on a survey of relevant innovations in the member countries, the aim is to spot trends, analyse the positive and negative determinants of the way in which innovations arise and identify potential areas of interest to central banks.

Statistics

The need for additional, reliable, timely and, wherever possible, granular data and data links as a result of the escalation in the European Union sovereign debt crisis was a particular focus for the Statistics Department in 2011. The implementation of the G20 Finance Ministers' and Central Bank Governors' catalogue of recommendations for addressing data gaps and the supply of EU-wide harmonised basic data to the European Systemic Risk Board (ESRB), which began its activities in 2011, were also high on the agenda.

Linked to the issue of systemic risk, demand for information on intra-group relationships and consolidated data on financial and non-financial corporate groups also grew considerably. This approach is the only one that allows the economic and financial links and consolidation effects between the sectors and from a cross-border perspective to be presented and the risk exposures in the corporate network to be modelled systematically.

The Bundesbank was also able to expand and intensify its supply of statistical information last year despite its generally (by international comparison) favourable statistical position. This was partly due to the MFI monthly balance sheet statistics with data on repo transactions and the business activities of financial vehicle corporations, as well as to the expansion of the MFI interest rate statistics and the first publication at the European level of insurance company statistics based on national data.

In addition, important progress was seen in developing a European data production and analysis system for securities holdings. Furthermore, contributions were made towards establishing a statistics-based early warning mechanism. Initiated by the EU, it is based on an indicators (scoreboard) system which evaluates member states' risks in terms of insufficient competitiveness and macroeconomic imbalances.

Greater range of issues

New statistical assignments and user groups have emerged at the national, European and international levels as a result of the ongoing global financial crisis and the escalating sovereign debt crisis in the European Union. The demand for timelier and, if possible, more granular data has also grown sharply again, and there is a greater need for consolidated data on financial and non-financial enterprises (see also box on pages 113-115 concerning the latter point).

Implementing G20 recommendations

Intensive work continues on implementing the G20 Finance Ministers' and Central Bank Governors' catalogue of recommendations on addressing information gaps. The Bundesbank is actively participating in further implementation measures, even though by comparison Germany is in a rather more favourable statistical position overall. Top of the IMF's and its member states' agenda is revising the Financial Soundness Indicators (FSIs), particularly harmonising the bank-related indicators with the Basel III definitions, developing new indicators – namely for households and enterprises – and further breaking down the non-bank financial sector. The IMF is also preparing stricter data publication standards for countries with a systemically important financial sector which are to be surveyed as part of its Financial Stability Assessment Program (FSAP), while the Financial Stability Board (FSB) intends to introduce data supply obligations for countries with systemically important banks.

Information base for ESRB

The ESRB started work at the beginning of 2011 and presented its short-term data requirements in a report that summer. The ESRB was provided with a broad spectrum of euro-area-wide harmonised ESCB statistical information – via the ECB in an initial step – at an early stage, for example from the MFI monthly balance sheet statistics, the MFI interest rate statistics and the investment fund statistics. The range of data required in the long run is now to be successively specified in greater detail.

Additional data for preventing crises and improving monetary policy analysis

The statistical basis for the macroeconomic and macroprudential analyses was greatly improved in 2011, the foundations having been laid correctly early on. This entailed the introduction of a separate disclosure of claims and liabilities from reverse repo and repo transactions with central counterparties in the monthly balance sheet statistics, as well as the supply of information about the scale of German banks' traditional securitisation business and the activities of financial vehicle corporations (FVCs) domiciled in Germany. This enables the relationships between the banking sector and shadow banks, which carry out securitisations and have come under close scrutiny since the last financial crisis, to be modelled better. The aim therefore is to identify and evaluate systematically the effective risk and resilience of the entire financial system.

Further breaking down the new lending business in the MFI interest rate statistics helps to improve the analysis of the monetary transmission mechanism and the convergence of the financial markets in the euro area. The first results of new quarterly ESCB statistics on insurance companies (including pension funds) were also published. For Germany, these are mainly based on primary information originating from the area of insurance supervision. Harmonised insurance statistics for stocks and flows are planned, as insurers both play a key role in reallocating economic risks and make a significant contribution as institutional investors to financial intermediation. Timelier and more differentiated data on insurers' securities investments are also of particular interest for analysts.

Common European securities holders database

ESCB statistics committees are currently preparing legislative acts that will lead to a significant overall improvement in the quality of statistical data on securities investments in financial and non-financial sectors. Compiled on a security-by-security basis, these statistics will also make it easier to set up a common data production and analysis system for securities holdings. Known as the Securities Holdings Statistics

Mapping intra-group relationships and consolidation effects in statistics

The interlocking group structures of affiliated enterprises have become a typical organisational form in both the financial system and the real economy, and as such have become an important subject for statistics. While traditional short-term real economic indicators were geared to the concept of local units, which due to the homogeneity of their manufactured products could be directly related to a specific economic sector, the focus on systemically important corporate groups and their interrelationships is now moving centre stage, not least because of the financial crisis.

Consolidation concepts of different depths and widths, and which relate to different relationship aspects, play an increasingly important role in Bundesbank statistics. Networked data are of outstanding interest for domestic banks in the current sovereign debt crisis as they provide an overall view of cross-border exposures and display important information on, among other things, the scale of the German banking system's exposure to countries with growing financing problems. The Deutsche Bundesbank's banking statistics produce a comprehensive picture of the financial status of German credit institutions' parent companies, subsidiaries and branches which each hold a banking license. This pool of information serves as a data basis for Germany's contribution to the International Consolidated Banking Statistics of the Bank for International Settlements, which show the global credit exposure of large complex banking groups.

The Bundesbank's banking statistics are a good example of the additional benefits provided by the analysis of group-related information, such as a differentiated analysis of German institutions' interbank relationships from the interaction of consolidated and individual data, which makes it possible to identify not only the relationships with other financial centres but also intra-group connections between domestic local units and foreign subsidiaries and branches. After all, at the end of September 2011, around two-thirds (€726 billion) of the cross-border interbank assets and liabilities of German banks' domestic offices[1] were based on business links with their own branches and subsidiaries abroad. The closest relationships are between domestic institutions and their branches and subsidiaries in the United Kingdom, Luxembourg, offshore financial centres and the United States. These locations act as hubs for German banks, forwarding and redistributing their own liquidity within the group. However, US and UK subsidiaries in particular also hold significant claims on other local institutions.

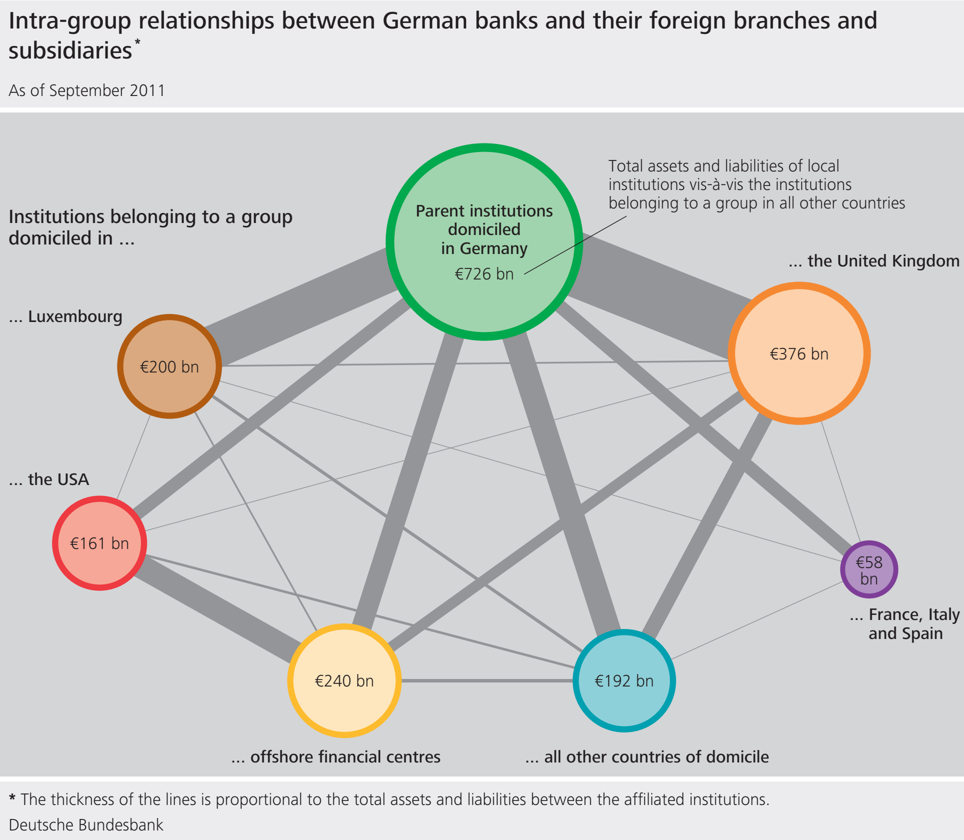
Additional information is generated for macroprudential analysis from the Consolidated Banking Data, which is a dataset specially tailored to prudential supervisory aspects, and the Financial Soundness Indicators, which are created in cooperation with the International Monetary Fund. These provide a common indicator concept for improving the transparency of financial systems, which is of particular benefit in preventing crises.

The consolidated data of non-financial corporate networks in the form of groups also close sensitive data gaps in several respects. They have the advantage of eliminating

1 German banks are understood to be those banks whose headquarters are domiciled in Germany.

Intra-group relationships between German banks and their foreign branches and subsidiaries*

As of September 2011



* The thickness of the lines is proportional to the total assets and liabilities between the affiliated institutions.
Deutsche Bundesbank

intra-group trade links that can lead to profit shifting between domestic group enterprises due to flexible internal transfer prices, for example. Furthermore, they reflect basic financing processes and the corresponding movement of cash more comprehensively which in individual annual financial statements only lead to intangible indicators for the degree of integration. In addition, the group results contain data about cross-border exposures and risk transfers to foreign subsidiaries, which are omitted from their domestic individual financial statements. With the extensive consolidation measures, therefore, group financial statements also provide an insight into relationship-adjusted capital structures.

In the Bundesbank's December 2011 Monthly Report, results based on quarterly statements of non-financial groups listed on the DAX and MDAX were used to estimate the current gross return on sales for the first time. The systematic recording and statistical preparation of quarterly and annual statements of listed groups that belong to the German Stock Exchange's Prime Standard market segment has already got underway. Using this approach, current ratios and indicators are generated for the ongoing observation of the business cycle and the emergence of liquidity and earnings risks in the real sector. These results are a counterpart to the traditional financial statements statistics based on individual annual accounts and provide a consistent framework for analysing the assets, financing and profitability of German groups.

At the international level, various statistics committees are also working on enhancing the supply of information on financial and non-financial corporations' relationships. Under the direction of the ECB and the Statistical Office of the European Commission, and in cooperation with the national central

banks and national statistical offices, comprehensive registers for multi-national enterprises that operate in the EU (Register of Institutions and Affiliates Database, RIAD, and EuroGroups Register, EGR) are being established. These registers make intragroup structures transparent and create a crucial basis for collecting and preparing consolidated enterprise statistics. A plan is also in the offing to collect data on the securities portfolios of large financial groups on a security-by-security basis using a harmonised concept. A more far-reaching approach known as the Legal Entity Identifier (LEI) standard, which was initiated by the US Department of the Treasury's Office of Financial Research, is currently being pursued at a global level with European committee involvement. The aim of the LEI is to clearly identify the parties involved in all financial transactions, thereby generating key information that can play an important role in the efficient integration of available data and in improving the monitoring and understanding of systemic risk in financial markets. Specific recommendations for the Financial Stability Board are expected to be presented this year.

Database (SHSDB) and developed jointly by the Bundesbank and the ECB, it will create diverse and flexible means of generating evaluations and timelier *ad hoc* analyses of special questions in this strategically important and especially risky segment of the financial system.

Large benefit from granular data

The Bundesbank already derives great benefit for its analyses and the policy advice which is based on them from the existence of granular information on securities investment at the national level. For example, the volumes of securities held by domestic investment funds are calculated by country and country group and published each month. As the quarterly (from 2013, monthly) statistics on securities investments (previously securities deposit statistics) cover both the securities holdings of customer securities deposit accounts and banks' own holdings, the risks to the stability of the financial system associated with these types of financial investments can be better observed.

A set of indicators to identify macroeconomic imbalances

Additional requirements for member states' national statistics have also arisen due to the expansion of multilateral surveillance and economic governance in the European Union. This mainly affects the assessment of macroeconomic imbalances within the EU. To that end, the European Commission has decided to set up a statistical scoreboard which, together with derived thresholds, will also provide important indications about EU member states' insufficient competitiveness. The dataset, which was first published in February 2012, currently contains ten macroeconomic indicators ranging from the current account balance and net international investment position (each as a percentage of GDP), the development of housing prices to the general government debt ratio. Save for house price statistics, which are still at an experimental stage, this scoreboard's baseline statistics are indeed available, but assuring the quality of the harmonised and current datasets calculated from them as part of an early warning system is a permanent task

that requires appropriate monitoring by the data producers. This is the only way to ensure that any politically sensitive interpretations thereof are actually based on reliable statistics.

Education

On 1 August 2011, the Executive Board of the Deutsche Bundesbank set up a new Department for Economic Education, University of Applied Sciences and Technical Central Bank Cooperation (Ökonomische Bildung, Hochschule, Technische Zentralbank-Kooperation). This department is the connecting link in the wide range of training opportunities available at the Bundesbank – from the internal training programmes to the degree programme provided by the University of Applied Sciences – all of which ultimately ensure that Bundesbank staff are highly qualified. The events arranged for the general public engender a deeper understanding in broader society of the Bundesbank's stability culture. Technical Central Bank Cooperation organises the exchange of knowledge and experience among central banks around the globe. The new department is also the curator of the Bundesbank's wealth of knowledge and cultural assets (held in archives, libraries and databases), ensuring that the collections are managed and expanded appropriately and that they are readily available for users. By setting up this new department, the Executive Board has underscored the strategic importance of education activities. One particular objective for the coming years is to expand the range of activities directed at the general public.

Specific central bank expertise required

To be able to carry out their tasks, central bank employees require a high level of specific expertise. However, in-depth knowledge of certain topics, such as operational monetary policy, banking supervision and cash management, is often available only at a central bank itself and not at universities or other institutions of learning. The Bundesbank thus attaches great importance to education and training: knowledge and experience are passed down from seasoned Bundesbank employees to the next generation of staff. In addition, the Bundesbank organises seminars with external experts with the aim of attracting knowledge from outside the Bank to its own ranks. In a similar way, the intensive cooperation with foreign central banks also promotes knowledge transfer and the exchange of experience.

Constant influx of new staff

The training options on offer at the Bundesbank provide school leavers and entry-level staff with many ways of entering employment at the Bank – be it as civil servants or salaried employees, in the Intermediate, Upper Intermediate or Higher Service. Last year, a total of 552 people across all services were undergoing training at the Bundesbank. Just over half were being trained for the Upper Intermediate Service, mainly at the Deutsche Bundesbank's University of Applied Sciences in Hachenburg, Germany. As a result of the restructuring of the Bundesbank's cash management operations, the share of trainees in the Intermediate Service rose to around 40%, whilst the share of those being trained in the Higher Service remained unchanged at roughly 5%. This ensures that the Bundesbank, mindful of demographic trends, has a constant influx of highly qualified young members of staff. By, in some cases, training more people than required for internal needs, the Bundesbank also gives other young people a solid grounding on which to embark on their careers.

Bachelor's degree in central banking accredited

In line with general developments at European universities, the Deutsche Bundesbank's University of Applied Sciences in Hachenburg converted its training programme to a bachelor's degree in 2011. The new bachelor's degree programme in central banking was officially accredited in July 2011. By introducing this new degree programme, the Bundesbank has emphasised just how important its University of Applied Sciences is for attracting highly qualified new members of staff. The graduates, who are versed in both the theoretical and practical aspects of central banking, form the backbone of the Bundesbank as members of the Upper Intermediate Service. In the spring and autumn of 2011, a total of 106 civil servant trainees for the Upper Intermediate Service from the Bundesbank and 14 from the Federal Financial Supervisory Authority (BaFin) started their degree. To meet the growing need for new staff, especially for banking supervisors, the number of degree places offered will continue to rise. Currently 12 professors as well as 3 full-time and numerous guest lecturers with a firm background in central banking practice teach at the University of Applied Sciences.

Demand for professional development still high

Bundesbank employees' demand for professional development is still high; in the reporting year, more than 16,700 staff members attended internal seminars and some 2,200 participated in external training. Measured in terms of headcount, roughly three-quarters of all Bundesbank employees took part in professional development measures last year – many of them attended multiple courses. In 2011, the Bundesbank contributed 11 seminars to the joint ESCB training activities. The project management qualification programme in particular, which is now in its second year, was stepped up.

Additions to Executive Education Initiative

Last year, 16 seminars on 9 main topics were hosted by the European Supervisor Education Initiative (ESE), which the Bundesbank oversees as coordinator. Around 250 employees from the banking, insurance or securities supervision departments of 34 central banks and supervisory authorities participated in these seminars. The ESE Initiative, which is organised by the Bundesbank, Oesterreichische Nationalbank, Banque centrale du Luxembourg, BaFin and

Frankfurt University's Goethe Business School, was founded three years ago and continues to make a valuable contribution to a common understanding of European financial supervision. In addition, the Bundesbank hosted its inaugural one-week "Central Banking Workshop" for central banking experts in the summer of 2011. Participants from 17 countries discussed current financial issues with central bankers, supervisors and academics.

TCBC activities influenced by financial crisis

In 2011, approximately 3,500 experts from over 100 central banks took advantage of the services provided by Technical Central Bank Cooperation (TCBC). They attended 26 international central banking courses at the Bundesbank's Central Office in Frankfurt and participated in around 300 seminars, workshops and other activities both in Germany and abroad, which TCBC had tailored to meet partner central banks' requirements. EU twinning projects were concluded for the national banks of Ukraine and Croatia. Furthermore, the Bundesbank participated in ongoing ESCB projects in Egypt, Bosnia and Herzegovina, and Serbia. The protracted nature of the financial crisis has led to a general shift in the demand for training and advisory services towards topics concerned with financial stability and banking supervision.

Training for the general public

The events on offer to the general public continued to focus on training for schools, particularly upper secondary level pupils at general secondary schools and vocational school pupils, as well as teachers. In 2011, experts from our Economic Education Department and from the regional offices held a total of 880 events for 30,700 participants, predominantly school pupils. Over the same period, 3,300 teachers attended 120 seminars organised by the Bundesbank on topics such as monetary policy, the Eurosystem or cash and cashless payments. Teachers and pupils alike were able to use the information materials provided at no cost by the Bundesbank (both on its website and as publications) for training purposes.

Some of the seminars and workshops took place at the Bundesbank's Money Museum, where real-world audiovisual elements supplement theoretical instruction. The Money Museum attracted over 40,000 visitors last year. In 2011, the Executive Board decided to completely redesign the Money Museum, including its content, over the next few years. As a place of learning, the aim of the Money Museum is to promote public awareness of monetary, fiscal and economic policy stability. In addition to lessons from German and European monetary history, the museum will address and discuss recent experience gained from the financial and economic crises of the past few years.

Further units within the Economic Education Department are responsible for gathering and managing information produced both internally and externally in various media and ensuring that this is readily available for users. These include the specialist libraries, which possess over 230,000 media items and have responded to more than 26,000 enquiries, the historical archive, the coin and banknote collection, the art collection, and the databases.

Other activities

I Research Centre

Research priorities

In the Research Centre, Bundesbank employees undertake academic projects, in some cases together with visiting researchers from universities, other central banks or similar institutions. The aim is to examine topics of interest to the Bundesbank from an academic perspective and thus facilitate the decision-making process within the Bank. The results are generally published as discussion papers and as articles in academic journals. Such projects focus, in particular, on issues relating to economics, financial stability and banking regulation. In 2011, these studies again concentrated on issues emerging in conjunction with the ongoing financial and economic crisis. These included a number of studies on the workings of monetary policy in the particular context of the crisis, with a special focus on the stability of the financial system. One aspect examined was the degree to which banks' propensity to take greater risks in their lending business was encouraged by low central bank interest rates in the first half of the last decade. Several studies analysed the mechanisms through which financial shocks are transferred from one economy to other countries, and whether this has changed compared with the situation pre-2007. The findings show that, during the crisis, shocks in the US financial market had a much greater effect on other countries than had previously been the case. Some of these studies also looked at the activities of international banks, in particular their cross-border lending. In the last few years, a debate has been underway as to whether and to what extent banking regulation was partly responsible for banks restricting their credit supply during the crisis, thus exacerbating matters. One key issue is whether the planned countercyclical capital buffers for banks could be of any assistance. Other studies examined interbank contagion via the financial markets and payment systems. This revealed how banks' funding liquidity and financial markets' liquidity influence one another and, as a result, that liquidity shocks can spill over to banks which are otherwise not directly affected by such problems. A number of projects dealt with the question of how labour market reforms can strengthen the resilience and competitiveness of individual economies during times of crisis.

Research networks, international working groups and visiting researchers

The Research Centre maintains contacts to academics outside the Bundesbank in a variety of different ways. In two one-week seminars held regularly by the Bundesbank, guests give presentations on general economic topics and specific topics related to banking and financial studies. The Bank also organises another set of seminars in Frankfurt together with the ECB and the University of Frankfurt. Research Centre employees are involved in many research networks and international working groups. The aim of one European research network is to improve the data on household finances and debt in order to make more precise statements about the distribution of wealth, saving and consumption behaviour, old-age provision and similar issues. The first round of surveys in Germany was completed last autumn. The statistics are currently being compiled and a dataset for all euro-area countries should be available at the end of 2012. In Germany, roughly the same households will be regularly re-contacted in the future in order to obtain a picture of developments over time. Another network, which is also organised within the ESCB framework, investigates different ways of improving macroprudential financial stability. One aspect of this involves developing indicators that can be used as an early warning system for impending problems in the financial system. The further development of macro models also serves to yield a better understanding of the root causes of financial instability. As in previous years, studies conducted by the Bundesbank researchers involved in the Research Task Force of the Basel Committee on Banking Supervision helped to forge ahead with improvements to the international banking regulatory regime. In

2011, the focus was on refining the trading book regime. The Bundesbank has been a member of the Marie Curie Initial Training Network on Risk Management and Risk Reporting since 2009. This is a network comprising universities and research departments of commercial and central banks. The Bundesbank has, for the duration of this project, hired three researchers who specialise in selected topics relating to risk measurement and prudential regulation. In addition to these research associations in which the Bundesbank participates, direct contacts to and collaboration with visiting researchers are extremely important for exchanging expertise and strengthening research activities. Last year, nearly 100 visiting researchers and interns from Germany and abroad worked temporarily at the Research Centre.

Publications

In 2011, the Research Centre published a total of 53 discussion papers across both series (Series 1: Economic Studies, Series 2: Banking and Financial Studies). Many of these discussion papers will be published in – predominantly international – academic journals (or books) in due course. Last year, more than 60 articles written by members of staff were published or accepted for publication, *inter alia* in the Journal of Monetary Economics, the Journal of Money, Credit and Banking, the International Journal of Central Banking, the Journal of Econometrics and the Journal of Banking and Finance.

Conferences and workshops

In 2011, the Bundesbank organised a number of conferences and workshops in which internationally renowned academics presented their new research for discussion and important economic policymakers laid out their positions. The Spring Conference, which was held together with the Banque de France, was entitled "Fiscal and monetary policy: challenges in the short and long run". Debate at this conference centred on the problems specific to sovereign debt in a monetary union, the effectiveness of fiscal policy in a financial crisis as well as the advantages and disadvantages of an internationally coordinated economic policy. The Autumn Conference was dedicated to the topic of "Basel III and beyond: regulating and supervising banks in the post-crisis era". This event was organised together with the Centre for European Economic Research in Mannheim and focused on finding new ways to measure systemic risk and to use macroprudential instruments. It also looked at new modelling procedures and approaches to regulating financial risk at banks. Another jointly-hosted conference explored the financial stability challenges faced by economic policy. To celebrate the one-year anniversary of the European Systemic Risk Board, Jens Weidmann (President of the Bundesbank), Philipp Hildebrand (Chairman of the Governing Board of the Swiss National Bank), Stefan Ingves (Governor of the Bank of Sweden), Jürgen Stark (Member of the Executive Board of the ECB) and other guests discussed issues concerning macroprudential oversight. The Bundesbank also organised a conference together with the German Institute for Economic Research (DIW Berlin), Boston College and the Finance Center Münster on "The role of finance in stabilising the past, present, and future real economy" and a conference as part of the Marie Curie Initial Training Network.

II Services the Deutsche Bundesbank provides for the public sector

Help in issuing Federal securities

The Bundesbank conducts the auctions of one-off issues of Federal securities and carries out market management operations for listed Federal securities on the German stock exchanges on behalf of the Federal Republic of Germany – Finance Agency. One-off issues of Federal securities are sold by auction through the Bund Issues Auction Group. The auction procedure is conducted using the electronic primary market platform Bund Bidding System provided by the Bundesbank. In 2011, 68 auctions were carried out (as against 73 auctions in 2010), including 4 auctions of inflation-linked instruments. The allotment volume was €239.3 billion (as against €273.1 billion in 2010). In the reporting year, the Bundesbank continued to be involved, through credit institutions, in selling tap issues of Federal Treasury financing paper and Federal savings notes. The Bundesbank does not lend to the government or take Federal securities onto its own books in the context of either the German government's bond issuance programme or secondary market transactions involving Federal securities.

Cooperation with the European Financial Stability Facility (EFSF)

The Bundesbank provides operational support in the issuance of bonds by the European Financial Stability Facility (EFSF). In 2011, in addition to the securities settlement of EFSF bonds issued in the underwriting procedure, a sale of EFSF bills by auction was conducted operationally via the EFSF Market Group. The auction procedure was carried out using the electronic primary market platform EFSF Bidding System (EBS) provided by the Bundesbank.

Asset management …

In its role as fiscal agent, the Bundesbank also performs asset management services on behalf of the Federal and state governments. It manages these assets under a passive strategy.

… for the Federal Government, …

Asset management services for the Federal Government cover several pension fund portfolios and the portfolio of the Monetary Stability Foundation. The Bundesbank was given the responsibility for managing this portfolio after the Act on a Federal Government Pension Reserve *(Versorgungsrücklagegesetz des Bundes)* came into force in 1999. The reserve is partially funded by wage increases and serves to cover the Federal Government's increased pension burden in the years 2018 to 2032. The purpose of the Federal Government's pension fund, which is also managed by the Bundesbank, is to finance the pension claims of all Federal civil servants, judges and professional soldiers newly hired from 2007 onwards. The spectrum of investment instruments permitted by the Federal Government includes Federal securities as well as other investment-grade euro-denominated debt securities. For the pension fund, the German parliament also created the possibility of an index-linked investment of up to 10% of the assets in shares.

… the Federal Employment Agency, …

The Federal Employment Agency's pension scheme is separate from that of the Federal Government. Here, too, the Bundesbank was appointed asset manager by law and is subject to the investment rules of the Federal Government's reserve fund.

… the Federal Financial Supervisory Authority …

The funded pension scheme for civil servants employed at the Federal Financial Supervisory Authority (BaFin) is also regulated outside the scope of the Act on a Federal Government Pension Reserve. Nevertheless, the portfolio managed by the Bundesbank for this scheme has a similar structure to that of the Federal Government's pension fund.

… and the Federal states

The Bundesbank also provides varying levels of asset management services for several state government pension reserves and funds.

III Own portfolio and management of the foreign reserves

Euro financial assets …

The Bundesbank manages portfolios of euro-denominated financial assets. One portfolio is the balance sheet counterpart to the pension reserves for Bundesbank civil servants, the capital base, the statutory reserves and provisions for general risks. A further portfolio is assigned to non-specific balance sheet items. Both portfolios are invested in covered bonds using a buy-and-hold-to-maturity strategy.

… made available for securities lending

Since April 2010, the Bundesbank has used the lending facility of the central securities depository Clearstream to make instruments from these euro-denominated portfolios, as well as bonds purchased under the Covered Bond Purchase Programme (CBPP), available for automated securities lending. The objective is to improve the liquidity of the covered bond market and to reduce settlement failures.

Management of the reserve assets …

The management of the Bundesbank's reserve assets includes the investment of foreign currency reserves and the stewardship of the IMF reserve position as well as the management of gold reserves. Along with its own foreign reserve assets, the Bundesbank also manages part of the ECB's foreign reserves.

… on the basis of benchmark portfolios …

The framework for managing the foreign currency reserves of the Bundesbank and the ECB is defined by benchmark portfolios for the respective currency (US dollar and yen). These benchmarks reflect the desired long-term risk level and serve as a yardstick. The benchmarks for the Bundesbank's own reserves are set annually by the Executive Board. The Bundesbank manages the ECB reserves for which it is responsible using benchmarks set by the Governing Council and Executive Board of the ECB. Reserve managers may, in their decisions, deviate from the benchmark within a narrow margin in order to outperform the benchmark.

… and eligible investment instruments

In addition to US and Japanese government bonds, a limited volume of fixed-income securities of top-notch supranational issuers represent eligible investment instruments. In addition, the Bundesbank invests in money market products.

Sales of gold under the gold coin programme

As part of its management of gold reserves, the Bundesbank has since 2002 been selling small amounts each year to mint gold coins. In 2011, it sold around 4.7 tonnes to the Federal Office for Central Services and Unsettled Property Issues to mint the gold coin "UNESCO World Heritage – Wartburg". The sales took place under the extended gold agreement between the central banks of the Eurosystem, Switzerland and Sweden in August 2009. The Bundesbank's gold reserves are physical holdings of numbered gold bullion. They are stored in the Bundesbank's vaults and at three central banks abroad: the Federal Reserve Bank of New York, the Bank of England and the Banque de France.

IV Management of financial risks

Financial risks …

The Bundesbank is exposed to various financial risks in fulfilling its statutory functions. Chief among these are counterparty credit risk, market risk, interest rate risk and liquidity risk.

… of foreign reserves …

The market risk of the foreign reserves (gold price risk, exchange rate risk) are largely determined by the size of the foreign currency portfolio and the gold holdings. With regard to the

gold price risk, a balance sheet loss owing to the prevailing revaluation position is very unlikely at the current time. The interest rate risk for the foreign currency portfolios, which are largely denominated in US dollars with a relatively small amount in yen, is limited through a conservative duration management. The Bundesbank's high standards for the security of its investments are met by concentrating on US and Japanese government bonds. Fixed-income securities of selected supranational issuers with a very high credit rating are permitted to a certain extent. Money market transactions are conducted on a collateralised basis.

… and portfolios denominated in euros

In addition, the Bundesbank holds euro-denominated fixed-income securities in various portfolios. Under the specification of a conservative credit threshold, they are invested solely in covered bonds, which were issued on a legal basis. German Pfandbriefe account for the lion's share.

The risk-mitigating provisions for the above-mentioned portfolios, as well as other business areas (in particular foreign exchange trading and central bank services), are set forth in internal rulebooks, which are approved by the Executive Board at least once a year. The creditworthiness of the counterparties and securities issuers is monitored continuously. Business activities with the individual counterparties in the different instruments are governed by a differentiated limit system.

Monetary policy risk

The risk of claims arising from monetary policy operations as well as that of the monetary policy securities portfolios is managed according to Eurosystem guidance.

It is not primarily entries in the Bundesbank's balance sheet which are relevant for assessing the risk of claims on credit institutions related to monetary policy operations and the securities portfolio built up under the Securities Markets Programme (SMP), but generally the total amount of claims held by the Eurosystem in this area. In this context, any losses arising would normally be borne by the Bundesbank in accordance with its ECB capital share of around 27%.

With regard to securities purchased under both of the Eurosystem's CBPPs, any available scope will be used for the individual capital transactions. However, risk management is restricted by Eurosystem guidance.

Risks increased last year

Counterparty credit risks from claims motivated by monetary policy rose significantly in 2011. The significant expansion of both the SMP (from €74.0 billion to €211.9 billion) as well as the refinancing loans (from €546.7 billion to €863.6 billion) is one factor. In addition, the riskiness of the exposures has increased through the stronger concentration on certain countries and banks, lower requirements for eligible collateral posted by credit institutions in the wake of the financial crisis, longer maturities, and also through the deterioration of the financial situation of some monetary policy counterparties. This applies in particular to claims on private and public debtors from the euro-area peripheral countries.

Bundesbank's risk provisioning

In order to make provisions for the associated balance sheet risks, a further €4,141 million was added to the provisions for general risks (further information can be found in the explanatory notes on the balance sheet items in the analysis of the Deutsche Bundesbank's annual accounts).

TARGET2 balances …

At the end of 2011, intra-Eurosystem claims, including the TARGET2 net balance vis-à-vis the ECB of €463.1 billion, were the largest item in the Deutsche Bundesbank's balance sheet. The Bundesbank's positive TARGET2 balance establishes a Bundesbank claim on the ECB. As all central banks are still legally independent and report separately, the positive TARGET2 balance is reported in the Bundesbank's balance sheet as an asset. This creates a liability vis-à-vis the ECB for Eurosystem central banks with a negative TARGET2 balance. The Bundesbank's high TARGET2 balance is the result of a decentral-

ised provision of central bank liquidity and the existing imbalances in the liquidity needs of the banking systems in the individual countries. Liquidity is predominantly provided by means of the Eurosystem's monetary policy refinancing operations, but also by building up securities holdings and national central banks conducting operations on their own responsibility. The exact modalities of monetary policy operations are determined by the Governing Council of the ECB within the framework of its monetary policy mandate.

… and their risk assessment

The Eurosystem TARGET2 claims could impact the Bundesbank's risk situation via two transmission channels. With regard to the TARGET claim stated in the Bundesbank's balance sheet, it should, however, be emphasised for the purpose of risk assessment that these claims are not on other national central banks, but always on the ECB. Second, as a shareholder in the ECB, the Bundesbank can be indirectly affected by those risks to which the ECB is exposed. Alongside TARGET2 balances, such equity risks could occur in the hypothetical case of a country with a negative TARGET2 balance exiting the euro area and the central bank of the country in question not being able to meet its obligation to the ECB. The Bundesbank believes that the euro area will continue to exist in its current form. Hence Eurosystem TARGET2 claims do not pose an additional threat on top of those risks arising from operations to provide liquidity.

Staff

I Staff

Continued slight reduction in staff levels

Since the beginning of the structural reform programme in 2002, the Bundesbank has significantly reduced its staff numbers using socially responsible methods. The number of staff has fallen by 35% (around 5,300 employees) to 10,308 employees. This is due mainly to the large reduction in staff at branch level, which has been caused in particular by the consolidation of the branch network and the increasing automation of cash processing. However, this continual reduction in staff numbers is progressing at a significantly slower pace than in previous years; staffing levels decreased by only 1.7% in the reporting year.

Altered staff structure

This is mainly because a greater number of qualified university graduates have been recruited in recent years. On the one hand, in the last decade since the start of monetary union, the Bundesbank's responsibilities within Europe have become even more complex and, on the other, the ongoing challenges of the financial crisis significantly increased the scope of its duties again in 2011. This development is reflected by the Bank's altered staff structure: the proportion of employees with university degrees has risen from 36% to 48% over the last ten years.

Attractive employer

Career starters still appreciate the uniqueness of the tasks carried out by Europe's largest central bank in an international environment and the reliability of the public sector. The positive perception of the Bundesbank as an employer is also reflected in the Bank's place in various employer ranking tables. Once again, it ranked more highly in 2011 than in previous years.

The Bundesbank regards further improvement in the compatibility of family and working life as an important issue both for staff policy and for society as a whole, and is constantly working to achieve this. In addition to the many ways in which the Bundesbank already supports its employees in this regard, during the reporting year, the Bank announced that it would establish its own childcare facilities for employees at its largest site in Frankfurt.

Bundesbank staff on 31 December 2011 *

Table 15

Item	Staff numbers 1				Year-on-year changes			
	Total	Regional Offices	Branches	Central Office	Total	Regional Offices	Branches	Central Office
Civil servants	5,400	1,538	1,499	2,363	– 18	25	– 107	64
Salaried staff	5,460	1,422	1,973	2,065	– 176	– 62	– 89	– 25
Total	10,860	2,960	3,472	4,428	– 194	– 37	– 196	39
of which Trainees	552	141	30	381	– 15	– 47	8	24
Remainder Core staff	10,308	2,789	3,472	4,047	– 179	– 20	– 174	15
Memo item Core staff *pro rata* (full-time equivalent)	9,559.7	2,558.2	3,200.9	3,800.6	– 183.7	– 20.3	– 167.1	3.7

	End-2011	End-2010
* Not included:		
Members of staff on secondment	163	156
Members of staff on unpaid leave	379	369
Members of staff in the second phase of the partial retirement scheme	456	408
1 Of which part-time employees	2,041	1,990
Of which staff with temporary contracts	154	155

Deutsche Bundesbank

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

At its meeting on 14 July 2004, the Executive Board of the Deutsche Bundesbank, in consultation with the Corporate Governance Compliance Adviser, approved a Code of Conduct for the members of the Executive Board of the Deutsche Bundesbank. This code states, *inter alia*, that details of offices held by Board members on supervisory boards or similar inspection bodies of business enterprises shall be disclosed in the Annual Report.

The Board members hold the offices indicated below.

– Dr Jens Weidmann,
  President since 1 May 2011:
  Member of the Board of Directors, BIS;[1]
  Alternate, Administrative Council,
  LIKO-Bank[2]

– Professor Axel A Weber,
  President up to 30 April 2011:[3]
  Member of the Board of Directors, BIS;[1]
  Alternate, Administrative Council,
  LIKO-Bank[2]

– Professor Franz-Christoph Zeitler,
  Deputy President up to 31 May 2011:[4]
  Member of the Administrative Council,
  LIKO-Bank;[2]
  Alternate, Board of Trustees, Monetary
  Stability Foundation

– Dr hc Rudolf Böhmler:
  Member of the Supervisory Board of
  ARADEX AG, Lorch;
  Member of the Board of Trustees, Monetary
  Stability Foundation

– Dr Andreas Dombret:
  Alternate, Board of Directors, BIS;[1]
  Member of the Administrative Council, LIKO-Bank (since 27 June 2011);[2]
  Member of the Stock Exchange Expert Commission of the Federal Ministry of Finance;
  Alternate, Board of Trustees, Monetary Stability Foundation

– Dr Joachim Nagel:
  Senior Vice-Chairman of the Administrative Council, LIKO-Bank (since 11 January 2011);[2]
  Vice-Chairman of the Credit Committee, LIKO-Bank (since 11 January 2011);[2]
  Standing guest on the Central Capital Market Committee

– Mr Carl-Ludwig Thiele:
  Alternate, Administrative Council,
  LIKO-Bank;[2]
  Member of the Board of Trustees, Monetary Stability Foundation

1 Ex officio.
2 Partnership agreement.
3 Offices held when he stepped down from the Executive Board on 30 April 2011.
4 Offices held when he stepped down from the Executive Board on 31 May 2011.

Annual accounts of the Deutsche Bundesbank for 2011

I Balance sheet of the Deutsche Bundesbank as at 31 December 2011

Assets

			31.12.2010
		€ million	€ million
1 Gold and gold receivables		132,874	115,403
2 Claims on non-euro-area residents denominated in foreign currency			
2.1 Receivables from the IMF	22,296		(18,740)
2.2 Balances with banks, portfolio investment, external loans and other external assets	29,433		(27,957)
		51,730	46,697
3 Claims on euro-area residents denominated in foreign currency		18,128	–
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	8,635		(68,376)
5.2 Longer-term refinancing operations	47,112		(33,460)
5.3 Fine-tuning reverse operations	–		(1,240)
5.4 Structural reverse operations	–		(–)
5.5 Marginal lending facility	49		(–)
		55,797	103,076
6 Other claims on euro-area credit institutions denominated in euro		8,464	9,610
7 Securities of euro-area residents denominated in euro			
7.1 Securities held for monetary policy purposes	66,981		(30,899)
7.2 Other securities	4,886		(5,246)
		71,867	36,146
8 Claims on the Federal Government		4,440	4,440
9 Intra-Eurosystem claims			
9.1 Participating interest in the ECB	1,722		(1,407)
9.2 Claims arising from the transfer of foreign reserves to the ECB	10,909		(10,909)
9.3 Claims related to the allocation of euro banknotes within the Eurosystem (net)	–		(–)
9.4 Other claims within the Eurosystem (net)	463,263		(325,535)
		475,894	337,850
10 Items in course of settlement		3	1
11 Other assets			
11.1 Coins	805		(763)
11.2 Tangible and intangible fixed assets	938		(968)
11.3 Other financial assets	10,472		(10,312)
11.4 Off-balance-sheet instruments revaluation differences	–		(–)
11.5 Accruals and prepaid expenses	2,506		(1,651)
11.6 Sundry items	3,725		(4,343)
		18,447	18,036
		837,643	671,259

Liabilities

			31.12.2010
		€ million	€ million
1 Banknotes in circulation		221,264	209,615
2 Liabilities to euro-area credit institutions related to monetary policy operations denominated in euro			
2.1 Current accounts	76,408		(71,407)
2.2 Deposit facility	66,069		(38,536)
2.3 Fixed-term deposits	86,395		(36,489)
2.4 Fine-tuning reverse operations	–		(–)
		228,873	146,431
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	745		(173)
4.2 Other liabilities	4,756		(756)
		5,501	928
5 Liabilities to non-euro-area residents denominated in euro		46,552	14,460
6 Liabilities to euro-area residents denominated in foreign currency		7	15
7 Liabililies to non-euro-area residents denominated in foreign currency		–	159
8 Counterpart of special drawing rights allocated by the IMF		14,311	13,955
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)	170,489		(157,105)
9.3 Other liabilities within the Eurosystem (net)	–		(–)
		170,489	157,105
10 Items in course of settlement		1	2
11 Other liabilities			
11.1 Off-balance-sheet instruments revaluation differences	418		(0)
11.2 Accruals and income collected in advance	641		(443)
11.3 Sundry items	2,486		(2,443)
		3,545	2,886
12 Provisions		12,046	7,996
13 Revaluation accounts		129,411	110,502
14 Capital and reserves			
14.1 Capital	2,500		(2,500)
14.2 Statutory reserves	2,500		(2,500)
		5,000	5,000
15 Profit for the year		643	2,206
		837,643	671,259

II Profit and loss account of the Deutsche Bundesbank for the year 2011

		€ million	2010 € million
1.1 Interest income	8,556		(6,193)
1.2 Interest expense	– 3,786		(– 2,623)
1 Net interest income		4,770	3,570
2.1 Realised gains/losses arising from financial operations	617		(688)
2.2 Write-downs on financial assets and positions	– 3		(– 87)
2.3 Transfers to/from provisions for general risks, foreign exchange risks and price risks	– 4,141		(– 1,631)
2 Net result of financial operations, write-downs and risk provisions		– 3,527	– 1,030
3.1 Income from fees and commissions	67		(67)
3.2 Expenses relating to fees and commissions	– 19		(– 17)
3 Net income from fees and commissions		48	49
4 Income from participating interests		240	441
5 Net result arising from allocation of monetary income		323	417
6 Other income		96	91
Total net income		1,950	3,537
7 Staff costs		614	622
8 Other administrative expenses		306	252
9 Depreciation of tangible and intangible fixed assets		107	115
10 Banknote printing		71	125
11 Other expenses		209	218
Profit for the year		643	2,206

Frankfurt am Main, 14 February 2012

DEUTSCHE BUNDESBANK
Executive Board

Dr Jens Weidmann   Sabine Lautenschläger

Dr hc Rudolf Böhmler   Dr Andreas Dombret   Dr Joachim Nagel   Carl-Ludwig Thiele

III 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 2011 to 31 December 2011. 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). 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,
28 February 2012

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Müller-Tronnier
Wirtschaftsprüfer

Havas
Wirtschaftsprüfer

Overview of the principles for the accounting of the Deutsche Bundesbank

General accounting principles

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

Recording of spot transactions

Spot transactions in gold and foreign currencies shall be taken into account as from the trade date for ascertaining the average acquisition 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 and non-marketable securities are valued at amortised cost.

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 securities items or currency positions. 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, currencies 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.

Premiums or discounts arising on purchased securities shall be treated as part of interest income and shall be amortised using either the straight-line method or the implicit rate of return method. The implicit rate of return method shall be used in the case of zero-coupon bonds with a residual maturity of more than one year at the time of acquisition.

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

Transitional arrangements

The assets and liabilities shown in the closing Deutsche Mark balance sheet 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.

IV General information on annual accounts

Legal basis

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

Accounting principles of the 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 Deutsche Bundesbank decided to adopt those principles as the "accounting principles of the Deutsche Bundesbank".[1] An overview of the principles for the accounting of the Deutsche Bundesbank is given above.

Notes on balance sheet entry of euro banknotes and associated intra-Eurosystem balances arising from the allocation of euro banknotes within the Eurosystem

The ECB and the national central banks of the euro-area countries, which together comprise the Eurosystem, issue banknotes denominated in euro. The following allocation procedure was approved for recording the euro banknotes in circulation in the financial statements of the individual central banks in the Eurosystem.[2] The respective share of the total value of euro banknotes in circulation due to each central bank in the Eurosystem is calculated on the last business day of each month in accordance with the banknote allocation key. The ECB has been allocated an 8% share of the total value of the euro banknotes in circulation, whereas the remaining 92% has been allocated to the national central banks in proportion to their respective paid-up shares in the capital of the ECB. In the year under review, the Bundesbank had a 27.1% share in the fully paid-up capital of the ECB and therefore a 24.9% 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 Eurosystem central bank in accordance with the banknote allocation key and the value of the euro banknotes that this national central bank actually puts into circulation gives rise to remunerated intra-Eurosystem balances.[3] 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 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 in NCBs' relevant income positions from those in previous years. The adjustments are made by taking into account the differences between the average value of the banknotes which each national central bank had in circulation in the reference period and the average value of the banknotes which 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,

1 Published as a revised edition in Bundesbank Notice No 10001/2012 of 25 January 2012.
2 Decision of the European Central Bank of 13 December 2010 on the issue of euro banknotes (ECB/2010/29).
3 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), amended by the ECB Decision of 3 November 2011 (ECB/2011/18).

when income from euro banknotes is allocated fully in proportion to the NCBs' paid-up shares in the ECB's capital. In the year under review, the adjustments resulted from the accession of the central bank of Slovenia in 2007, the Maltese and the Cypriot central banks in 2008, the Slovakian central bank in 2009 and the Estonian central bank in 2011. Accordingly, the adjustments will be phased out by 31 December 2012, 2013, 2014 and 2016. 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".

ECB's interim distribution of profit

The ECB's income from the transfer of 8% of the euro banknotes in circulation to the ECB as well as from securities purchased by the ECB as part of the "Securities Markets Programme" is allocated to the national central banks of the Eurosystem in the form of an interim distribution of profit in the financial year in which the income arose, unless the ECB's net profit for the year is less than this income or, as a result of a decision by the Governing Council of the ECB, the amount is retained for allocation to a risk provision.[4] For the financial year 2011, €652 million of the aforementioned ECB income was distributed among the national central banks as interim profit for the profit and loss accounts 2011 in January 2012. The Bundesbank's share in the amount of €176 million is included under profit and loss item 4 "Income from participating interests". For the financial year 2010, all of this income of the ECB was required to fund the risk provision.

Change to ECB capital key on 1 January 2011

As of 1 January 2011, the Eurosystem was expanded owing to the accession of the Estonian central bank, which paid up its contribution to the capital of the ECB in full. As a result, the Bundesbank's share in the fully paid-up capital of the ECB declined from 27.13% to 27.06% on 1 January 2011.

Preparation and auditing of financial statements

The Executive Board drew up the Bundesbank's financial statements for the financial year 2011 on 14 February 2012. 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 28 February 2012 that the Bundesbank's financial statements for 2011 – 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 position and results of operations of the Deutsche Bundesbank. After studying the external auditors' report, the Executive Board decided to publish the financial statements and transfer the Bundesbank's profit to the Federal Government on 13 March 2012.

4 Decision of the European Central Bank of 25 November 2010 on the interim distribution of the income of the European Central Bank on euro banknotes in circulation and arising from securities purchased under the securities markets programme (ECB/2010/24).

V Notes on the individual balance sheet items

1 Assets

1 Gold and gold receivables

As of 31 December 2011, the Bundesbank's holdings of fine gold (ozf) amounted to 3,396,303 kg or 109 million ounces. The gold was valued at market prices at the end of the year (1 kg = €39,123.09 or 1 ozf = €1,216.864). In the year under review, the gold holdings declined by 4,666 kg or 0.2 million ounces. This was due to the sale of gold to the Federal Government at market prices for the purpose of minting gold coins.

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

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 are shown in this item.

2.1 Receivables from the IMF

Sub-item 2.1 contains the claims on the IMF which are financed and held by the Bundesbank and which arise from Germany's membership of the IMF. The claims, which total SDR18,788 million (€22,296 million), consist of drawing rights within the reserve tranche, special drawing rights and loans under the New Arrangements to Borrow (NAB).

The drawing rights within the reserve tranche correspond to the amounts actually paid to the IMF in gold, special drawing rights, foreign exchange and national currency under the German quota. The drawing rights held represent the difference between the German quota of SDR14,566 million (€17,285 million) and the euro balances amounting to €12,246 million (SDR10,319 million) at the disposal of the IMF at the end of the year. The German quota was increased by SDR1,557 million to SDR14,566 million on 16 March 2011 in line with the *ad hoc* quota adjustment resolved in 2008. 25% of this sum was paid in special drawing rights and 75% in euro. In 2011, there was a net increase of SDR1,378 million to SDR4,246 million (€5,039 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, amounting to SDR12,059 million were allocated free of charge. A corresponding counter-

Receivables from the IMF Table 16

Item	31.12.2011 SDR million	31.12.2011 € million	31.12.2010 SDR million	31.12.2010 € million	Year-on-year change SDR million	Year-on-year change %	Year-on-year change € million	Year-on-year change %
German quota	14,566	17,285	13,008	15,054	1,557	12.0	2,232	14.8
less euro balances	10,319	12,246	10,140	11,735	179	1.8	511	4.4
Drawing rights within the reserve tranche	4,246	5,039	2,868	3,319	1,378	48.1	1,720	51.8
Special drawing rights	11,897	14,118	12,188	14,104	– 291	– 2.4	14	0.1
Bilateral loans	–	–	1,138	1,317	– 1,138	– 100.0	– 1,317	– 100.0
New Arrangements to Borrow	2,645	3,139	–	–	2,645	.	3,139	.
Total	18,788	22,296	16,194	18,740	2,594	16.0	3,556	19.0

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part is shown as liability item 8 “Counterpart of special drawing rights allocated by the IMF”. In 2011, the holdings of special drawing rights fell by SDR291 million to SDR11,897 million, chiefly because of the payment of Germany’s increased quota.

On activation of the NAB on 1 April 2011, the existing loans from the bilateral loan agreement with the IMF were transferred to the NAB. NABs are multilateral credit lines with the Fund, which serve as a backstop for use in the event of a systemic crisis and can only be taken up if an IMF programme has been agreed and after an NAB has been activated. The Bundesbank’s NAB credit line amounts to SDR25.4 billion. At the end of the reporting year, this resulted in receivables from the IMF of SDR2,645 million (€3,139 million).

IMF programmes that were agreed before 1 April 2011 will continue to be financed with the bilateral credit line that has been in place since 2009, and transferred to the NAB on the same day. At the end of the year, there were therefore no receivables arising from bilateral loans; as at 31 December 2010, this item still contained receivables to the amount of SDR1,138 million (€1,317 million).

If all items on the assets side and the liabilities side of the balance sheet are taken into account, the net SDR item amounted to SDR6,731 million, compared with SDR4,137 million in 2010. The valuation is based on the reference rate of SDR1 = €1.1867 (2010: SDR1 = €1.1572) calculated by the ECB at the end of the year for all central banks participating in the Eurosystem.

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

The balances with banks, portfolio investment, loans and other foreign currency claims which are shown in sub-item 2.2 amounted to €29,433 million at the end of 2011, compared with €27,957 million on 31 December 2010. These are almost exclusively US dollar holdings amounting to US$35,473 million (€27,416 million), representing a decline of US$830 million on the previous year. This sub-item also contains holdings in yen (¥200,911 million = €2,005 million) and 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 into account, the net US dollar item valued at market prices amounted to US$35,611 million, compared with US$36,202 million in 2010, and the net yen item valued at market prices amounted to ¥201,041 million, compared with ¥84,015 million in 2010. The foreign currency items were valued at the respective end-of-year

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

Table 17

Item	31.12.2011	31.12.2010	Year-on-year change	
	€ million	€ million	€ million	%
Current account holdings and overnight deposits	676	594	82	13.8
Claims arising from reverse repurchase agreements	3,802	3,594	209	5.8
Fixed-term deposits and deposits at notice	–	1,609	– 1,609	– 100.0
Marketable securities	24,832	22,036	2,797	12.7
Other	122	124	– 2	– 1.3
Total	29,433	27,957	1,477	5.3

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market rate; this amounted to €1 = US$1.2939 for the US dollar item (2010: €1 = US$1.3362) and €1 = ¥100.20 for the yen item (2010: €1 = ¥108.65).

3 Claims on euro-area residents denominated in foreign currency

This item contains €18,128 million of US dollar claims on credit institutions resulting from refinancing operations in the context of the temporary swap agreements with the Federal Reserve (2010: no holdings). In order to carry out these operations, the ECB receives US dollars from the Federal Reserve in return for euro based on the swap agreement; the ECB then makes these available to the national central banks, which pass them on to euro-area credit institutions. The TARGET2 liabilities resulting from swap transactions between the ECB and the Bundesbank lower the TARGET2 settlement balances shown in asset sub-item 9.4 “Other claims within the Eurosystem (net)”.

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, liquidity-providing fine-tuning operations and the marginal lending facility). At the end of the reporting year, the Eurosystem’s corresponding outstanding monetary policy operations amounted to €863,568 million (2010: €546,747 million), of which the Bundesbank held €55,797 million (2010: €103,076 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 ECB capital key shares.

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 were conducted as fixed-rate tenders with full allotment. At the end of the year, the main refinancing operations amounted to €8,635 million, which was €59,741 million less than on 31 December 2010. On a daily average, the main refinancing operations amounted to €17,390 million (2010: €51,327 million).

Longer-term refinancing operations with a maturity of between one maintenance period and three years were carried out in the year under review with the purpose of providing longer-term liquidity. The operations were conducted as fixed-rate tenders with full allotment at the main refinancing rate. The volume of these transactions amounted to €47,112 million at the end of 2011 and was therefore €13,652 million greater than the volume of the previous year. On a daily average, the volume of longer-term refinancing operations was €34,718 million (2010: €102,499 million).

The marginal lending facility is available at a predetermined interest rate (standing facility). At the end of 2011, recourse to this facility amounted to €49 million (at the end of 2010: no recourse). The extent to which it was being used on a daily average came to €64 million (2010: €151 million).

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

This item, amounting to €8,464 million (2010: €9,610 million), consists in particular of fixed-term deposits which are held at credit institutions and which arise from funds received in connection with central bank services (see liability item 5 “Liabilities to non-euro-area residents denominated in euro”).

7 Securities of 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 held to maturity and valued at amortised cost. Purchases as part of the Eurosystem’s Covered Bond Purchase Programme (CBPP), Securities Markets Programme (SMP) and Second Covered Bond Purchase Programme (CBPP2), which the ECB Governing Council approved on 7 May 2009, 9 May 2010 and 6 October 2011 respectively, are shown under sub-item 7.1 “Securities held for monetary policy purposes”; other holdings of euro-denominated covered bonds are shown under sub-item 7.2 “Other securities”.

At the end of 2011, the Bundesbank's securities holdings under the CBPP amounted to €14,827 million (2010: €15,330 million). The balance sheet value of the securities that the Bundesbank purchased under the CBPP2 between November 2011 and the end of the year under review amounted to €1,019 million.

At the end of 2011, the Eurosystem national central banks' SMP holdings amounted to €194,155 million (2010: €60,873 million), of which the Bundesbank held €51,135 million (2010: €15,569 million). Pursuant to Article 32.4 of the ESCB Statute, all risks from these operations, provided they materialise, are shared among the Eurosystem national central banks in proportion to the prevailing ECB capital key shares. The Governing Council of the ECB decided that no write-downs were required as at 31 December 2011 for Greek bonds contained in the SMP holdings. This decision was based on the fact that the voluntary restructuring planned in 2011 as part of private sector involvement (PSI) is to apply exclusively to those Greek bonds that are held by the private sector.

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 the 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 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 other 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. In accordance with rules laid down in Article 29.3 of this statute, the key for subscription to the ECB's capital was adjusted with effect from 1 January 2009. Since then, the Bundesbank has had an 18.9% share of the ECB's subscribed capital. Pursuant to a decision of the Governing Council of the ECB,[5] the ECB's capital was increased by €5 billion with effect from 29 December 2010. The Eurosystem national central banks pay the capital in three equal annual instalments. The Bundesbank's capital contribution amounts to a total of €947 million; as at 28 December 2011, as in the previous year, €316 million was transferred to the ECB as a TARGET2 payment (see sub-item 9.4 "Other claims within the Eurosystem (net)"). The Bundesbank's participating interest in the ECB increased from €1,407 million to €1,722 million as a result.

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 2011, these claims amounted to €10,909 million. As the transferred gold does not earn interest, the claims are remunerated at 85% of the respective interest rate for the main refinancing operations.

Sub-item 9.3 "Claims related to the allocation of euro banknotes within the Eurosystem (net)" shows the claims which arise from applying the

5 Decision of the European Central Bank of 13 December 2010 on the increase of the European Central Bank's capital (ECB/2010/26).

Tangible and intangible fixed assets

Table 18

€ million

Item	Purchase/ production costs 31.12.2010	Additions	Disposals	Accumulated depreciations	Book value 31.12.2011	Book value 31.12.2010	Depreciation in 2011
Land and buildings	2,365	25	– 22	– 1,571	798	837	– 61
Furniture and equipment	699	54	– 31	– 586	135	127	– 41
Computer software	120	6	– 0	– 120	5	5	– 5
Total	3,183	85	– 53	– 2,277	938	968	– 107

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euro banknote allocation key. Like at the end of 2010, the Bundesbank had no claims at the end of 2011 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 TARGET2 individual payment system. In 2011, as in 2010, the German banking system received extensive central bank money via TARGET2; at the end of the year, the Bundesbank's net claim on the ECB thus rose by €137,578 million to €463,134 million and is shown under sub-item 9.4 "Other claims within the Eurosystem (net)". The net balance (with the exception of unremunerated intra-Eurosystem balances resulting from the swap transactions between the ECB and the Bundesbank, see asset item 3 "Claims on euro-area residents denominated in foreign currency") are remunerated at the respective interest rate for main refinancing operations. On a daily average, the interest-bearing net balance amounted to €367,835 million (2010: €244,921 million). This item also contains the liabilities of €48 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 €176 million claim on the ECB arising from the interim distribution of profit (see General information on annual accounts).

10 Items in course of settlement

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

11 Other assets

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

Sub-item 11.2 "Tangible and intangible fixed assets" amounted to €938 million, compared with €968 million in 2010; it comprises land and buildings, furniture and equipment, and computer software.

Sub-item 11.3 "Other financial assets" amounted to €10,472 million, compared with €10,312 million in 2010. It contains fixed-interest euro assets of €10,384 million as a counterpart to the capital, statutory reserves, provisions for general risks and provisions for pensions and healthcare assistance. The euro assets are held to maturity and valued at amortised cost. This item also includes €89 million in participating interests held by the Bundesbank.

The participating interest in the BIS, Basel, was unchanged at €50 million at the end of 2011. The Bundesbank holds 50,100 shares. As in the previous year, the balance sheet value of the participating interest in Liquiditäts-Konsortialbank GmbH, Frankfurt am Main, amounted to €38 million. This 30% interest continues to entail a maximum additional commitment of €300 million for the Bundesbank. As in 2010, the participating interest in the co-operative society SWIFT, La Hulpe (Belgium), amounted to €1 million.

Sub-item 11.5 "Accruals and prepaid expenses" contains the accrued and prepaid expenditure calculated as at 31 December 2011. These chiefly consist of interest income due in 2012 from securities, refinancing operations for credit institutions and TARGET2 balances which were acquired or transacted in 2011.

As of 31 December 2011, sub-item 11.6 "Sundry items" mainly contained, as in 2010, the nominal value of claims against one counterparty that defaulted from monetary policy operations undertaken by the Eurosystem.

2 Liabilities

1 Banknotes in circulation

The total value of euro banknotes issued by the central banks in the Eurosystem is distributed among these banks on the last business day of each month in accordance with the key for allocating euro banknotes (see General information on annual accounts). According to the banknote allocation key applicable on 31 December 2011, the Bundesbank has a 24.9% 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 €839,702 million to €888,628 million, or by 5.8%. According to the allocation key, the Bundesbank had euro banknotes in circulation worth €221,264 million at the end of the year compared with €209,615 million at the end of 2010. The value of the euro banknotes actually issued by the Bundesbank in 2011 increased by 6.8% from €366,720 million to €391,753 million. As this was more than the allocated amount, the difference of €170,489 million (2010: €157,105 million) is shown in liability sub-item 9.2 "Liabilities related to the allocation of euro banknotes within the Eurosystem (net)".

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

Sub-item 2.1 "Current accounts" contains the deposits of credit institutions, amounting to €76,408 million (2010: €71,407 million), which are used to meet the minimum reserve requirement and 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. Minimum reserve balances are remunerated at the average interest rate for main refinancing operations in the maintenance period. On a daily average, the current account deposits came to €52,537 million (2010: €50,923 million).

Sub-item 2.2 "Deposit facility", amounting to €66,069 million (2010: €38,536 million), contains overnight deposits at a predetermined interest rate (standing facility). On a daily average, the deposit facility amounted to €28,696 million (2010: €52,298 million).

Sub-item 2.3 "Fixed-term deposits" contains liquidity-absorbing fine-tuning operations of €86,395 million (2010: €36,489 million). In 2011, they were conducted as variable-rate tenders with a maximum bid rate, in particular to neutralise the liquidity-providing effects of the Securities Markets Programme. Furthermore, as in 2010, liquidity-absorbing fine-tuning operations were conducted to offset high liquidity imbalances at the end of the maintenance periods. On a daily average, the fixed-term deposits amounted to €61,144 million (2010: €20,090 million).

Sub-item 4.1 "General government deposits" encompasses the balances of the Federal Government, its special funds, the state govern-

4 Liabilities to other euro-area residents denominated in euro

ments and other public depositors. The deposits of other public depositors constitute balances held by social security funds and local authorities. On 31 December 2011, general government deposits amounted to €745 million in all (2010: €173 million). This increase results, in particular, from higher deposits of the Financial Market Stabilisation Fund.

Sub-item 4.2 "Other liabilities" amounted to €4,756 million compared with €756 million on 31 December 2010. It mainly comprises deposits of financial intermediaries and individuals.

5 Liabilities to non-euro-area residents denominated in euro

This balance sheet item, amounting to €46,552 million (2010: €14,460 million) contains, firstly, the working balances of central banks, monetary authorities, commercial banks and international organisations held to settle the payments and other services provided by the Bundesbank. Secondly, it contains fixed-term deposits of central banks accepted mainly as part of the Bundesbank's central bank services. The proceeds are invested in the money market (see asset item 6 "Other claims on euro-area credit institutions denominated in euro").

6 Liabilities to euro-area residents denominated in foreign currency

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

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

The foreign-currency-denominated liabilities to banks outside the euro area are reported in this item. These are liabilities in US dollars which have arisen from securities repurchase agreements (repos). At the end of 2011, no holdings were reported under this item (2010: €159 million).

8 Counterpart of special drawing rights allocated by the IMF

The counterpart of the special drawing rights allocated by the IMF free of charge and shown in sub-item 2.1 "Receivables from the IMF" on the assets side of the balance sheet corresponds to the allocations of SDRs to the Federal Republic of Germany from 1970 to 1972, from 1979 to 1981 and in 2009, which together totalled SDR12,059 million.

9 Intra-Eurosystem liabilities

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

Sub-item 9.1 contains "Liabilities related to the issuance of ECB debt certificates". The ECB did not issue such paper during 2011.

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 €170,489 million (2010: €157,105 million).

The net liabilities balance 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 2011, the Bundesbank had a net claim, and this is shown on the assets side under sub-item 9.4 "Other claims within the Eurosystem (net)" and explained in the explanatory notes above.

10 Items in course of settlement

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

11 Other liabilities

Sub-item 11.1 "Off-balance-sheet instruments revaluation differences" essentially comprises €418 million for the valuation of the US dollar forward liabilities to the ECB arising from the €/US dollar swap agreement with the ECB (see asset item 3 "Claims on euro-area residents denominated in foreign currency").

Sub-item 11.2 "Accruals and income collected in advance" contains the accrued income calculated as at 31 December 2011. This consists mainly of interest expenditure which is due in 2012 but was incurred in 2011 and which arose in connection with the allocation of banknotes within the Eurosystem.

Sub-item 11.3 "Sundry items" mainly consists of the liabilities arising from the Deutsche Mark banknotes still in circulation. Although Deut-

Provisions Table 19

Provisions for	31.12.2011	31.12.2010	Year-on-year change	
	€ million	€ million	€ million	%
General risks	7,709	3,568	4,141	116.1
Monetary policy operations	279	650	– 370	– 57.0
Direct pension commitments	2,770	2,514	256	10.2
Indirect pension commitments (supplementary pension funds)	403	398	5	1.3
Healthcare subsidy commitments to civil servants	542	496	46	9.4
Partial retirement scheme	97	102	– 4	– 4.2
Staff restructuring schemes	208	229	– 21	– 9.0
Other	37	40	– 3	– 8.0
Total	12,046	7,996	4,050	50.7

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sche 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/Ia and BBk III/IIIa and, at the end of 2011, totalled €3,269 million. The banknote series BBk I/Ia accounted for €1,251 million of this total (2010: €1,262 million) and the banknote series BBk III/IIIa for €2,018 million (2010: €2,067 million). In 2004, part of the liabilities arising from Deutsche Mark BBk I/Ia series banknotes still in circulation and amounting to €1,237 million were taken off the books and reported as income as it is highly unlikely that this part of the banknote stock will now be exchanged for euro. As a result of this partial write-off, the liabilities arising from Deutsche Mark banknotes still in circulation on 31 December 2011 amounted to €2,032 million.

12 Provisions

The provisions for general risks are created pursuant to the regulations governing the Bundesbank's annual accounts contained in section 26 (2) of the Bundesbank Act *(Bundesbankgesetz)*. 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 methods amongst others, taking account of the Bundesbank's holdings of risk-weighted assets, their degree of risk, the financial situation expected for the coming year and the statutory reserves (€2.5 billion). Taking the aforementioned factors into consideration, the risk provisions need to be expanded by a greater amount than in 2010. This rise is particularly attributable to higher risks from monetary policy operations. The counterparty credit risks of the Securities Markets Programme and of the refinancing operations, which are determined using a model, grew significantly as a result of the larger volume of the operations but also of the higher degree of risk. The risk provisions are to be increased over a period of three years up to the end of 2012. According to the current valuation of the risks, the risk provisions were raised by €4,141 million on 31 December 2011 as the second of the planned three stages (see the profit and loss sub-item 2.3 "Transfers to/from provisions for general risks, foreign exchange risks and price risks").

In accordance with Article 32.4 of the ESCB Statute, the provision for monetary policy operations will be funded by all national central banks of participating member states in proportion to their subscribed capital key shares in the ECB applicable in the year in which the counterparty defaults. In accordance with the Eurosystem accounting principles and in con-

sideration of the general principle of prudence, the ECB Governing Council reviewed the appropriateness of this provision and decided to reduce the total amount from €2,207 million on 31 December 2010 to €949 million on 31 December 2011. The Bundesbank's share of this provision is €279 million (2010: €650 million). This resulted in income of €370 million for the Bundesbank in 2011 (see profit and loss item 5 "Net result arising from allocation of monetary income").

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 based on an actuarial expert opinion pursuant to the entry age normal method *(Teilwertverfahren),* with a discount rate of 5.0% used in the reporting year (2010: 5.1%). After the provisions of the Accounting Law Modernisation Act *(Bilanzrechtsmodernisierungsgesetz)* were implemented, provisions for pension and healthcare subsidy commitments amounted to €4,095 million as at 31 December 2011, in particular given future cost increases. €3,715 million of this sum is recorded in the provisions as at 31 December 2011. The remaining amount of €380 million is to be distributed evenly among the annual accounts for 2012 and 2013. Provisions for the partial retirement scheme and for payment commitments arising from staff restructuring schemes that had already been carried out by the balance sheet date are valued using a discount rate of 3.93% (2010: 3.91%) based on an actuarial expert opinion pursuant to the present value method *(Barwertverfahren)*. Expenses in the amount of €270 million from marking up the aforementioned staff provisions (including effects of changing the discount rate) are contained in profit and loss sub-item 1.2 "Interest expense"; transfers of €190 million due to changing over to the provisions of the Accounting Law Modernisation Act are booked to profit and loss item 11 "Other expenses". Other changes to provisions provide relief of €153 million in profit and loss item 7 "Staff costs" and income of €24 million in profit and loss item 6 "Other income".

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

13 Revaluation accounts

This item contains the disclosed hidden reserves from the initial valuation at the time of the changeover to market valuation on 1 January 1999 (revaluation items "old") and the unrealised profits arising from market valuation on 31 December 2011 (revaluation items "new").

Revaluation items "old"

A revaluation item "old" now remains only for the gold position. It represents the difference between the market value of gold 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 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 are 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 0.2 million ozf in the gold holdings resulted in a dissolution amount of €26 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".

Revaluation items "new"

In the case of gold holdings, the net positions in each foreign currency and the securities portfolios, the positive difference between their market value on 31 December 2011 and their value in terms of the average acquisition cost

Revaluation accounts Table 20

Item	Revaluation items "old"	Revaluation items "new"	Total 31.12.2011	Total 31.12.2010	Year-on-year change	
	€ million	€ million	€ million	€ million	€ million	%
Gold	18,873	105,972	124,845	107,363	17,482	16.3
US dollars	–	3,023	3,023	2,277	747	32.8
SDRs	–	376	376	150	225	149.9
Yen	–	349	349	248	101	40.8
Securities	–	818	818	464	354	76.4
Total	18,873	110,538	129,411	110,502	18,909	17.1

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carried forward from 1 January 1999 is shown in the revaluation items "new".

In the case of gold, the acquisition cost is 1 ozf = €246.370. At the end of 2011, the market value of the gold position exceeded its acquisition value, leading to a revaluation item of €105,972 million (2010: €88,464 million). The market values of the US dollar, SDR and Japanese yen positions at the end of 2011 were likewise above their acquisition value (€1 = US$1.4589, €1 = SDR0.8842 and €1 = ¥121.30), giving rise to revaluation items. There were only slight valuation gains in the case of the other foreign currencies.

The valuation gains from securities shown in the balance sheet result almost exclusively from US dollar investments. The euro securities are held to maturity and valued at amortised cost. If this item had been valued at market prices, there would have been valuation losses of €8.9 billion (2010: €2.1 billion), chiefly from SMP securities, and valuation gains of €1 billion (2010: €0.5 billion), in particular from the euro portfolio shown in asset sub-item 11.3 "Other financial assets".

14 Capital and reserves

In accordance with section 2 of the Bundesbank Act, the liable capital amounts to €2.5 billion. 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.

15 Profit for the year

The profit and loss account for 2011 closed with an annual surplus of €643 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 2011.

VI Notes on the profit and loss account

1 Net interest income

This item shows interest income less interest expense. Net interest income was greater than in 2010, rising by €1,201 million to €4,770 million. Of this net income, €392 million was in foreign currency (primarily US-dollar-denominated securities) while euro holdings amounted to €4,379 million (primarily from the use of monetary policy instruments).

1.1 Interest income

Interest income in foreign currency in 2011 fell year on year by €6 million to €451 million. This was due to the lower annual average rate of interest on US dollar assets. IMF interest income rose by an additional €54 million (see profit and loss sub-item 1.2 "Interest expense") because gross reporting of interest income and expenditure from allocated special drawing rights was introduced in 2011. Interest income in euro increased year on year by €2,369 million to €8,105 million. Income from the refinancing of credit institutions and the TARGET2 balances rose by €1,289 million overall. This resulted primarily from the higher average rate of interest over the year. Income from securities grew by €1,032 million, particularly owing to purchases of securities as part of the Eurosystem's Securities Markets Programme (SMP).

1.2 Interest expense

Interest expenditure increased by €1,162 million to €3,786 million year on year. In the case of foreign currency, interest expenditure rose by €57 million, mainly because gross reporting of interest income and expenditure from allocated special drawing rights was introduced in 2011 (see profit and loss sub-item 1.1 "Interest income"). In the case of the euro, there was a year-on-year increase of €1,106 million to €3,726 million. The interest expense on the remuneration of intra-Eurosystem balances arising from the allocation of euro banknotes increased by €536 million owing to the higher interest rate level over the year and the rise in holdings (see General information on annual accounts). Furthermore, interest expenditure on liabilities related to monetary policy operations (minimum reserve, deposit facility and fixed-term deposits) grew by €554 million on account of higher average interest rates and an increase in holdings.

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

The net income shown in sub-item 2.1 "Realised gains/losses arising from financial operations" amounted to €617 million, compared with €688 million in 2010.

Sub-item 2.3 "Transfers to/from provisions for general risks, foreign exchange risks and price risks" contains the increase of €4,141 million in the provision for general risks (see liability item 12 "Provisions").

3 Net income from fees and commissions

Net income from fees and commissions came to €48 million, compared with €49 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. The total income of €240 million (2010: €441 million) includes, in particular, the Bundesbank's share of the ECB's profit distribution for the financial years 2010 and 2011.

5 Net result arising from allocation of monetary income

This item comprises income of €323 million overall in 2011, compared with €417 million in 2010. Risk provisioning for Eurosystem monetary policy operations resulted in net income of €370 million (2010: €435 million). Expenditure from the allocation of monetary income amounted on balance to €48 million, compared with €18 million in 2010.

The monetary income of the Eurosystem national central banks is allocated in accordance with a decision taken by the Governing Council of the ECB.[6] 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 monetary base.

The monetary 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)" and the net liabilities arising from

6 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 3 November 2011 (ECB/2011/18).

Net interest income

Table 21

Item	2011	2010	Year-on-year change	
	€ million	€ million	€ million	%
Interest income in foreign currency				
IMF	76	11	66	.
Reverse repo transactions	4	9	– 5	– 57.8
Securities	364	430	– 66	– 15.4
Claims arising from the provision of foreign exchange liquidity	5	3	3	94.4
Other	2	5	– 3	– 54.8
Total	451	457	– 6	– 1.3
Interest income in euro				
Main refinancing operations	202	520	– 319	– 61.2
Longer-term refinancing operations	428	1,039	– 611	– 58.8
Other refinancing operations	1	8	– 6	– 80.5
TARGET2 balances in the ESCB	4,708	2,483	2,224	89.6
Government bonds (SMP portfolio)	1,518	521	997	191.1
Covered bonds	609	563	46	8.2
Claims arising from the transfer of foreign reserves to the ECB	117	94	23	24.9
Claims arising from central bank services	82	40	42	104.1
Financial assets	386	397	– 11	– 2.8
Other	53	69	– 16	– 23.7
Total	8,105	5,736	2,369	41.3
Interest income	8,556	6,193	2,363	38.2
Interest expense in foreign currency				
IMF	54	–	54	.
Liabilities arising from the provision of foreign exchange liquidity	5	3	3	93.9
Other	0	0	0	.
Total	60	3	57	.
Interest expense in euro				
Minimum reserves	649	512	137	26.7
Deposit facility	151	133	18	13.6
Fixed-term deposits	505	106	399	376.1
Liabilities related to the allocation of euro banknotes	2,068	1,533	536	34.9
Liabilities arising from central bank services	77	35	42	120.6
Marking up of staff provisions	270	286	– 16	– 5.6
Other	6	16	– 10	– 61.0
Total	3,726	2,620	1,106	42.2
Interest expense	3,786	2,623	1,162	44.3
Grand total interest income	4,770	3,570	1,201	33.6

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Net result of financial operations, write-downs and risk provisions Table 22

Item	2011	2010	Year-on-year change	
	€ million	€ million	€ million	%
Realised gains/losses				
Gold	170	163	7	4.2
Foreign currency	145	167	– 22	– 13.0
Securities	302	359	– 57	– 15.8
Total	617	688	– 71	– 10.4
Write-downs				
Foreign currency	– 0	– 0	0	.
Securities	– 3	– 87	84	– 96.4
Total	– 3	– 87	84	– 96.4
Transfers to/from provisions for general risks, foreign exchange risks and price risks	– 4,141	– 1,631	– 2,510	– 153.9
Grand total	– 3,527	– 1,030	– 2,498	– 242.6

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TARGET2 accounts 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 aforementioned monetary base items reduces the amount of the 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 net assets arising from TARGET2 accounts 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 CBPP and the CBPP2 generate income according to the respective interest rate for the main refinancing instrument.

Net income from fees and commissions Table 23

Item	2011	2010	Year-on-year change	
	€ million	€ million	€ million	%
Income				
Cashless payments	25	26	– 1	– 4.1
Cash payments	15	14	0	3.1
Securities business and security deposit business	9	11	– 3	– 25.1
Other	18	14	4	26.8
Total	67	67	0	0.6
Expense				
Securities business and security deposit business	14	13	1	9.9
Other	4	4	– 0	– 0.9
Total	19	17	1	7.3
Grand total	48	49	– 1	– 1.8

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Staff costs Table 24

Item	2011 € million	2010 € million	Year-on-year change € million	Year-on-year change %
Salaries and wages	493	489	4	0.8
Social security contributions	81	80	1	1.3
Expenditure on retirement pensions	41	54	– 13	– 24.3
Grand total	614	622	– 8	– 1.3

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If the value of a national central bank's earmarked assets is above or below the value of its monetary 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 of monetary income resulted in a net expense of €48 million for the Bundesbank. This net expense represents the difference between the €4,304 million in monetary income paid by the Bundesbank into the common pool and the Bundesbank's claim of €4,257 million – corresponding to the Bundesbank's share of the ECB's paid-up capital – on the common pool.

6 Other income

The remaining income amounted to €96 million, compared with €91 million in 2010.

7 Staff costs

Staff costs fell from €622 million to €614 million year on year. The main reason for this was lower expenditure on retirement pensions.

The remuneration received by each member of the Executive Board is published in the annual report in accordance with item 8 of the "Code of Conduct for the members of the Executive Board of the Deutsche Bundesbank". The President of the Bundesbank (in office since 1 May 2011) received a pensionable salary of €208,105.37, a special non-pensionable remuneration of €51,129.19 and a standard expenses allowance of €3,408.64, amounting to a total of €262,643.20. The Deputy President of the Bundesbank (in office since 1 June 2011) received a pensionable salary of €145,712.73, a special non-pensionable remuneration of €35,790.43 and a standard expenses allowance of €1,789.55, amounting to a total of €183,292.71. For 2011, the other members of the Executive Board each received a pensionable salary of €187,418.10, a special non-pensionable remuneration of €46,016.27 and a standard expenses allowance of €2,556.48, amounting to a total of €235,990.85. Two members of the Executive Board were replaced in 2011. For the period from 1 January 2011 until he left on 30 April 2011, the previous President received a pensionable salary of €104,097.96, a special non-pensionable remuneration of €25,564.59 and a standard expenses allowance of €1,704.32, amounting to €131,366.87. For the period from 1 January 2011 until he left on 31 May 2011, the previous Deputy President received a pensionable salary of €104,097.95, a special non-pensionable re-

muneration of €25,564.60 and a standard expenses allowance of €1,278.25, amounting to €130,940.80.

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 €11,435,720.13 in 2011.

8 Other administrative expenses

The other (non-staff) operating expenditure increased year on year by €54 million to €306 million, mainly due to IT and construction projects.

9 Depreciation on tangible and intangible fixed assets

The depreciation of land and buildings, of furniture and equipment and of computer software amounted to €107 million, compared with €115 million in 2010 (see asset sub-item 11.2 "Tangible and intangible fixed assets").

10 Banknote printing

Expenditure on banknote printing declined year on year by €54 million to €71 million.

11 Other expenses

Other expenses, which contain in particular the transfers to staff provisions due to the transition to the provisions of the Accounting Law Modernisation Act (see liability item 12 "Provisions"), amounted to €209 million, compared with €218 million in 2010.

The Deutsche Bundesbank: key figures

Staff[1]	2010	2011
Core staff (full-time equivalents)	9,743	9,560
– contraction since 31 December 2002[2]	5,057 (= 34.2%)	5,240 (= 35.4%)

Locations/core staff (full-time equivalents)[1]	2010	2011
Central Office	1 / 3,797	1 / 3,801
Regional Offices	9 / 2,579	9 / 2,558
Branches	47 / 3,368	47 / 3,201

Annual accounts[1]	2010	2011
Profit for the year	€2,206 million	€643 million
Net interest income	€3,570 million	€4,770 million
Balance sheet total	€671,259 million	€837,643 million
Foreign reserve assets (total)	€162.1 billion	€184.6 billion
– foreign currency	€28.0 billion	€29.4 billion
– gold	(3,401 t) €115.4 billion	(3,396.3 t) €132.9 billion
– receivables from the IMF	€18.7 billion	€22.3 billion

ECB capital key[3]		2011
Share of subscribed capital		18.9373%
Share of paid-up capital		27.0647%
Amount of the participating interest in the ECB[4]		€1.72 billion
Foreign reserve assets transferred to the ECB		€10.91 billion

Money market transactions (main refinancing operations)	2010	2011
Banks participating in the Eurosystem (average)	115	192
– *of which* using the Bundesbank as an intermediary	32	69
Amount outstanding for main refinancing operations in the Eurosystem[5]	€132 billion	€160 billion
– *of which* counterparties of the Bundesbank	€51 billion	€17 billion

Cash payments	2010	2011
Volume of euro banknotes in circulation (Eurosystem)[1]	€839.7 billion	€888.6 billion
Volume of euro coins in circulation (Eurosystem)[1]	€22.3 billion	€23.1 billion
Value of DM/euro exchange transactions	DM131.2 million	DM109.5 million
Unreturned DM banknotes and coins	DM13.44 billion	DM13.30 billion

Incidence of counterfeit money in Germany	2010	2011
Euro banknotes (number)	60,000	39,000
Euro coins (number)	67,400	52,700

1 On 31 December. **2** Core staff (full-time equivalents) on 31 December 2001 (year before the structural reform began): 14,800. **3** Since 1 January 2011. **4** Since 28 December 2011. **5** Daily average.

Cashless payments	2010	2011
Payments via the Bundesbank (number of transactions)	2,711.8 million	2,738.7 million
– of which via RPS	2,663.0 million	2,690.0 million
– of which via TARGET2-BBk	44.7 million	44.4 million
Payments via the Bundesbank (value)	€219 trillion	€215 trillion
– of which via RPS	€2,300 billion	€2,413 billion
– of which via TARGET2-BBk	€214 trillion	€210 trillion
Share of TARGET2-BBk transactions in EU-wide TARGET2 system	50.5%	~ 50%

Banking supervision	2010	2011
Number of institutions to be supervised	3,686	3,558
Audits of banking operations	214	225
Monthly returns processed and additional information pursuant to section 25 of the German Banking Act	30,598	29,974
Audit reports processed	6,137	5,685
Reports on Own Funds Principle (Solvency Regulation)	[6] 8,584	8,388
Reports on Liquidity Principle (Liquidity Regulation)	25,752	24,964
Meetings with senior management	1,957	2,690

Cooperation with foreign central banks	2010	2011
Training and advisory events	309	306
– number of participants (total)	3,719	3,494
– number of participating countries (total)	92	110

Selected economic publications (editions/circulation)	2010	2011
Annual Report	1 / 20,000	1 / 16,000
Financial Stability Review	1 / 17,000	1 / 15,700
Monthly Report	12 / 16,000	12 / 13,000
Statistical Supplements	52 / 2,700	52 / 2,600
Research Centre Discussion Papers	40 / 350	53 / 398
Publications in academic journals/books	49 / –	57 / 4

External communication/public relations	2010	2011
Visitors to the Money Museum	40,512	40,110
Written answers to queries	24,446	19,706
Press releases	342	340
Visits to the website (www.bundesbank.de)	7,215,157	7,422,338
Training sessions on counterfeit prevention	1,200	1,700
– number of participants	27,000	35,000

6 Since 2009, quarterly reports only.

Branches of the Deutsche Bundesbank on 1 April 2012

Locality number	Bank location	Locality number	Bank location
390	Aachen [1]	660	Karlsruhe
720	Augsburg	520	Kassel [1]
773	Bayreuth [2]	210	Kiel [2]
100	Berlin	860	Leipzig
480	Bielefeld	545	Ludwigshafen
430	Bochum	230	Lübeck [3]
290	Bremen [2]	810	Magdeburg
870	Chemnitz	550	Mainz
570	Coblenz	840	Meiningen [1]
370	Cologne	700	Munich
180	Cottbus [1]	150	Neubrandenburg
440	Dortmund	760	Nuremberg
850	Dresden [3]	280	Oldenburg
300	Düsseldorf	265	Osnabrück
350	Duisburg [1]	750	Regensburg
820	Erfurt	640	Reutlingen
360	Essen	130	Rostock
215	Flensburg [1]	590	Saarbrücken
500	Frankfurt/M	600	Stuttgart
680	Freiburg	630	Ulm
	Lörrach [1, 4]	694	Villingen-Schwenningen
513	Giessen [3]	790	Würzburg
260	Göttingen		
450	Hagen		
200	Hamburg		
250	Hanover		

1 Closure date 30 September 2012. **2** Closure date 30 September 2015. **3** Closure date 31 March 2015. **4** Operating unit.