



Monthly Report October 2016

Vol 68
No 10

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

Postal address
Postfach 10 06 02
60006 Frankfurt am Main
Germany

Tel +49 69 9566 0

Fax +49 69 9566 3077

<http://www.bundesbank.de>

Reproduction permitted only if source is stated.

ISSN 0418-8292 (print edition)

ISSN 1862-1325 (online edition)

The German original of this *Monthly Report* went to press at 11 am on 21 October 2016.

Annual and weekly publishing schedules for selected statistics of the Deutsche Bundesbank can be downloaded from our website. The statistical data are also published on the website.

The *Monthly Report* is published by the Deutsche Bundesbank, Frankfurt am Main, by virtue of section 18 of the Bundesbank Act. It is available to interested parties free of charge.

This is a translation of the original German-language version, which is the sole authoritative text.



■ Contents

■ Commentaries.....	5
Economic conditions.....	5
Public finances.....	7
Securities markets.....	8
Balance of payments.....	10
■ Local government finances: Development and selected aspects.....	13
<i>Local government fiscal rules and the problem of cash advances.....</i>	18
<i>Specific social benefits included in local government budgets</i>	20
<i>Annex: Key figures outlining the state-specific differences in local government finances</i>	30
■ Significance and impact of high-frequency trading in the German capital market.....	37
<i>Eurex datasets</i>	42
<i>Empirical evidence of HFT participants' reaction to the publication of important news.....</i>	47
<i>Unusual activity patterns among HFT participants</i>	55

■ Statistical Section	1*
Key economic data for the euro area.....	5*
Overall monetary survey in the euro area.....	8*
Consolidated financial statement of the Eurosystem.....	16*
Banks.....	20*
Minimum reserves.....	42*
Interest rates.....	43*
Insurance corporations and pension funds.....	48*
Capital market.....	50*
Financial accounts.....	54*
Public finances in Germany.....	58*
Economic conditions in Germany.....	65*
External sector.....	74*
■ Overview of publications by the Deutsche Bundesbank	83*

Abbreviations and symbols

- e Estimated
- p Provisional
- pe Partly estimated
- r Revised
- ... Data available at a later date
- . Data unknown, not to be published or not meaningful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.

■ Commentaries

■ Economic conditions

Underlying trends

Temporary dip in German economic growth in Q3

Macroeconomic activity in Germany continued to expand in the third quarter of 2016, although it may have temporarily lost a little steam compared with the second quarter. Nonetheless, the underlying cyclical trend remains quite robust. The increase in gross domestic product in the third quarter is likely to have been driven mainly by private consumption and the strong construction sector. Both retail sales and construction output have returned to their growth path after dipping in the second quarter, and the consumer climate remains at an exceptionally high level. Industrial activity was recently slightly down on the second quarter, however. According to the data available so far, exports did not quite maintain the high level reached in the previous quarter either. However, in line with the upward trend in orders received, optimistic export and business expectations in the manufacturing sector indicate that the situation there might also improve more over the next few months.

Industry

Industrial output almost completely recouped strong decline of previous month

After seasonal adjustment, industrial output in Germany saw a steep month-on-month increase in August (+3¼%). The decline in July thus proved to be a sharp but temporary dip, which is likely to have been related to the constellation of holidays. However, taking the more meaningful average of July and August, German industrial output still remained slightly down on the previous quarter's average (-¼%). The slight increase in consumer goods production (+¼%) was not sufficient to compensate for declines at intermediate (-½%) and capital goods (-¼%) producers.

Industrial new orders rose distinctly in August by a seasonally adjusted 1% on the month. On an average of July and August, the volume of orders thus showed a marked ¾% increase on the previous quarter's level. This was due mainly to the fact that orders from countries both within (+3%) and outside the euro area (+2¼%) expanded strongly, partly driven by large-scale orders, as German industry suffered a substantial reduction in domestic orders (-2%). Broken down by category of goods, there was an increase in orders of capital goods, whilst orders of intermediate and, in particular, consumer goods fell.

Distinct increase in orders received

August saw a steep rise in seasonally adjusted industrial sales by 4¼% on the month. Nevertheless, the average of both months only just matched the average of the second quarter. This reflected lower sales at home and in non-euro-area countries. By contrast, sales in the euro area expanded perceptibly (+1¼%). German producers of capital and consumer goods were the main beneficiaries; on an average of July and August, they were able to improve their euro-area sales significantly. Nominal exports of goods in August rose sharply on the month (+5¼%). However, the two-month average was just shy of the prior-quarter figure (-¼%) on account of the weak July figure, which was probably due to the holidays. The decrease was slightly larger in real terms (-¾%) due to the upward trend in export prices. Nominal goods imports in August were up by a substantial 3% on their level in July. On an average of the two-month period, imports consequently rose by a seasonally adjusted 1½% on the level of the second quarter. However, import prices continued to move upwards, which meant that the increase in real terms was small (+½%).

Steep rise in industrial sales and exports

Economic conditions in Germany*

Seasonally adjusted

Period	Orders received (volume); 2010 = 100			
	Industry			Main construction
	Total	of which		
Domestic		Foreign		
2015 Q4	110.0	105.9	113.4	121.5
2016 Q1	111.0	105.0	115.8	129.1
Q2	110.5	106.0	114.2	129.0
June	110.3	105.8	114.0	129.0
July	110.6	102.4	117.2	123.1
Aug	111.7	105.1	117.0	...
Period	Output; 2010 = 100			
	Industry			Construction
	Total	of which		
Intermediate goods		Capital goods		
2015 Q4	110.0	106.1	117.5	106.3
2016 Q1	112.2	107.6	120.2	109.5
Q2	111.6	106.9	119.2	105.6
June	112.2	106.2	121.0	105.7
July	109.4	105.4	116.2	106.9
Aug	113.0	107.1	121.7	105.6
Period	Foreign trade; € billion			Memo item Current account balance in € billion
	Exports	Imports	Balance	
	2015 Q4	297.63	236.85	60.78	63.68
2016 Q1	298.40	236.43	61.97	75.73
Q2	299.94	233.30	66.64	72.18
June	99.73	78.29	21.44	22.95
July	97.10	77.71	19.39	22.02
Aug	102.30	80.07	22.23	24.34
Period	Labour market			
	Employment	Vacancies ¹	Unemployment	Unemployment rate in %
	Number in thousands			
2016 Q1	43,403	630	2,726	6.2
Q2	43,522	647	2,698	6.1
Q3	...	664	2,681	6.1
July	43,604	657	2,685	6.1
Aug	43,619	664	2,679	6.1
Sep	...	670	2,680	6.1
Period	Prices; 2010 = 100			
	Import prices	Producer prices of industrial products	Construction prices ²	Consumer prices
	2016 Q1	96.2	101.5	112.5	106.6
Q2	97.0	101.6	113.1	107.3
Q3	...	102.1	113.7	107.6
July	97.8	102.2	.	107.5
Aug	97.8	102.1	.	107.5
Sep	...	102.0	.	107.7

* For explanatory notes, see Statistical Section, XI, and Statistical Supplement, Seasonally adjusted business statistics. ¹ Excluding government-assisted forms of employment and seasonal jobs. ² Not seasonally adjusted.

Deutsche Bundesbank

Construction

Seasonally adjusted construction output in August posted a significant 1¼% decline on the month, the figure for July having been revised slightly down. With regard to the individual construction sub-sectors, the decrease in the finishing trades, in particular, was considerable (-3¼%), although it should be noted that this area has often been subject to major revisions in the past. Taking the average of July and August, however, construction output increased distinctly overall in comparison with the second quarter (¾%). This was due to the main construction sector, where there was a particularly marked rise in activity of 2¼%. The expansion in building construction was stronger than in civil engineering. New orders in the main construction sector in July – the last month for which data are available – fell by a seasonally adjusted 4½% compared with the second quarter. However, they had previously reached a very high level so that the orders situation can still be considered extremely positive. The results of the Ifo Institute's survey also suggest that the construction sector is in very good shape; according to the survey, business conditions in the main construction sector were at the highest level for many years in the third quarter, and business expectations were also deemed to be very positive.

Construction sector still very favourable despite weaker output

Labour market

The fairly robust and steady rise in employment seen in the year to date weakened somewhat during the summer holidays. In August, the seasonally adjusted number of persons in work in Germany was up by 15,000 on the month, compared with +40,000 on an average of 2016 so far. The year-on-year increase fell to 506,000 persons, or +1.2%. The still strong growth posted in the last 12 months is due mainly to the increase in jobs subject to social security contributions. In July 2016, roughly 496,000, or 1.6%, more people held such positions than in the same month one year earlier. According

Rise in employment somewhat weaker recently

to the initial figures provided by the Federal Employment Agency, however, the increase turned slightly negative for the last two available months, June and July. That said, the available leading indicators do not suggest that a long-term slowdown in employment growth is to be expected. The Ifo employment barometer climbed sharply in September from an elevated position, and the labour market barometer of the Institute for Employment Research (IAB) and the Federal Employment Agency's BA-X job index remained at very high levels.

Unemployment unchanged despite refugee effect

Seasonally adjusted unemployment in September remained virtually unchanged on the month. There were 2.68 million persons registered as unemployed with the Federal Employment Agency. As in August, the unemployment rate was 6.1%. Compared with the same month one year earlier, there were 100,000 fewer persons out of work and the unemployment rate was 0.3 percentage point lower. An increasing number of refugees have registered as unemployed with the Federal Employment Agency over the past few months. By contrast, unemployment amongst the native population, which is a better reflection of the underlying cyclical trend, continues to point downwards. According to the IAB labour market barometer, official unemployment could come down a little further over the next few months.

Prices

Significant increase in crude oil prices recently

Following the sideways movement in September, crude oil prices are on a clear upward path in October so far. The price of Brent crude oil rose significantly above the US\$50 per barrel mark in the first half of October. As this report went to press, the price of a barrel of Brent crude oil stood at US\$52. The premium on crude oil futures was US\$3 for deliveries six months ahead and US\$4¼ for deliveries 12 months ahead.

Import and producer prices changed little in the period under review. At the producer level,

this applied only for non-energy goods while energy prices went down slightly. The year-on-year decline narrowed further overall. In the case of imports, it was -2.6% in August and taking the two-month average of August and September -1.5% for domestic sales.

Import and producer prices constant

After remaining basically unchanged in seasonally adjusted terms in the previous two months, consumer prices rose by 0.2% in September. A contributing factor was that, although crude oil prices moved sideways, mineral oil products became more expensive as enterprises increased their margins. The somewhat stronger rise in the cost of industrial goods was attributable, in part, to higher tobacco prices. By contrast, prices for other goods, including clothing and footwear, did not appreciate much. The prices of services excluding rents went up slightly and rents increased at a marginally higher pace, as in the previous month. There was little change in food prices. Annual inflation, as measured by the national consumer price index, rose from +0.4% to +0.7%, and the Harmonised Index of Consumer Prices increased from +0.3% to +0.5%. Going by current financial market expectations of oil price developments, inflation is likely to reach just over 1% again at the end of 2016.

Consumer prices up again

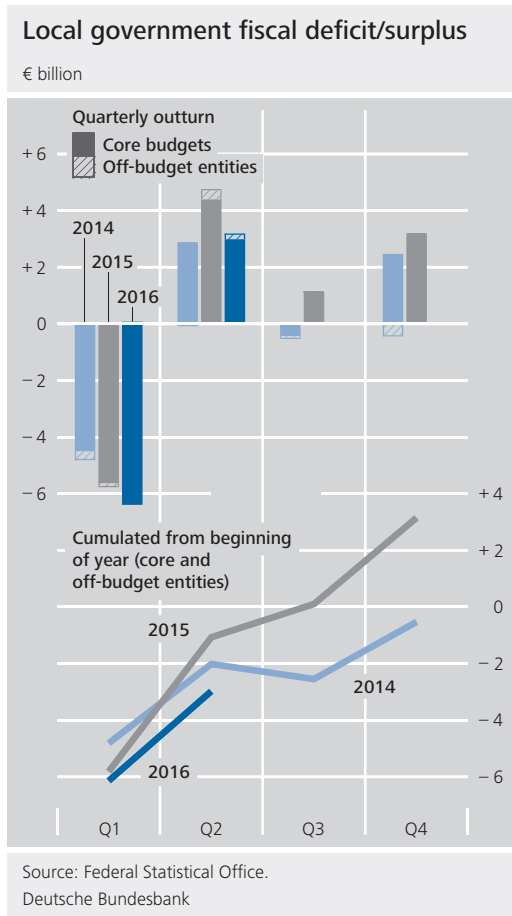
Public finances¹

Local government finances

Local government core budgets and off-budget entities ran a cash surplus of just over €3 billion in the second quarter of 2016. This constitutes a year-on-year decline of €1½ billion. Revenue rose considerably by 5% (€3 billion). Taxes only saw a moderate increase of just under 2% (€½ billion), with local business taxes stagnating

Smaller surplus in Q2: marked rise in revenue ...

¹ In the short commentaries on public finances, the emphasis is on recent outturns. The quarterly editions of the Monthly Report (published in February, May, August and November), by contrast, contain a detailed description of public finance developments during the preceding quarter. For detailed data on budgetary developments and public debt, see the statistical section of this report.



In comparison, the rise in personnel expenditure remained moderate at just over 2½%. Payroll costs might have been expected to expand more given the wage agreement in spring, which raised remuneration rates by 2½%, but the agreement has apparently not yet been implemented in many municipalities. In contrast, fixed asset formation surged by 15½% (almost €1 billion). This was again notably driven by very strong growth in Bavaria and Baden-Württemberg, whose local governments, with an overall population share of 30%, accounted for almost half of this expenditure.²

The reclassified debt statistics³ recorded mid-year local government liabilities to the private sector of €143 billion. This was €1 billion lower than at the end of 2015. The total deficit of €3 billion recorded in the first half of the year was fully funded on balance by withdrawals from reserves.⁴ The largest relative drops in indebtedness were reported for the municipalities in Saxony and Baden-Württemberg, which posted a half-year surplus.

Debt somewhat down in H1

after deducting revenue shares accruing to other government tiers. In contrast, revenue received from state government increased by a substantial 12% (€2½ billion), evidently not least due to higher reimbursements related to the reception and accommodation of refugees.

Overall expenditure soared by 8½% (€4½ billion). Social benefits saw a particularly large increase of 15½% (€2 billion). Whilst accommodation costs for unemployment benefit II recipients stagnated in spite of a growing number of recognised refugees in need, expenditure on asylum seeker benefits more than doubled (+ €1 billion). In addition, most of the 32% (€½ billion) leap in funds for the assistance of young people housed in welfare facilities is likely to be attributable to the higher number of unaccompanied minor refugees entering Germany. The extent to which the influx of refugees has also helped to swell the steep growth in current operating expenditure at 9% (€1 billion) cannot be precisely gauged.

... but even bigger rise in expenditure

■ Securities markets

Bond market

In August 2016, gross issuance in the German bond market stood at €86.1 billion, down on the previous month's figure of €110.2 billion. After deducting redemptions, which were considerably lower, and taking account of changes in issuers' holdings of their own debt securities, the outstanding volume of domestic bonds

Significant net issuance in German bond market

² For a more in-depth analysis of local authorities' finances and the outlook for further financial trends, see the article on pp 13-36.

³ According to the Federal Statistical Office press release of 28 September 2016, the reporting population in the quarterly statistics from 2016 onwards was aligned to that in the annual statistics. A breakdown of figures into regular loans and cash advances was not published.

⁴ Based on the assumption that municipal debts owed to other public sector entities not published to date (€11½ billion at end-2015) have changed only moderately and that reclassifications had little net effect.

rose by €18.0 billion, compared with a drop of €26.6 billion in July. The outstanding volume of foreign debt securities in the German bond market increased by €1.6 billion over the same period. Thus, debt instruments totalling €19.6 billion net were sold in the German market.

Increase in the public sector's capital market debt

In the reporting month, the public sector raised €12.0 billion net in the capital market. Ultimately, this could be attributed entirely to activities of central government (€14.1 billion), which for the most part issued two-year Federal Treasury notes (Schätze) worth €4.3 billion, five-year Federal notes (Bobl) amounting to €3.4 billion and ten-year Federal bonds (Bunds) totalling €2.5 billion on balance. By contrast, state governments redeemed bonds worth €2.1 billion net.

Net issuance by credit institutions

German credit institutions increased their capital market debt by €7.0 billion net in August. Most notably, debt securities issued by specialised credit institutions (€4.8 billion) and mortgage Pfandbriefe (€3.4 billion) were placed on the market, while the outstanding volume of other bank debt securities which can be structured flexibly declined by €1.5 billion.

Fall in enterprises' capital market debt

Domestic enterprises redeemed own bonds with a net value of €0.9 billion in the reporting month, compared with net issuance of €1.1 billion in July.

Purchases of debt securities

In August, the Deutsche Bundesbank was the predominant buyer in the German bond market on balance, purchasing debt securities for €13.0 billion net under the Eurosystem's asset purchase programmes. Domestic non-banks and foreign investors acquired bonds worth €9.4 billion and €7.5 billion net respectively, whereas German credit institutions sold bonds in the amount of €10.2 billion on balance.

Equity market

In the month under review, domestic enterprises issued €1.1 billion net worth of new

Sales and purchases of debt securities

€ billion

Item	2015	2016	
	August	July	August
Sales			
Domestic debt securities ¹	14.8	- 26.6	18.0
of which			
Bank debt securities	1.6	- 16.3	7.0
Public debt securities	11.3	- 11.4	12.0
Foreign debt securities ²	3.3	- 4.1	1.6
Purchases			
Residents	15.4	- 1.6	12.2
Credit institutions ³	- 0.8	- 10.0	- 10.2
Deutsche Bundesbank	9.9	18.1	13.0
Other sectors ⁴	6.3	- 9.7	9.4
of which			
Domestic debt securities	4.4	- 14.5	4.0
Non-residents ²	2.7	- 29.2	7.5
Total sales/purchases	18.1	- 30.7	19.6

¹ Net sales at market values plus/minus changes in issuers' holdings of their own debt securities. ² Transaction values. ³ Book values, statistically adjusted. ⁴ Residual.

Deutsche Bundesbank

shares in the German equity market, most of which emanated from non-listed companies. At the same time, the outstanding volume of foreign shares in the German market rose by €3.8 billion. On balance, equities were largely acquired by domestic credit institutions (€2.3 billion). Foreign investors and domestic non-banks purchased shares amounting to €1.4 billion and €1.1 billion net respectively.

Net issuance in the German equity market

Mutual funds

Domestic mutual funds recorded a net inflow of €5.2 billion in August (compared with €7.9 billion in July). This benefited specialised funds reserved for institutional investors in particular (€4.1 billion). Among the asset classes, bond funds were able to place the highest volume of shares on the market (€3.4 billion). By contrast, mixed securities funds redeemed their own units to the tune of €1.0 billion net. During the month under review, foreign mutual funds

German mutual funds record inflows

Major items of the balance of payments

€ billion

Item	2015		2016	
	Aug	July	AugP	
I Current account	+ 14.4	+ 20.2	+ 17.9	
1 Goods ¹	+ 16.9	+ 21.2	+ 22.2	
Exports (fob)	87.3	95.5	96.5	
Imports (fob)	70.5	74.3	74.3	
Memo item				
Foreign trade ²	+ 15.2	+ 19.5	+ 20.0	
Exports (fob)	87.9	96.4	96.5	
Imports (cif)	72.7	76.9	76.5	
2 Services ³	- 5.4	- 3.9	- 5.6	
Receipts	18.6	20.0	20.1	
Expenditure	24.0	23.8	25.6	
3 Primary income	+ 5.7	+ 6.3	+ 5.8	
Receipts	15.1	16.5	14.9	
Expenditure	9.4	10.1	9.1	
4 Secondary income	- 2.7	- 3.4	- 4.5	
II Capital account	0.0	- 0.1	- 0.1	
III Financial account (increase: +)	+ 19.5	+ 19.1	+ 13.7	
1 Direct investment	- 1.3	+ 10.9	- 2.0	
Domestic investment abroad	- 0.2	+ 6.6	- 0.8	
Foreign investment in the reporting country	+ 1.1	- 4.3	+ 1.2	
2 Portfolio investment	+ 1.9	+ 29.6	+ 0.2	
Domestic investment in foreign securities	+ 5.3	- 0.8	+ 8.5	
Shares ⁴	+ 0.6	+ 1.8	+ 3.5	
Investment fund shares ⁵	+ 1.3	+ 1.5	+ 3.4	
Long-term debt securities ⁶	+ 4.6	- 1.0	+ 0.9	
Short-term debt securities ⁷	- 1.2	- 3.1	+ 0.7	
Foreign investment in domestic securities	+ 3.4	- 30.4	+ 8.3	
Shares ⁴	- 0.3	+ 0.2	+ 1.4	
Investment fund shares	+ 1.0	- 1.5	- 0.6	
Long-term debt securities ⁶	+ 0.4	- 15.4	+ 5.4	
Short-term debt securities ⁷	+ 2.3	- 13.8	+ 2.1	
3 Financial derivatives ⁸	- 1.0	+ 3.1	+ 1.9	
4 Other investment ⁹	+ 20.0	- 24.9	+ 13.5	
Monetary financial institutions ¹⁰	+ 3.4	- 16.4	- 2.5	
of which				
Short-term	+ 3.3	- 14.7	- 5.9	
Enterprises and households ¹¹	- 2.5	+ 12.1	+ 4.6	
General government	- 1.9	+ 2.9	+ 2.9	
Bundesbank	+ 21.1	- 23.5	+ 8.5	
5 Reserve assets ¹²	- 0.2	+ 0.3	+ 0.1	
IV Errors and omissions ¹³	+ 5.0	- 1.0	- 4.0	

1 Excluding freight and insurance costs of foreign trade. 2 Special trade according to the official foreign trade statistics (source: Federal Statistical Office). 3 Including freight and insurance costs of foreign trade. 4 Including participation certificates. 5 Including reinvestment of earnings. 6 Long-term: original maturity of more than one year or unlimited. 7 Short-term: original maturity of up to one year. 8 Balance of transactions arising from options and financial futures contracts as well as employee stock options. 9 Includes in particular loans and trade credits as well as currency and deposits. 10 Excluding the Bundesbank. 11 Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households. 12 Excluding allocation of special drawing rights and excluding changes due to value adjustments. 13 Statistical errors and omissions, resulting from the difference between the balance on the financial account and the balances on the current account and the capital account.

Deutsche Bundesbank

operating in the German market parted with shares totalling €3.4 billion on balance. German non-banks were the sole net buyers of investment fund units (€10.0 billion). Domestic credit institutions and non-resident investors, on the other hand, disposed of mutual fund shares worth €0.9 billion and €0.6 billion respectively in net terms.

Balance of payments

Germany's current account recorded a surplus of €17.9 billion in August 2016, putting it €2.3 billion below the previous month's level. This result was attributable to an increased deficit on invisible current transactions, which comprise services as well as primary and secondary income. While the goods account surplus rose, this was insufficient to have an offsetting effect.

Decrease in current account surplus

In August, the surplus on the goods account was up on the month by €1.0 billion to €22.2 billion. This was chiefly caused by an increase in exports of goods, primarily as a result of higher net receipts on merchanting, but also on account of higher income arising from general trade in goods. Meanwhile, imports of goods remained virtually unchanged.

Increase in goods account surplus

The deficit in the invisible current transactions account stood at €4.3 billion in August, the €3.4 billion increase on the month arising from poorer results in all three sub-accounts. The deficit on the services sub-account expanded by €1.7 billion to €5.6 billion, thanks in large part to the seasonally induced increase in expenditure on travel. Meanwhile, the deficit on secondary income increased by €1.1 billion to €4.5 billion. In addition, net receipts in the primary income item contracted by €0.6 billion to €5.8 billion, not least because of a fall in earnings from direct investment which was mainly generated by leaner earnings from equity capital. The impact of this decline was, however, softened somewhat by the fact that payments to non-residents of dividends and earnings aris-

Invisible current transactions record wider deficit

ing from investment fund shares fell more sharply than the corresponding level of income from capital investment abroad.

Portfolio investment balanced

There was an easing of financial market tensions in August, with market sentiment being driven by a sense of expectation that the adverse effects of the United Kingdom potentially leaving the European Union might be less harsh than originally feared, particularly in view of the Bank of England's adoption of accommodative monetary policy measures. German cross-border portfolio investment recorded a more or less balanced overall result (+€0.2 billion), having seen net capital exports in July (€29.6 billion). Resident investors acquired foreign securities to the tune of €8.5 billion, mostly in the form of foreign equity (€3.5 billion) and investment fund shares (€3.4 billion), also purchasing debt securities (€1.6 billion), with a particular emphasis on foreign currency bonds. On the other hand, non-resident investors resumed net purchases of German paper (€8.3 billion), having parted with large quantities of these instruments (€30.4 billion) only one month previously owing to comprehensive redemptions and purchases by the Bundesbank under the expanded asset purchase programme (APP). With their interest mainly geared to debt securities (€7.5 billion), they invested not just in paper issued by the private sector but also in public-sector bonds, of which there was a plentiful issuance-driven supply in August. Moreover, foreign investors bolstered their holdings of German shares (€1.4 billion).

Direct investment sees capital imports

Direct investment led to net capital imports (€2.0 billion) in August, after generating outflows in July (€10.9 billion). German companies scaled back their net foreign investment by €0.8 billion, having further expanded their activity in this area just one month earlier (€6.6

billion). This was achieved by shifting financial resources, first and foremost through intra-group loans (€7.6 billion), and most notably by means of trade credits. Conversely, they boosted their equity capital abroad even more assertively than in July (€6.9 billion, up from €4.9 billion). On the other hand, foreign enterprises resumed investing in Germany (€1.2 billion) after having withdrawn funds in July (€4.3 billion), with capital inflows arising in the main from the accumulation of equity capital (€1.9 billion).

Other statistically recorded investment, comprising financial and trade credits (where these do not constitute direct investment) as well as bank deposits and other assets, yielded net capital exports of €13.5 billion in August. In this context, transactions by non-banks generated capital outflows in the order of €7.5 billion. Of this figure, €4.6 billion was accounted for by enterprises and households mainly engaged in redeeming past financial loans taken out abroad, with a further €2.9 billion stemming from general government, which mainly augmented its holdings of foreign overnight deposits. The banking system likewise saw capital exports (€6.0 billion net), largely on the back of how Bundesbank items developed (€8.5 billion), including a €17.2 billion increase in claims within its large-value payment system TARGET2. This contrasted with inflows from abroad brought about by an upturn in foreign deposits at the Bundesbank (€8.7 billion). Monetary financial institutions excluding the Bundesbank recorded capital imports of €2.5 billion.

Outflows in other investment

The Bundesbank's reserve assets – at transaction values – remained virtually unchanged in August (+€0.1 billion).

Reserve assets

Local government finances: Development and selected aspects

Since reunification, Germany's local government finances have experienced considerable fluctuations. Up to the mid-2000s and in the course of the financial and economic crisis they were, overall, almost always in deficit, while perceptible surpluses were recorded in the pre-crisis boom years and have also returned lately. Debt levels have remained very limited in comparison with those of central and state government. Local government finances will probably deteriorate somewhat this year. However, the coming years are likely to see a distinct improvement, partly as a result of considerable financial support from central government. Even so, the financial situation of individual local governments varies widely, and is considerably strained in many cases. Yet the very low interest rates are currently substantially easing the financial burdens associated with debt, which is very large in some municipalities.

Central government financial support for local governments has significantly increased in recent years and is set to rise again, not least in order to boost local government investment activity. If, as some suggest, central government were to cover a larger portion of social costs, such as accommodation costs for recipients of unemployment benefit II (means-tested benefit), it would be essential to ensure that local incentives for using funds efficiently and maintaining the area's attractiveness as a business location remain intact. It is important to view the pronounced decline in local government investment expenditure up to the mid-2000s in context. This fall is partly due, for example, to some entities being outsourced from local government budgets. Nonetheless, infrastructure improvements are undoubtedly overdue in some areas, and a shift of emphasis towards investment expenditure therefore appears desirable. Calls for a swift and dramatic increase in investment spending do not seem justified, however. In particular, appropriate needs testing, and capacity for planning and implementation will be crucial. Central government support could help to achieve this. Nonetheless, if a local government is in severe financial difficulties, once full use has been made of scope for adjustment locally it is the state governments which should step in, as responsibility for supporting local governments with structural weaknesses lies with them.

Overall, the state governments strongly influence the financial situation of their municipalities – most notably via the local government financial equalisation scheme, cost reimbursements or restructuring programmes – and perform budgetary oversight which includes extensive powers of intervention. Consistent oversight will be important in order to avoid local governments running into serious financial difficulties in the future and prevent delays in resolving them. Another option worth considering would be to stipulate that local governments may only obtain multi-year cash advances from their home state government and that, as a rule, these advances should count towards that state's borrowing allowance under the debt brake so that all levels of government are aware of any problems at an early stage.

Overview of local government finances

Important role of local governments in Germany's federal system

In Germany's federal system, local governments¹ perform key functions and, at present, account for one-quarter of total general government expenditure (excluding social security). In particular, they are responsible for many social benefits, day care for children, parts of the school education system and public administration, local transport and recreational infrastructure, as well as public utilities and waste disposal. Germany's Basic Law (*Grundgesetz*) tasks local governments with conducting their affairs on their own responsibility within the framework of the law. In addition to transfers from state government, they obtain their funding from service charges, shares in joint taxes and from taxes with multipliers that vary across local governments, with the latter accounting for one-fifth of their revenue according to recent figures. Through their allocations under local government financial equalisation arrange-

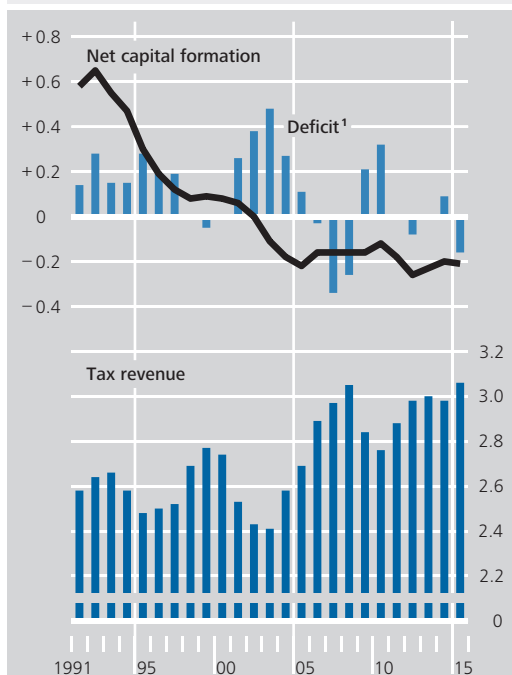
ments and supplementary rules on (sometimes lump-sum) cost reimbursements, state governments have a key impact on local government finances. Local governments are generally subject to strict (state-specific) budgetary rules, and their compliance must be monitored by the state government in question. Overall, local government accounts for only a small portion of general government debt. However, there are major differences between individual local governments, some of which have very high debt levels and persistent structural budget imbalances.

Particularly since the turn of the millennium, there have been significant fluctuations in local government finances,² largely as a result of tax developments³ (see the adjacent chart). Up to the mid-2000s, local government was almost always in deficit. The economic upturn helped local government to achieve marked surpluses in 2007 and 2008 for the first time, but this was followed by higher deficits in the wake of the financial and economic crisis. Since 2011, their finances have largely improved again, and

Larger fluctuations in finances since the turn of the millennium

Local government deficit, net capital formation and tax revenue*

As a percentage of GDP



Sources: Federal Statistical Office and Bundesbank calculations.
 * National accounts data. ¹ Surplus denoted with negative sign.

Deutsche Bundesbank

¹ In this article, the term generally includes local government associations.

² The last in-depth Monthly Report article on local government finances (Deutsche Bundesbank, Trends in local government finances since 2000, Monthly Report, July 2007, pp 25-44) referred to the period from 2000 to 2006. Unlike the 2007 article, this one analyses local government budgets including off-budget entities, as defined in the national accounts. The local government tier of city-states falls under the category of state government and is therefore disregarded here. The national accounts demarcate the government sector more consistently over time than the government finance statistics, which have only included local government off-budget entities since 2011 and in numbers which vary from year to year. The full impact of the sometimes extensive outsourcing of entities from local government core budgets up to 2010 is thus reflected by the development of individual expenditure components in the government finance statistics, whereas the national accounts data are only affected in cases of outsourcing to (possibly public) enterprises not categorised as belonging to the government sector. However, the changeover to double-entry accounting in most local governments, which took effect on different cut-off dates, may also have an influence on the national accounts figures.

³ Local government taxes encompass, most notably, local business tax, shares in income tax, and real estate tax. General purpose grants from state government, which are tied to state government revenue developments, further amplify the tax-induced fluctuations.

Revenue and expenditure in local government budgets from 2005 to 2015							
Item	2005	2010	2012	2013	2014	2015	Change
	€ bn						% pa
Revenue	165.16	194.77	210.63	219.18	226.30	240.27	3.82
<i>of which</i>							
Sales	31.25	37.86	38.21	37.70	39.01	39.54	2.38
Taxes	61.99	71.24	82.19	84.67	87.12	92.89	4.13
Transfers (from government)	56.60	68.20	72.42	78.64	82.80	89.88	4.73
Expenditure	167.71	202.90	208.39	218.95	228.84	235.55	3.46
<i>of which</i>							
Intermediate consumption	35.27	48.48	48.22	50.45	50.32	52.37	4.03
Personnel expenditure ¹	46.86	53.75	56.81	58.91	61.46	62.96	3.00
Interest	4.55	4.96	4.52	4.15	3.72	3.59	- 2.36
Subsidies	5.68	5.57	5.79	6.30	6.35	6.58	1.47
Social benefits ²	39.41	45.67	48.09	50.44	53.76	58.01	3.94
Transfers (to government)	7.16	8.66	8.97	9.22	9.71	10.09	3.49
Gross capital formation	16.98	22.60	19.79	21.32	22.39	22.51	2.86
Budget balance	- 2.55	- 8.13	2.23	0.23	- 2.54	4.72	
	% of GDP						Percentage points
Revenue	7.18	7.55	7.64	7.76	7.74	7.92	0.74
<i>of which</i>							
Sales	1.36	1.47	1.39	1.33	1.33	1.30	- 0.05
Taxes	2.69	2.76	2.98	3.00	2.98	3.06	0.37
Transfers (from government)	2.46	2.64	2.63	2.78	2.83	2.96	0.50
Expenditure	7.29	7.86	7.56	7.75	7.83	7.77	0.48
<i>of which</i>							
Intermediate consumption	1.53	1.88	1.75	1.78	1.72	1.73	0.19
Personnel expenditure ¹	2.04	2.08	2.06	2.08	2.10	2.08	0.04
Interest	0.20	0.19	0.16	0.15	0.13	0.12	- 0.08
Subsidies	0.25	0.22	0.21	0.22	0.22	0.22	- 0.03
Social benefits ²	1.71	1.77	1.74	1.78	1.84	1.91	0.20
Transfers (to government)	0.31	0.34	0.33	0.33	0.33	0.33	0.02
Gross capital formation	0.74	0.88	0.72	0.75	0.77	0.74	0.00
Budget balance	- 0.11	- 0.32	0.08	0.01	- 0.09	0.16	

Source: Federal Statistical Office, national accounts, as at August 2016. ¹ Compensation of employees, civil servant pensions and health-care payments. ² Monetary social benefits (excluding civil servant pensions and healthcare payments) and social transfers in kind.

Deutsche Bundesbank

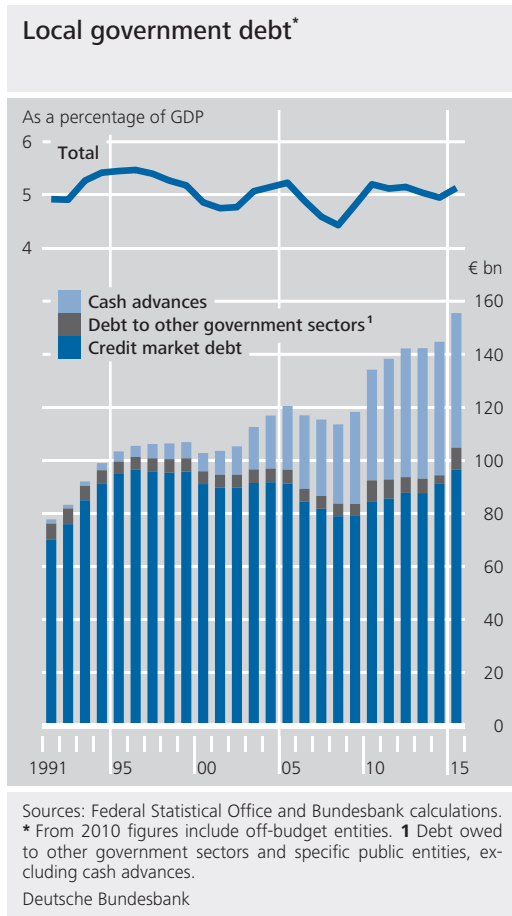
last year a surplus of €4½ billion (0.2% of gross domestic product (GDP)) was recorded.⁴

Clear net depreciation of fixed assets and costs of civil servant pensions put surpluses in perspective

Although local government budgets were close-to-balance on average over the last decade, net capital formation was negative throughout. Last year's significant surplus was not sufficient to compensate for this net depreciation of fixed assets (as understood in the "golden rule").⁵ In addition, many local governments face considerable legacy burdens connected with future pension entitlements which are not visible either in the national accounts budget balances or the aggregated debt fig-

⁴ The temporarily stronger deterioration in 2014 is linked to one-off burdens. These were caused by court rulings leading to tax refund claims which, in the national accounts, had to be recorded on the expenditure side when the rulings were issued. By contrast, the government finance statistics, on which the short commentary on pp 7-8 is based, only record the subsequent repayments as reflected in the cash position.

⁵ A "golden rule" does not require a balanced budget without net borrowing but limits the permissible deficit to the amount by which investment adjusted for asset sales exceeds depreciation not captured in the balance (depreciation during the relevant period of assets built up through past investment). In the event of negative net capital formation – as seen in the local government budgets since 2003 – this rule therefore requires a surplus. Financial transactions not included in the national accounts balance are irrelevant here, since they do not change the net asset position.



of day care for children played a particularly important role in this. The expansion of day care was the main reason why staff numbers at local government level, which had been falling for many years, started to increase again moderately from 2008. At the same time, higher wage increases than at the start of the millennium also had an impact on personnel expenditure. By contrast, interest expenses decreased substantially overall (-2½% per year), as the relief brought about by falling interest rates outweighed the cost of rising debt levels. The share of interest expenses in total expenditure has thus almost halved since 2005, to 1½% at last report.

At an average annual rate of almost 4%, revenue has grown somewhat faster than expenditure since 2005. Growth in transfers received from the government sector (4½%) and tax revenue (just over 4% per year) was above average, with the latter accounting for almost two-fifths of total revenue according to the latest figures. If the rise in tax revenue is adjusted for the arithmetical effects of the overall increase in the multipliers for real estate and local business tax (additional revenue of €2½ billion in 2015 compared with 2005), the average annual growth would have been just under ½ percentage point lower.

Somewhat stronger rise in revenue from transfers and taxes, with some multipliers raised

ures.⁶ All in all, local government was not in an especially comfortable financial position last year either, despite posting a surplus.

Intermediate consumption and social benefits important drivers of relatively strong expenditure growth

In the past ten years, the increase in local government spending, at an average annual rate of 3½%, was distinctly stronger than nominal economic growth (2¾%). This development was largely driven by social benefits (excluding civil servant pensions and healthcare payments) and intermediate consumption⁷ (annual average of +4% in both cases). Recording a not inconsiderable average increase of 3%, personnel expenditure (including civil servant pensions and healthcare payments) also rose somewhat faster than GDP, while gross capital formation grew in parallel with GDP on average. Alongside a higher number of beneficiaries, and adjustments to social benefits which, combined, drove up expenditure (above all, affecting integration assistance for disabled persons, assistance for young people and the basic allowance for the elderly), the significant expansion

Local government debt stood at just over €155 billion at last report. In relation to GDP, it has thus remained broadly stable at a relatively low level (around 5%) since Germany's reunification

⁶ In the local governments using double-entry bookkeeping, the balance sheet must capture increases in pension provisions. Notably, the persistently low interest rates are currently placing a strain on the balance as a result. In local governments using single-entry accounting systems, the only negative impact in this context, if any, is from higher payments to precautionary special funds. Provided that, like pension reserves, these special funds are also included in the government sector, these transfers do not affect the national accounts balance. Acquisitions or revaluations of pension entitlements are not recorded in the core system of the national accounts. However, the subsequent pension payments do affect the fiscal balance. There are no nationwide statistics on the development of pension provisions in local government budgets.

⁷ This primarily includes (non-investment) tangible goods purchases, including the procurement of services.

Debt ratio stable at a relatively low level, but strong increase in cash advances in many local governments

(see the chart on page 16) – unlike in the case of central and state government. However, developments varied substantially across local governments, both within federal states and among them.⁸ Until well into the 1990s local governments still almost exclusively took up investment loans, mostly agreeing fairly long maturities, whereas the share of cash advances, which should be interpreted as an indicator of budgetary imbalances, has now risen to almost one-third of their total debt (see the box on page 18). By contrast, regular investment loans declined in relation to GDP. While in 1991 hardly any cash advances were recorded, their outstanding volume has since risen steadily, reaching €24 billion at the end of 2005 and €48½ billion at the end of 2012. Since then, it has increased comparatively little, standing at almost €51 billion at last report.⁹ These cash advances are heavily concentrated in the local governments of just a few federal states (see the Annex to this article, pages 30 to 36).

The social benefits burden on local government budgets

Trend increase in social benefits has recently further intensified with influx of refugees

In the past, developments in local government finances were influenced, not least, by a significant rise in spending on social benefits. Following a sharp surge in the first few years following German reunification, there were further marked increases in the run-up to and the year of the HartzIV reform (2005), and also following the recent influx of refugees. By contrast, the rise was dampened, in particular, by transfers of responsibility for providing certain benefits when the public long-term care insurance scheme was launched in the mid-1990s. In 2015, social benefits reached €58 billion (or 2% of GDP). They thus accounted for one-quarter of total local government expenditure.

Cost reimbursement by state and central government partly offsets burden

However, the volume of social spending does not reflect the actual net burden on local government budgets, not least because the state governments forwarded central government funds – which have seen a significant overall

rise in recent years – to cover the cost of accommodation for recipients of unemployment benefit II¹⁰ and the basic allowance for the elderly (see the box on pages 20 to 22). Moreover, the state governments also cover some costs under the local government financial equalisation scheme or special reimbursement rules. In some instances, it seems that certain costs may even be overcompensated in cases where they are used as an auxiliary indicator to estimate other social spending.¹¹ It is still likely that social benefits result in a significant net burden for local government, however.¹²

In some cases, social spending in individual local governments differs very widely, with large discrepancies already apparent between the aggregate results for the individual federal states (see the Annex to this article).¹³ This is mainly due to structural differences in their

In some cases, large differences in local social spending

⁸ According to the government finance statistics.

⁹ However, the stabilisation seen in recent years is partly due to state government's redemption of €3 billion in cash advances under the debt relief programmes in Hesse and Lower Saxony and to special authorisations to convert cash advances into other forms of credit.

¹⁰ The 2005 reform aimed to provide relief to local government budgets amounting to €2½ billion per year. To achieve this, it was agreed that central government would assume part of the accommodation costs incurred by local government. For a more detailed evaluation of the reform, see Deutsche Bundesbank, An estimate of the fiscal costs of the HartzIV reform, Monthly Report, September 2006, pp 72-73.

¹¹ For information on the overweighting of the number of income-support households under the local government financial equalisation scheme of North Rhine-Westphalia (while acknowledging the fundamental suitability of this indicator as a starting point for targeted relief measures) see, for example, I Deubel (2014), Soziallastenberücksichtigung im Finanzausgleich und Lösung des Altschuldenproblems, in G Henneke (ed), Gesicherte Kommunalfinzen trotz Verschuldungs- und Finanzkrise, p 125 f.

¹² In reality, it should not be assumed that state government provides precisely the right amount of funds to reimburse social spending. Instead, there is probably often a predefined sum of funds earmarked for financial equalisation, which is then simply distributed differently. Consequently, the real cost reimbursement would only be the amount by which the allocation of funds for the local governments in question differs from the result without taking account of social spending. Where reimbursements are made separately in the form of case-based lump-sum payments, their overall volume really is flexible.

¹³ See also F Arnold, F Boettcher, R Freier, R Geißler and B Holler (2015), Kommunaler Finanzreport 2015, Bertelsmann Stiftung, pp 67-84 for analysis regarding accommodation costs, as well as R Geißler and F-S Niemann (2015), Kommunale Sozialausgaben – Wie der Bund sinnvoll helfen kann, Bertelsmann Stiftung, pp 66-81.

Local government fiscal rules and the problem of cash advances

State government fiscal rules generally permit local government borrowing to cover expenditure only in the case of investment and usually only in cases where the local government can demonstrate that it has sufficient financial capacity. A local government is deemed to have satisfied this latter requirement if its fiscal situation offers evidence that the additional future expense associated with borrowing-based investment can be borne without breaching the fiscal rules.

These rules expect local governments that use single-entry (cameralistic) accounting systems to prove that both the additional interest payments and the funds required to honour redemptions due can be generated from the current budget – ie without any need to dispose of assets or tap the follow-up financing arrangements that are customary at the central and state government levels. As for local governments using double-entry bookkeeping systems, they are obliged to demonstrate in their profit and loss accounts that their current revenue is sufficient to cover both the depreciation and the additional interest charges. Assuming the maturity schedule of the borrowing arrangement matches the depreciation profile, the requirements will be broadly identical. Diminishing interest rates, then, permit greater borrowing-based investment in both accounting systems.¹

Assuming the fiscal rules are applied consistently, local governments that cannot furnish proof of sufficient financial capacity are unable to access normal budgetary loans. This means that if they are unwilling to consolidate the current budget, they will need to curtail their investment (at least outside fee-financed areas).

In many cases observed in recent years where local governments failed to generate sufficient current revenue to cover their current expenditure (including redemptions due), thereby breaching the fiscal rules, state-level supervisory authorities have turned a blind eye to the cash advances² those local governments took out, which were no longer used for their intended purpose, which is solely to bridge short-lived intrayear liquidity bottlenecks. The amount of cash advances not replaced by normal revenue in the end-of-year budget outturn equates to the remaining funding needs that ought, by rights, to be fully covered in the next draft budget.

Reported levels of cash advances have actually been rising almost continually for many years. Evidently, then, many local governments regularly underfund their current budgets and neither local government policymakers nor state-level supervisory authorities have been as rigorous as they should in tackling this issue. Instead, local governments in several Federal states are permitted – in view of the difficult situation³ – to take out cash advances with long maturities or fixed rates of interest for periods of up to ten years.

¹ Note, however, that there are differences between the two systems that tend to make it more difficult for local governments with double-entry accounting systems to show that they have sufficient financial capacity when interest rates are declining. That system has to account for provisions for pension obligations, for example. As much as low interest rates push up the present value of benefit obligations, so will higher additions to provisions need to be recorded in their profit and loss accounts, which might come at a tangible expense.

² In double-entry accounting systems, these are typically called liquidity credits.

³ In a negative net investment situation, the budget balance alone does not allow any conclusions to be drawn about the state of the current budget, which is the main item of interest here.

economic situation and development. For instance, economically weaker areas have a higher proportion of unemployment benefit II recipients and thus ultimately larger accommodation costs. By contrast, the distribution of those who meet the criteria for integration assistance for disabled persons or assistance for young people should depend less on the regional economic situation. Differences in this area tend to stem from how benefits are granted in practice in each municipality.¹⁴

Awareness of incentive problems needed where central government assumes costs

The current central government relief measures and those that are additionally planned for the future, particularly for accommodation costs, sometimes entail a targeted reduction of local differences in the social benefits burden. Some are calling for even more cost reimbursement by central government for social benefits which are regulated in the same way nationwide in order to give the local governments most burdened by them greater room for manoeuvre. However, in view of the influence that local governments have on the basic conditions for the local economy (and thus, up to a point, on the number of persons receiving basic social welfare allowances) and, in particular, given their leeway in granting benefits, greater cost reimbursement from central government would need to go hand in hand with a heightened awareness of incentives to ensure an efficient use of funds and to maintain attractive business locations. It would therefore seem advisable for municipalities to continue to cover at least a portion of these costs themselves.

Conceivable for central government to cover larger portion of accommodation costs, but state government should also step in

These criteria could probably be satisfied, in particular, by central government covering a larger portion of the accommodation costs for recipients of unemployment benefit II. This would be of most benefit to the local governments with higher accommodation costs, whose budgets tend to be under greater strain. However, given the recently implemented and forthcoming funding increases, central government's share will already have reached a size beyond which it would be necessary to switch to (centralised) administrative execution by the

federal states on federal commission.¹⁵ To provide leeway for reimbursements without such a change of system, funds could be increased and the group of recipients expanded for special-need supplementary central government grants under section 11 III a of the Financial Equalisation Act (*Finanzausgleichsgesetz*). This legislation cites high burdens caused by long-term unemployment as justification for annual payments of just under €1 billion to date to the east German federal states. Provided that targeted support for individual, particularly hard-hit local governments is the priority – as opposed to addressing differences in the cost burden among the federal states – it is primarily the individual state governments that should step in, however. It would therefore make little sense to replace the special-need supplementary central government grants for infrastructure reconstruction in eastern Germany, which will be discontinued in 2019, with new inter-state redistribution of funds by central government.

In terms of spending on social benefits which hinge less on regional differences in economic strength or which entail more discretionary scope for state and local government, greater central government involvement to limit the burden on individual local governments would

Greater involvement of central government in other social benefits inappropriate

¹⁴ See I Deubel (2014), op cit, p 125.

¹⁵ This arrangement is a "middle road" between administrative execution by central government and execution of federal laws by the federal states as their responsibility. Here, central government has far-reaching powers to issue instructions, and execution is subject to monitoring of compliance with legal requirements and suitability. Laws on the granting of payments in cash which stipulate that central government shall finance one-half or more of the expenditure must be executed by the state governments on federal commission pursuant to Article 104a III of the German Basic Law. With regard to this arrangement, under the current administrative framework J Wixforth (Bundesbeteiligung an den Kosten der Unterkunft als Sammelbecken der Kommunalentlastung?, *Wirtschaftsdienst* 96(7), 2016, pp 501-509) found there to be remaining potential for financial relief amounting to €2½ billion from 2018 onwards when factoring in the education and integration package. Under the latest draft legislation aiming to further ease the burden on state and local government, this leeway would be almost exhausted, however. R Geißler and F-S Niemann (op cit, p 82 ff), by contrast, advocate a much higher contribution of up to 65%, on condition that new executive administration managed by central government be established.

Specific social benefits included in local government budgets

According to the government finance statistics, social benefits accounted for €54 billion, or one-quarter of total local government spending last year.¹ Accommodation costs for recipients of unemployment benefit II (means-tested benefit) came to just over €12 billion (in the non-city states), or a little more than one-fifth of social benefits. In 2005, as part of the Hartz IV reform, the local government-financed assistance for living expenses (social assistance) for persons who are able to work was combined with central government's unemployment assistance (granted subsequent to the temporary benefits paid by unemployment insurance) to form the basic allowance for job seekers. Since then, local government has assumed the costs of providing accommodation for this group of recipients, while central government has covered the standard benefits, integration assistance and administration costs. Compared with the other social benefits provided by local government, accommodation costs have since grown at a relatively moderate annual rate of no more than roughly 1½%.²

Around half of the social payments made by local government were attributable to the social assistance benefits remaining after the reform, which are governed by the Twelfth Book of the Social Security Code (*Sozialgesetzbuch*, or SGB XII). In particular, these encompass integration assistance for people with disabilities.³ They also include, *inter alia*, the basic allowance for the elderly and for persons with reduced earning capacity that was introduced in 2003 as well as assistance for living expenses (less substantial in quantitative terms since the Hartz IV reform) and for long-term care.⁴ Since 2005, there has been a sharp increase in the basic allowance for the elderly, in particular. As with unemployment benefit II, regular rate adjustments to this allowance have, since 2011, tracked past developments in price and wage levels. A more extensive recalculation is performed at longer intervals based on data from the sample survey of income and expenditure. Legislative

changes in other areas also had an impact on social spending by local government. For example, after the introduction of the public long-term care insurance scheme in the mid-1990s, the number of recipients of assistance for long-term care was halved. Following the introduction of regular benefit adjustments in the long-term care insurance scheme from 2008, it is fair to assume that the associated strain on local government budgets is likely to remain in check over the next few years as well.

1 The deviation from the amount given in the main article as defined in the national accounts is mainly the result of the transfer component of child benefit being reported as an expense in the national accounts. As expenses for numerous individual types of benefit were published in the government finance statistics, data from that source are used in this analysis.

2 Given an average decline of just over 1% per year in the number of income-support households, payments for unemployment benefit II fell by an annual average of 2% during this period, not least because of the pension contributions that no longer had to be paid. See also Deutsche Bundesbank, *The evolution of labour market-related government expenditure in Germany*, Monthly Report, April 2015, pp 13-33.

3 While this refers, in particular, to measures designed to enable people with disabilities to engage in an occupation, it also covers benefits for medical rehabilitation, for instance.

4 Following the Hartz IV reform, assistance for living expenses is now only paid to persons in need who are unable to work and whose earning capacity is not fully reduced, provided they have not yet reached the statutory retirement age. This meant that the number of benefit claims – outside facilities or institutions – dropped from 3 million to around 80,000 in 2005. Payments of the basic allowance for the elderly and for persons with reduced earning capacity are made to older people in need once they reach the standard retirement age, and to persons with permanently fully reduced earning capacity once they turn 18. The benefit has the same scope as social assistance, although the basic allowance for the elderly entails lesser maintenance obligations on the part of dependents. Assistance for long-term care is granted when long-term care payments cannot be paid in full by the person in need of care or covered by a third party (such as the public long-term care insurance scheme). Other benefits encompassed by social assistance include, *inter alia*, assistance for overcoming particular social difficulties. In 2013, according to the social assistance statistics (including expenditure by the city states and at the state government level), €15½ billion went towards integration assistance, €5½ billion towards the basic allowance for the elderly, just under €4 billion towards assistance for long-term care and €1½ billion towards assistance for living expenses.

Social benefits included in local government budgets*

Item	2005	2010	2012	2013	2014	2015	Change
Expenditure	€ bn						% pa
Social assistance ¹	17.28	21.03	22.79	24.02	25.48	26.64	4.4
outside facilities or institutions	4.64	5.97	6.90	7.45	8.13	8.77	6.6
in facilities or institutions	12.64	15.06	15.89	16.57	17.35	17.87	3.5
Benefits under SGB II	10.55	12.14	11.32	11.91	11.92	12.57	1.8
of which accommodation and heating	10.32	11.66	10.94	11.58	11.57	12.20	1.7
Benefits for education and integration ²			0.27	0.25	0.25	0.28	1.4
Assistance for young people	5.10	6.53	7.36	7.71	8.32	9.29	6.2
Asylum seeker benefits	0.95	0.55	0.75	1.04	1.59	3.14	12.7
Other social benefits	1.56	1.87	1.93	2.02	2.01	2.07	2.9
Total	35.45	42.12	44.42	46.95	49.56	54.00	4.3

Sources: Federal Statistical Office, quarterly cash data for local government budgets; up to 2013: Deutscher Städtetag (Association of German Cities), Gemeindefinanzbericht. * Local government expenditure in the non-city states, ie excluding Berlin, Bremen and Hamburg. ¹ Including, in particular, integration assistance for people with disabilities and the basic allowance for the elderly. ² Pursuant to section 28 of the Second Book of the Social Security Code (SGB II) and section 6b of the Federal Child Benefits Act (Bundeskindergeldgesetz).

Deutsche Bundesbank

Dynamic growth was recorded in expenditure on assistance for children and young people (Eighth Book of the Social Security Code (SGB VIII), but excluding day care for children),⁵ which has nearly doubled since 2005 to just under €9½ billion (just over one-sixth of social spending). This growth was given a distinct boost last year by benefits for unaccompanied refugee minors.

Lastly, payments of asylum seeker benefits, which are also borne by local government, have likewise seen stronger year-on-year increases since as early as 2010 and, after doubling last year, reached a volume of €3 billion (6% of social benefits). While state government is responsible for the initial reception and provision of initial support to asylum seekers, local government bears responsibility for subsequent support up until a decision is made on their applications and, in the event that they are rejected, up until their exit from the country.⁶ The rules on the reimbursement of costs vary greatly from one federal state to the next. In some instances, case-based lump-sum payments are made, which can also vary by region within a federal state and likely provide only partial compensation for actual costs in many cases. By contrast, some federal states – such as Bavaria – make final settlements in order to ensure that the costs of statutory asylum seeker benefits are reimbursed in full.

The net burden on local government arising from social benefits is significantly smaller than the gross expenditure outlined above because central and state government make financial contributions in other areas, too. Central government, for instance, generally makes special-purpose transfers to state government, which are passed on to local government. While the initial 29% share of accommodation and heating costs for recipients of unemployment benefit II⁷ that was

⁵ Expenses for accommodation in facilities or institutions such as homes and for other special assistance for education and care are recorded as assistance for young people.

⁶ The basic benefits for asylum seekers primarily comprise the costs of accommodation, food and medical care as well as durable and non-durable household goods – chiefly in the form of benefits in kind. In addition to this, a monthly cash stipend is paid to cover day-to-day personal needs. Ancillary costs, eg for administrative staff, are not included here. After having stayed in Germany for 15 months, the persons entitled to benefits no longer receive the basic benefits; instead, they are granted higher rates pursuant to the provisions on assistance for living expenses (SGB XII). After being officially recognised, persons in need who are entitled to asylum normally receive the basic allowance for job seekers pursuant to the Second Book of the Social Security Code (SGB II), which is largely funded by central government.

⁷ Further to this, state government passes on to local government the relief arising from the Hartz IV reform in relation to the housing allowance, for example (approximately €1 billion in 2015), as well as the special-need supplementary central government grants owing to higher burdens caused by structural unemployment in the east German states (€¾ billion).

assumed by central government under the Hartz IV reform in 2005 temporarily declined somewhat, it has risen by around 3 percentage points on balance since 2011 in the wake of several adjustments being made.⁸ In addition, in the case of the basic allowance for the elderly and for persons with reduced earning capacity, central government has, after incrementally increasing its share, fully reimbursed the expenses not covered by third parties since 2014.

Alongside central government, state government supports local government in the provision of social benefits through financial equalisation schemes, for example. However, it is virtually impossible to quantify the total relief that this provides to local government. In particular, the equalisation amount paid in most federal states to local government is not pegged to the actual spending requirement for the social benefits taken into account under these schemes; instead, this requirement is merely used as one of several allocation criteria in those states. The annual accounting figures for the local government core budgets available for 2014 do not break down the proceeds received in relation to social and youth assistance (including day care for children) any further. For that area as a whole, with expenditure of just over €82 billion (including administration costs and investment), the budgets nonetheless show directly allocable transfers (ie excluding funds relating to social costs distributed under local government financial equalisation schemes) from other levels of government amounting to €24 billion and other receipts of €6½ billion. Thus, while expenditure rose by an annual average of 5% against the comparable data for 2005, the increase in transfers was considerably higher, at almost 8%. The expenses remaining after also deducting other task-specific receipts grew by 4%, putting them less strongly above GDP growth.

The Federal Government recently set in motion further relief pertaining to local government social spending. Central government's share in the accommodation costs for persons claiming unemployment benefit II will be

raised to an average of 35½% in 2017.⁹ According to the Draft Act on the Contribution of the Federal Government towards the Costs of Integration and on the Further Easing of the Burden on State and Local Government (*Gesetzentwurf zur Beteiligung des Bundes an den Kosten der Integration und zur weiteren Entlastung von Ländern und Kommunen*), this share is to be increased incrementally, but remain below the 50% threshold so as to avoid triggering a switch to the procedure of state government administration on behalf of central government. Expenditure on recognised refugees is ultimately to be assumed in full, however, and central government will also transfer turnover tax revenue using an allocation key that is not contingent on social spending by the individual local government. Altogether, the package is set to provide local government with permanent relief payments of €5 billion annually from 2018, as laid out in the coalition agreement.

⁸ In order to ensure that local governments in all federal states across the country receive a balanced level of relief, the shares for Baden-Württemberg and Rhineland-Palatinate were raised from 2007. Overall, central government's percentage shares were initially adjusted annually in line with the change in the number of income-support households in order to preserve the target level of relief. This adjustment formula was altered as part of the 2011 reform. The costs of the education and integration package, newly introduced at that time, for the children of recipients of unemployment benefit II, additional children's allowance and housing allowance are covered by way of an additional contribution to accommodation costs (most recently just over 3½ percentage points, on average, in addition to central government's aforementioned share in the costs).

⁹ A detailed description of this can be found in J Wixforth, op cit. See also Federal Ministry of Finance, *Bund unterstützt Kommunen auf vielfältige Weise*, Monatsbericht, December 2015, pp 9-20.

be a less targeted course of action. The central government contribution to integration assistance for disabled persons envisaged in the Federal Government's coalition agreement was therefore unconvincing and is now no longer being pursued. Such assistance includes personalised transfers in kind and affords the relevant local government considerable scope for discretion. The most sensible course of action for central government to assume a limited portion of these costs, in the current legal framework, would seem to be to switch over to lump-sum monetary benefits, which would, *de facto*, sharply limit leeway in granting the benefits. In addition, these benefits are already financed at the state level in many cases. For similar reasons, it would be inappropriate for central government to contribute to long-term care assistance or assistance for young people; in the case of the latter, some variation in how details are legislated across the federal states is permitted, too.

Lump-sum refunds of benefits for asylum seekers

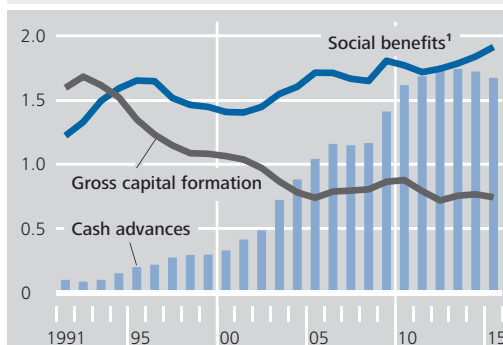
By contrast, individual municipalities have very little influence on the granting of benefits for asylum seekers. Decisions on the status and distribution of asylum seekers are initially made at the central government level, with the financial capacity of the individual states being taken into account. Against this backdrop, cost-sharing in the form of case-based lump-sum payments (which central government has indeed been paying from 2016), would seem essentially appropriate, not least with regard to the incentive to make efficient use of resources. In order to also ease the burden on the individual local governments which were allocated refugees by state government, it would seem sensible to grant lump-sum reimbursements on a case-by-case basis.

The decline in local government investment

The ratio of government investment to economic output in Germany has plummeted, particularly at the local government level, over the

Selected local government expenditure* and cash advances

As a percentage of GDP



Sources: Federal Statistical Office and Bundesbank calculations.
 * Pursuant to the national accounts. ¹ Excluding civil servant pensions and healthcare payments and without deducting refunds and cost-sharing.

Deutsche Bundesbank

past four decades.¹⁶ The sharp decline at the local government level persisted until the mid-1980s after which, following just a temporary rise in the wake of German reunification, the deterioration continued at a decelerated pace until the mid-2000s. Thereafter, the ratio stabilised at ¾% of GDP (see the chart above). The long-term downward trend essentially affected local governments in both financially weak and financially strong federal states (at a higher investment level in the case of the latter, however).¹⁷ Since 2003, capital consumption has consistently outstripped gross capital formation (currently by 0.2% of GDP). As central and state government investment has risen more sharply, primarily in connection with education and research but also in relation to construction work, local government's share in general government gross capital formation has fallen from over 50% at the start of the 1990s to 35% at the current juncture.

Stabilisation of capital formation in recent times, but new investment outstripped by capital consumption

Generally speaking, a needs-based level of infrastructure is, first and foremost, a crucial factor affecting (the location of) economic activ-

¹⁶ Based on the data available for this longer period pursuant to ESA 1995, the general government gross capital formation ratio fell from just over 4½% in 1970 to around 1½% in 2005 (with the ratio at the local government level dropping from 2¾% to ¾%).

¹⁷ According to government finance statistics as the national accounts do not contain state-specific data.

Long-term decline also as a result of a certain degree of saturation and decreasing need for investment in east German states

ities. There is evidence to suggest that there is some catching-up to be done in certain areas, as well as a need to shift towards investment expenditure. However, the significance of the long-term decline in investment expenditure at the local – and general – government level does have to be viewed in context to a certain extent. For example, following the extensive build-up of infrastructure in the west German states in previous decades, it is likely that a certain degree of saturation was reached, with the result that scaled-back investment did not necessarily lead directly to a significant supply shortfall. A similar conclusion can be drawn about the gradual tapering-off of infrastructure build-up in the east German states. In addition, construction price rises, which have long remained relatively low in relation to general price developments since the mid-1990s, have suppressed the investment ratio. Lastly, demographic change, characterised by relatively low birth rates, will – at least in the longer term – curb the demand for certain local services and subsequently the need for investment as well.

In addition, some tasks merely transferred to the private sector

It is also especially important to take into account with respect to the decline in local government investment that an increased share of infrastructure is provided by the private sector. This applies, *inter alia*, to investment in schools, day care facilities for children, sports facilities and other recreational facilities. Over time, outsourcing of fee-funded local amenities to entities that are assigned to the corporate sector has also taken place on a large scale. For example, half of the decline in local government investment recorded between 1991 and the mid-2000s was attributable to areas affected by this: environmental protection (eg waste and sewage management)¹⁸ as well as housing and local amenities (eg water supply).¹⁹

Investment restraint also partly due to stretched budgets, however

Irrespective of this, it is likely that the increased financial strain has also led to a more problematic throttling of investment, at least for some local authorities. The very sharp rise in cash advances since the turn of the millennium, for example, highlights the extent of the budget

strains that many local authorities are experiencing. In such an environment, many local governments have had only limited access to investment loans as they have been either unable or limited in their ability to prove that they can bear the future interest and depreciation charges (or repayments).²⁰ As a result, local authorities have cut back on their investment activities, which are more disposable in the short term. In fact, the decline in local government investment is strongly correlated, especially up to the mid-2000s, with the increase in social benefits and cash advances. Higher social spending also appears to be accompanied by lower investment when comparing aggregate figures for federal states and individual local authorities.²¹

Several studies recently identified an increasing, significant investment gap in Germany, which is primarily making itself felt at the local government level in the areas of transport infrastruc-

¹⁸ See, for instance, the example of Frankfurt am Main in Deutsche Bundesbank, Trends in local authority finance since the mid-nineties, Monthly Report, June 2000, p 52.

¹⁹ However, investment in the areas of energy supply and sewage and waste management also fell significantly in terms of aggregate government and private sector activity – ie including the outsourced amenities – during this period. See N Schmidt (2011), Ausgliederungen aus den Kernhaushalten: öffentliche Fonds, Einrichtungen und Unternehmen, Wirtschaft und Statistik, pp 154 ff; and M Gornig, C Michelsen and K van Deuverden (2015), Kommunale Infrastruktur fährt auf Verschleiß, DIW Wochenbericht 43, pp 1023-1030.

²⁰ However, this ought to have been counteracted for some time and to an increasing degree by the sharp decline in capital market rates, which is making it easier for local authorities to furnish this proof, although this in turn may sometimes be offset by higher transfers to pension provisions in the low-interest-rate setting.

²¹ See also F Arnold, R Freier, R Geißler and P Schrauth (2015), Große regionale Disparitäten bei den kommunalen Investitionen, DIW Wochenbericht 43, pp 1031-1040. The authors find a significantly negative correlation between the cost of accommodation for the long-term unemployed and the investment expenditure of districts and independently administered cities.

Level of infrastructure still a locational advantage overall, but lagging investment evident in some areas

ture and schools, in particular.²² There were also numerous calls for a substantial boost in local government investment given the low general government investment ratio by international standards.²³ Caution is advised when comparing government investment ratios at the international level – much as it is when making the aforementioned comparisons over time – on account of differences in the tasks assigned to government and the corporate sector. In principle, the decisive factor is not the amount of expenditure *per se* but rather the needs-based level of infrastructure and efficient use of resources. For example, international comparisons of business locations generally continue to indicate that Germany's infrastructure is comparatively very good, although its rating has deteriorated somewhat in recent years.²⁴ Overall, it would appear that there has indeed been a pent-up need for investment in specific areas for an extended period of time and that greater emphasis on investment would be desirable at the local government level as well. However, it is of key importance to identify bottlenecks and replacement needs in a targeted manner and to efficiently allocate the funds for these projects. Various factors, not least a lack of planning and implementation capacity, would likely be barriers to an abrupt, massive increase in government investment, as has occasionally been called for, and it is questionable whether funds would be carefully allocated.

Investment grants from central government less promising than planning assistance ...

Under the Basic Law, central government's capacity to provide targeted support for local government investment is tightly restricted. While Article 104b outlines financial assistance for particularly important local government measures, in the absence of a serious emergency, the funds may only be granted for areas in which central government has legislative powers of its own. Consequently, it is only possible to provide financial assistance for noise reduction measures and renovation work to improve energy efficiency rather than for general maintenance measures or the expansion and construction of local roads and schools. It

is likely that, under the current rules, priority needs cannot be covered in many cases.²⁵ However, this does not appear to be the main reason why only 1% of the €3½ billion held in 2015 in a central government special fund for promoting the investment projects of financially weak local governments had been spent by the end of September 2016. As previously mentioned, it is probably often due to a lack of planning capacity more than anything. One proposal put forward to remedy this – such as by the Expert Commission (otherwise known as the Fratzscher Commission) in its report "Increasing Investment in Germany" in 2015 – was to offer central government planning assistance to local government. The current plan in this respect is for a company that was originally founded to assist public-private partnerships to now advise local governments. In order to effectively avoid delays and allocate resources more efficiently, it appears important not only that projects are better planned out on the basis of thorough calculations prior to the conclusion of construction contracts but also that responsibilities do not become blurred.

²² See, for example, KfW, KfW-Kommunalpanel 2016, June 2016; S Brand and J Steinbrecher, Kommunalen Investitionsrückstand bei Schulgebäuden erschwert Bildungserfolge, KfW Research Fokus Volkswirtschaft, No 143, September 2016; DIW, Investitionen für mehr Wachstum – Eine Zukunftsaufgabe für Deutschland, DIW-Wochenbericht 26/2013; and M Reidenbach, T Bracher, B Grabow, S Schneider and A Seidel-Schulze (2008), Investitionsrückstand und Investitionsbedarf der Kommunen, Difu. By contrast, the German Council of Economic Experts established a less pronounced need for investment in its Annual Economic Report for 2014/15 (see pp 12-18).

²³ See, for example, European Commission, Germany Country Report 2016 (which includes an in-depth review of the prevention and correction of macroeconomic imbalances), 26 February 2016, and the report prepared by the Expert Commission on behalf of the Federal Minister for Economic Affairs and Energy, Increasing Investment in Germany, April 2015 (<http://www.bmwi.de/EN/Service/publications,did=709422.html>).

²⁴ For example, Germany was ranked eighth globally for infrastructure in World Economic Forum (2016), The Global Competitiveness Report 2016-17, having been ranked seventh the year before and third in 2013. This downgrade was partly attributable to the quality of roads scoring lower.

²⁵ Against this background, these rules are set to be relaxed somewhat as part of the agreement reached between central and state government in October 2016 on the reform of federal financial relations from 2020 onwards.

... and targeted state government measures

In principle, the aforementioned options to provide financial support to those local authorities hit especially hard by high social expenditure, thereby strengthening their capacity to invest, are still open to central government. However, it is ultimately state government that decides, not least based on the financial equalisation scheme for local government, how funds are to be allocated to individual local authorities. It is responsible for regional policy and determines how it allots general financial resources and targeted support for investment projects within the respective state as well as how structurally weak regions should be assisted. For example, needs-based conditions may be placed on the way in which transfers are used, and funds may be distributed in a targeted manner in order to avoid significant local supply shortfalls.

Outlook and considerations concerning the prevention of local government overindebtedness

Deterioration in financial situation this year, but outlook more favourable again overall

A deterioration in the local government budget balance is on the cards this year.²⁶ For instance, it would appear that spending in connection with refugee migration is only being partially offset by reimbursements provided by state government. Furthermore, local business tax refunds to be made in the wake of court rulings are likely putting a strain on cash balances. The outlook for the coming years, however, is significantly brighter once again. For example, in 2017, central government will provide – over and above the amount of €1 billion granted for three years from 2015 onwards – additional one-off relief payments in the amount of €1½ billion, which are set to be followed on a permanent basis by funds of €5 billion *per annum* as of 2018. Furthermore, agreements reached in summer envisage the full assumption of accommodation costs for recognised refugees between 2016 and 2018 by means of additional payments from central government, which will rise from €½ billion this year to €1

billion for the years thereafter. Given the significant drop in immigration, expenditure on benefits for asylum seekers (support until a decision is reached regarding their application for asylum and, in the event that it is rejected, until their exit from the country) is likely to fall sharply.²⁷ To this extent, there should be additional financial scope at the local government level – above and beyond the €3½ billion from the fund to promote municipal investment that has been available since mid-2015 – to step up investment activities.

Although the overall level of local government debt does not appear problematic, alarming budget imbalances have been built up by a number of local authorities in the past. This is proven not least by the volume of cash advances, which is now very high. Some local governments using double-entry bookkeeping systems are now even recording excess debt on their balance sheets.²⁸ The budget imbalances are, in the context of high debt, partly obscured by the low interest rates but would, however, intensify if interest rates were to rise. Against this background, major budget consolidation programmes have since been established in some federal states with local authorities that are particularly affected. The earlier erroneous developments show that the combination of budgetary legislation, which is actually strict, and oversight by state government has more often than not failed to effectively prevent nascent budgetary emergencies. By not prescribing the necessary adjustments, or refraining from making them altogether, problems were prolonged and ultimately exacerbated.

Interest burden for large volume of cash advances currently low, but greater structural budget imbalances and risks at times

Individual state governments are responsible for supplying their local authorities with ad-

²⁶ For information on developments throughout the year, see Public finances in the Commentaries section of this Monthly Report, pp 7-8.

²⁷ By contrast, expenditure on unaccompanied refugee minors, which appeared to rise sharply until recently, is expected to decline at a considerably slower rate.

²⁸ In such a case, the assets shown on the balance sheet are not sufficient to cover the liabilities. Equity capital (net worth) is thus negative and recorded on the assets side.

Key influence of local government financial equalisation scheme, assignment of tasks ...

equate financial resources – where necessary, above and beyond their own sources of income, which they are responsible for maintaining – in order to allow local governments to exercise the autonomy afforded to them under the Basic Law.²⁹ This duty is supposed to be met first and foremost by the local government financial equalisation scheme, which is governed by individual state governments.³⁰ Individual state governments also decide on the scope of the tasks assigned to local authorities, *ipso facto* establishing their financing needs. In this context, the connectivity rules introduced a number of years ago should, in principle, guarantee an entitlement to compensation if tasks are transferred from state to local government. That being said, the specific arrangements for this appear to be shrouded in legal ambiguities.³¹ In many cases, a key question is whether a new task, and thus one that truly falls within the scope of the connectivity principle, really has been assigned.

... and, in particular, of budgetary legislation and oversight by state government

State-level financial oversight of local government, the set-up of which also differs from state to state, likewise plays a key role in ensuring sound local government budgets as it monitors compliance with what are, in principle, strict budgetary rules. If local authorities fail to achieve the balanced budget³² generally prescribed throughout Germany, they must, where required, draw up a budget consolidation programme to be approved by the budget supervisor. Should the planned measures be deemed insufficient, these must generally be amended. Temporary budgeting rules designed to be restrictive will then be put in place until the revised measures are approved. In extreme cases, the state government may send a representative to go over the heads of elected local decision-making bodies and implement restructuring measures.³³ As such far-reaching steps would likely be extremely unattractive, not least for local politicians, they provide conscientious state-level supervisors with a useful potential threat – one that has also been acted upon in certain cases – to help steer local

authorities towards sustainable budgeting in a timely manner.

While investment borrowing generally has to be tailored to financial capacity and can thus be relatively tightly restricted, there are no comparable rules that apply to cash advances. The way in which cash advances are handled differs from state to state, and a connection between that and the greater volumes of cash advances taken out in certain states seems likely. For example, the supervisory approval previously required for local authorities to take out larger cash advances was abolished in North Rhine-Westphalia as early as 1994 and later in other federal states,³⁴ too. Furthermore, the municipal codes and loan ordinances in some federal states make it possible to take out

Easing of budgetary rules impeding consistent oversight in some federal states

²⁹ Article 28 II of the Basic Law protects local government autonomy, while Article 106 VII guarantees local authorities an additional portion of state government's share of total revenue from joint taxes in order to ultimately safeguard this autonomy.

³⁰ Studies appear to indicate that financial resources may not always be sufficient; according to these studies, lower general-purpose grants from state government are sometimes accompanied by higher local government cash advances. See F Heinemann, L Feld, B Geys, C Gröpl, S Hauptmeier and A Kalb (2009), *Der kommunale Kassenkredit zwischen Liquiditätssicherung und Missbrauchsgefahr*, ZEW-Wirtschaftsanalysen, Vol 93; and C Gröpl, F Heinemann and A Kalb (2010), *Die Zweckentfremdung des kommunalen Kassenkredits – eine rechtlich-ökonomische Analyse*, Perspektiven der Wirtschaftspolitik, Vol 11(2), pp 178-203.

³¹ See, for example, *Gemeindefinanzbericht 2011*, in der städtetag 5/2011, pp 46 ff.

³² Under single-entry bookkeeping, a budget is deemed to be balanced if current revenue is sufficient to cover current expenditure, including compulsory repayments. In the case of double-entry bookkeeping, a balanced budget requires that all expenditure – ie including write-downs and transfers to pension provisions – is covered by earnings. Disparities between the rules introduced in different federal states arise, for instance, with respect to the inclusion of asset realisations at prices above their carrying amount and whether it is permissible to utilise parts of equity capital.

³³ In this case, the state-level budget supervisor could, in particular, impose higher multipliers on local business tax and real estate tax.

³⁴ In Bavaria, Brandenburg, Hesse, Rhineland-Palatinate, Saarland, Saxony-Anhalt and Schleswig-Holstein. See also K Herrmann (2011), *Der Missbrauch kommunaler Kassenkredite*, Wirtschaftsdienst, 91(10), pp 686-693. However, since 2016, section 105 of the Municipal Code of the State of Hesse (*Hessische Gemeindeordnung*), to name one example, has stipulated that the authorised volume of cash advances generally has to be approved by the budget supervisor. In Saxony-Anhalt, there is currently a threshold above which cash advances must be approved.

longer-term cash advances.³⁵ The option now enshrined in section 76 II of the Municipal Code of the State of North Rhine-Westphalia (*Gemeindeordnung für das Land Nordrhein-Westfalen*) for local authorities with budgets that are under particular strain to hold off on balancing their budgets as required until the end of a ten-year period likewise ultimately hampers oversight of local government.

Aid programmes coupled with stringent consolidation requirements promising

In the first few years of this decade, local government debt relief and consolidation programmes were launched – especially in North Rhine-Westphalia, Rhineland-Palatinate and Hesse, which are home to the local authorities holding the lion's share of cash advances – with the aim of stemming the altogether worrying rise in cash advances.³⁶ These programmes differ considerably with regard to their consolidation requirements, and the results seem to have varied wildly thus far. It is crucial to their success that the assistance provided is tied to long-term, sufficient improvement in the primary balance, which has to be brought about by the local government (by way of spending cuts or, if need be, adjustments to local business and real estate tax multipliers), and that the targeted implementation of the consolidation programme is ensured by means of consistent budgetary oversight. It could potentially be helpful to enshrine thresholds for budget imbalances in law – thresholds that, if exceeded, would immediately trigger stringent intervention by state-level supervisors.

Favourable financing conditions for local authorities – even those in precarious budgetary situation

The fact that it was possible for persistent budget imbalances to arise is ultimately due partly to the state of affairs in which the local authorities, despite major differences in their budgetary situations, have apparently been able to obtain funding on the financial markets – even, standardly, from the savings banks that they themselves own and control³⁷ – with next to no risk premiums. Interest rates are currently very low – and even negative in some cases – for short-term cash advances, in particular. Lenders evidently assume that, in the event of a local government running into payment diffi-

culties, state government will step in to service the debt. In order to mitigate any spillover effects on borrowing options and costs for other local governments, the incentive for state government to step in and provide assistance in a worst-case scenario may well be high. However, it is not clear whether, due to individual state governments' joint responsibility for ensuring that their local governments are supplied with adequate funding and their responsibility for local government budgetary oversight, external creditors could assert claims against federal states. State government assumes no liability for local government debt vis-à-vis external creditors, in any case; consequently, the possibility that loans granted to local governments will not be serviced on time cannot be ruled out altogether.

Taken as a whole, this combination of local government liability, control and funding is un-

³⁵ For example, in the event of it not being possible to achieve a balanced budget in the foreseeable future, local authorities in Saarland are able to take out unlimited cash advances with maturities extending beyond the fiscal year (section 94 II of the Local Self-Government Act (*Kommunalselbstverwaltungsgesetz*)).

³⁶ North Rhine-Westphalia's programme to strengthen city finances (*Stärkungspakt Stadtfinanzen*), which was set up in 2011 and will run until 2020, has a total volume of €6 billion, while Hesse's debt relief programme set up in 2012 amounts to €3 billion and the local government debt relief fund in Rhineland-Palatinate, which was set up in 2012 and will run until 2026, contains €4 billion. Hesse regularly reports on progress made by a total of 100 municipalities (just under one-quarter of all local authorities in Hesse; participating on a voluntary basis) in reducing their budget imbalances as contractually agreed. The minimum consolidation contribution was set at €100 per capita annually until a balanced budget was achieved; partial debt relief was offered in return.

³⁷ There is often a close link between local authorities and local public credit institutions. For example, various studies have found evidence of a relationship between local government election years and lending by savings banks; see RE Gropp and V Saadi, Electoral credit supply cycles among German savings banks, IWH Online 11/2015; or F Englmaier and T Stowasser, Electoral cycles in savings bank lending, Munich Discussion Paper No 2014-14, LMU Munich. Overall, public credit institutions issued the lion's share of cash advances – in addition to savings banks (about one-quarter of short-term loans), Landesbanken and promotional banks (just over one-third) once again played a major role. See also S Brand (2015), Paradigmenwechsel in der Kommunalfinanzierung – der lange Schatten der Finanzkrise, Wirtschaftsdienst, 95(1), pp 51-55; and R Freier and V Grass, Kommunale Verschuldung in Deutschland: Struktur verstehen – Risiken abschätzen, DIW Wochenbericht 16/2013, pp 13-21.

Lack of risk premiums opening door to erroneous developments

satisfactory. It does not appear to create sufficient incentives for state or local government to avoid excessive local government debt. At the same time, there is a lack of transparency surrounding the substantial risk to which state government budgets are exposed – that is to say, the potential assumption of local government debt as part of debt relief programmes or in crisis situations. Even budgetary surveillance by the Stability Council does not take into account developments at the local government level of individual states in terms of the main indicators. All in all, when local government finances are knocked off course, it sometimes takes too long to take back control of the helm, which can result in serious local government budget imbalances. Ultimately, it cannot be ruled out that, in event of a failure to service local government debt on time, individual credit institutions operating in this sector would run into difficulties. This would be the case, in particular, if the amount of receivables outstanding exceeded the bank's equity capital. It should be noted here that institutions such as savings banks are members of protection schemes within their associations. Nonetheless, the cluster risk associated with individual local authorities should also be monitored from a risk-based perspective.

If necessary, recourse to cash advances via state government only

If the provisions of the financial constitution currently in place were to be overhauled, consideration could also, theoretically, be given to a major change of regime aimed at strengthening the financial markets' disciplining effect on local government – for example, by partially incorporating municipalities into the German Insolvency Code (*Insolvenzordnung*), similar to chapter 9 of the US Bankruptcy Code.³⁸ This would have to be accompanied, in any case, by

the introduction of stricter bank regulation covering lending to local government so that local authorities that find themselves in a deteriorating budgetary situation would have only limited access to credit. However, such a fundamental change of regime, which would necessitate amendments to the Basic Law and changes to state governments' legislation governing local government finances, is not on the agenda. By contrast, it would be simpler to establish a financial framework under which local governments are only permitted to take out from state government cash advances for which repayment using covering funds is not envisaged within one fiscal year. As a result, responsibility would clearly lie with state government, while liability and control would be brought broadly into line. An individual state government's interest in swiftly counteracting any growing financial difficulties of its local authorities could be safeguarded by means of a provision stipulating that these cash advances be counted towards borrowing under the debt brake framework.³⁹ Nevertheless, in order to avert persistent structural budget imbalances and excessive local government debt in future, it is crucial that state-level supervision stringently enforces budgetary rules and that financial resources are allocated commensurate with the tasks at hand.

38 State governments could potentially make their local governments subject to the Insolvency Code; see section 121 paragraph 2 of the Insolvency Code. This would make it possible, for instance, for provisions from the part covering insolvency plans to be declared applicable.

39 This form of lending to local government could either not be factored out as a financial transaction under any circumstances or only factored out in instances where the local governments receiving assistance had committed, either contractually or by statutory resolution, to adhere to a budgetary plan (with specific measures) deemed sufficient by a body such as the State Court of Auditors and guaranteeing repayment.

Annex

Key figures outlining the state-specific differences in local government finances

While the aggregate data for Germany's national accounts indicated local government budget surpluses with a stable local government debt ratio of late, the situation for the individual municipalities was very heterogeneous. However, given that the national accounts do not show state aggregates or data for individual municipalities, in the following we essentially draw on per capita results from the government finance statistics aggregated to the state level for illustrative purposes.

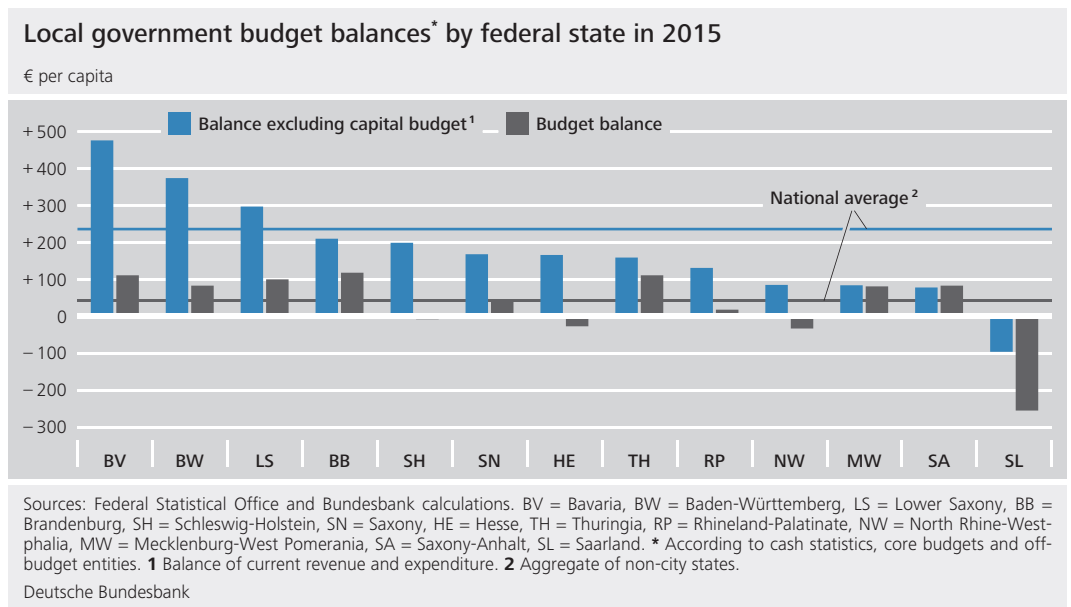
Budget balances and debt

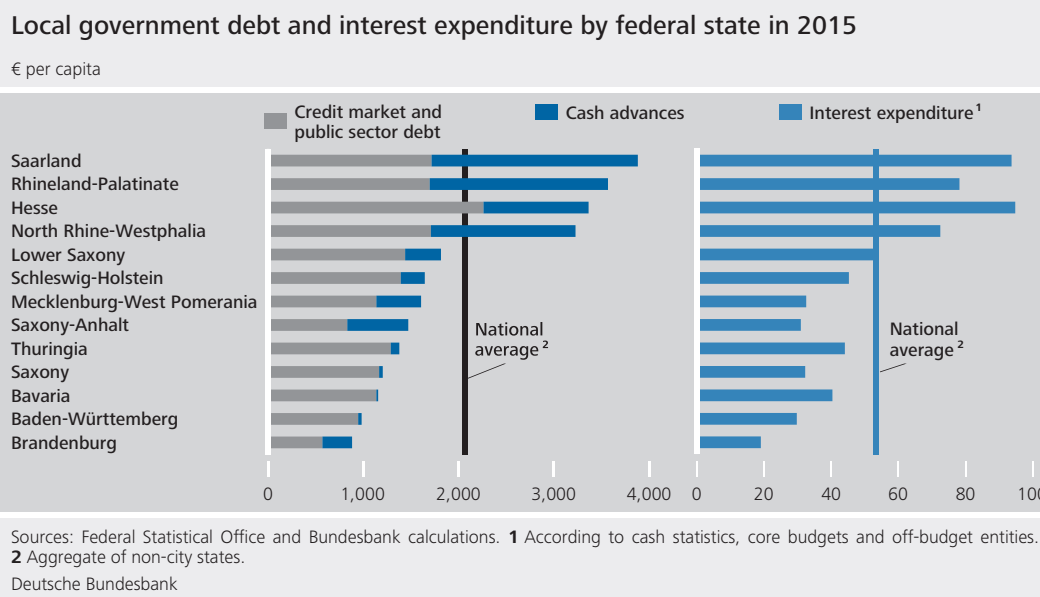
A key yet potentially relatively volatile indicator of the fiscal position is the budget balance.⁴⁰ With a national cash surplus posted by local governments of €3 billion, the aggregated state results for the municipal budgets were predominantly distinctly positive in 2015. Only the state of Saarland posted a high per capita deficit. North Rhine-Westphalia, Hesse and Schleswig-Holstein recorded moderate deficits, while Rhineland-Palatinate attained only a relatively small surplus. Looking at current revenue and expenditure alone to identify the budgetary strain excluding the discretionary fluctuations in investment revenue and expenditure, the surplus was a great deal higher on average. The range was

also more extensive in this way, however, as municipalities in states with more favourable current budget balances had higher self-financed investment expenditure (ie without using proceeds from asset realisation, investment grants or contributions). Besides the above-mentioned states, all east German states, too, showed below-average results.

The level of debt captures the budget deficits and surpluses of the past. Per capita, the figures ranged from below €1,000 in Brandenburg and Baden-Württemberg to at times considerably above €3,000 in the states of Saarland, Hesse, Rhineland-Palatinate and North Rhine-Westphalia (with a mean value of €2,070 across all non-city states). At the same time, more than half of all cash advances – which are an especially good indicator of a tight budgetary position – were concentrated in the municipalities of North Rhine-Westphalia; an additional more than 30% was accounted for by the other three states mentioned above. In terms of per capita results, the highest figure in Germany was recorded in Saarland (€2,170). Rhineland-Palatinate (€1,870) and North Rhine-Westphalia (€1,520) came in second and third

⁴⁰ Generally speaking, it needs to be taken into consideration for individual municipalities that the volatility of the revenue from local business tax in particular is often even more pronounced than at the aggregated national level due to economic developments or as a result of tax refunds, and that considerable fluctuations in the budget balances may occur in individual years without this having any impact on the overall fiscal position.





place, followed by Hesse (€1,100). At the other end of the spectrum stood Bavaria, Baden-Württemberg, Saxony and Thuringia (at times well below €100). The gaps between the aggregated state figures increased markedly over the past years.⁴¹ Interest expenditure on the whole did not diverge as heavily because the lower average interest rates⁴² reduced the burden more strongly for the municipalities with higher debt. However, the range of interest expenditure per capita continued to expand to between €20 and €95 (average of €55) of late compared with between €35 and €80 (average of €65) in 2005. The vast differences in debt developments are put into perspective by the very low interest rates, bringing significant relief to highly indebted local governments, in particular. However, the differences in the levels of indebtedness within the states are even more strongly pronounced in a comparison of individual municipalities than when comparing the aggregate state levels (see the table on page 35, and for the shared responsibility of state governments in this regard, see pages 26 to 29).⁴³

Social benefits

Varying expenditure burdens as a result of social benefits are often cited as the reason for deviations in the budgetary position. North Rhine-Westphalia was the state with the highest per capita expenditure, followed by Hesse with a substantial margin. However, the informative value of this rough comparison already appears to be strongly limited by the different extents to which the responsibility for the provision of benefits is taken at the state level.⁴⁴ In

addition, it is not possible to derive from the cash statistics data unambiguous figures regarding the varying degrees to which central government and state governments assume shared costs.

On the other hand, accommodation costs for recipients of unemployment benefit II in the non-city states are solely allocated to municipal authorities and thus comparable. The differences between states were relatively pronounced here, the highest level of expenditure being exhibited in most east German states as well as in North Rhine-Westphalia, Saarland and Schleswig-Holstein. It is evident that this expenditure correlates negatively with the eco-

⁴¹ In 2005, the range of cash advances per capita spanned from very considerably below €100 to almost €1,000.

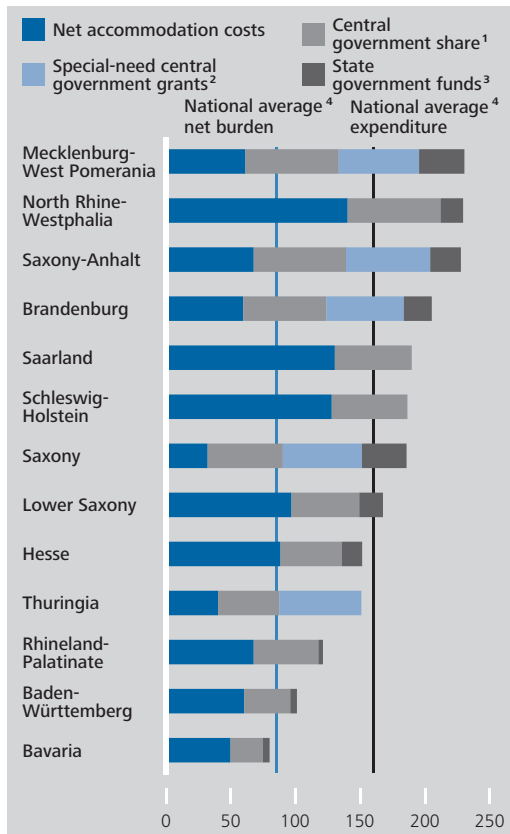
⁴² Since 2005, the average interest rate calculated for local government debt across all non-city states has decreased by 1½ percentage points to 2½% at present. The decreases were especially prominent in some east German states.

⁴³ Extensive cash advances among the highly indebted municipalities also left a distinct mark in the equity capital positions where double-entry bookkeeping is applied. In North Rhine-Westphalia alone, 29 of the 430 municipalities were expected to exhibit a negative equity balance as at the end of 2015. In the case of the city of Oberhausen, for example, total assets came to just under €3 billion, while a shortage in equity capital was recorded of just over €1 billion (around -€5,500 per capita). By contrast, the state capital of North-Rhine Westphalia, Düsseldorf, posted a high positive net asset value of around €13,000 per capita.

⁴⁴ The results are correspondingly different, for example, when referring to joint expenditure on social assistance by state and local governments (according to social assistance statistics). In that case, Saarland would occupy second place after North Rhine-Westphalia, and Hesse would only come in fifth.

Local government expenditure on accommodation costs* by federal state in 2015

€ per capita



Sources: Federal Statistical Office and Bundesbank calculations.* For recipients of unemployment benefit II, data generally in accordance with cash statistics, core budgets and off-budget entities. **1** Including reimbursements for the education and integration package. **2** Special-need supplementary central government grants to offset the higher burdens caused by long-term unemployment. Rough breakdown. **3** Forwarded savings resulting from the Hartz IV reform. **4** Aggregate of non-city states.

Deutsche Bundesbank

conomic strength of the individual states⁴⁵ (whereas other factors appear to be relevant in terms of integration assistance for disabled persons or assistance for young people, for instance). After adjusting for the central government share,⁴⁶ the forwarded savings by the state governments resulting from the Hartz IV reform and also the (rough breakdown of the) corresponding special-needs-related supplementary central government grants for the east German states, the actual net burden⁴⁷ was even clearly below average in some of those states. Conversely, North Rhine-Westphalia exhibited an above-average burden, which per se represented just over one-third of the gap in terms of the average current budget balance. Within the states, the disparities in accommodation costs across municipalities are likewise

very discernible and also persistent, with a negative correlation in terms of tax revenue capacity.⁴⁸

Investment expenditure

To ensure a municipality's sustainable development, needs-based construction and maintenance measures are important for the local infrastructure. A financial statistics indicator in this context is provided in the form of expenditure on fixed asset formation (especially transport facilities and school buildings).⁴⁹ Although the relevant data are to be interpreted with considerable caution given that – amongst other things – investment grants with similar objectives to entities outside of the government sector remain unaccounted for, a correlation with the state-wide economic performance of the municipalities becomes evident. The municipalities in Bavaria and – to a somewhat lesser extent – in Baden-Württemberg have been very noticeably exceeding the national average value for some years now (by two-thirds and one-third respectively in 2015), whereas the levels of investment are less dispersed among the other states. Particularly low values (ie at least three-tenths below the average) were reported by Mecklenburg West-Pomerania, Saxony-Anhalt, Saarland and North Rhine-Westphalia. In the east German states, the extensive investment activity following reunification has been scaled back considerably over the past decade. At the same time, a continuing trend of population decline in those states can lead to maintenance and modernisation, for example, no longer being considered necessary in some cases, resulting in only a minor need for investment in some areas. The differences in investment activity in the individual municipalities are likewise large and persistent, although not as extensive as with debt or the cost of accommodation, and are subject to substantial annual fluctuations. It appears

⁴⁵ Yet a stronger economic capacity ought to have a positive impact on the local level of rents for dwellings, keeping the differences in check.

⁴⁶ The data are not adjusted for the reimbursements for the education and integration package, which have only a small impact.

⁴⁷ For the state-wide results, the redistribution of costs associated with this expenditure item in the context of the states' financial equalisation systems for municipalities does not need to be taken into account.

⁴⁸ See Arnold et al, op cit, pp 64-123.

⁴⁹ Net investment cannot be shown here as the government finance statistics do not provide any data on consumption of fixed public capital. A comparison of the state-specific developments in fixed asset formation over an extended period of time, too, is distorted in the context of the financial statistics as a result of large-scale outsourcing.

that municipalities with higher cash advances and expenditure on accommodation tend to have lower investment expenditure.⁵⁰

Tax revenue capacity

A direct indicator of financial performance is tax revenue capacity per capita.⁵¹ Special focus lies on real estate and local business tax as the individual municipalities determine the local multipliers, leaving them with significant leeway. The top position in terms of the average local business tax revenue capacity among the non-city states in 2015 was occupied by the local authorities in Hesse, Bavaria and Baden-Württemberg. By contrast, the values were particularly low in the east German non-city states and Saarland, falling at least three-tenths below the nation-wide result. The differences in tax revenue capacity in 2015 were much smaller with regard to real estate tax, which is not as important. The dispersion of tax revenue capacity has remained more or less unchanged over time, at least within the individual states, and tends to be higher in the financially stronger states.⁵²

However, indicators of tax revenue capacity, too, are to be interpreted with caution as state constitutions ultimately guarantee the municipalities a minimum amount of funds. In order to ensure that municipal tasks are carried out, all non-city states have financial equalisation systems in place which⁵³ aim at increasing municipal financial capacity in general when redistributing funds among a state's municipalities by allocating tax revenue from the state government level.

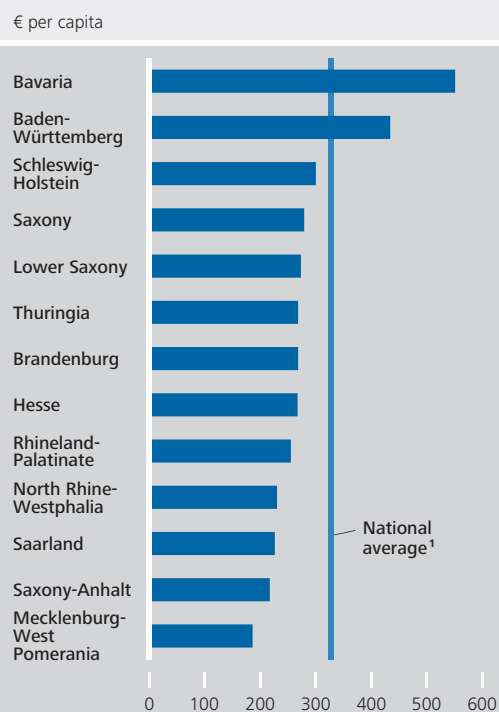
⁵⁰ See also Arnold et al (2015), DIW, pp 1035 et seq.

⁵¹ When calculating tax revenue capacity, the revenue is adjusted for local differences in multipliers in the year under review.

⁵² See also R Geißler and F Boettcher (2016), Disparitäten in der Entwicklung der Gemeindesteuern, Wirtschaftsdienst 96(3), pp 212-219.

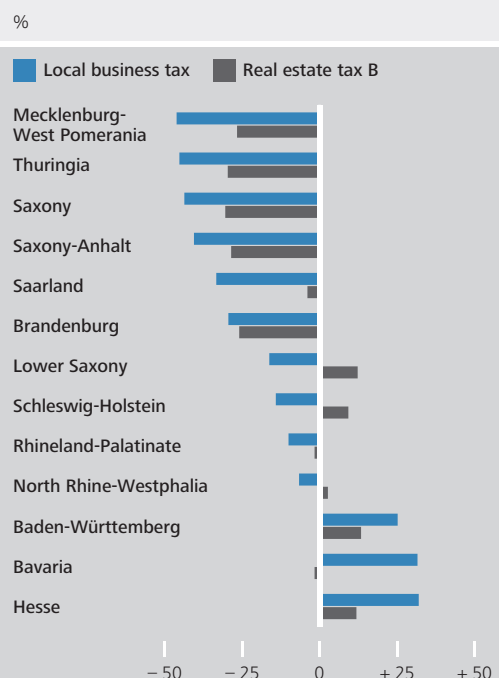
⁵³ The differences in tax revenue capacity, supplemented by needs-related aspects, within a state are considerably reduced using state government funds and, in some cases, also with allocations from municipalities with particularly high tax revenues. However, given that not least the assessment of needs varies greatly across states and that the payments are unable to keep up with the actual differences in the fiscal year, it is virtually impossible to evaluate the equalisation effect within any one state.

Fixed asset formation* of local government by federal state in 2015

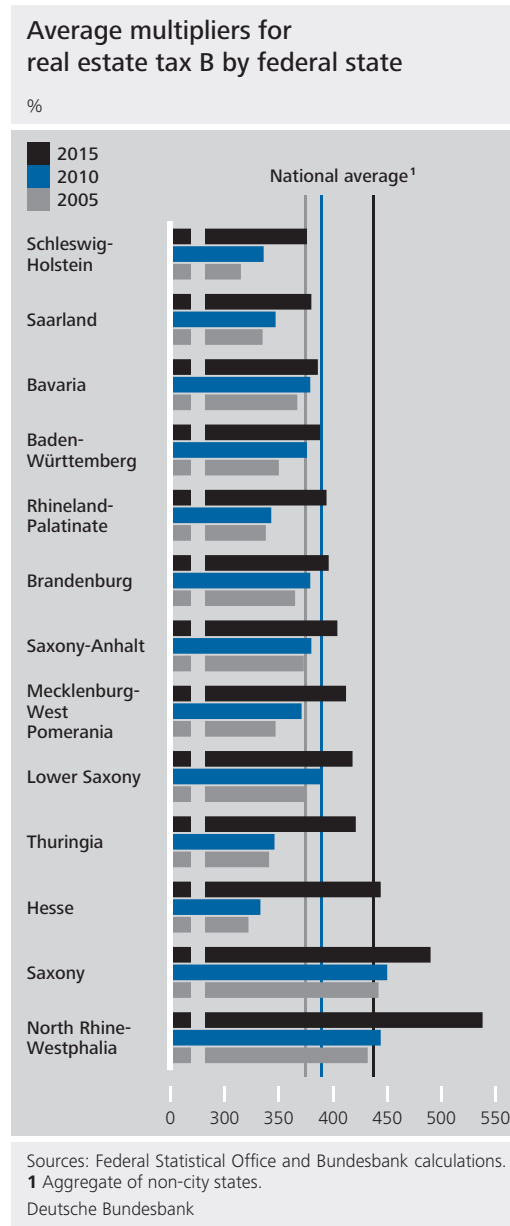
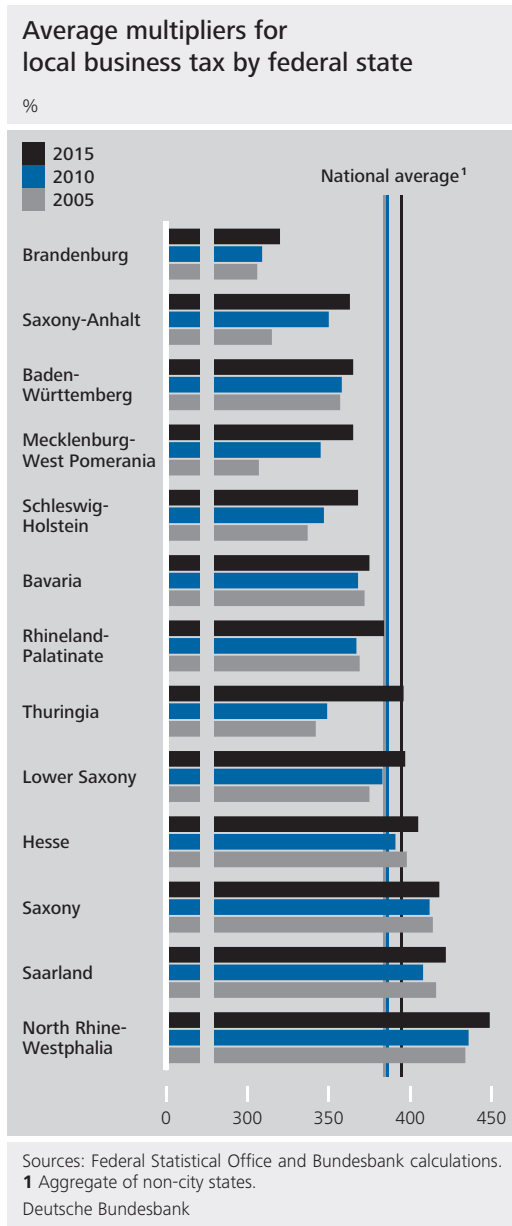


Sources: Federal Statistical Office and Bundesbank calculations.
 * Data in accordance with cash statistics, core budgets and off-budget entities. ¹ Aggregate of non-city states.
 Deutsche Bundesbank

Deviation in the tax revenue capacity of local governments from the national average* by federal state in 2015



Sources: Federal Statistical Office and Bundesbank calculations.
 * State-wide revenue figures divided by state average multipliers. National average based on aggregate of non-city states.
 Deutsche Bundesbank



Non-personal tax multipliers

Last, with regard to tax data, the average effective state multipliers for non-personal taxes also serve as an indicator of the strain on the fiscal position. Municipalities with higher outstanding cash advances tend to also apply higher multipliers to their real estate and local business taxes. Fiscal imbalances can be redressed by increasing rates unless a strong diversion of the tax base is to be expected, which is a risk that can be assumed with regard to local business tax, in particular. Thus, if the local government budgetary rules are strictly implemented, the focus in this context lies on real estate tax B, which is mostly levied on residential buildings.

The increase in local business tax has, in fact, been limited to 3% (11 multiplier points) across Germany over the last ten years. Larger increases were reported by Mecklenburg West-Pomerania, Thuringia and Saxony-Anhalt, where the, at first, lower state-wide multiplier values essentially closed in on the average for the non-city states. Overall, the increase has somewhat accelerated over the past five years,

Differences in the budgetary positions of districts and independently administered cities in 2014*

Federal state ¹	Number of units	Total debt € per capita			Cash advances € per capita			Multiplier for real estate tax B %			Multiplier for local business tax %		
		MV	CV	Range	MV	CV	Range	MV	CV	Range	MV	CV	Range
SH	15	1,449	0.55	3,323	303	1.20	1,127	377	0.17	179	367	0.09	107
LS	46	1,573	0.59	4,054	529	1.26	2,953	393	0.12	232	384	0.08	136
NW	53	2,832	0.68	8,268	1,625	1.03	7,484	505	0.16	393	454	0.07	174
HE	26	3,153	0.43	6,844	1,181	0.70	3,649	390	0.16	208	379	0.10	151
RP	36	3,589	0.59	8,293	2,090	0.86	7,406	384	0.07	113	383	0.06	99
BW	44	603	0.46	1,578	19	1.45	116	385	0.15	290	361	0.08	135
BV	96	1,077	0.59	3,555	22	1.96	246	357	0.15	295	351	0.10	198
SL	6	3,039	0.31	2,774	1,755	0.45	2,232	340	0.13	124	408	0.05	64
BB	18	975	0.79	2,604	493	1.68	2,464	400	0.12	137	342	0.14	227
MW	8	1,540	0.27	1,374	513	0.93	1,430	420	0.21	288	364	0.14	162
SN	13	774	0.41	1,304	29	1.23	119	463	0.19	248	408	0.07	78
SA	14	1,391	0.39	1,593	567	0.69	1,173	395	0.13	158	372	0.13	139
TH	23	995	0.37	1,432	134	1.82	1,127	413	0.13	239	386	0.10	142
MV	31	1,768	0.49	3,615	712	1.17	2,425	402	0.15	223	381	0.09	139
Total	398	1,723	0.88	9,130	650	1.78	7,531	400	0.19	490	380	0.12	297

Sources: Federal Statistical Office (regional statistics) and Bundesbank calculations. * Core budgets (debt of municipalities belonging to a district is allocated to the district). Debt owed to the non-public sector and other government sectors and specific public entities. Mean value (MV) and coefficient of variation (CV) not population-weighted for the individual aggregates. 1 SH=Schleswig-Holstein, LS=Lower Saxony, NW=North Rhine-Westphalia, HE=Hesse, RP=Rhineland-Palatinate, BW=Baden-Württemberg, BV=Bavaria, SL=Saarland, BB=Brandenburg, MW=Mecklenburg-West Pomerania, SN=Saxony, SA=Saxony-Anhalt, TH=Thuringia.

Deutsche Bundesbank

Differences in the budgetary positions of individual municipalities in 2012*

Federal state	Number of municipalities	Total debt € per capita			Multiplier for real estate tax B %			Multiplier for local business tax %			
		MV	CV	Range	MV	CV	Range	MV	CV	Range	
Schleswig-Holstein	1,116	895	2.03	38,428	295	0.16	500	329	0.09	215	
Lower Saxony	288	1,628	0.70	8,866	365	0.13	340	365	0.09	160	
North Rhine-Westphalia	396	1,750	0.79	8,364	431	0.12	560	428	0.06	220	
Hesse	426	3,030	0.52	11,360	288	0.15	350	339	0.09	210	
Rhineland-Palatinate	2,306	1,965	0.67	14,739	351	0.10	820	358	0.06	600	
Baden-Württemberg	1,101	.	.	.	344	0.15	800	347	0.05	165	
Bavaria	2,056	1,036	0.77	7,061	338	0.15	500	335	0.09	260	
Saarland	52	2,558	0.46	5,693	312	0.12	210	401	0.05	100	
Brandenburg	419	791	1.06	7,888	359	0.10	243	318	0.10	250	
Mecklenburg-West Pomerania	783	1,119	0.99	15,241	334	0.10	350	309	0.12	250	
Saxony	454	829	0.69	4,136	401	0.09	350	388	0.05	215	
Saxony-Anhalt	219	1,423	0.54	3,461	357	0.12	395	335	0.11	234	
Thuringia	878	926	0.82	7,413	371	0.10	290	355	0.09	300	
Mean value		807	1,496	0.84	11,054	350	0.12	439	354	0.08	245
Total	10,494	1,379	0.96	38,488	345	0.15	900	347	0.11	700	

Sources: Federal Statistical Office, Integrated debt of municipalities and associations of municipalities, as at 31 December 2012, 2014; regional statistics. * Core budgets and off-budget entities (debt at the district level allocated to municipalities belonging to a district). Non-public sector debt. No data provided on cash advances or debt in the individual municipalities in Baden-Württemberg. Mean value (MV) and coefficient of variation (CV) not population-weighted for the individual aggregates.

Deutsche Bundesbank

probably against the backdrop of at times pronounced budgetary strain, amongst other things.⁵⁴

By contrast, real estate tax B grew by 16½% (62 multiplier points) throughout Germany. Due also to the typically far more extensive per capita expenditure in large cities, the highest rates⁵⁵ in terms of real estate tax B were recorded by the densely populated state of North Rhine-Westphalia, where a noticeably accelerated increase (105 points in total) was recorded of late, apparently in the form – in particular – of a consolidation contribution under the programme to strengthen city finances (*Stärkungspakt Stadtfinanzen*). Although a high tax level was recorded in Saxony, the increase of 49 points was below average. Developments in Hesse, too, were striking in that a marked rise occurred of late (122 points in total) from a relatively low level in 2005.⁵⁶ The dispersion within the individual states increased perceptibly for the most part in this regard.⁵⁷

All in all, notably the data regarding cash advances suggest that there are specific problems in the municipalities belonging to the states of Saarland, Rhineland-Palatinate, North Rhine-Westphalia and Hesse. The distinct increase in multipliers over the past years and the present levels not only of real estate tax B but also of local business tax, eg in Hesse and North Rhine-Westphalia, are consistent with this finding. However, the multipliers in the other states with high cash advances are below average in some

cases. Higher levels of real estate tax B in both Saarland⁵⁸ and Rhineland-Palatinate, in particular, seem appropriate if budgetary rules are to be strictly enforced.

54 Interpreting the local business tax multipliers is made more difficult inasmuch as the tax base is often subject to sizeable fluctuations which are related to macroeconomic developments as well as to relocations. This may require considerably higher rates to be applied in crisis years to ensure a certain revenue level. However, there are also instances of small to medium-sized municipalities such as Monheim in North Rhine-Westphalia, which attracted a large number of businesses by switching to a decidedly low-tax-rate policy, which boosted not only its tax revenue capacity but also its actual revenue. The growing importance of such locations slows down the development of the average multiplier.

55 Given that Berlin is a city state, its multiplier of 810% was not taken into account in this calculation.

56 The most extreme example of this is the municipality of Nauheim (around 10,000 inhabitants; near Rüsselsheim in Hesse) – a participant in the state programme for partial debt-relief – where the multiplier tripled to 960% between 2013 and 2014. In terms of local business tax, the multiplier was increased by not nearly as much in that same year, ie by 20 percentage points to around 400%.

57 In North Rhine-Westphalia, for example, multipliers in 2005 ranged from as low as 240% in the town of Schloss Holte-Stukenbrock to 530% in the cities of Bottrop and Gelsenkirchen. In 2015, the lowest value of 260% (Harsewinkel) stood only just above the minimum value recorded in 2005. By contrast, at 876% (Bergneustadt), the highest value represented a considerably more marked increase and as much as one-quarter of all municipalities (population share of just over two-fifths) had raised the multiplier above the highest state-wide value of 2005.

58 In the case of Saarland, the deficit would have been lower by one-fifth if an average multiplier such as that in North Rhine-Westphalia had been applied and three-fifths lower if the Berlin multiplier had been applied.

Significance and impact of high-frequency trading in the German capital market

Over the past ten years, the significance of algorithm-based trading strategies has grown considerably in international marketplaces, especially in Europe. This has accordingly heightened interest on the part of central banks and regulators in the potential implications of high-frequency trading (HFT) on market stability and market integrity.

However, the market impact of HFT to date has been all but impossible to measure, especially owing to the paucity of available data. In order to provide a stronger basis for a discussion based on facts, this report presents the first comprehensive empirical studies of HFT in the German capital market.

The results illustrate the fact that it would be inappropriate to make a sweeping judgment of the impact of HFT on the financial markets as they depend heavily on the strategies and market phases under observation, which are also, in some cases, quite varied. This means that, in a calm market setting, HFT traders make a considerable contribution to liquidity. However, during periods of high market volatility, the studies show that HFT market makers temporarily reduce their liquidity provision in both Bund and DAX futures. In addition, in times of relatively highly volatile markets, some HFT participants are particularly active and can thus contribute to trend-amplifying price movements. The results can also stimulate the regulatory debate on HFT.

■ Introduction

HFT accounts for key share of exchange trading

Since the middle of the last decade, investors, exchange operators and regulators have been witnessing a remarkable transition in the ways in which securities and derivative financial instruments are traded in the financial markets. Computer algorithms have been making increasing inroads into exchange trading activities, for instance. Human decisions on which securities to buy or sell and at what prices are being replaced with increasing frequency by specially designed algorithms which are capable of analysing large quantities of data and initiating hundreds of orders in a fraction of a second. This trend has been accompanied by growing competition among stock exchanges, new regulatory measures (MiFID in Europe, Reg NMS in the United States) and the appearance of new marketplaces which, in particular, favour algorithm-based trading.¹ These various factors, acting in concert, constitute a driver of structural change in the financial system.

High-frequency trading (HFT), as a sub-category of general computerised trading, is playing a key role in this transformative process. It now accounts for nearly 50% of trading activity in the most highly liquid segments of the US and European markets.² HFT uses new technological infrastructures and algorithms in order to profit from high trading speeds based on a variety of different strategies. Although the use of speed-based advantages in exchanges is not an unprecedented approach by any means, the advent of HFT has made speed a particularly important factor.

Recent events on stock exchanges have pushed HFT to forefront of public debate

At the beginning of the current decade, HFT drew the attention of the public and regulators owing to a series of events on stock exchanges³ which were characterised primarily by price swings which were rapid and, in most cases, could not be explained by the fundamentals. Many observers saw these events as having been triggered by the activity of HFT algorithms. Recently, such “flash events” have also been increasingly occurring in the markets for

sovereign bonds, traditionally regarded as highly liquid and less volatile. Examples include the US Treasury “flash rally” in October 2014 and the Bund tantrum⁴ in early 2015.⁵ These extreme events triggered debates on financial markets’ ability to withstand shocks – in other words, their resilience – and on the impact of new market players, such as HFT.

Given that HFT accounts for a high share of trading activity, together with the fact that opinion on it among investors is sharply divided and that there is a general interest in new forms of capital market intermediation, regulators and central banks have been increasingly addressing the issue of HFT for some years now. They are looking not only at market integrity issues but also first and foremost at the impact HFT has on the ability of markets to function. To the extent to which HFT impacts

Impact of HFT on aspects of market quality highly interesting ...

¹ The Markets in Financial Instruments Directive (MiFID) is an EU directive designed to harmonise financial markets in the single European market. Regulation (Reg) NMS (short for “national market system”) is a US financial directive which is intended to enable all investors to place orders at the best nationwide rate.

² It is very difficult to precisely quantify the HFT share of the volume of a specific traded asset. For the US equity markets, a study by the TABB Group for 2012 (“US Equities Market 2012: Mid-year review”) finds that the share is around 50% (as early as 2005, this share had already stood at roughly 30%). According to a more recent ESMA study in 2014, the share of equities trading on European stock exchanges accounted for by HFT, depending on the underlying definition applied, ranges from 24% to 43% of the equity trading volume and 58% to 76% of the overall number of orders.

³ A “flash event” is a sudden occurrence of very strong and rapid price volatility, for which a fundamental cause is often absent and the path of which is generally reversible. Examples include the “flash crash” of the US stock market on 6 May 2010 and a whole series of smaller, but no less dynamic, events in a variety of asset classes and exchanges. They have also marked the beginning of a period of intensive study of the topic by researchers and regulators since 2010.

⁴ The Bund tantrum, which occurred on 7 May 2015, is seen as the peak of a period of strong price volatility in German government bonds (Bunds) which lasted from late April to early June 2015.

⁵ Central banks and regulatory authorities, in particular, responded by publishing studies in which they examined the history and causes of these events. See US Department of the Treasury (2015), Joint Staff Report, the US Treasury market on October 15th 2014; R Riordan and A Schrimpff (2015), Volatility and evaporating liquidity during the bund tantrum, BIS Quarterly Review, September 2015; BIS (2016), Electronic trading in fixed income markets, Study by the Market Committee.

on various facets of market quality, such as liquidity, volatility and price efficiency, it can also be expected to impact on financial stability.

... yet hardly any empirical studies for German capital market to date

Owing primarily to a paucity of available data, empirical knowledge of the actual extent of HFT activity and its impact is currently limited. Studies on European capital markets and for non-stock-market segments – including Germany – are particularly few and far between. Another factor which makes it difficult to come to a definitive judgement on the impact of HFT is that HFT is simply a portmanteau for a wide variety of strategies. This heterogeneity makes it a laborious endeavour to identify a unique impact of HFT on market quality.⁶

Focal points of study: liquidity provision, price efficiency and price volatility

With all that in mind, the present article was written with a view to helping the reader to obtain a deeper understanding of the importance of HFT activities and their impact on the German capital markets. One of the aims is to address whether the rising velocity of financial market activities is having an overall positive impact on the capital markets.⁷ However, the article is chiefly about the impact of HFT on liquidity provision during various market phases and the role of HFT in information processing and its contribution in periods of temporary high volatility. Some studies look at the market for DAX and Bund future contracts at the micro-second level, the behaviour of HFT traders when key macroeconomic data are published and the role of HFT as a market maker in various market settings. In addition, the DAX future order book is extensively reconstructed and evaluated and market data analysed for potentially conspicuous strategies. One particular advantage of these studies over previous research is that current and extensive data from Eurex, in which each individual HFT order is labelled, are used.

HFT strategies and behaviours in different market phases

MiFID II defines HFT as a subcategory of algorithmic trading. The key characteristics of HFT include⁸

Definition of HFT pursuant to MiFID II

- a technical infrastructure designed to minimise the time lag for order executions and
- which uses the opportunity, for a fee, to station its trading computers in close proximity to the exchange's servers (co-location) and/or very high-speed electronic access for system-determination of the initiation, generation, forwarding ("routing") and execution of individual trades or orders without any human intervention
- with high intraday message rates of orders, quotes or deletions.

Overview of HFT strategies

HFT is a portmanteau term that covers a large number of different strategies. HFT strategies can be broken down into the following categories, depending on their objective: statistical arbitrage, directional strategies and passive market making.⁹ Moreover, there are what are known as structural strategies which are based on exploiting structural weaknesses in the market infrastructure or among individual market players. Other strategies are also the topic of critical debate in the public sphere and among academics.¹⁰

HFT comprises numerous different strategies ...

⁶ See US Department of the Treasury (2015), op cit.

⁷ For more information on this fundamental category, see, for example, J Weidmann (2014), The macroeconomic importance of capital markets, speech delivered on 22 May 2014.

⁸ For more information, see MiFID II, Article 17 (1) and (2).

⁹ See Securities Exchange Commission (2014), Equity market structure literature review part II: high frequency trading, Working Paper.

¹⁰ These include quote stuffing (see box on pp 55-58), momentum ignition and strategies whose sole purpose is to detect movements in the order book and identify liquidity (eg sniping).

... such as
statistical
arbitrage ...

Statistical arbitrage is designed to exploit price inefficiencies between related products or markets. For example, such a strategy takes advantage of temporary price discrepancies between highly correlated products, such as an exchange-traded fund (ETF) and the underlying basket of individual securities.

... directional
strategies and
passive market
making as the
best-known
categories

In directional strategies, HFT traders take unhedged positions based on anticipated price changes and mostly trade in the direction of the short-term price trend. One type of directional strategy is “news trading”, in which the objective is to respond to new public information as fast as possible in order to generate fast profits (see the box on pages 47 to 49).

Passive HFT traders, acting as market makers, provide liquidity and continuously update their bid-ask spreads to reflect the market situation. Their primary sources of income include, alongside the bid-ask spread, fees for liquidity provision services offered by some trading platforms, primarily in the United States.¹¹

Impact on
market stability
depends on type
of strategy and
market setting

Some of the strategies being pursued by HFT traders are suspected of amplifying or even causing market turmoil, depending on the market setting and aggressiveness of their implementation. Therefore, a closer look should be taken not only at market integrity but also primarily at the impact on stability. While the statistical arbitrage is not an issue here, as it only causes the prices of various products on one platform or the same products on different platforms to adjust more quickly, directional strategies, in particular, can contribute to stronger price movements. Whether or not they also cause major price swings depends not least on the liquidity provided during the respective market phase. Therefore, the focus of the empirical studies in the next sections will be, in particular, on directional and passive market making strategies.

Behaviour of HFT participants in different market phases

The following section will study the general trading behaviour of HFT participants and slower traders before going into detail on specific HFT strategies. It will also study whether the behaviour of market players differs in periods of high and low volatility.¹² On the basis of the implied volatility index on the DAX (VDAX), a trading week of heightened volatility (March 2014), as well as a week of low volatility (June 2014) are identified. The underlying Eurex data are described in the box on page 42.

For a more detailed analysis of HFT participants' trading behaviour, orders initiated by market participants will be divided into active and passive orders.¹³ Market orders or limit orders which are executed immediately¹⁴ (liquidity-consuming) are regarded as active orders. By contrast, limit orders which are not executed immediately and which transmit liquidity to the order book (liquidity-providing) are regarded as passive orders. In the following, market participants which issue an active (passive) order at a given point in time are referred to as active (passive) HFT participants.

Active trading orders consume liquidity, passive orders provide liquidity

¹¹ See SEC (2010), Concept release on equity market structure, Working Paper. These “maker-taker” pricing systems have been used increasingly on electronic marketplaces since the late 1990s, including the NYSE and the NASDAQ.

¹² For details regarding the method, see K Schlepper, High-frequency trading in the Bund futures market, Deutsche Bundesbank Discussion Paper No 15/2016; as well as J Breckenfelder (2013), Competition between high-frequency traders and market quality, Working Paper.

¹³ For more information on this approach see, for example, J Brogaard, T Hendershott and R Riordan (2014), High-frequency trading and price discovery, *The Review of Financial Studies* 27 (8), pp 2267-2306; or J Brogaard (2011), High-frequency trading and volatility, Working Paper.

¹⁴ Market orders are orders where the given number of securities should be traded immediately at the currently most favourable rate or as soon as possible. A market order expresses the contractor's preference for time over price. Limited orders are orders to buy (sell) a security at a given price or below (above) it. The purpose of these conditional orders is to give traders protection against a transaction at unfavourable conditions. A limit order thus expresses the contracting party's preference for price over time.

In times of heightened market stress, HFT participants increasingly pursue momentum strategies ...

The next step will be to study which market players tend to, on average, go in line with market movements (momentum strategy) or contrary to the market (contrarian strategy). Active traders mainly follow momentum strategies in the Bund future market, whereas passive traders, on average, buck the price trend. Consequently, passive orders dampen volatility – irrespective of the current market setting: in both the heightened-volatility and low-volatility weeks, active traders follow a momentum trading strategy, while passive market makers show contrarian trading behaviour. However, HFT participants change from contrarian strategies in calm market phases to momentum trading strategies during periods of heightened market stress.

... and, in addition ramp up their trading activity with increased volatility

A further analysis of the two weeks shows that both active and passive HFT participants ramp up their trading activity in the high-volatility week, whereas in the calm week their trading activity remains relatively constant across various levels of volatility.¹⁵ Slower traders (non-HFT participants) do just the opposite: in the high-volatility week, they reduce their trading in inverse proportion to the increase in volatility. One reason for the positive relationship between volatility and active HFT participants' trading activity could be that these traders see more opportunities for short-term gains in times of major price swings. Another possible explanation is that HFT participants acting in the direction of the market are the cause of the higher volatility. In the absence of a specific exogenous event or an appropriate statistical instrument,¹⁶ it is impossible to identify an exact causality.¹⁷ In the case of passive HFT participants, the direction of causality between their trading activity and the volatility is likewise unclear. It is important to note that these traders are more likely to exercise their limit orders in periods of volatility. It is accordingly unclear whether passive HFT participants prefer an environment of heightened price volatility or whether the heightened volatility simply leads to more orders being placed, particularly if they are close to the best bid-ask prices. Owing to

this endogeneity problem, at this juncture it is possible only to establish a positive relationship between the activity of active and passive HFT participants and volatility, but not a specific causal relationship.

In conclusion, active HFT participants who trade in the direction of the price movement predominate in the more turbulent market phase and increase their activity as volatility rises. This results in an increased risk of HFT participants even amplifying excessive price volatility in times of jittery markets.

Causal link between HFT and volatility not definitively established, however

Example of a directional strategy – news trading

A subject of the study was “news trading”, which means trading in response to important news. Since this is a direct response to the announcement of news, news trading is of specific relevance to active HFT participants, whose orders are executed immediately. Since HFT participants can make particularly good use of their speed advantage, news trading strategies are widely used among them.

Speed is very advantageous when responding to news

It is known that the publication of important macroeconomic data plays a major role in the markets for government bonds. Yields in European bond markets often respond the strongest just on either side of the announcement of

Announcement of macroeconomic data particularly relevant in the case of government bonds

¹⁵ This result is largely confirmed by empirical studies in other markets (see E Boehmer, K Fong and J Wu (2012), International evidence on algorithmic trading, Working Paper; A Chaboud, B Chiquoine, E Hjalmarsson and C Vega (2014), Rise of the machines: Algorithmic trading in the foreign exchange market, *Journal of Finance*, 69 (5), pp 2045-2084). The realised variance, which represents the sum of the squared yields per time interval (here: 1 minute), is used here as a measure of volatility.

¹⁶ The objective of a statistical instrument is to have maximum correlation with the explanatory variable but to be uncorrelated with the dependent variable in order to avoid endogeneity problems. In order to measure, for instance, the impact of HFT on volatility, the instrument should be highly correlated with HFT activity but be as uncorrelated as possible with market volatility.

¹⁷ See, for example, E Benos and S Sagade (2012), High-frequency trading behaviour and its impact on market quality: evidence from the UK equity market, Bank of England Working Paper; or J Brogaard (2011), op cit.

Eurex datasets

The empirical studies outlined are based on two different datasets for DAX and Bund futures. The first dataset comprises a week of relatively high volatility, 6-13 March 2014 (during the Crimean crisis), and a week of relatively low volatility, 3-10 June 2014, when the DAX reached a new all-time high of over 10,000 points. These two volatility phases were determined using the DAX's implicit volatility index (VDAX). In the March week during the Crimean crisis, the VDAX reached a level approaching 20, with a mean of 17.2, compared with an average level of 14.1 in the preceding six months. In the June week, the VDAX was at an average level of 13.4, compared with a mean value of 16.7 over six months. The second dataset comprises individual trading days between July 2013 and June 2014 on which significant macroeconomic news was published. These are the publication dates for the ECB Governing Council's interest rate decisions, ie the first Thursday of each month in the year under review, and for US labour market data, ie the first Friday of each month. The latter refers to nonfarm payroll data, meaning those newly created jobs in the US economy each month which have the greatest effect on yields in the global sovereign bond markets. The datasets were supplemented by individual, highly volatile trading days. Each individual trading day includes all order book activities, ie all the relevant information on conducted transactions as well as bid-ask prices and volumes, plus modifications and order cancellations. The timestamp of the transactions and other order book activities is given in microseconds; all activities are additionally assigned a ranking position within these microseconds. Since existing empirical studies, on the other hand, are usually based on milliseconds or a lower frequency

(eg Brogaard *et al* (2013), Gao and Mizrach (2013)), this extremely high data frequency enables particularly granular analysis.

Another key feature of the Eurex data is that they contain an HFT (high-frequency trading) identifier, which has the value 1 for HFT traders and 0 for non-HFT (NHFT) traders. It is based on a method developed by Eurex and used exclusively within the organisation. The idea of this is to investigate which traders exhibit HFT-typical behaviour on the basis of incoming orders placed by individual trading participants. First, a theoretical distribution of incoming transactions is determined on the basis of all the observed transactions; this shows, for example, the average number of orders entering the trading system per day at particular intervals from each other. Finally, this is compared with the actual distribution of transactions by each trading participant. If the expected values are significantly exceeded within the smallest time intervals (at the microsecond level), the participant is classified as an HFT trader. Therefore, the Eurex method's classification principle is based on the observed frequency of consecutive transactions by individual trading participants. The participants are only classified as HFT traders if these values are considerably higher than the average expected value overall. The group of NHFT traders therefore encompasses traditional investors as well as those computer algorithms which exhibit longer time intervals between orders submitted than HFT traders do. The resulting individual allocation of an HFT identifier may deviate from the HFT identifier based on legal requirements.

the monthly US labour market data and ECB Governing Council interest rate decisions. The behaviour of HFT participants upon the publication of these monthly Bund future market data between July 2013 and June 2014 will therefore be examined in greater depth below.¹⁸ An additional advantage of this analysis compared with previous studies of HFT strategies in various market phases is that the announcement of macroeconomic news can be regarded as an exogenous event¹⁹ and is generally a source of high short-term volatility. In addition, there is little empirical literature on the behaviour of HFT participants on either side of the announcement of data.²⁰

Bund future yield responds strongly to US labour market data

First, HFT activity seconds before and after publication of the US labour market data is examined relative to average activity on each respective date.²¹ A more detailed statistical analysis encompasses both US labour market data and the ECB Governing Council's interest rate decisions (see the box on pages 47 to 49). The chart on page 44 shows that post-announcement Bund future volatility rises sharply, on average, but already reverts to normal after just a few seconds. A clear difference between HFT and non-HFT participants in terms of behaviour emerges. Liquidity-consuming HFT participants are between around 10% and 30% more active just before and after the announcement of data than the daily average. By contrast, liquidity-consuming non-HFT participants increasingly pull out of the market, possibly because they are aware of their slower speed in response to the news. While passive HFT participants become more active only after the announcement, passive non-HFT participants likewise display above-average activity around the publication of data. However, this is due to the fact that their limit orders can adapt quickly enough to the information and are ultimately executed by the more aggressive orders issued by active HFT participants.

The next step will be to examine whether HFT participants trade in the direction of, or contrary to, market movements after the an-

nouncement of news. Surprisingly high employment gains in the United States tend to trigger expectations of rising inflation and policy rates. Therefore, in keeping with the international comovement of interest rates, Bund future prices will generally also fall in response to good employment figures and rise whenever these figures deviate negatively from the expected value.²² The chart on page 45 shows the order flow (net order volume, ie the number of buy orders minus the number of sell orders) of HFT and non-HFT participants as well as the yield on Bund futures just before and after surprisingly positive US labour market data.²³ According to this chart, active HFT participants trade in the direction of the market in the second of the announcement and show above-average trading activity. Therefore, it stands to reason that their activity is part of the cause of the strong initial price movement. As sales and purchases by passive HFT participants are balanced in this period (order flow close to 0), HFT participants are net liquidity consumers, rather than providers, in the volatile phase owing to the publication of data.²⁴ The chart on page 45 illustrates that passive non-HFT

Majority of HFT participants move in direction of markets after the data are announced, ...

... and thus HFT participants in this setting are net consumers of liquidity ...

¹⁸ During this period, US labour market data were announced on the first Friday of each month and the decisions of the ECB Governing Council on the first Thursday of each month at a previously known time.

¹⁹ See A Chaboud, B Chiquoine, E Hjalmarsson and C Vega (2014), op cit.

²⁰ Only one comparable study exists for the US Treasury markets: G Jiang, I Lo and G Valente (2013), High-frequency trading around macroeconomic news announcements: Evidence from the US Treasury market, Working Paper. Further macroeconomic data studies for other markets include A Chaboud, B Chiquoine, E Hjalmarsson and C Vega (2014), op cit, in the foreign exchange market and J Brogaard, T Hendershott and R Riordan (2014), op cit for the US equity market.

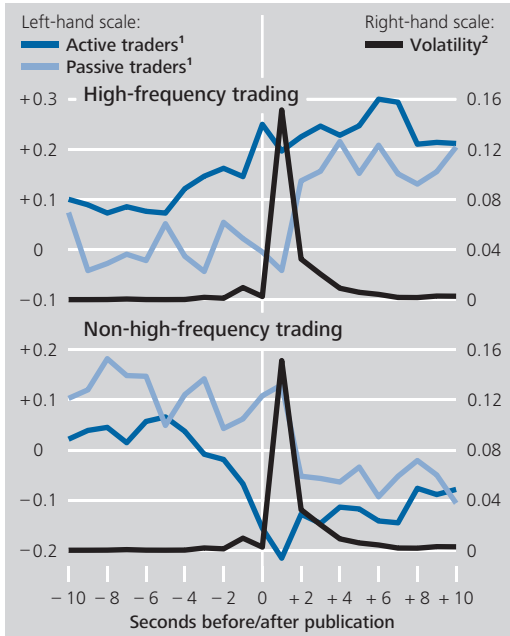
²¹ The graphic analysis incorporates only labour market data since breaking down macroeconomic data into positive and negative surprises is more clear-cut than breaking down interest rate decisions along the same lines.

²² In the underlying study, the median of analyst estimates reported by Bloomberg is used as the expected value.

²³ The result is less meaningful for surprise bad news, as a result of, inter alia, outliers and a small number of observations.

²⁴ This result runs counter to the study by J Brogaard, T Hendershott and R Riordan (2014), op cit, for the US equity market, according to which, in the aggregate, HFT traders dampen volatility owing to the preponderance of passive market makers.

Trading activity upon release of US labour market data*



Sources: Eurex, Bloomberg, and Bundesbank calculations.
 * Monthly publication of nonfarm payrolls. **1** Share of the trading volume in relation to the total trading volume per second. The surplus relative to the entire trading day is shown here. **2** Surplus relative to the average of the entire trading day in %.
 Deutsche Bundesbank

active HFT participants then close their positions. They generate, in a very short period of time, significant gains, in some cases, depending on the strength of the market reaction.

Passive non-HFT participants issuing orders against the market trend following the announcement of news cannot adapt their orders quickly enough and thus fall victim to “adverse selection”: their orders are executed by orders of active HFT participants at prices that are not favourable to them. It can be empirically confirmed that passive non-HFT participants increasingly withdraw even before the news is announced in such market phases.

Orders of passive non-HFT participants executed by fast HFT orders

The trading behaviour of HFT participants is statistically significant only in the first second after the data are announced. For more detailed results regarding market players’ initial reactions, the box on pages 47 to 49 studies the publication of macroeconomic news on the basis of transactions (ticks). The results show that, on the one hand, active HFT participants contribute significantly more to price efficiency than active non-HFT participants: their activity causes new information to be incorporated into prices more quickly. On the other hand, their immediate and aggressive trading in response to price-relevant news triggers a very high short-term volatility, an “overshooting” of sorts. It should be borne in mind that prices are not made more informative by the activity of HFT participants as such. The latter would be the case if their trading were to create new information which would not be incorporated into prices without their actions.²⁵ Rather, the contribution made by these traders to higher price efficiency is that new information is factored into prices microseconds faster than would have been the case in their absence. However, the economic value of prices which

Rapid action by HFT participants leads to higher price efficiency, but also to increased short-term volatility

participants occupy the other side of the positions of active HFT participants.

... and can generate profits nearly instantaneously

The statistical analysis (see the box on pages 47 to 49) supports the graphic results: active HFT participants respond at the second of the publication in the direction of the surprise component of the news. Following this initial response, the sign of the order flow reverses itself after a few seconds, which would suggest that the active HFT participants have already realised their trading gains.

The results show news trading behaviour which is typical of HFT, and which is based on fast and relatively aggressive trading: HFT players use their speed advantage to buy or sell Bund future contracts in response to the data at a favourable price as the new information has not yet been incorporated into the price. Once slower market participants have also responded to the news with a time lag and have amplified the initial price movements with their trades,

²⁵ See also J Hirshleifer (1971), The private and social value of information and the reward to inventive activity, The American Economic Review, 61, pp 561-574; and T Foucault (2016), Where are the risks in high frequency trading?, in Banque de France, Financial Stability Review, No 20, April 2016.

are more efficient by fractions of a second is difficult for the human observer to comprehend.

Example of a passive strategy – market making

Liquidity provision is of great importance, particularly in times of stress

A fear among regulators and market participants is that passive HFT participants provide liquidity only in calm market phases and tend to withdraw it in times of stress, where liquidity is particularly needed.²⁶ Such behaviour also has implications for financial stability, as in the case of market shocks a reduced supply of liquidity could even intensify the shock.²⁷

When analysing the provision of liquidity in Bund futures, a distinction is made between a period of unexpected volatility triggered by a surprise increase in traders' risk aversion, such as the Crimean crisis in March 2014, and a phase of expected volatility, such as when the US labour market data are announced.²⁸ In order to assess whether the liquidity increases or decreases at any given point in time, a deletion ratio, defined as the ratio of orders deleted from the order book to new orders over a given time period.²⁹

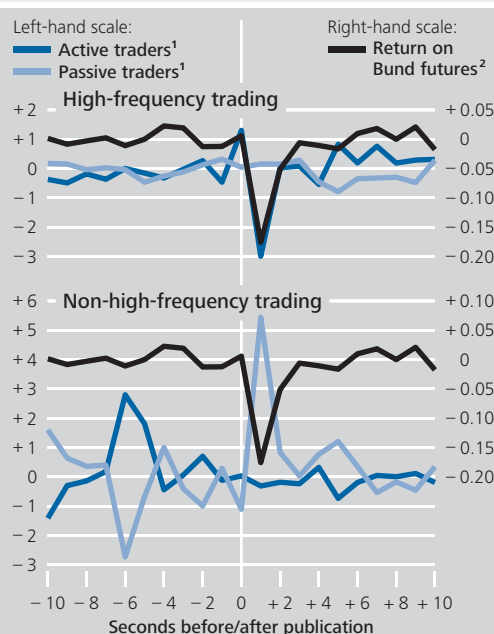
HFT participants increasingly delete orders in periods of more highly jittery markets ...

HFT participants exhibited a deletion ratio of 77% in the volatile week in March 2014, which was higher than in the calm week in June 2014, at 72%; for non-HFT participants, by contrast, there is virtually no discernible difference. This suggests that the provision of liquidity by non-HFT participants is more constant across various market phases.

... and provide less liquidity as volatility increases

Furthermore, one sees that a surprise increase in volatility in the turbulent week in March led HFT market makers to increasingly cancel their posted limit orders.³⁰ Non-HFT participants did the opposite: when volatility was higher, they withdrew fewer orders. In the calmer trading week in June, both HFT and non-HFT participants tended to delete fewer orders as volatility increased. As the week in June was a period in

Trading behaviour upon release of US labour market data*



Sources: Eurex, Bloomberg, and Bundesbank calculations.
 * Monthly publication of nonfarm payrolls. **1** Net trading volume per interval of one second. The surplus relative to the average of the entire trading day is shown here. **2** Surplus relative to the average of the entire trading day in %.
 Deutsche Bundesbank

which markets were not very jittery, a slight uptick in volatility during such a period does not appear to be cause for HFT traders to withdraw

26 See European Securities and Markets Authorities (ESMA) (2011), Report of trends, risks, and vulnerabilities, European Securities and Markets Authorities, Working Paper; and Australian Securities and Investments Commission (ASIC) (2012), Report 331: Dark liquidity and high-frequency trading, Working Paper.

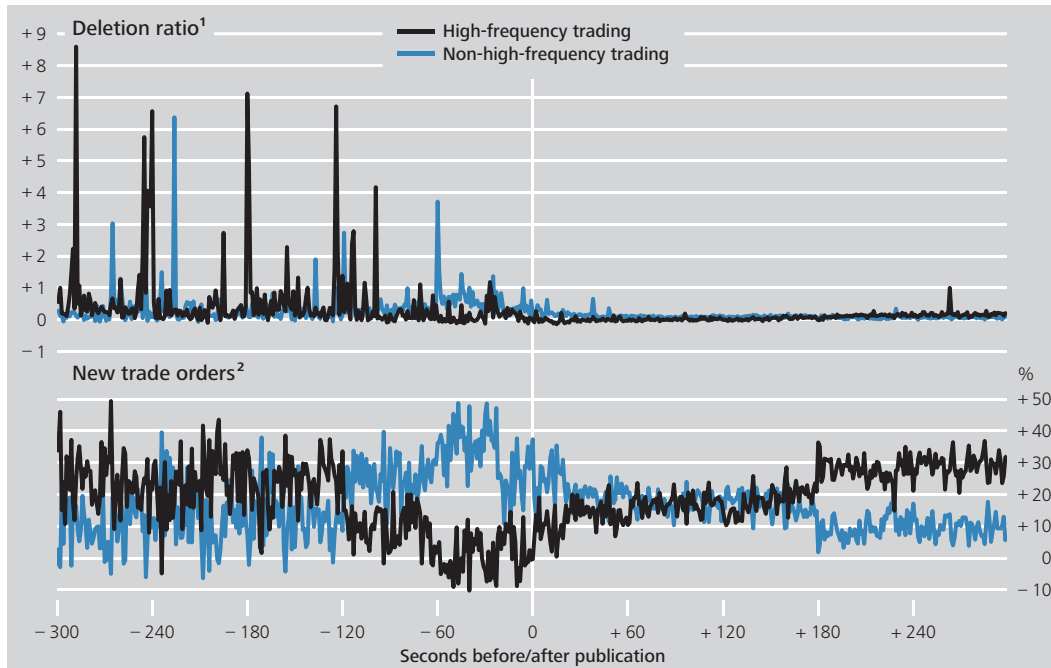
27 See Y Ait-Sahalia and M Saglam (2014), High-frequency traders: taking advantage of speed, Working Paper.

28 See K Schlepper (2016), op cit.

29 On the basis of order deletions, a more detailed analysis of the impact of volatility on the provision of liquidity by market players can be conducted than is possible based on transaction data. For transaction data (see eg A Chaboud, B Chiquoine, E Hjalmarrsson and C Vega (2014), op cit, and J Brogaard, T Hendershott and R Riordan (2014), op cit) the traded volume is used to measure the provision of liquidity. However, as this is highly correlated with volatility, previous studies often suffer from an endogeneity problem. For example, E Benos and S Sagade (2012), op cit, argue that, in periods of higher volatility, passive limit orders are more likely to be carried out, thus automatically increasing the trading volume.

30 To this end, a dummy variable is created which has a value of 1 if the deletion ratio exceeds the average figure for the whole week during the interval (1 minute) and 0 otherwise. This variable was regressed on the volatility in the preceding minute using a probit method.

Liquidity provision around the time of publication of US labour market data



Sources: Eurex, Bloomberg, and Bundesbank calculations. **1** Ratio of orders deleted from the order book to new orders per interval of one second. The surplus rate produced by the difference from the average of the entire trading day is shown. Values greater than 1 mean that more orders were deleted in the given second than new orders placed. **2** Ratio of new trade orders relative to all order book activities (ie new orders, transactions, deletions and modifications). The surplus rate produced by the difference from the average of the entire trading day is shown.

Deutsche Bundesbank

their liquidity from the market. The fact that they responded much more sensitively to market fluctuations in the more turbulent week could indicate the existence of certain volatility thresholds which, if overshoot, cause HFT traders to deem the market too risky and to increasingly pull out. In addition, during such periods HFT traders have no information advantage over non-HFT participants, unlike, for example, is the case regarding the announcement of news, which HFT traders can process faster than slower market participants. Thus, from a certain stress level, HFT participants increasingly cut back their supply of liquidity in order to avoid higher hedging costs when performing their market-making activities.

HFT traders also delete an excessive number of trading orders before the announcement of US labour market data

Furthermore, the empirical results show that both HFT and non-HFT participants delete an excessive number of orders compared to the average on that trading day even minutes before the publication of US labour market data – and thus prior to the period of expected volatil-

ity. For HFT traders, however, the deletion ratio is significantly higher than that for slower traders. Looking at the new orders relative to all order book activity on either side of the announcement of US labour market data, the order rates of HFT and non-HFT participants can be seen to diverge (see the chart above): while HFT traders place an above-average number of orders in the minutes prior to the announcement, activity decreases just prior to the announcement. At the same time, orders from non-HFT participants go up sharply.

The results show that, irrespective of the nature of volatility – expected or unexpected – HFT participants provide less liquidity as market stress rises and increasingly pull out of the Bund future market. As the increase in the volatility is anticipated *ex ante* when significant macroeconomic news is published, the orders are already increasingly deleted prior to the announcement, whereas if the rise in volatility

Empirical evidence of HFT participants' reaction to the publication of important news

Especially when important news such as US labour market data and ECB Governing Council interest rate decisions is published, high-frequency trading (HFT) participants can use their speed advantage, and react within the first few seconds after the announcement. On some days when US labour market data are published, up to around 500 transactions may take place during the second in which the announcement is made. To obtain a more accurate picture of HFT participants' initial reaction, which generally takes place within milliseconds or even microseconds, the following statistical analysis is performed at the tick level. This also reduces potential endogeneity problems because individual transactions can be analysed sequentially.¹ The following vector autoregressive model (VAR model) with 10 lags is used to capture market participants' reactions to the announcement of US labour market figures and ECB interest rate decisions and to measure the effect on the Bund future return:

$$\begin{aligned}
 r_t &= \alpha + \sum_{i=1}^l \beta_i OF_{t-i}^{hft} + \sum_{i=1}^l \gamma_i OF_{t-i}^{nhft} \\
 &\quad + \sum_{i=1}^l \delta_i r_{t-i} + \sum_{i=0}^l \psi_i D_i + \epsilon_{1t} \\
 OF_t^{hft} &= \kappa + \sum_{i=1}^l \eta_i OF_{t-i}^{hft} + \sum_{i=1}^l \lambda_i OF_{t-i}^{nhft} \\
 &\quad + \sum_{i=1}^l \nu_i r_{t-i} + \sum_{i=0}^l \phi_i D_i + \epsilon_{2t} \\
 OF_t^{nhft} &= \zeta + \sum_{i=1}^l \rho_i OF_{t-i}^{hft} + \sum_{i=1}^l \tau_i OF_{t-i}^{nhft} \\
 &\quad + \sum_{i=1}^l \nu_i r_{t-i} + \sum_{i=0}^l \pi_i D_i + \epsilon_{3t} ,
 \end{aligned}$$

Here, the dummy variable D is entered as an exogenous variable; it takes the value of 1 at the time data is released and 0 other-

wise. OF denotes the net order flow of HFT and non-HFT, and r is the log of the Bund future return at time t . The other variables are coefficients estimated using the maximum likelihood method. A Cholesky decomposition is applied to transform the VAR model into a vector moving average (VMA) form which can be used to identify the impact of HFT and non-HFT activity on returns:

$$\begin{aligned}
 \begin{pmatrix} r_t \\ OF_t^{hft} \\ OF_t^{nhft} \end{pmatrix} &= \begin{pmatrix} a(L)b(L)c(L) \\ d(L)e(L)f(L) \\ g(L)h(L)k(L) \end{pmatrix} \begin{pmatrix} e_{1,t} \\ e_{2,t} \\ e_{3,t} \end{pmatrix} \\
 &\quad + \begin{pmatrix} q(L) \\ r(L) \\ u(L) \end{pmatrix} \begin{pmatrix} X_{1,t} \\ X_{2,t} \\ X_{3,t} \end{pmatrix}
 \end{aligned}$$

The standard errors are orthogonalised, such that $e_i e_i' = I$, allowing causal conclusions about shocks from individual elements of e_i . The polynomials $a(L)$ to $k(L)$ represent the impulse-response functions of the three variables to shocks, while $q(L)$ to $u(L)$ capture the cumulative impact of the dummy variable on the three dependent variables. Furthermore, $b(L)$ and $c(L)$ represent the impulse-response functions of the HFT and non-HFT order flow, respectively, and can be interpreted as permanent price effects of an innovation in the order flow of HFT and non-HFT.

The upper table on the following page shows the effect that ECB interest rate decisions and NFP releases have on the order

¹ When using time intervals, a large number of transactions occur simultaneously (ie within one second, for example). The number of transactions also varies strongly, ranging from five transactions in the case of an ECB interest rate decision up to 1,330 transactions following a US labour market report in the second after publication. A tick-based analysis also allows the variability to be taken into account, which is not possible in an analysis based on fixed intervals.

The effect of news on trading behaviour

Item	Active HFT	Active NHFT	Passive HFT	Passive NHFT	HFT	NHFT
Short-term effect (tick = 0)	-0.089	0.004	-0.019	0.065	-0.099	0.096
Standard error	(0.304)	(0.237)	(0.16)	(0.346)	(0.292)	(0.316)
Long-term effect (tick = 10)	-6.715***	-0.875	0.967	5.686***	-5.892***	5.709***
Standard error	(1.764)	(1.228)	(0.654)	(1.89)	(1.704)	(1.7)
Long-term effect – short-term effect	-6.626***	-0.879	0.986	5.621***	-5.793***	5.613***
Standard error	(1.79)	(1.251)	(0.673)	(1.921)	(1.729)	(1.729)

* Statistically significant at 10%, ** at 5% and *** at 1%.

Deutsche Bundesbank

The effect of trading behaviour on the Bund future return

Item	Active HFT	Active NHFT	Active HFT – NHFT
Short-term effect (tick = 0)	0.069**	0.081***	-0.012
Standard error	(0.031)	(0.032)	(0.045)
Long-term effect (tick = 10)	0.607***	0.120*	0.486***
Standard error	(0.063)	(0.067)	(0.092)
Long-term effect – short-term effect	-6.626***	-0.879	-5.793***
Standard error	(0.07)	(0.074)	(0.102)

* Statistically significant at 10%, ** at 5% and *** at 1%.

Deutsche Bundesbank

flow of HFT and non-HFT, given by $r(L)$ and $u(L)$ in the model. This shows that only active HFT and passive non-HFT participants display a significant reaction to the data release. Within the first 10 ticks, HFT participants trade in the direction of the market; this effect becomes stronger the more ticks are considered. Passive non-HFT participants show the opposite reaction because they take the other side of the active non-HFT participants' trades that are executed.

The results of the impulse-response functions for active market participants² (see the lower table on this page) show that both HFT and non-HFT order flows have a significant positive short-term effect on the return. While the effect expands for HFT participants over the subsequent 10 ticks (long-term effect), it decreases slightly in the case of non-HFT participants. The chart on page 49 shows the cumulative impulse-response functions (IRF) for 10 events into the future and their 95% confidence bands.

The IRF of HFT participants after 10 ticks is around five times higher than that of non-HFT participants. This reveals that a shock in the HFT order flow has a 400% greater price effect than a comparable shock in the non-HFT order flow. This suggests that HFT orders contain more information than those of non-HFT participants. This finding is corroborated by the significant difference between the IRFs of HFT participants and non-HFT participants (Column 3 in the lower table on this page). Nevertheless, the stronger information efficiency found in the first 10 ticks applies only to a time-span of milliseconds. The economic benefit resulting from this seems doubtful. It is also unclear whether trading by active HFT par-

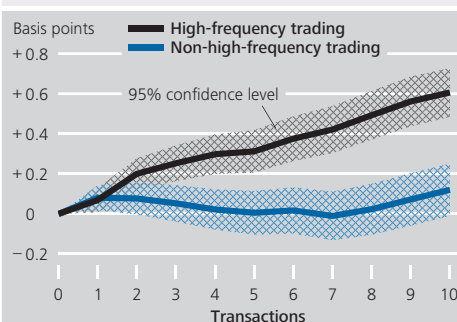
² The analysis is confined to active market participants, since they initiate the trades and thereby contribute to price discovery. This is also consistent with the method of T Henderschott and R Riordan (2011), Algorithmic trading and information, working paper; and A Chaboud, B Chiquoine, E Hjalmarsson and C Vega (2014), Rise of the machines: Algorithmic trading in the foreign exchange market, *Journal of Finance*, 69(5), pp 2045-2084.

ticipants in response to news generates a purely informative contribution or whether this creates additional unwanted short-term volatility (white noise). Generally speaking, volatility can have both a permanent (information-based) component and a transitory component. These two components are therefore decomposed using the variance decomposition method developed by Hasbrouk (1991 and 1993). The aim of this is to gauge the impact of active HFT and non-HFT transactions on the share of permanent and transitory variance. According to Hasbrouck, the observed price can be written as

$$p_t = m_t + s_t,$$

where m_t describes the permanent component and s_t denotes the transitory component or the error term. In this context, the error term may be interpreted as the lagged adjustment of the price to new information. On this basis, the variances of the permanent and transitory components can then be calculated as a function of the coefficients of the VMA process and the variance-covariance matrix.³ We find that, at 9.2%, HFT participants make a significantly larger contribution to permanent variance than non-HFT participants (0.4%). However, through their more aggressive trading, HFT participants also contribute much more strongly to transitory variance, which, at 33.4% after 10 ticks, is more than ten times higher than the figure for non-HFT participants (just 2.3%). The information-to-noise ratio for HFT participants is therefore well below 1, indicating that their rapid trading generates more transitory than information-based variance. It can be concluded from this that, as a rule, active HFT participants “overshoot the mark” in response to macroeconomic news. This means that they do act in the direction of the market movement in line with the

Impulse-response functions* upon release of US labour market data



Sources: Eurex, Bloomberg, and Bundesbank calculations. * Effect of an increase by 1 standard deviation in the net volume of orders (ie the number of buy orders minus the number of sell orders) on the Bund future return.

Deutsche Bundesbank

surprise component of the news, thus contributing to the price discovery process. Nevertheless, their reaction appears excessive measured in terms of the long-term implications of the news for the price.

³ For more details, see J Hasbrouck (1993), Assessing the quality of a security market: a new approach to transaction-cost measurement, *Review of Financial Studies* 6, pp 191-212; K Schlepper, High-frequency trading in the Bund futures market, Deutsche Bundesbank Discussion Paper No 15/2016; and E Benos and S Sagade (2012) High-frequency trading behaviour and its impact on market quality: evidence from the UK equity market, Bank of England working paper.

comes as a surprise, these deletions occur only once the markets have responded.

The importance of HFT traders in the limit order book

Limit order book as a key element for understanding the market ...

One essential component for a better understanding of HFT is taking a closer look at the environment in which its HFT algorithms interact with other market players. On nearly all regular trading platforms, this interaction takes place in the limit order book (LOB). All incoming and not immediately executable limited buy and sell orders are entered into it. Market orders, ie orders which are not limited and are instead placed to be executed immediately, are not entered directly into the LOB. Market orders nevertheless have an impact on the LOB because they interact with the limited orders entered into it through orders being executed. Orders are processed in the electronic trading system of the given stock exchange according to a fixed set of rules (market model) known to the market players in terms of their priority for execution.³¹

... represents overall liquidity

At each point in time during the trading process, the LOB – the aggregate total of all unexecuted limited buy and sell orders – represents the total demand and supply sides for the financing instrument. The LOB at time t thus represents the liquidity which is available at any given time for executing transactions for market players (see chart on page 51).^{32,33}

Price discovery process takes place in the LOB

A transaction takes place in the LOB if a new buy (sell) order arrives or if an existing order is modified in such a way that it overcomes the bid-ask spread and can be executed with a sell (buy) order on the other side of the LOB. Price discovery is therefore a complex process resulting from the constant individual entry, deletion and modification of orders by market participants and the ensuing transactions at the respective best price.

The processes running in the order book in the trading of a highly liquid financial instrument, such as the DAX or Bund future, are very numerous and complex and considerably increase the amount of work required for an LOB analysis.³⁴ From a regulatory perspective, an LOB analysis nevertheless affords a significantly better insight into the price discovery process, which is one of the most important functions of securities and futures markets and to which must be ascribed major economic relevance for the allocation of capital and for financial stability.

A comprehensive analysis of the LOB makes it possible to investigate a number of questions concerning the German capital market about which there has so far been little economic research. An investigation is made, for example, to determine the fundamental microstructural characteristics of the LOB (such as execution times of orders) for ultra-short time scales and with special consideration of HFT orders. It is now also possible to answer the question as to where in the order book HFT traders place their orders and how large their share of the liquidity provided in the LOB is. A similarly important aspect is the dynamics of the provision of liquidity by HFT and NHFT participants over time. The LOB analysis also supplies answers to the question of whether there are particular periods in which one or even

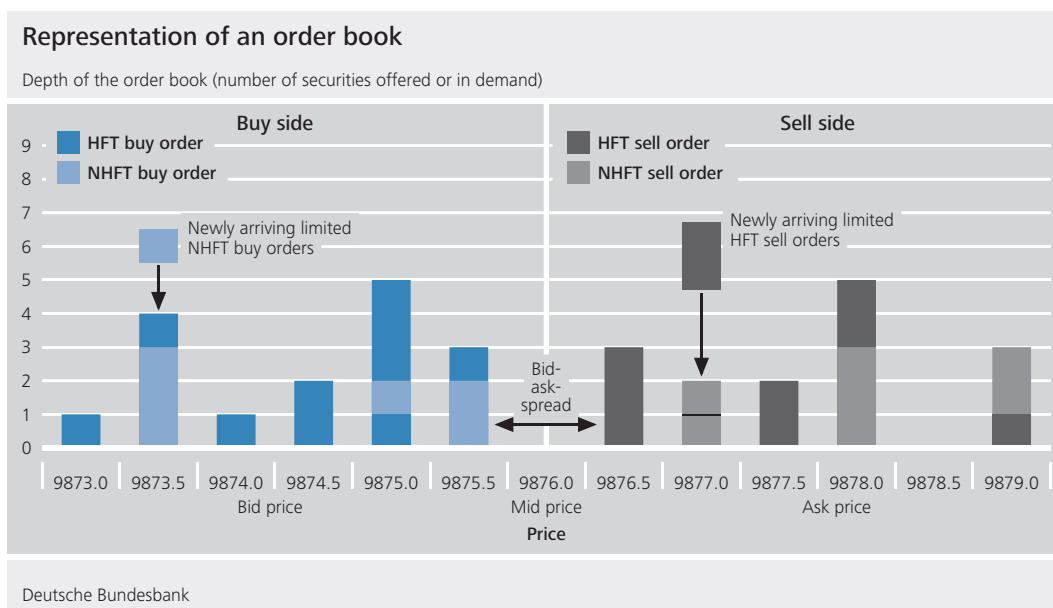
First-time analysis of the order book for very small time scales and taking account of HFT

³¹ In most market models, the order of priority is set initially by the price at which the investor is prepared to buy or sell the security in question. At the second level, if there is more than one order at a given price, there is a further prioritisation according to the time at which the order entered into the LOB (with older orders that arrived earlier being given priority over more recent ones).

³² Most stock exchanges grant their market players a partial or even complete insight in real time into the current status of the LOB (open order book).

³³ See M Gould et al (2013), Limit Order Books, Journal of Quantitative Finance, 13 (11), pp 1709-1742; and M Padrik et al (2014), Effects of Limit Order Book Information Levels on Market Stability Metrics, OFR working paper.

³⁴ For the sample of DAX future data examined in the LOB analysis, the volume of a normal daily rate of data fluctuates between about 0.9 million and 7 million individual events in the order book, of which each is registered with several dozen information units (such as the limit price, the precise time, the number of contracts, the identifier as an HFT order, etc). HFT data and the related research therefore have a marked "big data" character.



both parties significantly reduce their presence in the LOB (liquidity holes).

Both for the composition of the LOB at a given point in time and for the analysis of the LOB dynamics over time, it is sufficient if the sequence of the individual order entries, modifications and deletions as well as partial or full executions are processed in a way that is consistent with the set of rules of the trading platform. Using the available Eurex order data and the HFT identifier, it is therefore possible to reconstruct the situation in the LOB at virtually any time down to the level of a microsecond.

From the available Eurex data sample, a small selection of 12 individual trading days from 2013 to 2015 is made for the DAX future. The selection of trading days is guided by the requirement that the sample should include both normal days characterised by calmer trading and those marked by higher intraday volatility and dynamic, strongly news-driven market activity.³⁵

Characteristics of the LOB

The 12 selected trading days of the DAX future contain a total of around 21.1 million order activities. Of the roughly 1.75 million daily LOB

events, 52.2% are due to HFT traders and 47.8% to NHFT participants. For the actual contract volume, the figures are 41.3% for HFT and 58.7% for NHFT. On average, an executed HFT order is 1.31 contracts in size. For an NHFT order, the figure is 1.68.

The image of steady, continuous market activity on time scales such as minutes or seconds becomes more and more discrete and unsteady when progressively “zooming into” shorter time scales in the sub-second range.³⁶ The granularity of market activity at the millisecond or microsecond level therefore plays a big part in the analysis of high-frequency order book data. A continuous time flow with an approximately steady level of activity on time scales that can be perceived by human beings is thus often transformed into a discrete sequence of

Analyses for very small time scales call for special method

³⁵ The days studied in the LOB analysis are 5 July 2013, 2 August 2013, 6 September 2013, 2 October 2013, 8 November 2013, 6 December 2013 (NFP days), 3 to 6 June 2014, 9 June 2014 (normal days), and 7 May 2015 (very high volatility). For four of these days (2 August 2013, 6 September 2013, 3 and 10 June 2014), the LOB is reconstructed in an extensive analysis down to the level of a microsecond.

³⁶ It is thus not unusual, for example, for there to be periods at the level of one second in which several hundred orders or price discoveries occur within the space of a second. Conversely, there are many seconds in which no activities whatsoever occur in the LOB. A one-second volatility has widely differing implications in such circumstances.

Selection of a small but meaningful dataset

Just under half of all activities in the order book are HFT

Average time span before a new LOB activity*

in seconds

LOB activity	HFT	NHFT
New order	0.0143	0.0436
Modification	0.0132	0.0256
Deletion	0.0118	0.0189

* Times between a change in the bid-ask price or in the contract quantities offered or in demand at this price and a new LOB activity.

Deutsche Bundesbank

“activity clusters” in the sub-second range. In order to take account of this characteristic, all calculations of parameters, such as volatility or returns, are calculated at the level of the individual ticks in the order book on the basis of an “event to event” procedure.³⁷

The response times to changes in the LOB differ significantly between HFT and NHFT traders. After a change in the bid-ask price or in the contract quantities offered or in demand at these prices, HFT participants respond significantly more quickly than NHFT traders, irrespective of whether the activity initiated next in the LOB is a new order, a modification or a deletion.

Major differences are likewise apparent in terms of the amount of time a limit order that is not executed immediately spends in the LOB until it is executed. The median time until half of all HFT orders are executed amounts to 1.15 seconds. For NHFT, the median lies at 6.02 seconds.³⁸

HFT liquidity near to the best bid-ask price

The assertion that passive HFT traders make an essential contribution to market liquidity is a

key argument of the proponents of HFT. Owing to their presence, so the reasoning goes, other market players can trust in their orders being executed almost permanently at fair prices and within a short period of time. This argument thus implies that HFT in the vicinity of the respective best bid-ask price (eg up to 3 ticks from the current DAX future price) provides significant liquidity so that even a fairly large order of an NHFT trader can be executed without an overly large adverse price movement for the trader.³⁹ Furthermore, this adequate liquidity should be largely permanently present. With the LOB analysis, this assumption, in addition to the results from studying the Bund future data, is to be examined directly using a further method.

Its proponents see HFT as a major guarantor of liquid trading

To this end, it is calculated how many DAX contracts in the LOB are being offered or are in demand at the individual prices at each point in time by both HFT and NHFT traders. Additionally, a focused analysis of liquidity provision is conducted near to the best bid-ask prices in

Time until an HFT order is executed very much shorter than in the case of NHFT

³⁷ With regard to the sampling frequency of major parameters, such as returns or volatility, a distinction can be made between two basic procedures. In the case of the former, use is made of calculation periods that are spread evenly over time, where there is, for example, always one second between consecutive sampling points. These produce time series with a one-second time scale. This procedure is chosen here mainly in the Bund future analyses. In the case of calculation periods based on the actual arrival times of orders in the LOB, the time series are based on an “event to event” sampling. The time intervals between the individual observation points are mostly variable and are produced by the (stochastic) arrival patterns of orders in the LOB. Sampling of this kind is often more suitable for taking account of the discrete granularity of the market in the sub-second range. In a variant of this procedure, parameter measurements are always carried out at the time of actual transactions. This is referred to as a time series sampled “trade to trade”. Both variants are applied in the LOB analysis of the DAX future data.

³⁸ The averages are 61 seconds for HFT and 369 seconds for NHFT. The major difference between the average and the median is that the distribution of the execution times follows an exponential function. In this case, the median is therefore to be seen as the more meaningful figure.

³⁹ The minimum tick size is 1 tick, ie the smallest unit at which the asset is priced on the trading platform. In the case of the DAX future, 1 tick amounts to 0.5 DAX point. In other words, if, say, the best bid-ask price is currently 9876.5 points as in the chart on p 51, the 3-tick group for HFT traders on the sell side comprises all contracts offered by them between 9876.5 and 9877.5 points (seven contracts in the example).

Average HFT liquidity provision in the LOB

Item	Total LOB HFT	20 ticks HFT	10 ticks HFT	5 ticks HFT	3 ticks HFT
	%				
2 August 2013	55.9	35.4	32.9	42.2	47.6
6 September 2013	70.2	38.9	37.0	44.4	49.0
3 June 2014	57.6	35.7	34.4	40.9	42.8
10 June 2014	52.5	34.5	35.6	40.8	44.0
Average	59.0	36.1	34.9	42.1	45.8
	in € million				
Average HFT share	603.3	46.9	22.2	11.6	6.7

Deutsche Bundesbank

each case, ie where price discovery and trading activity effectively take place. Besides the absolute number of contracts, we thus also study how the liquidity of the two types of traders in the LOB is distributed with increasing distance from the bid-ask price. To do this, the aggregated contract volumes of the orders standing in the LOB within 3, 5, 10 and 20 ticks from the best bid-ask price are determined in each case for the buy and sell sides and the percentage due to HFT is calculated. This percentage represents the HFT liquidity in these LOB buckets and allows a more precise picture of the average provision of liquidity over the course of the day. Building on this, the temporal dynamics of the liquidity provision are analysed.⁴⁰

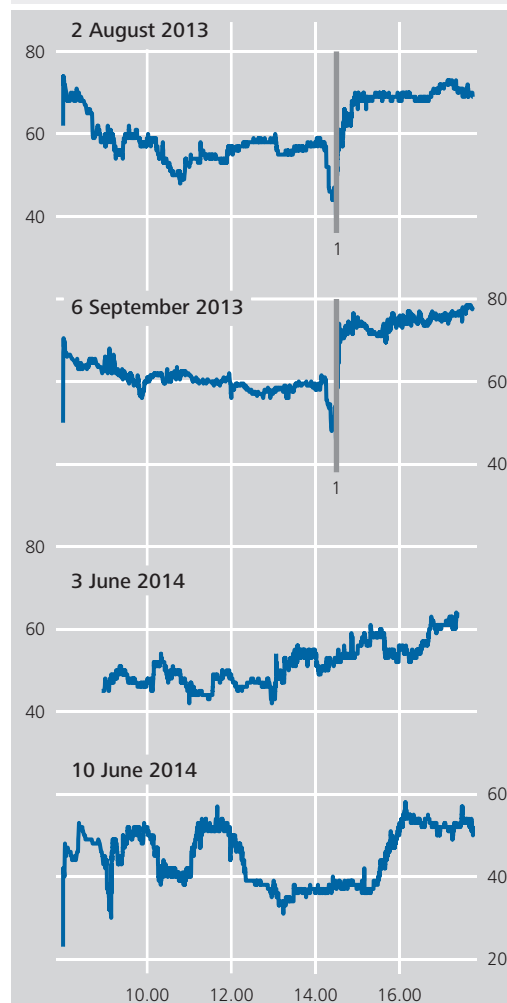
HFT provides liquidity in all areas of the order book ...

The LOB analysis confirms that HFT contributes a significant percentage of the liquidity provided. The HFT-induced liquidity is distributed broadly over the entire LOB and is by no means concentrated only on the area in the immediate vicinity of the best bid-ask price (see the adjacent chart).

With regard to the distribution of HFT liquidity, it becomes clear from the table above that the

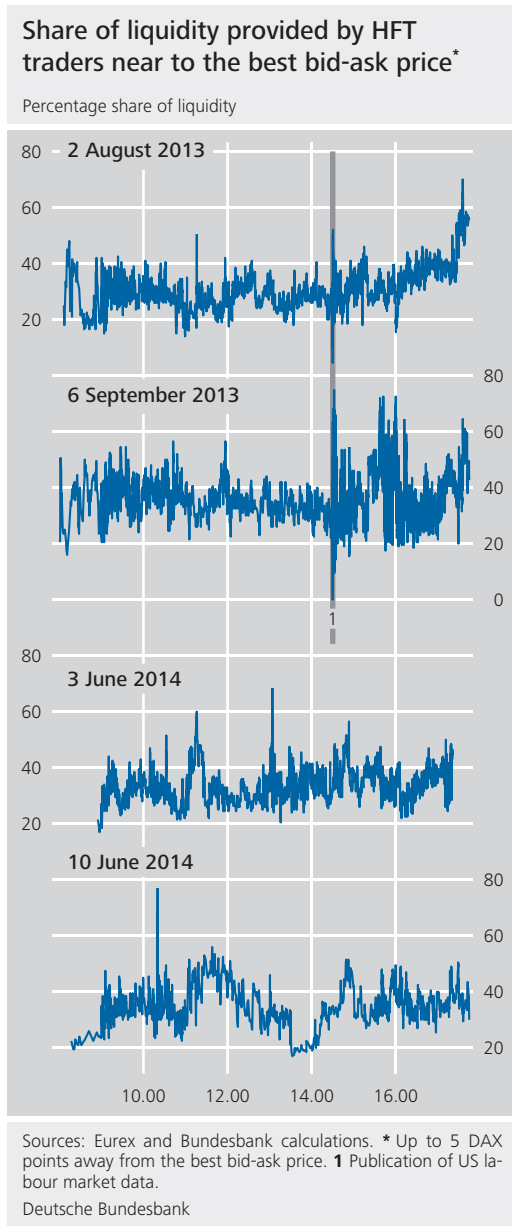
Share of HFT liquidity provided in the DAX future order book

Percentage share of liquidity



Sources: Eurex and Bundesbank calculations. 1 Publication of US labour market data.
 Deutsche Bundesbank

⁴⁰ The trading days selected for this more in-depth analysis are 2 August 2013, 6 September 2013, 3 and 10 June 2014.



... but does not do so everywhere to the same extent ...

HFT percentage in the immediate vicinity of the best bid-ask price (3 and 5 ticks) is quite high at around 45% and then decreases markedly in medium distance (10 to 20 ticks) to the best bid-ask price. In this medium range of the LOB, the contribution of HFT, for instance, at 10 ticks (=5 DAX points) distance is significantly lower at no more than just under 35% (see the chart above). Further away from the best bid-ask price, the HFT liquidity then increases quite sharply, making the average figure for the LOB as a whole rise to almost 60%.

The existence of high HFT liquidity far away from the best bid-ask price appears surprising

at first sight, as limit orders placed in this range stay for a considerably longer period of time until they are executed and the HFT advantages of speed do not come directly into play in the case of these orders. It would therefore be expected that HFT orders play a particularly active role, above all, in the immediate vicinity of the best bid-ask price.

One explanation might be that the HFT liquidity far from the best bid-ask price consists of orders by HFT traders that pursue passive strategies which are not, however, based on any market-making concept.⁴¹ The further rise in the HFT percentage in the vicinity of the best bid-ask price is, by contrast, consistent with the expected behaviour of HFT and can be explained by market-making strategies.

The assertion that HFT provides other market players almost permanently with important liquidity close to the best bid-ask price can therefore largely be confirmed. In normal times, HFT therefore supports liquidity.

The timing of liquidity provision by HFT traders proves to be quite stable for much of the times on the days under consideration. As was already becoming apparent in the study of the Bund future data, the liquidity situation also changes quite clearly for a time in the LOB analysis of the DAX future, however, if there is a strong, anticipated market event such as the NFP announcement (see the chart on page 59). It is true that a reduction in liquidity can also be noted in the case of NHFT traders, but its scale is not as great as in the case of HFT.

... and also not always only as the market maker

HFT market makers confirmed as major providers of liquidity

HFT liquidity is not granted all the time, however ...

⁴¹ Orders entered early take a privileged place in the sequence of priority at this limit price. This means that the investors secure themselves a "good seat" in the LOB at this price. If the best bid-ask price should then move near to the entered order at a subsequent point in time, HFT traders can use their speed advantage in analysing the market situation and the execution of orders in order to wait until the last moment to decide whether they want to maintain (and perhaps execute) the order or whether they simply wish to delete it shortly beforehand. Such behaviour might also explain part of the high number of deletions of HFT orders.

Unusual activity patterns among HFT participants

In the debate surrounding high-frequency trading (HFT) participants, one concern that has repeatedly been raised is that a number of HFT participants might be taking advantage of their superior speed to run trading strategies that are unfair on other market participants and that might not constitute market-compliant behaviour.^{1,2} However, in the absence of robust empirical data, this discussion has so far largely been driven by what is believed to be anecdotal evidence. One such piece of evidence that is cited time and again is the high incidence of order cancellations. Eurex trading data can be used to explore whether order cancellations exhibit unusual activity patterns that might point to incorrectly programmed algorithms or to behaviour on the part of individual participants that is not market-compliant. The results indicate that cancellations do indeed exhibit some irregularities for which there is no straightforward explanation.

In the DAX Futures dataset covering 12 days, order cancellations accounted for a total of 5.7 million of the roughly 21.1 million order activities.³ This shows that no unusual behavioural patterns are immediately obvious for the vast majority of the cancellations. Only a small quantity (belonging to a previously unknown category) of cancellation activities are striking. Each of them is a rapid and repeated sequence made up of the entry and almost immediate cancellation of limited low-volume buy (or sell) orders at the current best bid (or ask) price.⁴ This pattern of entering and immediately cancelling orders in the limit order book (LOB) takes place as a rapid repetitive cycle, with most orders being cancelled in less than a millisecond, only to then be re-entered identically in the LOB almost as quickly.⁵ This cycle is then repeated up to several dozen times without any changes being made to order parameters such as the limit price or contract quantity. These

events will be referred to in the remainder of this box as “rapid order entry and cancellation cycles” (ROECCs) (see the chart on page 56).

In the DAX Futures sample, ROECC events that have three or more directly related cycles and a mean lifetime of their individual orders of 1 millisecond or less, are by no means a rare phenomenon, with 4,882 observations, and occur several hundred times a day in the DAX Futures market.⁶

Around 96.5% thereof – 4,711 in number – were generated by HFT participants.⁷ In

1 The HFT debate gained particular prominence when Michael Lewis’s book “Flash Boys” was published in 2013. It is worth noting here that the criticism which that book directs at HFT participants, even if it were true, would primarily only be applicable to the United States and the exchange system in operation there. Given that Germany’s capital market has a different exchange landscape altogether and a procedure of its own for transmitting orders, the systematic front running described so sensationally in “Flash Boys” would hardly be possible in Germany.

2 Market-compliant behaviour, for the purposes of this box, is any trading activity that conforms to the exchange rules and does not violate applicable statutory provisions, notably the EU’s Market Abuse Regulation (Regulation (EU) No 596/2014, or MAR) and Market Abuse Directive (2014/57/EU, or CRIMMAR).

3 A median of 1.22 seconds lapses between order entry and cancellation. The average is 123 seconds. Here, too, the exponential distribution is striking.

4 In around 94% of cases, the order size (just one contract) is the minimum order size in the DAX Futures market. For the span of its lifetime in the LOB, that order represents the current best bid or ask price.

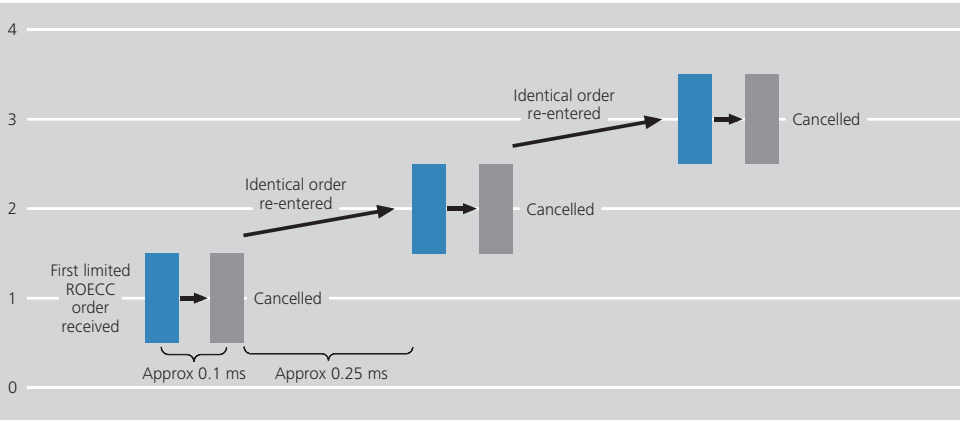
5 Fairly typical ROECC times are order lifetimes of 30 to 50 microseconds, say, followed by a break of approximately 280 microseconds until the order is re-entered. The fastest cancellations come after around 11 microseconds.

6 For the purposes of this analysis, the minimum number of cycles from which an event is counted as an ROECC was set at three. The subsequent analyses were repeated with values of five and eight, however, without producing any systematic changes in the results.

7 The mean number of cycles is 5.7 repetitions, and the most frequently observed ROECC event of a single HFT participant was made up of 91 cycles. In median terms, an ROECC order is cancelled after approximately 220 microseconds and re-entered roughly 4 milliseconds later. Thus, ROECC events rarely last longer than approximately 25 milliseconds, with many also taking place in the sub-millisecond range.

Example of rapid order entry and cancellation

Number of rapid order entry and cancellation cycles



Deutsche Bundesbank

almost all cases, there is no other activity in the LOB during this time. Likewise, order executions during the course of an ROECC event are very rare.

There is no straightforward explanation for the behaviour pattern revealed by these ROECC events. The HFT algorithms responsible for them, however, clearly respond to the bid-ask spread in the LOB. That makes sense if one assumes that an ROECC order is not designed to be executed in the first place (see the chart on page 57).⁸

A first possible explanation for the ROECC events identified here could be that algorithm coding errors or self-trading are to blame.⁹ Errors are a somewhat unlikely cause, however, given the evidence of a systematic response to changes in the bid-ask spread as well as the repeated incidence over a period of at least a year. Self-trading, on the other hand, is a plausible explanation that would be compatible with market-compliant behaviour since it does not constitute deliberate misconduct.

Another possible explanation is the “tracking hypothesis”, according to which liquidity providers cancel and replace their orders in quick succession in an effort to keep pace with rapidly changing LOB conditions

(“price chasing”). This explanation can be ruled out in the ROECC cases observed here because each subsequent order is absolutely identical with the previous ones. Furthermore, in every single case, the LOB did not change whatsoever between orders.

Yet another explanation, the “sounding-out hypothesis”, may be a market-compliant strategy, but the European Securities and Markets Authority (ESMA) has already identified it as an area of particular concern.¹⁰ According to this hypothesis, ROECC orders are a trading strategy in which a participant uses a buy (or sell) order to place the best bid (or ask) price in the LOB for a short period of time, the intention being to either have the order executed during this period with a latent but hidden market order on

⁸ The wider the current spread, the less likely it is that an order originating from the other side of the market will bridge the spread and be executed by the ROECC order. Therefore, the algorithm can set longer lifetimes for wider spreads.

⁹ Self-trading occurs when two almost identical algorithms in the market interact unintentionally, with each then responding to the other’s activity in a kind of positive feedback loop and revolving, in a sense, around the other.

¹⁰ See the section entitled “Ping orders” in ESMA 2012/122, p 21.

the selling (or buying) side¹¹ or to use the offer to draw the other side into entering an executable new order. The order is cancelled if neither of the intended events occurs within a very short space of time. The extremely quick cancellation of the ROECC order combined with the minimum response time in the Eurex system usually make it practically impossible for other market participants to deliberately respond to such orders, leaving the first variant as the only possible explanation.¹² Judging by the characteristics of ROECC events outlined in this box, this particular theory is an interesting possible explanation.¹³

Another conceivable explanation is known as “quote stuffing” and is not a permitted practice. Quote stuffing is the deliberate

11 If full execution is currently only possible at a very unfavourable price (in what is known as the “market order matching range”), many market models will briefly transform a market order into a kind of “waiting position”, ready to be executed at a later point in time when conditions have improved for the party placing the order. Such waiting market orders are hidden from other market participants and represent a kind of latent liquidity – though they can interact immediately with new incoming orders.

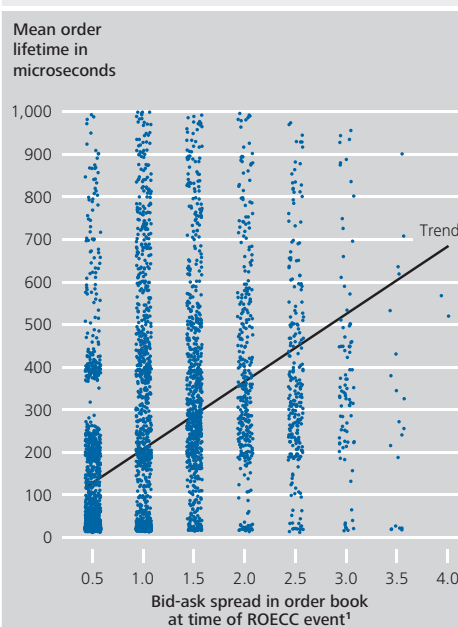
12 The minimum response time in the Eurex trading system was around 180 microseconds between 2013 and 2015. Thus, other market participants will briefly see this order but have no opportunity to act on it.

13 The academic literature likewise contains evidence supporting this explanation. See J Hasbrouck and G Saar (2007), Technology and liquidity provision: the blurring of traditional definitions, Working Paper, Stern School of Business.

14 The law as it stood until June 2016 defined quote stuffing as a market manipulation strategy (within the meaning of section 20a (1) sentence 1 number 2 of the German Securities Trading Act (WpHG) because such behaviour could be conducive to disrupting or delaying the proper functioning of exchange operators’ trading systems (section 3 (1) number 4a of the German Market Manipulation Definition Regulation (MaKonV)) or make it difficult for other market participants to identify the current buy and sell orders in the trading system (section 3 (1) number 4b of the MaKonV). See P Kasiske (2014), Marktmissbräuchliche Strategien im Hochfrequenzhandel, Zeitschrift für Wirtschafts- und Bankrecht, 68 (41), pp 1933-1939. From July 2016, section 20a of the Securities Trading Act and the Market Manipulation Definition Regulation were replaced by the EU Market Abuse Regulation without changing any aspects of the market conformity assessment.

15 This statement is based on information provided by Eurex representatives familiar with the IT architecture.

Relationship between ROECC order lifetime and bid-ask spread



Sources: Eurex and Bundesbank calculations. ¹ X-axis values dispersed slightly to aid visualisation. The genuine values are all 0.5; 1.0; 1.5 ... 4.0.
 Deutsche Bundesbank

entry and immediate cancellation of a large number of orders for a particular asset at a single trading venue.¹⁴ One objective can be to temporarily slow down the exchange’s trading system by generating a higher flow of orders. Perpetrators might then find it easier, say, to engage in profitable arbitrage because they could trade the asset affected by the marginal slowdown at a different trading venue at a more rewarding price. Given the low number of cycles in ROECC events (rarely more than a few dozen per second) and Eurex’s server capacities (many thousand per second), this explanation can be ruled out.¹⁵

Another objective is to disrupt and mislead other algorithmic market participants. From the perspective of other trading algorithms, a vigorous strategy of sending and immediately cancelling a large number of orders generates significant data flows which they need to process, tying up their IT capacities. In this scenario, an ROECC issuer might be

able to briefly slow down the algorithms of rival market participants and thus gain a decisive edge. The ROECC orders which supposedly suggest a misleading intention to buy or sell a given asset also have the effect of distorting the actual supply and demand situation, which again complicates matters for other market participants. This approach is likewise a possible explanation for ROECC events. One major drawback of this hypothesis, however, is that in a great many cases, an ROECC event is not actually immediately followed by a trade. Overall, it can be said that the observed cases cannot be attributed beyond a shadow of a doubt to quote stuffing behaviour, nor is it possible to identify any negative impact on market integrity.

A conclusive investigation into the intentions that lie behind ROECC events still needs to be conducted. What the analysis does illustrate, though, is that interesting

phenomena occur in the space of extremely short timeframes during trading that are not perceptible to a human trader's eye, about which much still remains unknown. This shows, then, that research based on trading data in the sub-second range can make an important contribution to the understanding of today's markets.

... but is sensitive to foreseeable volatility events

The withdrawal of the passive HFT traders observed in the run-up to the release of the US labour market data can be interpreted in terms of their liquidity-enhancing strategies having a marked opportunistic character and reacting very sensitively to anticipated volatility events. For the days under consideration here, the hypothesis that passive HFT traders make a continuing significant contribution to liquidity provision even if there is strong expected volatility cannot be confirmed, at least for the period around the publication of the US labour market data.⁴² At the time of the announcement at 14.30, the small amount of remaining liquidity is provided almost exclusively by NHFT traders. It should nevertheless also be noted that these are rare and only short-term withdrawals which appear to represent more of an exception than a rule.

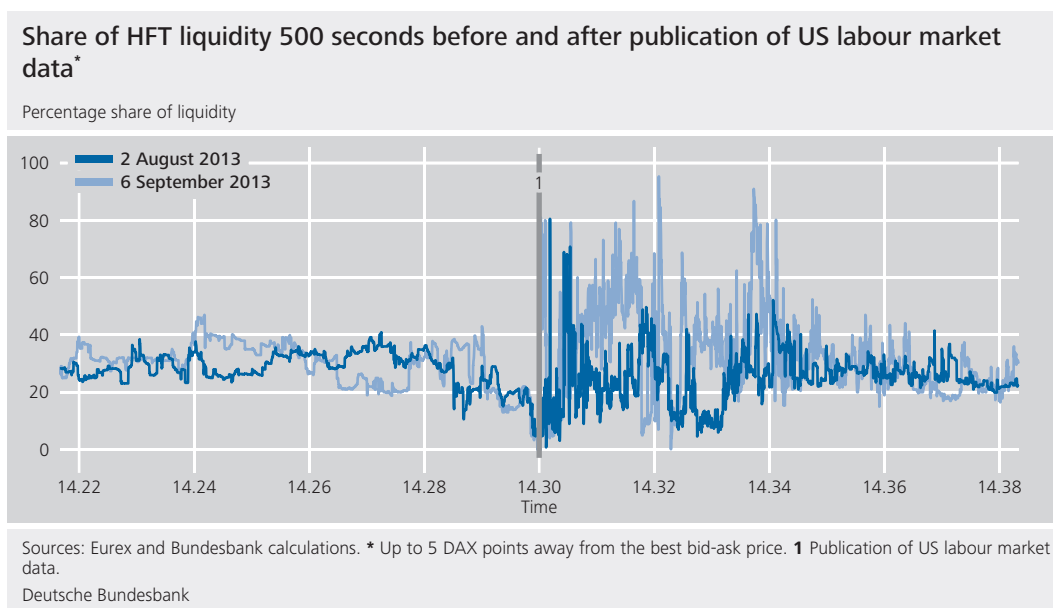
■ Summary and outlook

Based on a new and granular database, the importance of HFT for market stability and integrity in trading in DAX and Bund futures is highlighted. These are the two most liquid German investment instruments in which HFT accounts for a significant share of trading activity.

The results suggest that HFT traders participate more strongly in trading as active market players in the Bund future especially in times of higher volatility. This applies both in periods of unexpectedly occurring volatility and in the run-up to expected price fluctuations. Especially following the announcement of important news, HFT traders can exploit their speed advantage; in doing so, they improve price discovery on very small time scales, although they

While active HFT traders have a stronger presence in periods of market volatility ...

⁴² This stands in contrast to numerous traditional market makers, as binding rules on many trading platforms oblige them to provide liquidity in the order book even in adverse market conditions.



also contribute to an above-average extent to short-term (excess) volatility.

vary widely depending on the market segment and the share of HFT.

... passive HFT traders reduce their supply of liquidity

At the same time, the results point to passive HFT participants often withdrawing in periods of market volatility and reducing their supply of liquidity. Taken together, the differing behaviours of active and passive HFT traders suggest a heightened risk of episodes of excessive short-term volatility which could provoke market turmoil, including flash events.

Future studies by central banks, regulatory authorities and academic institutions might benefit from easier access to similarly granular data.⁴³ Enhanced transparency would also make it significantly easier to analyse new variants of intermediation in the capital markets in a timely and accurate manner. Understanding of how modern electronic trading works could be substantially improved in this way.

Greater data transparency is essential for further studies

Analysis of the order book reveals the importance and temporal dynamics of HFT liquidity

Reconstructing the DAX future order book reveals the important role played by passive HFT traders in a good provision of liquidity that is stable over time. However, the results for the DAX future also confirm the findings for the Bund future that the liquidity supplied by HFT decreases significantly in times when important news is announced. A further finding is the existence of a rare, but noticeable pattern of behaviour in deletions of orders on very small time scales. Although it is not possible to pinpoint the cause of this anomaly, the phenomenon does illustrate the part that an in-depth study of highly granular trading data can play in helping regulators gain a better understanding of the market. Taking an overall view, it should be borne in mind that the obtained results relate solely to the futures markets for the DAX and Bunds under study here and can

The empirical results also underline possible points of approach in the regulatory debate about HFT. First, they demonstrate how important it is to implement incentive mechanisms so that passive HFT market makers maintain the provision of liquidity even in periods of heightened stress in the market.⁴⁴

Results can assist debate on HFT regulation

Rare and unusual patterns of activity on very small time scales

⁴³ One example of future possibilities for analysis would be the use of the trader ID of individual transactions. A trader ID is an algorithm, contained in the dataset of every single order, which identifies the market participant placing the order. This makes it possible to answer the question of who has placed an order.

⁴⁴ Article 17 (3) of the EU directive on markets in financial instruments (MiFID II) stipulates that an investment firm that engages in algorithmic trading (not just HFT traders) to pursue a market making strategy shall carry out this market making continuously during a specified proportion of the trading venue's trading hours, except under exceptional circumstances.

Second, the results suggest that active HFT traders, owing to their speed advantages in responding to the publication of important news, contribute to an excessive temporary volatility rather than to an informative one. This might permanently discourage slower market participants from providing adequate liquidity in such periods. Various instruments to counteract this problem are under discussion. These include a switch from continuous, steady trading to a discrete sequence of auctions (frequent batch auctions) and the introduction of a minimum time lag in the execution time of the orders of all market participants.^{45,46} Both measures have in common that the resulting delay can restrict all the market players in their ability to respond by fractions of a second. Slower passive liquidity-providing participants would thus have a better chance of adjusting

their orders to current market conditions.⁴⁷ This would partly offset the competitive disadvantages of slower market participants, about which there is much criticism in the public debate, without perceptibly impairing technological progress on the trading platforms. Not least, it would reduce the incentives for what is – in terms of the economic benefit – a dubious technological “arms race” on the trading platforms.

⁴⁵ In a batch auction, a large number of incoming trading orders are combined and executed together at brief intervals in the form of an auction. This can reduce the speed advantage of HFT traders. See E Budish, P Cramton und J Shim (2015), The high-frequency trading arms race: frequent batch auctions as a market design response, *Quarterly Journal of Economics*, 130(4).

⁴⁶ Since spring 2016, the electronic trading platform IEX Group has been delaying trading in shares on Wall Street by 350 microseconds.

⁴⁷ See T Foucault (2016), *op cit.*

Statistical Section

■ Contents

■ I Key economic data for the euro area

1 Monetary developments and interest rates	5*
2 External transactions and positions	5*
3 General economic indicators	6*

■ II Overall monetary survey in the euro area

1 The money stock and its counterparts	8*
2 Consolidated balance sheet of monetary financial institutions (MFIs)	10*
3 Banking system's liquidity position	14*

■ III Consolidated financial statement of the Eurosystem

1 Assets	16*
2 Liabilities	18*

■ IV Banks

1 Assets and liabilities of monetary financial institutions (excluding the Bundesbank) in Germany	20*
2 Principal assets and liabilities of banks (MFIs) in Germany, by category of banks	24*
3 Assets and liabilities of banks (MFIs) in Germany vis-à-vis residents	26*
4 Assets and liabilities of banks (MFIs) in Germany vis-à-vis non-residents	28*
5 Lending by banks (MFIs) in Germany to domestic non-banks (non-MFIs)	30*
6 Lending by banks (MFIs) in Germany to domestic enterprises and households, housing loans, sectors of economic activity	32*
7 Deposits of domestic non-banks (non-MFIs) at banks (MFIs) in Germany	34*
8 Deposits of domestic households and non-profit institutions at banks (MFIs) in Germany	36*
9 Deposits of domestic government at banks (MFIs) in Germany, by creditor group	36*
10 Savings deposits and bank savings bonds of banks (MFIs) in Germany sold to non-banks (non-MFIs)	38*
11 Debt securities and money market paper outstanding of banks (MFIs) in Germany	38*
12 Building and loan associations (MFIs) in Germany	39*
13 Assets and liabilities of the foreign branches and foreign subsidiaries of German banks (MFIs)	40*

■ V Minimum reserves

1 Reserve maintenance in the euro area	42•
2 Reserve maintenance in Germany.....	42•

■ VI Interest rates

1 ECB interest rates	43•
2 Base rates.....	43•
3 Eurosystem monetary policy operations allotted through tenders	43•
4 Money market rates, by month	43•
5 Interest rates and volumes for outstanding amounts and new business of German banks (MFIs).....	44•

■ VII Insurance corporations and pension funds

1 Assets.....	48•
2 Liabilities	49•

■ VIII Capital market

1 Sales and purchases of debt securities and shares in Germany.....	50•
2 Sales of debt securities issued by residents	51•
3 Amounts outstanding of debt securities issued by residents.....	52•
4 Shares in circulation issued by residents.....	52•
5 Yields and indices on German securities	53•
6 Sales and purchases of mutual fund shares in Germany.....	53•

■ IX Financial accounts

1 Acquisition of financial assets and external financing of non-financial corporations	54•
2 Financial assets and liabilities of non-financial corporations	55•
3 Acquisition of financial assets and external financing of households.....	56•
4 Financial assets and liabilities of households	57•

■ X Public finances in Germany

1 General government: deficit and debt level as defined in the Maastricht Treaty	58•
2 General government: revenue, expenditure and fiscal deficit/surplus as shown in the national accounts.....	58•
3 General government: budgetary development (as per government's financial statistics)	59•
4 Central, state and local government: budgetary development	59•

5	Central, state and local government: tax revenue	60*
6	Central and state government and European Union: tax revenue, by type	60*
7	Central, state and local government: individual taxes	61*
8	German pension insurance scheme: budgetary development and assets.....	61*
9	Federal Employment Agency: budgetary development.....	62*
10	Statutory health insurance scheme: budgetary development	62*
11	Statutory long-term care insurance scheme: budgetary development	63*
12	Central government: borrowing in the market.....	63*
13	General government: debt by creditor.....	63*
14	Central, state and local government: debt by category.....	64*

■ XI Economic conditions in Germany

1	Origin and use of domestic product, distribution of national income.....	65*
2	Output in the production sector	66*
3	Orders received by industry	67*
4	Orders received by construction	68*
5	Retail trade turnover, sales of motor vehicles.....	68*
6	Labour market.....	69*
7	Prices	70*
8	Households' income.....	71*
9	Negotiated pay rates (overall economy).....	71*
10	Assets, equity and liabilities of listed non-financial groups	72*
11	Revenues and operating income of listed non-financial groups.....	73*

■ XII External sector

1	Major items of the balance of payments of the euro area	74*
2	Major items of the balance of payments of the Federal Republic of Germany.....	75*
3	Foreign trade (special trade) of the Federal Republic of Germany, by country and group of countries.....	76*
4	Services and Primary income of the Federal Republic of Germany	77*
5	Secondary income of the Federal Republic of Germany.....	77*
6	Capital account of the Federal Republic of Germany	77*
7	Financial account of the Federal Republic of Germany.....	78*
8	External position of the Bundesbank since the beginning of the European monetary union	79*
9	Assets and liabilities of enterprises in Germany (other than banks) vis-à-vis non-residents	80*
10	ECB's euro foreign exchange reference rates of selected currencies.....	81*
11	Euro-area member states and irrevocable euro conversion rates in the third stage of European Economic and Monetary Union	81*
12	Effective exchange rates of the euro and indicators of the German economy's price competitiveness.....	82*

I Key economic data for the euro area

1 Monetary developments and interest rates

Period	Money stock in various definitions 1,2					Determinants of the money stock 1			Interest rates		
	M1	M2	M 3 3		3-month moving average (centred)	MFI lending, total	MFI lending to enterprises and households	Monetary capital formation 4	Eonia 5,7	3-month Euribor 6,7	Yield on European government bonds outstanding 8
			M 3	M 3							
	Annual percentage change								% Annual percentage as a monthly average		
2014 Dec	8.1	3.8	3.8	3.8	3.5	- 0.1	- 0.7	- 2.1	- 0.03	0.08	1.3
2015 Jan	8.6	3.8	3.6	3.6	3.8	0.1	- 0.6	- 2.1	- 0.05	0.06	1.1
Feb	8.8	3.9	3.9	4.0	4.0	0.2	- 0.3	- 2.2	- 0.04	0.05	1.0
Mar	9.7	4.4	4.4	4.4	4.5	0.6	- 0.0	- 2.6	- 0.05	0.03	0.8
Apr	10.2	4.7	5.1	5.1	4.8	0.9	0.2	- 2.9	- 0.07	0.00	0.8
May	11.0	4.8	4.8	4.8	4.9	1.3	0.5	- 2.9	- 0.11	- 0.01	1.3
June	11.4	5.0	4.7	4.8	4.8	1.3	0.2	- 3.0	- 0.12	- 0.01	1.6
July	11.8	5.2	5.0	4.8	4.8	1.8	0.8	- 3.0	- 0.12	- 0.02	1.5
Aug	11.2	4.9	4.7	4.8	4.8	2.2	1.0	- 3.1	- 0.12	- 0.03	1.3
Sep	11.3	5.0	4.7	4.8	4.8	2.1	0.7	- 3.3	- 0.14	- 0.04	1.3
Oct	11.2	5.1	5.0	4.8	4.8	2.2	0.9	- 3.4	- 0.14	- 0.05	1.1
Nov	10.7	5.0	4.8	4.8	4.8	2.6	1.1	- 3.3	- 0.13	- 0.09	1.1
Dec	10.4	5.0	4.5	4.8	4.8	2.2	0.6	- 3.0	- 0.20	- 0.13	1.2
2016 Jan	10.5	5.5	5.1	4.8	4.8	2.7	1.0	- 3.3	- 0.24	- 0.15	1.1
Feb	10.2	5.4	5.0	5.0	5.0	3.1	1.2	- 3.4	- 0.24	- 0.18	1.0
Mar	10.2	5.5	5.1	4.9	4.9	3.0	1.0	- 3.3	- 0.29	- 0.23	0.9
Apr	9.7	5.1	4.6	4.9	4.9	3.2	1.2	- 2.7	- 0.34	- 0.25	0.9
May	9.1	5.1	4.9	4.9	4.9	3.5	1.3	- 2.5	- 0.34	- 0.26	0.8
June	8.7	4.9	4.9	4.9	4.9	3.8	1.5	- 2.3	- 0.33	- 0.27	0.7
July	8.4	4.9	4.9	5.0	3.7	3.7	1.2	- 2.6	- 0.33	- 0.29	0.6
Aug	8.9	5.2	5.1	...	3.7	3.7	1.5	- 2.5	- 0.34	- 0.30	0.5
Sep	...	...	...	...	...	...	...	...	- 0.34	- 0.30	0.6

1 Source: ECB. 2 Seasonally adjusted. 3 Excluding money market fund shares/units, money market paper and debt securities with a maturity of up to two years held by non-euro-area residents. 4 Longer-term liabilities to euro-area non-MFIs. 5 Euro

OverNight Index Average. 6 Euro Interbank Offered Rate. 7 See also footnotes to Table VI.4, p 43* 8 GDP-weighted yield on ten-year government bonds. Countries include: DE,FR,NL,BE,AT,FI,IE,PT,ES,IT,GR,SK.

2 External transactions and positions *

Period	Selected items of the euro-area balance of payments r								Euro exchange rates 1		
	Current account		Financial account						Dollar rate	Effective exchange rate 3	
	Balance	of which Goods	Balance	Direct investment	Portfolio investment	Financial derivatives 2	Other investment	Reserve assets		Nominal	Real
	€ million								1 EUR = ... USD	Q1 1999 = 100	
2014 Dec	+ 42,143	+ 26,439	+ 11,513	+ 5,079	+ 41,502	+ 996	- 37,093	+ 1,029	1.2331	99.0	94.8
2015 Jan	+ 6,312	+ 15,779	- 35,862	+ 62,079	- 100,890	+ 3,918	- 2,117	+ 1,147	1.1621	95.2	91.1
Feb	+ 15,953	+ 29,031	- 41,506	+ 26,759	- 62,196	+ 12,693	- 23,017	+ 4,256	1.1350	93.3	89.5
Mar	+ 32,952	+ 29,793	+ 41,165	+ 102,685	- 70,593	+ 10,641	- 1,859	+ 291	1.0838	90.6	86.9
Apr	+ 25,504	+ 30,326	- 15,307	+ 15,902	+ 24,491	+ 4,522	- 56,427	- 3,795	1.0779	89.7	86.1
May	+ 6,356	+ 26,749	+ 55,395	+ 5,738	+ 40,733	+ 4,805	+ 5,793	- 1,674	1.1150	91.6	87.8
June	+ 36,074	+ 34,828	+ 44,085	- 5,032	+ 33,162	- 5,590	+ 18,451	+ 3,093	1.1213	92.3	88.5
July	+ 39,923	+ 39,922	+ 31,648	+ 6,420	+ 75,850	+ 10,930	- 54,553	- 7,000	1.0996	91.3	87.5
Aug	+ 20,771	+ 19,646	+ 13,981	+ 10,125	+ 22,492	- 6,890	- 13,135	+ 1,390	1.1139	93.0	88.9
Sep	+ 35,448	+ 30,446	+ 49,286	- 326	+ 22,583	- 4,878	+ 23,625	+ 8,282	1.1221	93.8	89.6
Oct	+ 30,875	+ 33,678	+ 113,088	+ 38,822	+ 38,106	+ 12,456	+ 29,713	- 6,009	1.1235	93.6	89.6
Nov	+ 31,600	+ 32,741	- 34,466	- 73,196	+ 18,036	+ 21,414	- 3,182	+ 2,462	1.0736	91.1	87.1
Dec	+ 41,889	+ 31,781	+ 78,332	+ 55,550	+ 67,201	+ 21,746	- 74,291	+ 8,126	1.0877	92.5	88.3
2016 Jan	+ 8,817	+ 13,775	- 14,829	- 19,034	+ 71,947	+ 15,130	- 81,717	- 1,155	1.0860	93.6	89.1
Feb	+ 14,689	+ 27,479	- 17,213	+ 42,830	+ 22,276	+ 13,163	- 96,543	+ 1,061	1.1093	94.7	90.0
Mar	+ 36,813	+ 39,212	+ 36,743	+ 16,858	- 1,393	- 961	+ 21,176	+ 1,064	1.1100	94.1	89.5
Apr	+ 34,502	+ 35,204	+ 21,069	- 17,661	+ 120,189	- 21,423	- 58,417	- 1,618	1.1339	94.8	90.1
May	+ 17,207	+ 32,803	+ 10,921	+ 12,367	+ 4,817	- 13,991	+ 4,619	+ 3,109	1.1311	95.1	90.5
June	+ 36,138	+ 39,431	+ 60,044	- 20,174	+ 49,230	- 12,366	+ 42,658	+ 695	1.1229	94.7	90.2
July	+ 31,469	+ 31,896	- 771	+ 19,310	+ 52,799	+ 6,116	- 78,117	- 877	1.1069	94.9	p 90.4
Aug	...	...	...	...	...	...	...	...	1.1212	95.2	p 90.6
Sep	...	...	...	...	...	...	...	...	1.1212	95.4	p 90.7

* Source: ECB, according to the international standards of the Balance of Payments Manual in the 6th edition of the International Monetary Fund. 1 See also Tables

XII.10 and 12, pp 81-82* 2 Including employee stock options. 3 Vis-à-vis the currencies of The-EER-19 group.

I Key economic data for the euro area

3 General economic indicators

Period	Euro area	Belgium	Germany	Estonia	Finland	France	Greece	Ireland	Italy	Latvia
Real gross domestic product ^{1,2}										
2013	- 0.3	0.0	0.5	1.4	- 0.8	0.6	- 3.2	1.1	- 1.7	2.9
2014	1.1	1.3	1.6	2.8	- 0.7	0.6	0.4	8.5	0.1	2.1
2015	2.0	1.4	1.7	1.4	0.2	1.3	- 0.2	26.3	0.7	2.7
2015 Q1	1.8	1.1	1.3	1.2	- 0.5	1.4	0.3	28.1	0.4	1.8
Q2	2.0	1.5	1.8	1.9	0.6	1.2	1.3	24.3	0.9	2.8
Q3	2.0	1.3	1.8	1.9	- 0.1	1.1	- 1.7	24.4	0.6	3.5
Q4	2.0	1.6	2.1	0.8	0.7	1.4	- 0.7	28.4	1.0	2.7
2016 Q1	1.7	1.4	1.5	1.5	0.8	1.5	- 0.9	3.9	0.8	2.1
Q2	1.6	1.4	3.1	0.8	1.1	1.9	- 0.4	4.1	1.0	2.0
Industrial production ^{1,3}										
2013	- 0.7	1.0	0.2	4.2	- 3.2	- 0.6	- 3.2	- 2.2	- 3.1	- 0.7
2014	0.9	0.9	1.3	4.3	- 1.9	- 0.8	- 2.0	20.9	- 0.7	- 0.9
2015	2.0	- 0.1	0.8	- 2.4	- 1.0	1.5	1.0	36.9	1.1	3.6
2015 Q1	2.0	0.0	0.6	1.9	- 3.4	1.3	2.9	47.0	0.0	1.6
Q2	1.9	- 1.6	1.6	- 1.7	- 1.1	1.7	- 2.7	26.8	1.1	5.7
Q3	2.5	0.1	1.6	- 4.0	- 0.1	1.0	1.5	38.5	2.1	3.8
Q4	1.8	1.3	- 0.3	- 5.5	0.0	2.0	2.6	36.6	1.3	3.0
2016 Q1	1.3	4.6	1.3	- 2.4	- 0.6	0.7	- 1.0	- 0.2	1.7	3.7
Q2	1.0	3.5	0.6	- 1.8	2.4	0.4	5.0	0.7	0.0	4.4
Capacity utilisation in industry ⁴										
2013	78.4	76.6	82.1	71.3	78.4	80.9	65.0	-	71.6	72.0
2014	80.4	79.3	83.9	73.0	79.0	81.9	67.7	-	73.7	72.2
2015	81.3	79.7	84.5	71.4	79.2	82.7	66.2	-	75.5	71.5
2015 Q2	81.2	79.8	84.4	70.7	79.1	82.7	67.7	-	76.1	72.2
Q3	81.2	80.0	84.0	72.7	79.0	82.9	63.5	-	75.5	71.4
Q4	81.6	79.2	84.6	71.0	80.1	83.4	64.2	-	75.9	71.0
2016 Q1	81.9	80.0	85.0	72.5	79.5	82.6	65.5	-	77.1	72.3
Q2	81.5	79.3	84.6	73.8	78.0	82.8	67.8	-	76.5	73.0
Q3	81.6	79.7	84.8	73.0	73.8	83.7	67.8	-	76.0	71.8
Standardised unemployment rate ⁵										
2013	12.0	8.4	5.2	8.6	8.2	10.3	27.5	13.1	12.1	11.9
2014	11.6	8.5	5.0	7.4	8.7	10.3	26.5	11.3	12.7	10.8
2015	10.9	8.5	4.6	6.2	9.4	10.4	24.9	9.4	11.9	9.9
2016 Apr	10.1	8.2	4.2	6.5	9.0	9.9	23.5	8.3	11.5	9.5
May	10.1	8.2	4.3	6.5	9.0	9.9	23.6	8.3	11.4	9.5
June	10.1	8.3	4.2	6.9	8.9	10.1	23.4	8.4	11.5	9.6
July	10.1	8.3	4.3	6.8	8.9	10.3	23.2	8.3	11.4	9.5
Aug	10.1	8.2	4.2	...	...	8.8	10.5	...	8.2	11.4
Sep	...	...	...	...	...	...	...	7.9	...	...
Harmonised Index of Consumer Prices ¹										
2013	1.4	1.2	1.6	3.2	2.2	1.0	- 0.9	0.5	1.2	0.0
2014	6 0.4	0.5	0.8	0.5	1.2	0.6	- 1.4	0.3	0.2	0.7
2015	7 0.0	0.6	0.1	0.1	- 0.2	0.1	- 1.1	0.0	0.1	0.2
2016 Apr	- 0.2	1.5	- 0.3	0.0	0.3	- 0.1	- 0.4	- 0.2	- 0.4	- 0.7
May	- 0.1	1.6	0.0	0.0	0.3	0.1	- 0.2	- 0.2	- 0.3	- 0.8
June	0.1	1.8	0.2	0.4	0.3	0.3	0.2	0.1	- 0.2	- 0.6
July	0.2	2.0	0.4	0.8	0.5	0.4	0.2	0.1	- 0.2	0.1
Aug	0.2	2.0	0.3	1.1	0.5	0.4	0.4	- 0.4	- 0.1	- 0.1
Sep	0.4	1.8	0.5	1.7	0.5	0.5	- 0.1	- 0.3	0.1	0.5
General government financial balance ⁸										
2013	- 3.0	- 3.0	- 0.2	- 0.2	- 2.6	- 4.0	- 13.0	- 5.7	- 2.9	- 0.9
2014	- 2.6	- 3.1	0.3	0.8	- 3.2	- 4.0	- 3.6	- 3.8	- 3.0	- 1.6
2015	- 2.1	- 2.6	0.7	0.4	- 2.7	- 3.5	- 7.2	- 2.3	- 2.6	- 1.3
General government debt ⁸										
2013	91.1	105.2	77.5	9.9	55.5	92.4	177.7	120.0	129.0	39.1
2014	92.0	106.5	74.9	10.4	59.3	95.4	180.1	107.5	132.5	40.8
2015	90.7	106.0	71.2	9.7	63.1	95.8	176.9	93.8	132.7	36.4

Sources: National data, European Commission, Eurostat, European Central Bank. Latest data are partly based on press reports and are provisional. **1** Annual percentage change. **2** GDP of the euro-area aggregate calculated from seasonally adjusted data. **3** Manufacturing, mining and energy; adjusted for working-day varia-

tions. **4** Manufacturing, in %; seasonally adjusted; data are collected in January, April, July and October. **5** As a percentage of the civilian labour force; seasonally adjusted. Standardised unemployment rate of Germany: calculation based on unadjusted data from the Federal Statistical Office.

I Key economic data for the euro area

Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovakia	Slovenia	Spain	Cyprus	Period
Real gross domestic product ^{1,2}										
3.5	4.3	4.5	- 0.2	0.1	- 1.1	1.4	- 1.1	- 1.7	- 5.9	2013
3.5	4.1	3.5	1.4	0.6	0.9	2.5	3.1	1.4	- 2.5	2014
1.8	4.8	6.1	2.0	1.0	1.6	3.6	2.3	3.2	1.6	2015
1.6	4.5	6.1	2.6	0.8	1.7	2.9	2.5	2.7	0.1	2015 Q1
1.6	4.8	6.3	1.9	0.5	1.5	3.4	2.0	3.3	1.4	Q2
1.8	1.7	6.0	2.0	1.4	1.7	3.7	2.0	3.5	2.3	Q3
2.1	3.2	6.3	1.4	1.1	1.6	4.3	2.8	3.3	2.4	Q4
2.4	3.1	5.3	1.5	1.6	1.0	3.5	2.3	3.5	2.6	2016 Q1
1.9	4.3	3.0	2.3	1.2	1.1	3.7	2.7	3.4	2.9	Q2
Industrial production ^{1,3}										
3.2	- 3.1	- 5.3	0.5	0.8	0.5	3.9	- 1.4	- 1.7	- 13.5	2013
0.3	4.4	- 5.7	- 2.9	0.9	1.8	8.6	1.7	1.3	- 0.9	2014
4.5	1.1	6.3	- 3.4	1.8	1.7	7.0	5.4	3.4	3.6	2015
4.2	1.1	4.6	0.8	1.7	0.3	12.4	6.9	1.6	0.2	2015 Q1
4.5	1.5	8.3	- 4.8	0.7	1.9	5.0	5.6	3.2	3.1	Q2
4.0	0.6	7.3	- 5.4	2.8	2.4	6.1	5.4	4.2	4.4	Q3
5.3	1.3	5.0	- 4.5	2.3	2.2	5.0	3.7	4.8	6.4	Q4
5.7	1.4	- 5.1	- 2.5	1.4	0.9	2.3	5.7	2.9	10.2	2016 Q1
- 0.9	- 0.2	- 4.4	2.8	2.5	0.8	6.2	5.7	1.3	8.2	Q2
Capacity utilisation in industry ⁴										
73.2	64.5	77.0	76.7	83.6	76.3	77.1	78.3	73.3	49.3	2013
74.9	66.2	78.1	80.2	84.3	78.4	80.7	80.3	75.8	53.9	2014
74.2	68.3	78.6	81.8	84.0	80.4	82.4	83.6	77.8	58.2	2015
74.4	65.6	78.7	82.3	84.2	80.4	79.1	83.4	77.2	60.3	2015 Q2
73.6	69.0	77.2	82.2	84.4	80.1	86.2	83.6	77.6	56.4	Q3
74.3	72.2	77.9	82.2	83.4	80.4	83.4	82.3	78.1	61.1	Q4
75.9	72.4	77.8	81.4	85.0	80.0	85.4	83.2	79.0	56.9	2016 Q1
76.1	76.1	78.9	81.7	84.0	80.8	83.0	83.1	77.8	63.9	Q2
75.5	77.6	79.8	81.5	83.2	79.6	84.3	83.7	78.4	58.7	Q3
Standardised unemployment rate ⁵										
11.8	5.9	6.4	7.3	5.4	16.4	14.2	10.1	26.1	15.9	2013
10.7	6.0	5.8	7.4	5.6	14.1	13.2	9.7	24.5	16.1	2014
9.1	6.4	5.4	6.9	5.7	12.6	11.5	9.0	22.1	15.0	2015
8.0	6.3	4.9	6.4	5.9	11.6	10.0	8.0	20.2	12.6	2016 Apr
8.2	6.2	4.8	6.3	6.1	11.2	9.9	8.0	20.1	12.4	May
8.4	6.2	5.0	6.1	6.1	11.1	9.7	8.0	19.9	12.2	June
8.8	6.2	4.9	6.0	6.1	10.9	9.6	7.8	19.6	12.1	July
8.6	6.2	4.8	5.8	6.2	11.0	9.5	7.8	19.5	12.1	Aug
...	...	...	...	...	...	...	...	...	...	Sep
Harmonised Index of Consumer Prices ¹										
1.2	1.7	1.0	2.6	2.1	0.4	1.5	1.9	1.5	0.4	2013
0.2	0.7	0.8	0.3	1.5	- 0.2	- 0.1	0.4	- 0.2	- 0.3	2014
- 0.7	0.1	1.2	0.2	0.8	0.5	- 0.3	- 0.8	- 0.6	- 1.5	2015
0.8	- 0.6	0.8	- 0.2	0.6	0.5	- 0.4	- 0.7	- 1.2	- 2.1	2016 Apr
0.2	- 0.6	1.0	- 0.2	0.6	0.4	- 0.7	- 0.5	- 1.1	- 1.9	May
0.4	- 0.4	1.0	- 0.2	0.6	0.7	- 0.7	0.1	- 0.9	- 2.0	June
0.0	- 0.4	0.9	- 0.6	0.6	0.7	- 0.9	- 0.1	- 0.7	- 0.4	July
0.5	- 0.2	1.0	0.1	0.6	0.8	- 0.8	- 0.2	- 0.3	- 0.6	Aug
0.6	0.3	0.9	- 0.1	1.1	0.7	- 0.5	0.2	0.0	- 0.4	Sep
General government financial balance ⁸										
- 2.6	0.8	- 2.6	- 2.4	- 1.3	- 4.8	- 2.7	- 15.0	- 6.9	- 4.9	2013
- 0.7	1.7	- 2.0	- 2.4	- 2.7	- 7.2	- 2.7	- 5.0	- 5.9	- 8.9	2014
- 0.2	1.2	- 1.5	- 1.8	- 1.2	- 4.4	- 3.0	- 2.9	- 5.1	- 1.0	2015
General government debt ⁸										
38.8	23.3	68.6	67.9	80.8	129.0	55.0	71.0	93.7	102.5	2013
40.7	22.9	67.1	68.2	84.3	130.2	53.9	81.0	99.3	108.2	2014
42.7	21.4	63.9	65.1	86.2	129.0	52.9	83.2	99.2	108.9	2015

⁶ Including Latvia from 2014 onwards. ⁷ Including Lithuania from 2015 onwards.
⁸ As a percentage of GDP (Maastricht Treaty definition). Euro-area aggregate: European Central Bank, regularly updated. Member states excluding Germany:

latest data publication under the excessive deficit procedure (Eurostat). Germany: current data according to the Federal Statistical Office and Bundesbank calculations.

II Overall monetary survey in the euro area

1 The money stock and its counterparts * (a) Euro area

€ billion

Period	I Lending to non-banks (non-MFIs) in the euro area					II Net claims on non-euro-area residents			III Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
	Total	Enterprises and households		General government		Total	Claims on non-euro-area residents	Liabilities to non-euro-area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) ²	Capital and reserves ³
		Total	of which Securities	Total	of which Securities								
2015 Jan	73.1	- 2.1	3.3	75.2	53.0	- 15.0	197.7	212.7	- 1.9	- 12.3	0.5	- 9.0	18.9
Feb	11.3	21.4	2.1	- 10.2	- 0.3	- 23.3	- 18.1	5.2	- 14.6	- 8.8	- 1.4	- 9.8	5.3
Mar	75.4	43.1	1.0	32.3	29.1	10.6	- 30.2	- 40.9	- 20.5	- 12.4	- 1.3	- 26.2	19.4
Apr	54.4	17.6	16.8	36.8	32.5	- 57.6	38.4	95.9	- 47.5	- 18.8	- 2.1	- 15.5	- 11.0
May	27.4	10.9	- 0.8	16.4	31.2	25.2	- 55.0	- 80.2	- 21.3	- 8.3	- 1.7	- 23.5	12.2
June	6.6	- 16.6	- 28.1	23.2	24.5	56.0	- 87.7	- 143.7	- 21.5	- 13.8	- 1.2	- 12.9	6.5
July	61.8	58.0	50.8	3.7	4.0	- 65.0	- 0.3	64.7	- 5.3	10.4	- 0.9	- 21.4	6.6
Aug	15.3	- 23.6	7.0	38.8	47.7	- 23.3	10.5	33.8	- 10.0	- 2.4	- 1.4	- 8.5	2.4
Sep	26.4	- 13.0	- 8.7	39.4	45.8	- 7.7	- 94.8	- 87.0	- 20.8	- 3.2	- 0.7	- 26.1	9.3
Oct	24.8	2.7	- 15.4	22.2	18.6	9.5	22.6	13.1	- 39.9	- 25.3	- 1.1	- 17.3	3.8
Nov	87.2	48.1	2.0	39.1	47.1	3.5	- 15.3	- 18.9	- 6.5	- 13.5	- 1.7	- 4.8	13.5
Dec	- 113.8	- 75.0	- 2.2	- 38.8	- 33.8	- 10.5	- 196.1	- 185.6	- 8.4	4.1	- 0.6	- 26.5	14.6
2016 Jan	157.8	47.6	5.3	110.2	95.1	- 39.8	127.3	167.1	- 28.2	- 8.8	- 0.4	- 19.1	0.1
Feb	87.9	46.6	- 0.0	41.2	50.1	- 81.5	32.0	113.6	- 15.4	12.1	- 1.2	- 24.7	- 1.5
Mar	60.4	21.6	- 3.1	38.7	39.5	21.4	- 85.9	- 107.3	- 16.6	- 6.3	- 0.9	0.1	- 9.5
Apr	92.6	44.4	25.2	48.2	43.0	- 61.5	118.7	180.2	- 4.1	- 4.6	- 1.3	- 0.7	2.5
May	70.1	22.9	13.1	47.2	53.5	- 0.1	62.6	62.7	0.2	- 5.2	- 0.5	- 0.4	6.2
June	52.2	5.5	- 5.5	46.7	58.3	23.5	- 31.4	- 54.9	- 11.1	- 21.0	- 0.8	- 11.6	22.2
July	50.9	28.6	14.0	22.3	21.4	- 87.0	60.0	147.1	- 28.7	- 7.5	- 0.6	- 23.9	3.3
Aug	15.4	16.8	28.3	- 1.4	7.2	- 37.1	8.5	45.6	0.4	- 5.1	- 0.7	0.8	5.4

(b) German contribution

Period	I Lending to non-banks (non-MFIs) in the euro area					II Net claims on non-euro-area residents			III Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
	Total	Enterprises and households		General government		Total	Claims on non-euro-area residents	Liabilities to non-euro-area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) ²	Capital and reserves ³
		Total	of which Securities	Total	of which Securities								
2015 Jan	28.5	13.0	7.0	15.4	6.5	- 57.6	52.2	109.8	- 0.8	- 3.4	- 0.0	1.8	0.8
Feb	9.4	4.6	- 1.1	4.8	1.7	2.9	- 11.1	- 13.9	1.8	- 1.5	- 1.3	2.3	2.3
Mar	15.2	9.7	8.4	5.6	7.2	- 12.1	- 19.0	- 6.9	- 15.3	- 4.8	- 1.3	- 9.1	- 0.1
Apr	17.3	3.3	0.7	14.0	4.9	7.7	33.9	26.2	- 13.2	- 10.0	- 2.2	- 0.6	- 0.4
May	- 3.5	4.5	- 4.8	- 8.0	4.4	1.1	- 11.7	- 12.8	- 14.6	- 1.6	- 1.6	- 11.7	0.4
June	- 0.9	- 2.7	- 5.7	1.7	5.1	16.2	- 25.0	- 41.1	0.4	- 3.8	- 1.4	1.8	3.7
July	31.5	22.9	21.3	8.6	6.4	- 27.6	- 8.7	19.0	12.5	16.5	- 1.5	- 0.6	- 1.9
Aug	12.9	7.2	- 1.5	5.7	9.0	- 20.7	- 0.9	19.9	- 6.5	0.5	- 1.5	- 4.5	- 1.0
Sep	11.5	4.1	- 2.6	7.3	8.7	15.9	- 2.0	- 17.9	- 11.7	- 2.5	- 1.4	- 7.4	- 0.4
Oct	3.4	- 3.8	- 9.4	7.1	3.5	- 8.5	- 13.1	- 4.6	- 10.7	- 9.0	- 1.3	0.7	- 1.1
Nov	27.3	21.3	7.8	6.0	10.6	- 13.0	- 35.7	- 22.7	- 12.8	- 3.6	- 1.2	- 3.9	- 4.1
Dec	- 19.9	- 11.6	- 5.8	- 8.2	- 2.8	5.2	- 52.1	- 57.3	- 24.0	- 3.9	- 0.9	- 22.1	2.9
2016 Jan	19.7	5.7	- 3.0	14.0	10.4	- 21.1	24.7	45.8	- 1.2	- 1.5	- 1.3	2.8	- 1.2
Feb	15.6	10.9	- 4.2	4.7	4.8	- 29.2	7.3	36.5	- 11.8	- 1.8	- 1.3	- 7.7	- 1.0
Mar	12.3	4.4	0.6	7.8	8.2	7.3	- 22.6	- 29.8	0.9	- 0.0	- 1.1	2.4	- 0.4
Apr	22.8	12.3	0.7	10.6	5.9	- 40.1	13.5	53.7	- 2.3	- 3.3	- 1.1	1.7	0.4
May	22.0	16.2	4.9	5.8	9.1	1.7	- 0.5	4.8	0.8	- 1.0	- 1.0	5.0	- 0.0
June	2.5	1.7	0.5	0.8	6.5	- 2.9	23.9	26.8	- 5.7	- 1.5	- 0.7	- 7.3	3.8
July	25.7	13.2	1.4	12.5	9.5	- 18.5	7.0	25.5	- 10.5	- 0.8	- 0.9	- 5.1	- 3.7
Aug	9.1	8.9	1.5	0.2	2.0	- 16.6	2.5	19.1	- 0.4	- 1.8	- 0.8	3.8	- 1.6

* The data in this table are based on the consolidated balance sheet of monetary financial institutions (MFIs) (Table II.2); statistical breaks have been eliminated from the flow figures (see also the "Notes on the figures" in the "Explanatory notes" in the Statistical Supplement to the Monthly Report 1, p 30*). **1** Source: ECB. **2** Excluding

MFIs' portfolios. **3** After deduction of inter-MFI participations. **4** Including the counterparts of monetary liabilities of central governments. **5** Including the monetary liabilities of central governments (Post Office, Treasury). **6** In Germany, only savings deposits. **7** Paper held by residents outside the euro area has been eliminated.

II Overall monetary survey in the euro area

(a) Euro area

IV De- posits of central gov- ernments	V Other factors			VI Money stock M3 (balance I plus II less III less IV less V)										Period
	Total 4	of which Intra- Eurosystem liability/ claim related to banknote issue	Total	Money stock M2						Repo transac- tions	Money market fund shares (net) 2,7,8	Debt secur- ities with maturities of up to 2 years (incl money market paper) (net) 2,7		
				Total	Money stock M1			Deposits with an agreed maturity of up to 2 years 5	Deposits at agreed notice of up to 3 months 5,6					
					Total	Currency in cir- culation	Overnight deposits 5							
80.8	- 43.5	-	22.7	5.5	34.9	- 2.7	37.5	- 37.0	7.7	23.7	20.2	-	5.9	2015 Jan
- 28.6	- 15.4	-	46.5	21.8	28.7	4.1	24.6	- 8.5	1.6	38.1	8.7	-	2.6	Feb
22.6	53.2	-	30.8	53.7	51.2	7.7	43.4	- 5.4	7.9	1.7	- 10.0	-	6.0	Mar
- 43.3	- 25.4	-	113.0	77.8	91.5	8.8	82.7	- 15.5	1.8	- 17.5	21.9	-	6.3	Apr
44.1	- 0.4	-	30.2	64.2	94.6	6.7	88.0	- 35.2	4.8	- 5.9	- 9.1	-	6.8	May
14.0	64.9	-	5.2	38.3	63.8	10.7	53.1	- 25.5	0.0	- 20.1	- 17.1	-	8.2	June
- 42.3	- 29.4	-	73.8	42.7	41.8	14.2	27.6	1.4	- 0.6	- 1.8	24.4	-	12.1	July
- 14.8	1.4	-	15.4	11.5	13.3	- 1.9	15.2	- 5.4	3.6	0.7	11.0	-	4.5	Aug
28.7	31.7	-	- 20.9	6.3	23.1	- 2.8	25.9	- 8.4	- 8.5	- 7.7	- 15.7	-	0.8	Sep
33.0	- 62.8	-	104.0	67.9	82.8	2.2	80.6	- 10.1	- 4.8	- 6.1	21.8	-	1.1	Oct
- 17.2	61.1	-	53.4	54.6	58.7	5.7	53.0	- 1.9	- 2.2	4.0	15.1	-	1.0	Nov
- 72.3	- 43.4	-	- 0.2	53.9	45.2	14.4	30.8	7.8	0.9	- 31.1	- 23.9	-	10.8	Dec
87.7	- 17.8	-	76.4	37.3	36.2	- 11.4	47.6	- 9.3	10.4	22.5	17.6	-	8.0	2016 Jan
- 14.1	4.0	-	31.7	14.5	21.2	1.3	19.9	- 11.9	5.2	43.2	- 1.2	-	6.8	Feb
31.8	28.8	-	37.7	55.1	43.0	3.5	39.5	9.8	2.3	- 5.6	- 12.2	-	1.1	Mar
- 35.9	- 30.2	-	101.4	75.1	92.5	4.7	87.8	- 17.1	- 0.3	- 4.5	17.1	-	3.5	Apr
20.1	16.4	-	33.4	35.0	47.5	2.3	45.2	- 20.4	7.9	- 9.5	0.7	-	3.0	May
60.5	7.9	-	18.4	30.6	34.6	8.5	26.0	- 2.6	- 1.4	2.5	- 9.8	-	6.3	June
- 29.0	- 75.2	-	96.7	73.2	66.8	9.8	57.0	5.8	0.5	- 22.6	15.5	-	5.5	July
- 54.7	42.0	-	- 9.6	- 11.2	- 6.0	- 4.5	- 1.5	- 5.8	0.6	2.4	4.9	-	3.3	Aug

(b) German contribution

IV De- posits of central gov- ernments	V Other factors			VI Money stock M3 (balance I plus II less III less IV less V) 10										Period
	Total	of which Intra- Eurosystem liability/ claim related to banknote issue 9,11	Currency in cir- culation	Components of the money stock							Money market fund shares (net) 7,8	Debt securities with maturities of up to 2 years (incl money market paper)(net) 7		
				Total	Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits at agreed notice of up to 3 months 6	Repo transac- tions						
									Total					
6.3	- 59.5	2.4	- 0.8	24.9	26.3	- 5.1	- 1.1	3.4	0.0	1.4	2015 Jan			
- 6.7	- 11.4	2.1	0.8	28.6	23.5	0.7	0.9	1.2	0.0	2.3	Feb			
2.9	10.3	2.3	2.2	5.2	5.5	0.3	- 0.9	- 0.4	- 0.0	0.8	Mar			
- 2.7	5.0	2.2	1.8	35.9	29.6	- 1.2	- 0.2	3.8	- 0.1	4.1	Apr			
1.4	- 4.8	2.4	1.1	15.5	28.1	- 3.3	0.2	6.4	0.1	3.1	May			
2.2	12.7	0.9	3.5	- 0.1	5.6	- 3.5	- 0.3	- 1.6	0.1	0.3	June			
- 3.2	- 18.6	4.7	3.3	13.1	12.9	- 0.0	- 0.4	1.2	0.0	0.6	July			
- 0.3	- 13.1	2.4	- 0.5	12.1	14.7	- 3.8	0.3	2.0	0.1	1.2	Aug			
1.8	16.8	2.8	- 0.8	20.5	14.4	- 3.4	0.8	0.5	0.5	7.8	Sep			
- 0.6	- 25.3	3.0	- 0.3	31.4	30.7	- 3.8	1.3	- 0.5	- 0.0	3.7	Oct			
- 1.2	- 15.2	2.0	1.8	43.4	34.3	6.8	0.9	- 0.5	- 0.1	2.1	Nov			
10.3	15.2	2.6	2.3	- 16.2	- 21.3	6.3	3.0	- 3.6	- 0.4	0.2	Dec			
- 0.8	- 24.1	- 0.7	- 1.9	24.7	27.8	- 5.5	0.9	0.3	0.3	0.9	2016 Jan			
7.1	- 24.1	0.6	0.4	15.3	13.3	- 1.9	1.6	1.4	- 0.1	1.0	Feb			
21.0	3.1	2.1	0.6	- 5.5	- 12.5	10.9	- 0.8	- 0.9	- 0.2	2.0	Mar			
- 17.4	- 20.6	1.2	1.0	23.1	24.1	- 1.1	- 0.7	0.5	- 0.5	0.7	Apr			
18.7	- 19.6	2.9	- 0.5	19.9	21.5	- 0.3	- 0.6	- 0.2	- 0.4	0.7	May			
13.0	- 7.9	4.2	1.5	0.2	2.0	- 0.7	- 0.4	- 1.0	0.0	0.4	June			
- 31.8	25.0	3.7	2.1	24.5	12.3	4.0	- 0.1	0.9	- 0.2	7.6	July			
8.8	- 22.1	2.3	- 0.6	6.1	11.3	- 1.6	0.1	- 0.2	- 0.1	3.5	Aug			

8 Less German MFIs' holdings of paper issued by euro-area MFIs. 9 Including national banknotes still in circulation. 10 The German contributions to the Eurosystem's monetary aggregates should on no account be interpreted as national monetary aggregates and are therefore not comparable with the erstwhile German

money stocks M1, M2 or M3. 11 The difference between the volume of euro banknotes actually issued by the Bundesbank and the amount disclosed in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2).

II Overall monetary survey in the euro area

Liabilities												
Currency in circulation ⁴	Deposits of non-banks (non-MFIs) in the euro area											
	Total	of which in euro ⁵	Enterprises and households					At agreed notice of ⁶				
			Total	Overnight	With agreed maturities of			up to 3 months	over 3 months			
					up to 1 year	over 1 year and up to 2 years	over 2 years					
Euro area (€ billion) ¹												
944.7	11,022.8	10,378.1	10,420.0	4,448.9	1,115.3	430.6	2,244.8	2,095.2	85.0	2014 July		
946.8	11,015.1	10,414.4	10,454.5	4,478.1	1,124.0	427.2	2,241.3	2,097.5	86.3	Aug		
947.0	11,017.4	10,417.6	10,466.0	4,522.5	1,115.0	422.6	2,227.3	2,091.9	86.7	Sep		
950.6	11,004.8	10,402.5	10,465.5	4,557.8	1,109.4	415.2	2,212.0	2,084.5	86.5	Oct		
956.8	11,109.7	10,480.5	10,532.6	4,637.2	1,099.7	407.6	2,213.2	2,088.7	86.1	Nov		
980.6	11,155.3	10,549.3	10,627.7	4,728.8	1,089.3	399.5	2,217.4	2,105.6	87.0	Dec		
979.1	11,312.2	10,597.4	10,701.8	4,827.2	1,073.8	389.0	2,213.3	2,109.9	88.4	2015 Jan		
983.2	11,295.5	10,605.0	10,704.1	4,847.7	1,039.2	389.0	2,230.9	2,110.1	87.2	Feb		
990.9	11,362.5	10,639.0	10,750.7	4,900.1	1,040.0	384.7	2,221.9	2,118.1	85.9	Mar		
999.8	11,356.7	10,684.2	10,784.8	4,972.1	1,030.6	378.6	2,200.2	2,119.3	83.9	Apr		
1,006.4	11,453.0	10,726.9	10,824.8	5,049.8	1,001.7	374.0	2,192.9	2,123.9	82.3	May		
1,017.1	11,472.1	10,727.2	10,828.4	5,096.7	977.6	370.2	2,178.6	2,124.1	81.2	June		
1,031.3	11,470.9	10,759.7	10,875.8	5,134.9	983.3	367.9	2,187.5	2,121.8	80.4	July		
1,029.4	11,455.3	10,756.8	10,867.7	5,137.0	981.6	362.4	2,183.4	2,124.2	79.1	Aug		
1,026.5	11,489.3	10,772.2	10,875.0	5,162.4	977.2	358.8	2,179.5	2,118.7	78.3	Sep		
1,028.8	11,577.7	10,817.5	10,927.6	5,244.4	973.5	356.8	2,161.0	2,114.5	77.3	Oct		
1,034.5	11,602.0	10,851.3	10,947.8	5,288.4	971.2	350.3	2,150.5	2,111.6	75.7	Nov		
1,048.9	11,562.3	10,889.6	10,998.3	5,324.9	981.8	349.1	2,152.3	2,115.0	75.2	Dec		
1,037.4	11,686.0	10,926.9	11,027.4	5,364.3	973.3	348.8	2,142.8	2,123.8	74.3	2016 Jan		
1,038.7	11,695.4	10,946.4	11,050.3	5,383.7	968.1	344.9	2,154.4	2,126.1	73.1	Feb		
1,042.2	11,760.3	10,990.8	11,081.1	5,418.0	973.4	343.0	2,145.6	2,128.8	72.3	Mar		
1,046.9	11,788.3	11,051.0	11,145.6	5,503.2	964.0	339.9	2,139.5	2,128.5	70.5	Apr		
1,049.2	11,839.2	11,078.5	11,164.9	5,544.0	946.3	333.9	2,134.6	2,136.0	70.0	May		
1,057.7	11,900.5	11,073.0	11,160.7	5,563.8	946.0	331.7	2,114.7	2,135.1	69.3	June		
1,067.5	11,922.8	11,127.0	11,206.9	5,615.0	954.1	327.0	2,107.1	2,134.9	68.8	July		
1,063.1	11,855.0	11,109.4	11,192.3	5,611.1	954.4	321.2	2,101.6	2,136.0	68.0	Aug		
German contribution (€ billion)												
222.6	3,168.9	3,102.0	2,976.7	1,455.9	195.5	31.5	689.5	527.5	76.8	2014 July		
222.5	3,183.4	3,120.4	2,992.8	1,467.7	199.8	31.3	688.2	528.0	77.7	Aug		
222.8	3,187.6	3,124.3	2,997.3	1,479.1	191.5	32.7	687.6	528.2	78.2	Sep		
223.6	3,199.5	3,133.6	3,020.0	1,507.0	189.9	32.5	684.8	527.9	78.1	Oct		
224.8	3,222.7	3,157.5	3,038.6	1,531.2	186.7	33.4	682.2	527.4	77.7	Nov		
229.7	3,207.5	3,142.6	3,019.1	1,507.1	191.8	33.3	680.6	531.0	76.4	Dec		
228.9	3,233.6	3,156.6	3,045.0	1,541.7	188.3	31.3	677.5	528.8	77.4	2015 Jan		
229.7	3,249.6	3,172.0	3,062.0	1,562.7	187.1	31.0	675.4	529.6	76.1	Feb		
232.0	3,253.1	3,175.8	3,062.6	1,569.0	187.1	31.4	671.6	528.7	74.8	Mar		
233.8	3,265.4	3,191.1	3,080.3	1,598.9	187.3	31.7	661.3	528.5	72.7	Apr		
234.9	3,289.4	3,214.1	3,094.6	1,620.0	183.7	31.9	659.5	528.5	71.1	May		
238.3	3,287.5	3,208.9	3,090.0	1,626.3	178.9	32.2	654.6	528.3	69.7	June		
241.6	3,312.5	3,236.6	3,120.9	1,643.3	179.8	32.4	669.3	527.9	68.2	July		
241.2	3,321.2	3,246.0	3,123.4	1,651.0	175.8	32.2	669.5	528.2	66.7	Aug		
240.3	3,330.8	3,253.8	3,131.7	1,667.0	172.0	31.7	666.7	529.0	65.3	Sep		
240.1	3,349.1	3,271.6	3,154.0	1,698.6	170.8	32.9	657.5	530.3	64.0	Oct		
241.9	3,386.8	3,309.9	3,182.3	1,732.8	168.6	33.2	653.8	531.1	62.8	Nov		
244.2	3,379.0	3,293.1	3,168.8	1,711.8	176.9	34.4	649.6	534.1	61.9	Dec		
242.2	3,398.2	3,312.7	3,191.1	1,739.2	172.6	35.6	647.9	535.1	60.7	2016 Jan		
242.7	3,412.8	3,319.7	3,197.4	1,747.9	172.1	35.8	645.5	536.7	59.4	Feb		
243.3	3,428.4	3,315.7	3,188.8	1,735.7	176.5	37.5	644.9	535.9	58.3	Mar		
244.2	3,429.1	3,334.3	3,208.5	1,759.1	178.5	38.3	640.3	535.1	57.2	Apr		
243.7	3,469.8	3,356.2	3,222.9	1,779.2	175.2	37.3	640.6	534.4	56.2	May		
245.2	3,481.5	3,352.9	3,218.7	1,779.1	173.1	38.3	638.8	533.9	55.4	June		
247.4	3,464.1	3,368.1	3,233.1	1,793.5	174.7	38.2	638.3	533.8	54.6	July		
246.7	3,480.0	3,376.0	3,238.3	1,803.0	173.4	38.2	636.2	533.8	53.8	Aug		

of euro banknotes put into circulation by the Bundesbank in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2). The volume of currency actually put into circulation by the

Bundesbank can be calculated by adding to this total the item "Intra-Eurosystem liability/claim related to banknote issue" (see "Other liability items"). ⁵ Excluding central governments' deposits. ⁶ In Germany, only savings deposits.

II Overall monetary survey in the euro area

2 Consolidated balance sheet of monetary financial institutions (MFIs) (cont'd) *

Liabilities (cont'd)															
Deposits of non-banks (non-MFIs) in the euro area (cont'd)												Repo transactions with non-banks in the euro area		Debt securities	
General government															
End of year/month	Other general government						At agreed notice of 2		Total	of which Enterprises and households	Money market fund shares (net) 3	Total	of which denominated in euro		
	Central governments	Total	Overnight	With agreed maturities of			up to 3 months	over 3 months							
				up to 1 year	over 1 year and up to 2 years	over 2 years									
Euro area (€ billion) 1															
2014 July	292.8	310.0	132.6	101.9	9.2	45.0	16.1	5.2	302.3	293.4	409.0	2,524.2	1,898.5		
Aug	246.4	314.2	138.0	100.3	9.3	45.0	16.4	5.2	305.3	296.2	412.7	2,521.4	1,888.8		
Sep	240.6	310.8	132.1	102.9	9.1	45.2	16.4	5.1	287.6	272.5	414.4	2,526.9	1,878.0		
Oct	236.2	303.1	133.1	95.0	9.3	45.1	15.5	5.1	313.2	302.7	428.9	2,489.0	1,839.8		
Nov	262.2	315.0	142.1	97.0	10.1	44.9	15.8	5.1	310.5	301.4	434.4	2,474.9	1,824.9		
Dec	216.7	310.9	138.0	100.5	11.5	39.5	16.4	5.1	297.0	290.7	414.2	2,479.0	1,820.8		
2015 Jan	300.7	309.7	134.9	99.3	11.3	39.9	18.8	5.4	321.6	311.4	434.3	2,505.0	1,797.9		
Feb	272.1	319.3	142.1	99.8	11.6	40.0	20.3	5.3	359.7	349.6	443.1	2,502.5	1,783.8		
Mar	294.7	317.1	139.7	100.2	12.7	39.2	20.1	5.3	361.8	355.6	433.1	2,493.0	1,762.7		
Apr	251.4	320.6	144.8	97.9	12.8	39.5	20.4	5.1	344.0	336.3	455.0	2,462.0	1,743.3		
May	295.5	332.7	157.0	97.0	13.1	39.9	20.7	5.0	338.3	331.7	445.9	2,443.7	1,719.2		
June	309.5	334.1	157.1	97.6	13.1	40.9	20.5	4.9	318.0	314.5	428.8	2,431.8	1,704.8		
July	267.3	327.8	148.2	100.3	13.4	38.8	22.3	4.9	316.3	313.1	453.2	2,404.1	1,681.3		
Aug	252.6	335.1	154.3	100.4	13.4	38.8	23.4	4.8	316.7	311.6	451.7	2,373.3	1,671.8		
Sep	281.7	332.7	152.4	101.4	13.2	39.4	21.5	4.8	309.0	301.4	445.9	2,342.9	1,659.8		
Oct	316.6	333.5	156.3	98.6	13.2	39.6	20.9	4.7	303.1	293.6	467.6	2,336.2	1,639.5		
Nov	299.4	354.9	167.1	108.5	13.0	39.7	21.9	4.7	307.5	302.3	482.7	2,365.7	1,645.2		
Dec	227.4	336.6	154.4	104.6	13.7	39.7	19.5	4.7	276.1	274.2	458.9	2,317.9	1,633.0		
2016 Jan	315.1	343.4	160.9	102.3	14.3	39.7	21.0	5.2	298.5	296.9	475.9	2,299.3	1,613.5		
Feb	301.0	344.0	162.6	98.1	14.4	39.9	24.0	5.1	341.8	337.9	474.6	2,284.9	1,595.4		
Mar	333.3	345.9	159.5	102.0	15.1	40.8	23.6	5.0	335.7	332.5	462.8	2,263.8	1,588.8		
Apr	297.6	345.2	161.9	97.2	15.4	42.2	23.5	4.9	327.9	323.1	480.2	2,268.7	1,585.0		
May	317.7	356.6	167.0	102.1	15.5	43.1	24.0	4.9	318.7	312.8	480.9	2,275.3	1,572.7		
June	378.3	361.6	171.3	102.4	15.9	43.7	23.5	4.8	321.3	318.0	471.5	2,271.9	1,566.0		
July	349.2	366.6	174.0	101.6	18.2	43.8	24.2	4.8	298.6	297.4	487.0	2,248.1	1,540.7		
Aug	294.6	368.1	175.7	100.8	18.7	44.3	23.8	4.9	301.0	299.9	492.0	2,243.6	1,532.4		
German contribution (€ billion)															
2014 July	17.3	174.9	43.6	83.2	5.9	38.7	2.8	0.7	8.4	7.7	3.7	543.2	291.5		
Aug	12.4	178.2	47.8	82.1	6.0	38.8	2.8	0.6	10.1	9.0	3.4	541.2	289.6		
Sep	13.9	176.4	43.8	84.6	5.8	38.8	2.7	0.6	7.4	5.8	3.4	546.0	285.7		
Oct	12.6	166.8	41.6	77.1	5.8	38.9	2.8	0.6	9.1	8.4	3.4	549.3	287.7		
Nov	12.4	171.7	44.0	79.2	6.4	38.7	2.8	0.6	9.6	9.0	3.4	550.5	285.7		
Dec	11.3	177.1	50.7	82.3	7.6	32.8	3.0	0.7	3.4	3.1	3.3	547.3	280.7		
2015 Jan	18.7	170.0	44.7	81.2	7.5	32.9	3.1	0.7	6.8	4.7	3.3	566.9	283.7		
Feb	12.0	175.7	47.5	82.9	8.1	33.5	3.1	0.7	8.0	5.6	3.3	573.3	287.6		
Mar	14.7	175.8	47.7	82.3	9.2	32.8	3.1	0.7	7.6	5.2	3.3	573.0	285.6		
Apr	12.0	173.1	46.9	80.2	9.3	33.0	3.1	0.7	11.4	8.7	3.2	567.3	280.9		
May	13.4	181.4	54.6	80.0	9.7	33.3	3.2	0.6	5.0	3.8	3.3	557.3	272.4		
June	15.6	181.8	53.2	80.8	9.7	34.4	3.1	0.6	3.3	2.2	3.4	555.5	269.8		
July	12.4	179.3	49.8	83.6	9.8	32.3	3.1	0.6	4.5	3.3	3.4	558.4	267.2		
Aug	12.1	185.7	56.0	83.8	9.8	32.5	3.1	0.6	6.6	4.6	3.5	547.0	266.9		
Sep	14.0	185.1	54.4	84.5	9.7	32.8	3.1	0.6	7.0	4.9	4.0	547.0	272.6		
Oct	13.4	181.6	54.1	80.9	9.8	33.1	3.1	0.6	6.6	5.0	3.9	555.3	275.2		
Nov	12.3	192.2	55.6	90.2	9.5	33.2	3.1	0.6	6.1	4.5	3.8	562.5	270.9		
Dec	22.6	187.6	54.3	86.0	10.2	33.4	3.1	0.5	2.5	2.0	3.4	533.4	254.9		
2016 Jan	21.8	185.2	54.5	83.2	10.5	33.4	3.1	0.5	2.8	2.7	3.7	534.8	257.0		
Feb	28.9	186.5	59.1	79.7	10.5	33.7	3.1	0.5	4.2	3.7	3.6	527.9	250.2		
Mar	49.3	190.2	57.4	84.1	10.8	34.3	3.1	0.5	3.2	2.0	3.4	518.7	250.5		
Apr	31.9	188.7	58.2	80.3	10.9	35.6	3.2	0.5	3.7	2.4	3.0	521.8	249.1		
May	50.6	196.3	60.4	84.9	11.1	36.2	3.3	0.5	3.5	2.4	2.5	530.9	244.9		
June	63.6	199.2	62.2	85.0	11.5	36.6	3.3	0.5	2.5	2.3	2.6	523.0	241.2		
July	31.9	199.1	59.9	85.2	13.3	36.8	3.3	0.5	3.4	3.2	2.4	524.2	241.2		
Aug	40.6	201.0	61.7	84.6	13.6	37.2	3.4	0.5	3.2	3.2	2.3	524.3	241.5		

* Monetary financial institutions (MFIs) comprise banks (including building and loan associations), money market funds, and the European Central Bank and national central banks (the Eurosystem). 1 Source: ECB. 2 In Germany, only savings and deposits. 3 Excluding holdings of MFIs; for the German contribution, excluding German MFIs' portfolios of securities issued by MFIs in the euro area. 4 In Germany, bank debt securities with maturities of up to one year are classed as money market

paper. 5 Excluding liabilities arising from securities issued. 6 After deduction of inter-MFI participations. 7 The German contributions to the Eurosystem's monetary aggregates should on no account be interpreted as national monetary aggregates and are therefore not comparable with the erstwhile German money stocks M1, M2 or M3. 8 including DM banknotes still in circulation (see also footnote 4 on p 10). 9 For the German contribution, the difference between the volume of

II Overall monetary survey in the euro area

Flows

Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current account balances (including minimum reserves) ⁷	Base money ⁸	Reserve maintenance period ending in ¹
Net assets in gold and foreign currency	Monetary policy operations of the Eurosystem				Deposit facility	Other liquidity-absorbing operations ⁴	Banknotes in circulation ⁵	Central government deposits	Other factors (net) ⁶			
	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations ³								
Eurosystem ²												
+ 8.5	+ 13.6	- 35.8	+ 0.4	- 2.0	- 0.3	± 0.0	+ 6.3	- 8.0	- 7.4	- 5.9	+ 0.0	2014 Apr
+ 17.5	+ 22.7	- 15.0	- 0.5	- 4.9	+ 0.5	- 23.1	+ 9.5	+ 13.9	+ 22.9	- 4.0	+ 6.0	May
+ 0.4	+ 20.0	- 11.8	- 0.1	- 6.7	- 1.4	- 26.4	+ 3.1	+ 23.9	+ 1.6	+ 1.1	+ 2.8	June
+ 3.2	- 36.4	- 47.7	+ 0.0	- 6.9	- 4.4	- 98.8	+ 7.1	- 1.6	- 12.0	+ 22.0	+ 24.7	July
+ 7.6	- 5.1	- 45.4	+ 0.2	- 6.8	+ 0.7	- 27.2	+ 9.5	- 17.6	- 11.1	- 4.1	+ 6.2	Aug
+ 0.2	+ 8.1	- 27.3	- 0.1	- 5.9	+ 0.6	± 0.0	+ 4.2	- 26.2	- 3.4	- 0.1	+ 4.6	Sep
+ 4.2	- 15.8	+ 10.8	± 0.0	- 1.6	- 0.9	± 0.0	- 0.5	+ 12.2	+ 4.4	- 17.5	- 18.9	Oct
+ 10.0	- 3.7	+ 14.3	+ 0.1	- 1.4	+ 6.7	± 0.0	+ 2.3	- 2.3	+ 16.9	- 4.3	+ 4.6	Nov
+ 2.3	+ 8.1	- 16.4	- 0.1	+ 8.7	- 3.7	± 0.0	+ 6.2	- 4.4	+ 7.5	- 2.9	- 0.3	Dec
+ 12.1	+ 15.7	+ 58.3	+ 0.3	+ 15.9	+ 22.9	± 0.0	+ 25.7	- 5.4	+ 8.0	+ 50.9	+ 99.6	2015 Jan
+ 12.8	+ 23.6	- 79.4	- 0.1	+ 12.9	- 7.8	± 0.0	- 0.1	- 4.2	- 7.1	- 11.0	- 19.0	Feb
+ 36.7	- 23.7	+ 11.1	- 0.2	+ 59.8	+ 26.2	± 0.0	+ 10.5	+ 8.1	+ 2.4	+ 36.5	+ 73.3	Mar
+ 29.8	- 23.0	+ 20.5	- 0.1	+ 92.5	+ 31.1	± 0.0	+ 11.5	+ 6.3	+ 29.4	+ 41.6	+ 84.1	Apr
- 12.8	- 13.5	+ 36.6	+ 0.2	+ 88.7	+ 3.4	± 0.0	+ 15.3	+ 19.8	- 17.3	+ 78.0	+ 96.7	May
- 15.5	- 10.0	+ 19.0	+ 0.3	+ 79.0	+ 44.9	± 0.0	+ 12.6	- 32.9	+ 0.9	+ 47.0	+ 104.6	June
- 8.3	- 2.2	- 0.1	- 0.5	+ 92.4	+ 4.8	± 0.0	- 2.9	+ 31.8	+ 10.8	+ 36.9	+ 38.7	July
- 6.9	- 4.1	- 2.8	- 0.0	+ 87.5	+ 20.3	± 0.0	+ 4.1	- 1.7	+ 22.6	+ 28.5	+ 52.9	Aug
- 0.6	+ 5.5	+ 7.6	+ 0.1	+ 81.1	+ 23.5	± 0.0	+ 16.3	- 11.0	+ 1.7	+ 63.3	+ 103.1	Sep
- 3.8	- 8.7	- 5.2	- 0.1	+ 95.8	+ 33.9	± 0.0	- 9.4	+ 33.1	+ 20.7	- 0.6	+ 23.9	Oct
+ 19.5	- 4.8	- 0.9	+ 0.1	+ 92.5	+ 31.5	± 0.0	+ 5.9	+ 31.8	+ 23.8	+ 13.5	+ 50.9	Nov
+ 13.0	- 4.2	- 4.5	± 0.0	+ 105.2	+ 47.0	± 0.0	+ 7.3	- 23.5	+ 25.1	+ 53.8	+ 108.1	Dec
+ 25.8	- 6.3	+ 15.3	- 0.1	+ 121.8	+ 14.1	± 0.0	+ 10.5	+ 51.6	+ 46.6	+ 33.7	+ 58.3	2016 Jan
+ 18.9	- 4.1	+ 12.1	- 0.1	+ 112.6	+ 32.0	± 0.0	+ 9.1	- 37.7	+ 44.6	+ 91.3	+ 132.5	Feb
Deutsche Bundesbank												
+ 2.4	+ 1.1	+ 0.7	+ 0.0	- 0.6	- 0.9	- 3.5	+ 1.6	+ 0.1	+ 8.7	- 2.4	- 1.7	2014 Apr
+ 5.3	+ 13.7	+ 2.2	- 0.0	- 1.2	- 0.3	- 2.2	+ 2.4	- 0.0	+ 22.8	- 2.8	- 0.7	May
+ 0.0	+ 9.1	+ 4.3	- 0.0	- 1.4	- 0.2	- 5.0	+ 1.0	- 0.0	+ 16.6	- 0.3	+ 0.5	June
+ 0.7	- 18.4	- 2.0	+ 0.1	- 1.7	+ 0.7	- 32.9	+ 2.1	+ 0.2	- 0.6	+ 9.1	+ 11.9	July
+ 1.9	- 3.8	- 4.8	- 0.1	- 1.5	- 1.6	- 9.0	+ 2.4	- 0.6	+ 2.9	- 2.3	- 1.5	Aug
- 0.2	- 2.0	- 1.3	+ 0.1	- 1.6	+ 1.9	± 0.0	+ 0.6	+ 0.1	- 6.8	- 0.7	+ 1.7	Sep
+ 0.8	+ 1.5	+ 2.2	- 0.0	- 0.4	+ 0.4	± 0.0	+ 0.6	+ 0.2	+ 1.3	+ 1.6	+ 2.5	Oct
+ 1.5	+ 2.4	+ 2.7	+ 0.1	- 0.1	+ 0.0	± 0.0	- 0.3	- 0.3	+ 12.7	- 5.5	- 5.8	Nov
- 0.1	- 1.4	+ 1.7	- 0.1	+ 1.8	+ 0.3	± 0.0	+ 1.0	- 0.0	+ 2.8	- 2.0	- 0.8	Dec
+ 1.1	+ 6.7	+ 14.1	- 0.0	+ 3.1	+ 5.6	± 0.0	+ 4.9	+ 0.3	- 5.7	+ 19.8	+ 30.4	2015 Jan
+ 1.2	- 6.7	+ 0.2	+ 0.0	+ 2.0	- 2.5	± 0.0	- 0.3	+ 0.3	- 0.2	- 0.7	- 3.5	Feb
+ 8.3	- 1.1	- 1.4	+ 0.0	+ 12.4	+ 8.8	± 0.0	+ 3.0	- 0.4	- 7.8	+ 14.7	+ 26.4	Mar
+ 7.7	- 2.0	- 0.7	- 0.0	+ 19.2	+ 7.4	± 0.0	+ 2.6	+ 0.8	- 0.0	+ 13.5	+ 23.4	Apr
- 3.8	- 1.5	+ 7.6	- 0.0	+ 18.6	- 3.1	± 0.0	+ 3.7	+ 1.4	- 1.0	+ 19.9	+ 20.5	May
- 4.1	- 0.3	+ 3.7	+ 0.0	+ 16.6	+ 16.9	± 0.0	+ 3.2	- 0.4	- 17.0	+ 13.1	+ 33.2	June
- 2.9	+ 0.9	+ 0.8	- 0.0	+ 19.1	- 1.5	± 0.0	- 0.6	+ 2.3	+ 2.4	+ 15.4	+ 13.2	July
- 2.3	+ 0.4	+ 2.5	- 0.0	+ 18.1	+ 15.2	± 0.0	+ 0.3	+ 4.1	- 0.4	- 0.6	+ 15.0	Aug
- 1.3	+ 0.5	+ 5.1	+ 0.1	+ 17.7	- 6.0	± 0.0	+ 3.3	+ 8.7	- 7.6	+ 23.7	+ 21.0	Sep
- 1.0	- 1.7	- 2.1	- 0.0	+ 19.9	+ 9.8	± 0.0	- 2.1	+ 8.1	+ 10.7	- 11.5	- 3.8	Oct
+ 8.4	+ 1.1	- 1.3	+ 0.0	+ 20.3	+ 7.8	± 0.0	+ 1.7	+ 11.3	+ 8.2	- 0.4	+ 9.0	Nov
+ 4.3	+ 0.3	+ 0.4	- 0.0	+ 23.1	+ 19.7	± 0.0	+ 2.6	+ 3.8	- 22.1	+ 24.1	+ 46.3	Dec
+ 6.9	- 0.6	- 0.6	- 0.0	+ 26.2	+ 2.6	± 0.0	+ 2.8	+ 6.1	+ 10.2	+ 10.1	+ 15.4	2016 Jan
+ 5.1	- 0.8	- 0.7	- 0.0	+ 24.8	+ 1.0	± 0.0	+ 1.3	- 11.0	+ 4.4	+ 32.7	+ 35.0	Feb

allocated on a monthly basis to the ECB. The counterpart of this adjustment is shown under "Other factors". The remaining 92% of the value of the euro banknotes in circulation is allocated, likewise on a monthly basis, to the NCBS, with each NCB showing in its balance sheet the percentage of the euro banknotes in circulation that corresponds to its paid-up share in the ECB's capital. The difference between the value of the euro banknotes allocated to an NCB and the value of the euro banknotes which that NCB has put into circulation is likewise shown under

"Other factors". From 2003 euro banknotes only. ⁶ Remaining items in the consolidated financial statement of the Eurosystem and the financial statement of the Bundesbank. ⁷ Equal to the difference between the sum of liquidity-providing factors and the sum of liquidity-absorbing factors. ⁸ Calculated as the sum of the "deposit facility", "banknotes in circulation" and "credit institutions' current account holdings".

III Consolidated financial statement of the Eurosystem

1 Assets *

€ billion

On reporting date/ End of month 1	Total assets	Gold and gold receivables	Claims on non-euro area residents denominated in foreign currency			Claims on euro area residents denominated in foreign currency	Claims on non-euro area residents denominated in euro		
			Total	Receivables from the IMF	Balances with banks, security investments, external loans and other external assets		Total	Balances with banks, security investments and loans	Claims arising from the credit facility under ERM II
Eurosystem ²									
2016 Feb 5	2,811.9	338.7	304.8	79.3	225.5	31.9	22.7	22.7	–
12	2,827.6	338.7	304.5	78.6	225.9	32.0	22.3	22.3	–
19	2,837.6	338.7	305.1	78.1	227.0	31.0	21.3	21.3	–
26	2,850.3	338.7	307.3	79.7	227.6	31.5	21.6	21.6	–
Mar 4	2,859.8	338.7	306.9	79.7	227.2	32.6	21.8	21.8	–
11	2,872.3	338.7	306.9	79.7	227.3	32.2	22.1	22.1	–
18	2,886.2	338.7	307.9	79.7	228.2	29.5	21.4	21.4	–
25	2,897.7	338.7	309.2	79.7	229.5	27.9	21.8	21.8	–
Apr 1	2,941.8	377.3	297.5	77.4	220.1	29.2	20.9	20.9	–
8	2,953.1	377.3	296.1	77.4	218.6	30.5	19.4	19.4	–
15	2,966.1	377.3	295.5	77.4	218.0	31.7	18.5	18.5	–
22	2,983.2	377.3	294.8	77.4	217.4	31.9	18.2	18.2	–
29	3,000.8	377.3	296.5	77.2	219.4	32.3	18.0	18.0	–
May 6	3,017.8	377.3	298.2	77.0	221.1	29.0	17.5	17.5	–
13	3,032.8	377.3	298.7	77.0	221.8	29.7	17.6	17.6	–
20	3,054.1	377.3	297.6	76.8	220.8	30.9	18.0	18.0	–
27	3,067.5	377.3	299.0	76.8	222.2	30.4	18.4	18.4	–
June 3	3,078.6	377.3	300.6	76.8	223.7	30.1	18.6	18.6	–
10	3,093.9	377.3	300.0	76.6	223.4	30.3	18.8	18.8	–
17	3,109.6	377.3	298.0	76.6	221.4	31.1	17.8	17.8	–
24	3,131.1	377.3	299.6	76.6	223.1	30.1	18.3	18.3	–
2016 July 1	3,232.6	413.1	309.0	77.6	231.3	33.2	18.3	18.3	–
8	3,237.9	413.1	307.8	77.6	230.1	34.7	18.4	18.4	–
15	3,249.2	413.1	305.9	77.6	228.3	33.9	17.9	17.9	–
22	3,265.8	413.1	308.6	77.6	231.0	30.6	17.3	17.3	–
29	3,284.3	413.1	307.6	77.4	230.1	33.2	17.5	17.5	–
Aug 5	3,286.1	413.1	308.4	77.2	231.2	32.9	16.6	16.6	–
12	3,296.6	413.1	307.3	77.2	230.1	33.6	17.1	17.1	–
19	3,313.3	413.1	308.9	77.2	231.6	32.2	17.2	17.2	–
26	3,330.5	413.1	310.1	77.2	232.8	32.6	17.2	17.2	–
Sep 2	3,341.8	413.1	311.3	77.3	234.0	30.5	17.3	17.3	–
9	3,358.7	413.1	311.6	77.3	234.3	30.4	17.2	17.2	–
16	3,372.4	413.1	312.3	77.3	235.0	29.9	17.0	17.0	–
23	3,391.4	413.1	314.5	77.3	237.3	29.6	17.8	17.8	–
30	3,438.1	412.6	315.2	77.8	237.4	33.9	19.6	19.6	–
Oct 7	3,451.4	412.6	313.7	77.8	235.8	32.5	19.0	19.0	–
Deutsche Bundesbank									
2014 Nov	734.0	104.6	52.0	21.6	30.3	–	–	–	–
Dec	771.0	107.5	51.3	20.6	30.6	–	–	–	–
2015 Jan	805.7	107.5	51.6	20.4	31.2	–	–	–	–
Feb	800.2	107.5	51.9	20.3	31.6	–	–	–	–
Mar	847.9	120.0	56.9	21.3	35.7	–	–	–	–
Apr	856.5	120.0	56.9	21.2	35.6	0.0	–	–	–
May	860.3	120.0	56.8	21.1	35.7	0.0	–	–	–
June	880.1	113.8	54.5	20.6	33.8	–	–	–	–
July	903.5	113.8	53.3	19.9	33.4	–	–	–	–
Aug	930.8	113.8	53.1	20.2	32.9	–	–	–	–
Sep	936.9	109.0	53.0	20.1	32.8	–	–	–	–
Oct	956.3	109.0	53.1	20.1	33.0	–	–	–	–
Nov	1 002.6	109.0	52.6	20.0	32.6	0.0	–	–	–
Dec	1 011.5	105.8	53.7	20.3	33.4	–	0.0	0.0	–
2016 Jan	1 018.5	105.8	53.6	20.4	33.2	0.0	–	–	–
Feb	1 043.7	105.8	55.0	22.0	33.0	0.0	–	–	–
Mar	1 077.6	117.8	53.4	21.5	32.0	0.0	–	–	–
Apr	1 112.7	117.8	54.1	21.5	32.7	0.0	0.0	0.0	–
May	1 159.5	117.8	54.9	21.5	33.4	0.0	–	–	–
June	1 214.0	129.0	55.7	21.5	34.1	0.7	–	–	–
July	1 209.4	129.0	56.0	21.5	34.5	0.2	–	–	–
Aug	1 239.2	129.0	56.1	21.4	34.7	0.3	–	–	–
Sep	1 305.3	128.8	55.0	21.3	33.7	2.3	0.4	0.4	–

* The consolidated financial statement of the Eurosystem comprises the financial statement of the European Central Bank (ECB) and the financial statements of the

national central banks of the euro area member states (NCBs). The balance sheet items for foreign currency, securities, gold and financial instruments are valued at the

III Consolidated financial statement of the Eurosystem

Liabilities to non-euro area residents denominated in euro	Liabilities to euro area residents in foreign currency	Liabilities to non-euro area residents denominated in foreign currency			Counterpart of special drawing rights allocated by the IMF	Other liabilities ³	Intra-Eurosystem liability related to euro banknote issue ²	Revaluation accounts	Capital and reserves	On reporting date/ End of month ¹
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
Eurosystem ⁴										
46.5	4.8	3.8	3.8	—	59.2	214.9	—	346.2	97.7	2016 Feb 5
52.3	3.6	4.3	4.3	—	59.2	216.7	—	346.2	98.2	12
49.9	3.9	4.5	4.5	—	59.2	212.8	—	346.2	98.2	19
52.3	5.3	5.0	5.0	—	59.2	210.2	—	346.2	98.2	26
54.5	7.2	4.1	4.1	—	59.2	209.4	—	346.2	98.2	Mar 4
55.7	6.8	4.6	4.6	—	59.2	210.4	—	346.2	98.2	11
58.7	5.7	4.9	4.9	—	59.2	212.1	—	346.2	98.2	18
56.7	4.6	4.7	4.7	—	59.2	211.9	—	346.2	98.5	25
53.2	4.5	3.6	3.6	—	57.5	208.4	—	376.0	98.7	Apr 1
47.6	4.3	4.0	4.0	—	57.5	205.9	—	376.0	98.7	8
51.9	3.8	4.0	4.0	—	57.5	204.4	—	376.0	98.7	15
55.0	3.2	4.2	4.2	—	57.5	205.2	—	376.0	98.7	22
67.4	4.0	4.3	4.3	—	57.5	205.2	—	376.0	98.7	29
57.0	2.8	4.2	4.2	—	57.5	208.5	—	376.0	99.0	May 6
59.0	2.8	4.9	4.9	—	57.5	206.7	—	376.0	99.1	13
62.2	3.3	5.1	5.1	—	57.5	211.9	—	376.0	99.0	20
58.5	2.9	5.7	5.7	—	57.5	203.9	—	376.0	99.0	27
56.1	3.2	6.3	6.3	—	57.5	203.5	—	376.0	99.0	June 3
58.2	3.3	6.0	6.0	—	57.5	202.9	—	376.0	99.0	10
59.7	2.9	5.0	5.0	—	57.5	203.8	—	376.0	99.0	17
56.6	3.1	4.5	4.5	—	57.5	203.3	—	376.0	100.8	24
70.9	3.0	5.2	5.2	—	58.5	206.3	—	420.9	100.8	2016 July 1
79.2	3.4	5.5	5.5	—	58.5	206.0	—	420.9	100.8	8
72.8	3.5	6.2	6.2	—	58.5	205.8	—	420.9	100.8	15
79.0	3.0	6.4	6.4	—	58.5	205.0	—	420.9	100.8	22
83.0	3.1	7.4	7.4	—	58.5	203.3	—	420.9	100.8	29
83.8	3.2	7.9	7.9	—	58.5	204.8	—	420.9	100.8	Aug 5
76.1	3.1	7.8	7.8	—	58.5	202.7	—	420.9	100.8	12
77.4	3.1	8.1	8.1	—	58.5	203.4	—	420.9	100.8	19
81.2	3.1	8.6	8.6	—	58.5	203.4	—	420.9	100.8	26
85.6	3.2	8.6	8.6	—	58.5	204.5	—	420.9	100.8	Sep 2
72.6	3.1	8.2	8.2	—	58.5	204.0	—	420.9	100.8	9
84.0	3.0	8.7	8.7	—	58.5	205.8	—	420.9	100.8	16
93.4	2.9	8.8	8.8	—	58.5	209.2	—	420.9	100.8	23
122.8	2.8	8.8	8.8	—	58.1	207.3	—	418.5	100.8	30
101.7	4.2	8.8	8.8	—	58.1	207.1	—	418.5	100.8	Oct 7
Deutsche Bundesbank										
2.9	0.0	1.6	1.6	—	14.2	25.2	264.4	100.8	5.0	2014 Nov
12.3	0.0	0.8	0.8	—	14.4	25.5	267.9	104.5	5.0	Dec
54.0	0.0	1.3	1.3	—	14.4	25.0	270.3	104.5	5.0	2015 Jan
33.9	0.0	1.9	1.9	—	14.4	25.2	272.4	104.5	5.0	Feb
17.1	0.0	2.1	2.1	—	15.5	23.0	274.7	121.0	5.0	Mar
12.9	0.0	2.1	2.1	—	15.5	23.1	276.9	121.0	5.0	Apr
7.2	0.0	2.2	2.2	—	15.5	23.2	279.3	121.0	5.0	May
9.2	0.0	1.3	1.3	—	15.2	23.5	280.2	113.1	5.0	June
12.1	0.0	0.9	0.9	—	15.2	23.6	284.9	113.1	5.0	July
10.0	0.0	0.5	0.5	—	15.2	23.7	287.3	113.1	5.0	Aug
16.2	0.0	0.5	0.5	—	15.1	24.0	290.1	108.2	5.0	Sep
12.4	0.0	0.8	0.8	—	15.1	24.1	293.1	108.2	5.0	Oct
13.9	0.0	0.4	0.4	—	15.1	24.2	295.2	108.2	5.0	Nov
27.2	0.0	0.6	0.6	—	15.3	24.4	297.8	105.7	5.0	Dec
16.0	0.0	0.1	0.1	—	15.3	25.0	297.1	105.7	5.0	2016 Jan
28.0	0.0	0.2	0.2	—	15.3	22.0	297.7	105.7	5.0	Feb
30.5	0.0	0.3	0.3	—	14.9	22.8	299.8	116.2	5.0	Mar
30.7	0.0	0.8	0.8	—	14.9	22.9	300.9	116.2	5.0	Apr
27.2	0.0	1.4	1.4	—	14.9	23.1	303.9	116.2	5.0	May
47.0	0.0	1.0	1.0	—	15.2	23.4	308.0	128.5	5.0	June
43.8	0.0	1.4	1.4	—	15.2	23.6	311.7	128.5	5.0	July
48.9	0.0	1.7	1.7	—	15.2	23.7	314.1	128.5	5.0	Aug
70.3	0.0	1.1	1.1	—	15.1	24.0	318.8	128.0	5.0	Sep

remaining 92 % of the value of the euro banknote in circulation is also allocated to the NCBs on a monthly basis, and each NCB shows in its balance sheet the share of the euro banknotes issued which corresponds to its paid-up share in the ECB's capital. The difference between the value of the euro banknotes allocated to the NCB

according to the aforementioned accounting regime and the value of euro banknotes put into circulation is also disclosed as an "Intra-Eurosystem claim/ liability related to banknote issue". ³ For the Deutsche Bundesbank: including DM banknotes still in circulation. ⁴ Source: ECB.

IV Banks

2 Principal assets and liabilities of banks (MFIs) in Germany, by category of banks*

€ billion

End of month	Number of reporting institutions	Balance sheet total ¹	Cash in hand and credit balances with central banks	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)					Participating interests	Other assets ¹
				Total	of which		Total	of which			Securities issued by non-banks		
					Balances and loans	Securities issued by banks		Loans		Bills			
							for up to and including 1 year	for more than 1 year					
All categories of banks													
2016 Mar	1,771	7,826.0	194.6	2,415.9	1,892.9	518.0	4,001.6	357.4	2,855.3	0.7	777.9	119.4	1,094.5
Apr	1,769	7,849.5	207.7	2,456.6	1,934.4	516.7	4,023.1	371.9	2,866.1	0.7	773.7	119.0	1,043.1
May	1,769	7,860.5	226.7	2,431.2	1,912.1	513.8	4,031.1	368.5	2,876.2	0.6	775.5	119.1	1,052.4
June	1,764	7,963.8	243.4	2,447.8	1,929.9	512.6	4,010.8	355.9	2,876.6	0.6	769.7	119.4	1,142.4
July	1,754	7,985.3	264.9	2,438.2	1,928.9	505.3	4,030.4	366.6	2,887.9	0.5	769.5	119.7	1,132.0
Aug	1,749	7,951.8	273.2	2,429.6	1,923.8	502.0	4,031.3	360.2	2,900.7	0.5	763.4	120.0	1,097.7
Commercial banks ⁶													
2016 July	266	3,276.1	177.2	1,002.2	915.7	86.3	1,191.0	190.3	752.6	0.3	244.9	56.9	848.8
Aug	266	3,248.9	189.3	997.3	912.0	85.2	1,189.4	185.6	757.3	0.3	242.2	57.0	815.9
Big banks ⁷													
2016 July	4	1,993.9	52.2	573.0	534.6	38.3	505.3	106.8	277.1	0.1	118.9	50.3	813.1
Aug	4	1,963.7	66.0	561.4	524.3	37.0	505.8	106.1	278.7	0.1	117.5	50.3	780.3
Regional banks and other commercial banks													
2016 July	159	944.9	69.9	228.2	184.6	43.5	611.9	61.2	435.4	0.2	114.8	5.6	29.3
Aug	159	933.3	59.5	227.8	184.0	43.7	611.0	58.6	437.7	0.2	114.1	5.8	29.3
Branches of foreign banks													
2016 July	103	337.3	55.0	201.0	196.5	4.5	73.8	22.3	40.1	-	11.2	0.9	6.4
Aug	103	351.9	63.8	208.2	203.8	4.5	72.7	20.8	40.9	-	10.7	0.9	6.3
Landesbanken													
2016 July	9	945.2	13.2	283.8	212.2	71.2	509.0	56.1	360.1	0.1	91.4	11.0	128.3
Aug	9	938.6	13.4	281.1	211.1	69.6	504.9	55.8	360.3	0.1	87.9	10.9	128.4
Savings banks													
2016 July	408	1,153.9	23.7	185.0	66.0	118.8	915.4	49.7	710.4	0.1	155.1	14.5	15.4
Aug	408	1,157.0	21.5	187.4	68.0	119.2	918.2	48.6	713.9	0.1	155.4	14.5	15.4
Credit cooperatives													
2016 July	1,014	834.8	12.7	169.2	61.2	107.3	618.9	31.9	485.5	0.1	101.3	15.6	18.4
Aug	1,010	837.0	13.1	167.2	59.1	107.5	622.6	31.8	488.5	0.0	102.1	15.7	18.5
Mortgage banks													
2016 July	15	286.8	1.7	52.9	37.4	15.3	222.7	4.7	177.0	-	40.9	0.2	9.4
Aug	15	286.3	2.0	52.7	37.6	14.8	222.0	4.7	176.8	-	40.5	0.2	9.4
Building and loan associations													
2016 July	21	214.5	0.9	57.8	40.4	17.4	151.1	1.4	127.0	.	22.8	0.3	4.4
Aug	20	214.7	1.2	57.2	40.0	17.2	151.7	1.3	127.5	.	22.9	0.3	4.4
Banks with special, development and other central support tasks													
From July 2016 including DZ BANK AG Deutsche Zentral- Genossenschaftsbank, Frankfurt am Main (DZ Bank)													
2016 July	21	1,273.9	35.6	687.3	596.0	89.0	422.4	32.5	275.3	0.0	113.1	21.3	107.3
Aug	21	1,269.1	32.7	686.7	596.1	88.5	422.6	32.4	276.4	0.0	112.4	21.4	105.7
Memo item: Foreign banks ⁸													
2016 July	137	1,053.8	103.4	385.6	342.9	42.6	457.0	64.2	277.6	0.2	112.4	4.4	103.4
Aug	138	1,053.6	98.0	390.0	347.7	42.3	458.0	62.6	280.5	0.2	112.1	4.4	103.1
of which: Banks majority-owned by foreign banks ⁹													
2016 July	34	716.5	48.4	184.5	146.4	38.1	383.2	41.9	237.5	0.2	101.2	3.5	96.9
Aug	35	701.6	34.2	181.8	144.0	37.8	385.3	41.8	239.6	0.2	101.4	3.5	96.8

* Assets and liabilities of monetary financial institutions (MFIs) in Germany. The assets and liabilities of foreign branches, of money market funds (which are also classified as MFIs) and of the Bundesbank are not included. For the definitions of the respective items, see the footnotes to Table IV.3. ¹ Owing to the Act Modernising Accounting Law (Gesetz zur Modernisierung des Bilanzrechts) of 25 May 2009, derivative financial instruments in the trading portfolio (trading portfolio derivatives) within the

meaning of section 340e (3) sentence 1 of the German Commercial Code (Handelsgesetzbuch) read in conjunction with section 35 (1) No 1a of the Credit Institution Accounting Regulation (Verordnung über die Rechnungslegung der Kreditinstitute) are classified under "Other assets and liabilities" as of the December 2010 reporting date. Trading portfolio derivatives are listed separately in the Statistical Supplement to the Monthly Report 1, Banking statistics, in Tables I.1 to I.3. ² For building and

IV Banks

Deposits of banks (MFIs)			Deposits of non-banks (non-MFIs)										Capital including published reserves, participation rights capital, funds for general banking risks	Other liabilities ¹	End of month	
of which		Total	of which		Time deposits ²		Memo item Liabilities arising from repos ³	Savings deposits ⁴		Bank savings bonds	Bearer debt securities outstanding ⁵					
Sight deposits	Time deposits		Sight deposits	for up to and including 1 year	for more than 1 year ²	of which At three months' notice		Total								
All categories of banks																
1,682.0	497.5	1,184.5	3,450.0	1,807.2	281.8	694.8	40.4	603.2	543.6	63.0	1,110.4	480.2	1,103.3	2016 Mar		
1,718.2	493.9	1,224.2	3,483.4	1,836.5	290.4	692.7	60.3	601.4	542.9	62.4	1,119.0	483.5	1,045.4	Apr		
1,691.4	531.5	1,159.8	3,502.4	1,852.5	294.6	693.4	58.2	599.8	542.3	62.2	1,132.7	480.6	1,053.4	May		
1,717.7	550.2	1,167.4	3,495.4	1,855.4	285.8	694.0	48.7	598.6	541.8	61.7	1,125.6	485.3	1,139.9	June		
1,729.0	548.3	1,180.6	3,519.6	1,866.2	299.0	695.6	60.7	597.6	541.7	61.3	1,113.0	486.6	1,137.1	July		
1,717.1	535.9	1,181.1	3,530.4	1,875.8	302.4	694.7	65.0	596.8	541.7	60.7	1,116.8	484.9	1,102.6	Aug		
Commercial banks ⁶																
798.9	377.6	421.3	1,348.6	813.2	165.9	240.7	43.5	104.0	96.1	24.8	157.7	163.6	807.3	2016 July		
795.8	372.9	422.9	1,357.6	818.6	170.6	240.1	48.2	103.6	95.9	24.7	156.7	164.5	774.2	Aug		
Big banks ⁷																
438.4	196.1	242.3	581.6	329.1	95.8	86.5	43.5	64.5	63.1	5.8	123.1	97.1	753.7	2016 July		
436.0	203.3	232.6	586.6	330.2	100.0	86.5	48.2	64.2	62.8	5.8	122.7	97.1	721.3	Aug		
Regional banks and other commercial banks																
185.6	74.5	111.0	620.5	388.4	47.8	127.4	0.0	39.1	32.8	17.7	34.2	58.4	46.3	2016 July		
170.7	59.1	111.5	623.9	392.3	48.1	126.9	-	39.0	32.8	17.7	33.6	59.3	45.8	Aug		
Branches of foreign banks																
175.0	107.0	68.0	146.4	95.6	22.3	26.8	-	0.4	0.2	1.3	0.5	8.1	7.3	2016 July		
189.2	110.4	78.8	147.1	96.1	22.5	26.8	-	0.5	0.2	1.2	0.4	8.1	7.1	Aug		
Landesbanken																
263.4	53.1	210.2	296.4	122.4	64.7	95.5	11.8	13.6	10.5	0.2	204.0	55.3	126.2	2016 July		
262.4	55.2	207.2	294.5	120.0	65.1	95.7	12.8	13.5	10.6	0.2	202.7	55.3	123.7	Aug		
Savings banks																
133.4	9.9	123.5	865.9	513.5	16.5	15.3	-	293.7	262.9	26.9	13.8	101.0	39.8	2016 July		
131.4	8.8	122.6	870.5	519.1	16.1	15.5	-	293.3	262.9	26.5	13.8	101.1	40.2	Aug		
Credit cooperatives																
105.4	2.3	103.1	621.4	378.8	32.7	16.4	-	185.9	171.7	7.7	8.4	68.7	30.8	2016 July		
104.9	2.6	102.3	624.1	381.5	32.6	16.4	-	185.9	172.0	7.6	8.2	68.8	31.1	Aug		
Mortgage banks																
52.9	6.7	46.1	119.6	8.2	10.0	101.3	-	0.1	0.1	.	94.6	9.7	10.1	2016 July		
52.2	6.7	45.5	118.7	8.2	9.7	100.7	-	0.1	0.1	.	95.6	9.7	10.1	Aug		
Building and loan associations																
21.7	3.9	17.8	165.9	1.1	0.9	163.4	-	0.3	0.3	0.2	2.5	10.2	14.2	2016 July		
21.7	4.3	17.5	166.1	1.1	0.9	163.6	-	0.3	0.3	0.2	2.5	10.2	14.2	Aug		
Banks with special, development and other central support tasks																
From July 2016 including DZ Bank																
353.3	94.7	258.6	101.9	29.1	8.3	63.0	5.4	-	-	.	632.1	78.0	108.7	2016 July		
348.6	85.4	263.3	98.8	27.4	7.3	62.6	4.1	-	-	.	637.3	75.3	109.1	Aug		
Memo item: Foreign banks ⁸																
359.1	190.0	169.1	517.6	355.0	53.0	79.5	9.4	21.4	20.9	8.6	21.1	50.3	105.7	2016 July		
356.3	178.4	178.0	521.0	358.2	53.7	79.2	10.0	21.4	20.9	8.5	20.9	50.8	104.5	Aug		
of which: Banks majority-owned by foreign banks ⁹																
184.1	83.0	101.1	371.2	259.4	30.7	52.8	9.4	21.0	20.7	7.3	20.6	42.2	98.4	2016 July		
167.2	68.0	99.2	373.9	262.1	31.2	52.4	10.0	20.9	20.7	7.3	20.5	42.7	97.4	Aug		

loan associations: Including deposits under savings and loan contracts (see Table IV.12). ³ Included in time deposits. ⁴ Excluding deposits under savings and loan contracts (see also footnote 2). ⁵ Including subordinated negotiable bearer debt securities; excluding non-negotiable bearer debt securities. ⁶ Commercial banks comprise the sub-groups "Big banks", "Regional banks and other commercial banks" and "Branches of foreign banks". ⁷ Deutsche Bank AG, Dresdner Bank AG (up to

Nov. 2009), Commerzbank AG, UniCredit Bank AG (formerly Bayerische Hypo- und Vereinsbank AG) and Deutsche Postbank AG. ⁸ Sum of the banks majority-owned by foreign banks and included in other categories of banks and the category "Branches (with dependent legal status) of foreign banks". ⁹ Separate presentation of the banks majority-owned by foreign banks included in other banking categories.

IV Banks

lending													Period
prises and households					to general government								
Loans			Securities	Memo item Fiduciary loans	Total	Loans			Secur- ities 1	Equal- isation claims 2	Memo item Fiduciary loans		
Total	Medium- term	Long- term				Total	Medium- term	Long- term					
End of year or month *													
1,972.7	194.5	1,778.1	209.1	48.2	515.8	358.4	31.7	326.6	157.4	-	4.8	2006	
1,987.3	207.7	1,779.6	181.1	46.5	476.2	332.5	31.9	300.6	143.7	-	4.7	2007	
2,022.0	222.0	1,800.0	235.8	42.8	440.3	308.2	29.7	278.5	132.1	-	4.5	2008	
2,051.3	242.7	1,808.6	248.4	39.6	453.1	298.0	32.2	265.8	155.1	-	4.3	2009	
2,070.0	238.1	1,831.8	235.7	30.7	487.3	301.2	36.1	265.1	186.1	-	3.1	2010	
2,099.5	247.9	1,851.7	222.4	32.7	492.6	299.1	41.1	258.0	193.5	-	3.6	2011	
2,119.5	249.7	1,869.8	191.4	31.4	533.4	292.7	39.4	253.3	240.7	-	3.5	2012	
2,136.9	248.0	1,888.9	191.7	28.9	534.0	288.4	38.8	249.7	245.6	-	2.7	2013	
2,172.7	251.7	1,921.0	204.2	24.4	532.9	283.1	33.5	249.6	249.8	-	2.1	2014	
2,232.4	256.0	1,976.3	219.0	18.3	527.0	277.0	27.9	249.0	250.0	-	2.1	2015	
2,180.6	251.7	1,928.9	218.6	23.8	534.8	281.9	32.3	249.5	252.9	-	2.1	2015 Mar	
2,182.1	250.5	1,931.7	221.3	23.7	533.7	280.8	29.5	251.3	252.9	-	2.1	Apr	
2,192.6	253.2	1,939.4	214.5	23.6	528.4	280.4	29.5	250.9	248.0	-	2.1	May	
2,190.5	251.5	1,939.0	206.5	23.3	524.2	278.3	28.7	249.5	246.0	-	2.0	June	
2,201.5	250.8	1,950.6	228.7	23.0	525.5	276.6	28.5	248.2	248.9	-	2.0	July	
2,208.2	251.0	1,957.2	224.4	22.9	528.9	275.7	28.2	247.6	253.1	-	2.0	Aug	
2,208.7	251.2	1,957.4	219.7	22.9	530.6	277.5	29.3	248.2	253.1	-	2.0	Sep	
2,220.0	253.2	1,966.8	213.8	22.7	530.2	278.5	29.3	249.2	251.8	-	2.0	Oct	
2,233.7	256.1	1,977.6	217.4	22.5	533.8	278.6	28.1	250.5	255.1	-	2.0	Nov	
2,232.4	256.0	1,976.3	219.0	18.3	527.0	277.0	27.9	249.0	250.0	-	2.1	Dec	
2,235.3	257.1	1,978.3	217.2	18.2	527.2	277.8	27.7	250.1	249.4	-	2.1	2016 Jan	
2,240.2	257.4	1,982.8	215.9	18.0	525.6	276.8	27.7	249.1	248.8	-	2.1	Feb	
2,240.5	257.3	1,983.2	213.5	17.9	521.8	275.6	27.5	248.1	246.2	-	2.0	Mar	
2,249.9	258.6	1,991.3	216.6	17.8	520.1	276.1	27.5	248.7	244.0	-	2.0	Apr	
2,255.8	258.0	1,997.8	216.9	17.7	516.0	275.1	27.1	247.9	240.9	-	2.0	May	
2,256.9	258.7	1,998.2	216.0	17.8	510.4	273.5	26.9	246.6	236.9	-	1.8	June	
2,266.8	258.5	2,008.2	217.1	17.7	511.7	272.7	25.9	246.8	239.0	-	1.8	July	
2,278.8	260.6	2,018.1	218.4	17.6	506.6	271.5	25.9	245.6	235.1	-	1.8	Aug	
Changes *													
+ 9.6	+ 10.1	- 0.6	- 16.7	- 2.2	- 36.3	- 25.8	+ 0.1	- 26.0	- 10.5	-	- 0.1	2007	
+ 28.8	+ 12.0	+ 16.8	+ 54.7	- 5.3	- 34.5	- 23.2	- 2.3	- 20.8	- 11.4	-	- 0.1	2008	
+ 23.5	+ 17.3	+ 6.3	+ 13.1	- 3.9	+ 15.2	- 7.6	+ 2.5	- 10.2	+ 22.8	-	- 0.2	2009	
+ 18.6	- 4.0	+ 22.6	- 3.8	- 1.7	+ 35.2	+ 3.5	+ 3.5	- 0.0	+ 31.7	-	- 0.3	2010	
+ 22.6	+ 2.2	+ 20.4	- 13.2	- 1.0	+ 5.2	- 2.1	+ 4.9	- 7.0	+ 7.3	-	- 0.2	2011	
+ 21.6	+ 1.5	+ 20.1	- 10.7	- 1.1	+ 19.8	- 6.6	- 1.9	- 4.7	+ 26.4	-	- 0.2	2012	
+ 17.7	- 0.1	+ 17.8	- 0.1	- 2.5	+ 0.6	- 4.3	- 0.7	- 3.6	+ 4.9	-	- 0.8	2013	
+ 39.9	+ 5.6	+ 34.3	+ 12.5	- 1.8	- 4.1	- 8.5	- 5.1	- 3.4	+ 4.3	-	- 0.2	2014	
+ 59.0	+ 4.5	+ 54.6	+ 14.8	- 2.1	- 6.6	- 6.9	- 4.8	- 2.0	+ 0.2	-	+ 0.0	2015	
+ 1.0	+ 0.2	+ 0.8	+ 6.6	- 0.2	- 2.9	- 1.2	- 0.3	- 0.9	+ 1.7	-	- 0.0	2015 Mar	
+ 1.6	- 1.2	+ 2.8	+ 2.7	- 0.1	- 1.0	- 1.1	- 1.8	+ 0.7	+ 0.0	-	- 0.0	Apr	
+ 10.6	+ 2.8	+ 7.8	- 6.8	- 0.1	- 5.5	- 0.5	- 0.1	- 0.5	- 4.9	-	- 0.0	May	
- 2.1	- 1.7	- 0.4	- 8.0	- 0.3	- 4.2	- 2.1	- 0.7	- 1.4	- 2.0	-	- 0.1	June	
+ 9.7	- 0.7	+ 10.4	+ 22.2	- 0.3	+ 2.5	- 0.4	- 0.2	- 0.2	+ 2.9	-	- 0.0	July	
+ 6.9	+ 0.1	+ 6.8	- 4.3	- 0.1	+ 3.1	- 1.1	- 0.3	- 0.8	+ 4.3	-	- 0.0	Aug	
+ 1.3	+ 0.6	+ 0.7	- 4.7	- 0.1	+ 1.0	+ 1.0	+ 0.9	+ 0.2	- 0.1	-	- 0.0	Sep	
+ 11.6	+ 1.9	+ 9.7	- 5.9	- 0.1	- 0.7	+ 0.6	- 0.1	+ 0.7	- 1.3	-	- 0.0	Oct	
+ 10.5	+ 2.0	+ 8.6	+ 3.6	- 0.2	+ 3.5	+ 0.2	- 1.1	+ 1.3	+ 3.4	-	-	Nov	
- 1.3	- 0.1	- 1.2	+ 1.6	- 0.2	- 6.8	- 1.7	- 0.2	- 1.5	- 5.1	-	+ 0.1	Dec	
+ 3.0	+ 0.4	+ 2.5	- 1.8	- 0.1	+ 0.2	+ 0.9	- 0.2	+ 1.1	- 0.6	-	+ 0.0	2016 Jan	
+ 4.8	+ 1.0	+ 3.7	- 1.1	- 0.1	- 1.7	- 1.1	- 0.0	- 1.0	- 0.6	-	+ 0.0	Feb	
+ 0.2	- 0.1	+ 0.2	- 2.4	- 0.2	- 3.8	- 1.2	- 0.2	- 1.0	- 2.6	-	- 0.1	Mar	
+ 9.2	+ 1.2	+ 8.0	+ 3.0	- 0.0	- 1.6	+ 0.6	- 0.0	+ 0.6	- 2.2	-	- 0.0	Apr	
+ 7.4	+ 0.8	+ 6.6	+ 0.3	- 0.1	- 4.2	- 1.1	- 0.4	- 0.8	- 3.1	-	- 0.0	May	
+ 1.2	+ 0.7	+ 0.5	- 0.9	+ 0.1	- 5.6	- 1.6	- 0.2	- 1.4	- 4.0	-	- 0.2	June	
+ 10.8	+ 0.8	+ 10.1	+ 1.1	- 0.1	+ 1.3	- 0.8	- 1.0	+ 0.2	+ 2.1	-	- 0.0	July	
+ 12.0	+ 2.1	+ 9.9	+ 1.3	- 0.1	- 5.1	- 1.2	- 0.0	- 1.2	- 3.9	-	- 0.0	Aug	

IV Banks

						Lending to employees and other individuals					Lending to non-profit institutions			
Services sector (including the professions)				Memo items		Total	Housing loans	Other lending			Total	of which Housing loans	Period	
Total	of which			Lending to self-employed persons ²	Lending to craft enterprises			Total	of which	Instalment loans ³				Debit balances on wage, salary and pension accounts
	Housing enterprises	Holding companies	Other real estate activities											
End of year or quarter *													Lending, total	
644.1	188.1	33.9	173.8	389.8	47.9	1,078.6	856.6	222.0	150.0	10.7	14.5	3.8	2014	
650.7	190.9	34.8	174.6	393.1	48.1	1,089.6	866.8	222.8	151.6	11.0	14.1	3.5	2015 June	
649.0	191.5	32.0	175.9	394.7	47.7	1,103.0	878.4	224.6	153.6	11.0	14.2	3.6	Sep	
654.3	193.4	32.4	176.5	395.6	46.8	1,111.6	887.1	224.6	154.4	10.1	14.2	3.5	Dec	
660.2	194.8	34.4	177.4	397.2	47.1	1,115.9	889.2	226.6	156.8	10.3	14.1	3.4	2016 Mar	
667.2	198.4	34.6	178.1	399.4	46.9	1,127.6	898.7	228.9	159.6	9.8	14.0	3.5	June	
													Short-term lending	
52.9	8.5	6.1	11.8	26.6	6.2	34.2	3.7	30.5	1.9	10.7	0.7	0.0	2014	
54.9	8.6	6.9	10.9	27.0	6.6	33.7	4.1	29.5	1.9	11.0	0.6	0.0	2015 June	
51.0	8.6	6.2	10.4	26.1	6.3	33.8	4.2	29.6	1.7	11.0	0.6	0.0	Sep	
48.7	8.7	4.9	10.7	25.4	5.6	33.2	4.2	29.0	1.7	10.1	0.5	0.0	Dec	
50.3	8.1	6.5	10.5	25.6	6.2	32.4	3.7	28.7	1.8	10.3	0.5	0.0	2016 Mar	
51.2	8.6	6.1	10.7	25.5	5.9	31.6	3.6	28.1	1.8	9.8	0.5	0.0	June	
													Medium-term lending	
68.2	9.4	7.0	19.8	32.0	3.5	72.8	22.4	50.4	45.2	-	0.5	0.0	2014	
66.9	9.9	7.0	19.4	32.1	3.6	73.2	22.0	51.2	46.2	-	0.5	0.0	2015 June	
66.5	9.9	7.0	19.5	32.3	3.5	73.9	22.1	51.9	46.9	-	0.5	0.0	Sep	
68.4	10.1	7.3	19.3	32.4	3.5	74.2	21.9	52.3	47.4	-	0.6	0.0	Dec	
69.1	10.1	7.2	19.4	32.7	3.5	74.9	21.5	53.3	48.1	-	0.6	0.0	2016 Mar	
70.1	10.6	7.3	19.0	33.0	3.6	76.0	21.4	54.6	49.3	-	0.6	0.0	June	
													Long-term lending	
523.0	170.2	20.9	142.2	331.2	38.2	971.6	830.5	141.1	102.8	-	13.4	3.7	2014	
528.8	172.4	20.8	144.3	333.9	37.9	982.7	840.6	142.1	103.6	-	13.0	3.5	2015 June	
531.5	173.0	18.8	146.0	336.3	37.9	995.3	852.1	143.2	105.0	-	13.2	3.6	Sep	
537.3	174.6	20.2	146.5	337.8	37.7	1,004.2	861.0	143.3	105.3	-	13.0	3.5	Dec	
540.8	176.7	20.7	147.6	338.9	37.4	1,008.6	864.0	144.6	106.9	-	13.0	3.4	2016 Mar	
545.8	179.2	21.2	148.5	340.9	37.4	1,019.9	873.7	146.2	108.6	-	13.0	3.4	June	
Change during quarter *													Lending, total	
+ 4.9	+ 2.0	+ 1.0	+ 0.9	+ 2.3	- 0.1	+ 9.6	+ 8.6	+ 1.0	+ 1.7	- 0.3	- 0.3	- 0.3	2015 Q2	
- 1.1	+ 0.6	- 1.1	+ 1.4	+ 1.9	- 0.3	+ 13.5	+ 11.5	+ 2.0	+ 1.9	+ 0.0	+ 0.3	+ 0.1	Q3	
+ 4.6	+ 2.0	+ 0.3	+ 0.6	+ 0.8	- 0.9	+ 9.0	+ 8.5	+ 0.6	+ 1.0	- 0.9	- 0.3	- 0.1	Q4	
+ 6.1	+ 1.8	+ 1.8	+ 0.9	+ 1.1	+ 0.6	+ 4.4	+ 2.6	+ 1.7	+ 1.9	+ 0.2	- 0.0	- 0.0	2016 Q1	
+ 7.3	+ 3.1	+ 0.1	+ 1.3	+ 2.1	- 0.1	+ 11.8	+ 9.5	+ 2.3	+ 2.9	- 0.5	- 0.0	+ 0.0	Q2	
													Short-term lending	
+ 2.4	+ 0.3	+ 1.0	- 0.1	- 0.1	- 0.1	- 0.5	+ 0.3	- 0.9	- 0.2	- 0.3	- 0.1	- 0.0	2015 Q2	
- 3.7	+ 0.1	- 0.7	- 0.4	- 1.0	- 0.2	+ 0.1	+ 0.1	+ 0.0	- 0.1	+ 0.0	- 0.0	+ 0.0	Q3	
- 1.6	+ 0.1	- 1.1	+ 0.4	- 0.9	- 0.8	+ 0.0	+ 0.0	- 0.0	+ 0.1	- 0.9	- 0.0	+ 0.0	Q4	
+ 2.1	- 0.4	+ 1.7	- 0.2	+ 0.2	+ 0.6	- 0.8	- 0.2	- 0.7	+ 0.1	+ 0.2	- 0.0	+ 0.0	2016 Q1	
+ 1.0	+ 0.5	- 0.4	+ 0.3	- 0.2	- 0.3	- 0.7	- 0.1	- 0.6	- 0.1	- 0.5	- 0.0	-	Q2	
													Medium-term lending	
- 0.6	+ 0.2	- 0.2	+ 0.3	+ 0.2	+ 0.1	+ 1.1	- 0.1	+ 1.1	+ 1.2	-	+ 0.0	- 0.0	2015 Q2	
- 0.3	- 0.0	+ 0.1	+ 0.1	+ 0.1	- 0.1	+ 0.7	+ 0.1	+ 0.7	+ 0.7	-	+ 0.0	+ 0.0	Q3	
+ 1.3	+ 0.1	+ 0.3	- 0.2	+ 0.1	- 0.0	+ 0.4	- 0.2	+ 0.6	+ 0.5	-	-	- 0.0	Q4	
+ 0.8	- 0.0	- 0.2	+ 0.1	+ 0.1	+ 0.1	+ 0.8	- 0.3	+ 1.1	+ 0.7	-	+ 0.0	+ 0.0	2016 Q1	
+ 1.2	+ 0.5	+ 0.0	- 0.2	+ 0.4	+ 0.1	+ 1.1	- 0.1	+ 1.2	+ 1.2	-	- 0.0	+ 0.0	Q2	
													Long-term lending	
+ 3.2	+ 1.5	+ 0.2	+ 0.7	+ 2.3	- 0.1	+ 9.1	+ 8.3	+ 0.8	+ 0.7	-	- 0.2	- 0.3	2015 Q2	
+ 2.9	+ 0.5	- 0.5	+ 1.7	+ 2.8	- 0.0	+ 12.7	+ 11.4	+ 1.3	+ 1.4	-	+ 0.3	+ 0.1	Q3	
+ 5.0	+ 1.7	+ 1.0	+ 0.5	+ 1.5	- 0.2	+ 8.6	+ 8.6	+ 0.0	+ 0.4	-	- 0.2	- 0.1	Q4	
+ 3.2	+ 2.2	+ 0.3	+ 1.0	+ 0.8	- 0.1	+ 4.4	+ 3.1	+ 1.3	+ 1.1	-	+ 0.0	- 0.0	2016 Q1	
+ 5.2	+ 2.1	+ 0.5	+ 1.3	+ 1.9	+ 0.1	+ 11.4	+ 9.7	+ 1.7	+ 1.7	-	- 0.0	+ 0.0	Q2	

are not specially marked. **1** Excluding fiduciary loans. **2** Including sole proprietors.
3 Excluding mortgage loans and housing loans, even in the form of instalment credit.

IV Banks

8 Deposits of domestic households and non-profit institutions at banks (MFIs) in Germany*

€ billion

Period	Sight deposits						Time deposits 1,2					
	Total	by creditor group					Total	by creditor group				
		Domestic households						Domestic non-profit institutions				
		Total	Self-employed persons	Employees	Other individuals	Domestic non-profit institutions		Total	Self-employed persons	Employees	Other individuals	
End of year or month*												
2013	1,854.4	932.5	906.3	161.3	613.0	132.0	26.2	262.8	247.2	16.5	215.1	15.6
2014	1,923.6	1,008.3	980.1	173.3	673.0	133.8	28.2	269.3	254.7	27.8	185.0	41.8
2015	1,997.5	1,113.3	1,081.2	188.9	748.6	143.7	32.1	259.3	246.2	24.9	179.8	41.6
2016 Mar	2,003.0	1,122.1	1,088.6	188.6	756.1	143.9	33.5	259.7	247.0	24.8	180.6	41.7
Apr	2,021.5	1,142.1	1,108.3	193.2	769.7	145.5	33.8	260.7	247.7	25.1	180.7	41.9
May	2,023.0	1,144.9	1,110.3	193.7	771.7	144.9	34.7	261.5	248.5	25.3	181.2	42.0
June	2,028.5	1,151.7	1,116.7	191.3	779.9	145.5	34.9	262.1	248.8	25.5	181.3	42.0
July	2,044.8	1,170.3	1,135.8	198.4	791.4	146.0	34.5	261.5	247.9	25.7	180.7	41.5
Aug	2,045.3	1,173.3	1,138.1	201.5	790.3	146.4	35.2	260.2	246.7	24.7	180.7	41.4
Changes*												
2014	+ 72.3	+ 77.2	+ 74.0	+ 11.7	+ 57.1	+ 5.3	+ 3.2	+ 8.1	+ 7.6	+ 1.9	+ 6.4	- 0.6
2015	+ 73.7	+ 105.0	+ 101.1	+ 15.6	+ 75.4	+ 10.1	+ 3.9	- 9.9	- 8.1	- 3.0	- 4.5	- 0.7
2016 Mar	- 4.8	- 3.3	- 2.7	- 4.0	+ 1.5	- 0.2	- 0.5	+ 0.6	+ 0.5	- 0.1	+ 0.4	+ 0.1
Apr	+ 18.5	+ 20.0	+ 19.7	+ 4.6	+ 13.5	+ 1.6	+ 0.3	+ 0.9	+ 0.7	+ 0.4	+ 0.1	+ 0.2
May	+ 1.5	+ 2.9	+ 2.0	+ 0.5	+ 2.0	- 0.6	+ 0.9	+ 0.9	+ 0.8	+ 0.2	+ 0.5	+ 0.2
June	+ 5.6	+ 6.7	+ 6.5	- 2.4	+ 8.3	+ 0.6	+ 0.3	+ 0.6	+ 0.3	+ 0.2	+ 0.1	- 0.0
July	+ 16.1	+ 18.4	+ 18.8	+ 7.1	+ 10.4	+ 1.4	- 0.4	- 0.6	- 0.9	+ 0.2	- 0.8	- 0.3
Aug	+ 0.5	+ 3.1	+ 2.3	+ 3.2	- 1.1	+ 0.3	+ 0.7	- 1.2	- 1.2	- 1.0	- 0.0	+ 0.2

* See Table IV.2, footnote*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent

revisions, which appear in the following Monthly Report, are not specially marked. 1 Including subordinated liabilities and liabilities arising from registered debt

9 Deposits of domestic government at banks (MFIs) in Germany, by creditor group*

€ billion

Period	Deposits												
	Domestic government, total	Federal Government and its special funds 1						State governments					
		Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds 2	Memo item Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds 2	Memo item Fiduciary loans
				for up to and including 1 year	for more than 1 year					for up to and including 1 year	for more than 1 year		
End of year or month*													
2013	183.0	16.0	2.9	7.7	5.3	0.1	15.7	43.6	10.2	10.1	23.0	0.2	14.6
2014	186.7	10.5	2.6	2.4	5.5	0.1	14.6	40.2	13.4	10.4	15.8	0.7	14.1
2015	197.4	9.6	3.1	3.9	2.6	0.1	14.1	44.3	13.2	13.7	16.5	0.9	13.5
2016 Mar	198.3	8.3	3.3	2.3	2.6	0.1	14.0	51.4	15.3	19.2	16.0	0.9	13.3
Apr	196.0	7.9	3.2	2.0	2.6	0.1	14.0	49.3	14.5	16.9	17.0	0.9	13.2
May	204.3	8.1	3.3	2.1	2.7	0.1	14.0	49.4	13.7	17.7	17.1	0.9	13.2
June	204.0	8.8	3.9	2.2	2.6	0.1	13.8	51.7	14.7	19.0	17.1	0.9	13.1
July	203.8	8.1	3.6	1.8	2.6	0.1	13.8	53.9	15.1	20.4	17.5	0.8	13.1
Aug	206.1	7.9	3.6	1.6	2.6	0.1	13.8	51.9	14.4	19.2	17.4	0.9	13.1
Changes*													
2014	- 1.2	- 3.3	- 0.3	- 2.9	- 0.1	+ 0.0	- 1.0	- 3.7	+ 2.8	+ 0.4	- 7.2	+ 0.4	- 0.5
2015	+ 10.1	- 1.9	+ 0.5	+ 0.4	- 2.9	+ 0.0	- 0.6	+ 4.0	- 0.3	+ 3.4	+ 0.7	+ 0.2	- 0.6
2016 Mar	+ 3.8	+ 0.4	+ 0.6	- 0.1	- 0.0	-	- 0.0	+ 4.4	+ 0.3	+ 4.5	- 0.4	+ 0.0	- 0.1
Apr	- 2.3	- 0.5	- 0.1	- 0.4	+ 0.0	- 0.0	+ 0.0	- 2.0	- 0.9	- 2.2	+ 1.0	+ 0.0	- 0.1
May	+ 8.2	+ 0.3	+ 0.1	+ 0.1	+ 0.0	+ 0.0	+ 0.0	- 0.0	- 0.9	+ 0.7	+ 0.1	- 0.0	- 0.0
June	- 0.2	+ 0.7	+ 0.6	+ 0.1	- 0.1	+ 0.0	- 0.3	+ 2.4	+ 1.1	+ 1.4	+ 0.0	- 0.0	- 0.0
July	- 0.2	- 0.7	- 0.3	- 0.3	- 0.0	- 0.0	+ 0.0	+ 2.2	+ 0.5	+ 1.4	+ 0.4	- 0.0	- 0.1
Aug	+ 2.1	- 0.2	+ 0.0	- 0.2	+ 0.0	-	+ 0.0	- 1.9	- 0.7	- 1.2	- 0.1	+ 0.0	+ 0.0

* See Table IV.2, footnote*; excluding deposits of the Treuhand agency and its successor organisations, of the Federal Railways, east German Railways and Federal Post Office, and, from 1995, of Deutsche Bahn AG, Deutsche Post AG and Deutsche

Telekom AG, and of publicly owned enterprises, which are included in "Enterprises". Statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in

IV Banks

					Savings deposits ³				Memo item				Period
by maturity					Total	Domestic households	Domestic non-profit institutions	Bank savings bonds ⁴	Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities) ⁵	Liabilities arising from repos		
Domestic non-profit institutions	up to and including 1 year	more than 1 year ²											
		Total	of which										
		up to and including 2 years	more than 2 years										
End of year or month*													
15.6	68.1	194.7	14.0	180.7	599.3	589.6	9.7	59.8	0.0	7.0	–	2013	
14.6	68.4	200.9	11.4	189.5	597.2	587.7	9.4	48.8	0.0	5.0	–	2014	
13.1	55.5	203.9	12.7	191.1	585.6	576.6	9.0	39.2	0.0	3.8	–	2015	
12.7	54.2	205.5	13.4	192.1	583.6	574.6	9.0	37.6	0.1	3.4	–	2016 Mar	
13.0	54.7	206.0	13.8	192.2	581.8	572.7	9.0	37.1	0.1	3.4	–	Apr	
13.0	55.1	206.4	13.7	192.7	580.1	571.1	9.0	36.4	0.1	3.3	–	May	
13.3	55.6	206.5	13.6	192.9	578.9	569.9	9.0	35.9	0.1	3.2	–	June	
13.6	55.4	206.1	13.7	192.3	577.8	568.9	9.0	35.2	0.1	3.1	–	July	
13.5	54.2	206.0	13.7	192.4	577.0	568.0	9.0	34.7	0.1	3.1	–	Aug	
Changes*													
+ 0.5	+ 1.0	+ 7.1	– 2.0	+ 9.0	– 2.1	– 1.9	– 0.3	– 10.9	+ 0.0	– 1.9	–	2014	
– 1.8	– 12.8	+ 2.9	+ 1.4	+ 1.4	– 11.5	– 11.1	– 0.5	– 9.8	+ 0.0	– 1.2	–	2015	
+ 0.1	+ 0.1	+ 0.5	+ 0.2	+ 0.3	– 1.9	– 1.9	+ 0.0	– 0.2	+ 0.0	– 0.1	–	2016 Mar	
+ 0.3	+ 0.4	+ 0.5	+ 0.4	+ 0.1	– 1.9	– 1.9	– 0.0	– 0.5	+ 0.0	– 0.1	–	Apr	
+ 0.0	+ 0.5	+ 0.4	– 0.1	+ 0.5	– 1.7	– 1.6	– 0.0	– 0.6	+ 0.0	– 0.1	–	May	
+ 0.3	+ 0.5	+ 0.1	– 0.0	+ 0.2	– 1.2	– 1.3	+ 0.1	– 0.6	+ 0.0	– 0.1	–	June	
+ 0.3	– 0.2	– 0.5	+ 0.1	– 0.6	– 1.0	– 1.0	– 0.0	– 0.7	+ 0.0	– 0.1	–	July	
– 0.0	– 1.2	+ 0.0	– 0.1	+ 0.1	– 0.8	– 0.8	+ 0.0	– 0.5	+ 0.0	– 0.1	–	Aug	

securities. ² Including deposits under savings and loan contracts (see Table IV.12). ³ Excluding deposits under savings and loan contracts (see also foot-note

2). ⁴ Including liabilities arising from non-negotiable bearer debt securities. ⁵ Included in time deposits.

Local government and local government associations (including municipal special-purpose associations)						Social security funds						Period
Total	Sight deposits	Time deposits ³		Savings deposits and bank savings bonds ^{2,4}	Memo item Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds ²	Memo item Fiduciary loans	
		for up to and including 1 year	for more than 1 year					for up to and including 1 year	for more than 1 year			
End of year or month*												
44.9	23.5	10.7	6.6	4.1	0.4	78.7	11.6	52.7	13.5	0.9	0.0	2013
48.0	25.3	11.2	7.0	4.5	0.4	88.0	11.1	60.6	15.4	0.9	–	2014
52.4	29.2	9.6	8.3	5.2	0.4	91.2	12.1	60.5	17.5	1.1	–	2015
48.8	25.8	9.2	8.6	5.3	0.4	89.8	16.1	53.5	19.2	1.1	–	2016 Mar
49.0	26.1	9.0	8.7	5.3	0.4	89.8	17.1	52.0	19.6	1.1	–	Apr
53.6	30.1	9.3	8.8	5.5	0.4	93.2	16.5	55.3	20.0	1.3	–	May
50.7	27.7	8.6	9.0	5.5	0.4	92.7	15.8	54.8	20.8	1.4	–	June
48.3	25.4	8.0	9.4	5.5	0.4	93.5	16.0	54.2	21.9	1.5	–	July
54.2	30.3	8.7	9.6	5.6	0.4	92.0	14.1	54.0	22.4	1.5	–	Aug
Changes*												
+ 2.9	+ 1.8	+ 0.4	+ 0.3	+ 0.4	– 0.0	+ 2.9	– 2.4	+ 4.6	+ 0.6	– 0.0	– 0.0	2014
+ 4.1	+ 3.8	– 1.5	+ 1.1	+ 0.7	+ 0.0	+ 4.0	+ 1.2	+ 0.6	+ 1.9	+ 0.2	–	2015
– 1.2	– 1.6	+ 0.2	+ 0.2	+ 0.1	– 0.0	+ 0.1	– 0.2	– 0.7	+ 1.0	+ 0.0	–	2016 Mar
+ 0.2	+ 0.3	– 0.2	+ 0.0	+ 0.0	–	+ 0.0	+ 1.1	– 1.5	+ 0.4	+ 0.1	–	Apr
+ 4.6	+ 4.0	+ 0.3	+ 0.2	+ 0.2	+ 0.2	+ 3.3	– 0.6	+ 3.3	+ 0.4	+ 0.2	–	May
– 2.9	– 2.4	– 0.7	+ 0.1	+ 0.1	–	– 0.4	– 0.7	– 0.5	+ 0.8	+ 0.0	–	June
– 2.5	– 2.3	– 0.6	+ 0.4	+ 0.0	– 0.0	+ 0.8	+ 0.2	– 0.6	+ 1.1	+ 0.1	–	July
+ 5.9	+ 4.9	+ 0.7	+ 0.2	+ 0.0	–	– 1.7	– 1.9	– 0.2	+ 0.5	+ 0.0	–	Aug

the following Monthly Report, are not specially marked. ¹ Federal Railways Fund, Indemnification Fund, Redemption Fund for Inherited Liabilities, ERP Special Fund, German Unity Fund, Equalisation of Burdens Fund. ² Including liabilities arising from

non-negotiable bearer debt securities. ³ Including deposits under savings and loan contracts. ⁴ Excluding deposits under savings and loan contracts (see also footnote 3).

IV Banks

10 Savings deposits and bank savings bonds of banks (MFIs) in Germany sold to non-banks (non-MFIs)*

€ billion

Period	Savings deposits ¹								Memo item Interest credited on savings deposits	Bank savings bonds ³ , sold to			
	of residents				of non-residents					non-banks, total	domestic non-banks		foreign non-banks
	Total	Total	at three months' notice		at more than three months' notice		Total	of which At three months' notice			Total	of which With maturities of more than 2 years	
			Total	of which Special savings facilities ²	Total	of which Special savings facilities ²							
End of year or month*													
2013	620.0	610.1	532.4	413.5	77.8	65.2	9.9	7.9	7.5	92.2	76.6	59.3	15.6
2014	617.0	607.8	531.3	401.4	76.4	63.3	9.2	7.4	6.1	79.8	66.0	51.4	13.8
2015	605.4	596.5	534.6	379.7	61.9	48.0	8.9	7.4	4.4	64.9	56.1	41.0	8.7
2016 Apr	601.4	592.7	535.6	373.4	57.1	43.3	8.6	7.3	0.1	62.4	54.0	38.9	8.4
May	599.8	591.2	535.0	369.7	56.2	42.3	8.6	7.3	0.1	62.2	53.7	38.4	8.5
June	598.6	590.0	534.6	369.2	55.5	41.6	8.5	7.2	0.1	61.7	53.1	38.0	8.5
July	597.6	589.1	534.5	367.6	54.6	40.8	8.4	7.2	0.2	61.3	52.7	37.7	8.6
Aug	596.8	588.4	534.6	365.4	53.8	40.0	8.4	7.2	0.1	60.7	52.2	37.3	8.6
Changes*													
2014	- 3.0	- 2.4	- 2.4	- 13.0	+ 0.0	- 1.0	- 0.6	- 0.5	.	- 12.3	- 10.6	- 7.8	- 1.8
2015	- 11.6	- 11.3	+ 4.3	- 20.6	- 15.6	- 16.3	- 0.3	+ 0.0	.	- 15.1	- 10.1	- 6.6	- 5.1
2016 Apr	- 1.8	- 1.8	- 0.7	- 2.2	- 1.1	- 1.1	- 0.1	- 0.0	.	- 0.6	- 0.5	- 0.4	- 0.1
May	- 1.6	- 1.5	- 0.6	- 3.7	- 0.9	- 1.1	- 0.1	- 0.0	.	- 0.2	- 0.3	- 0.5	+ 0.1
June	- 1.2	- 1.1	- 0.4	- 0.5	- 0.7	- 0.7	- 0.1	- 0.0	.	- 0.5	- 0.5	- 0.4	+ 0.0
July	- 1.0	- 0.9	- 0.1	- 1.7	- 0.8	- 0.8	- 0.1	- 0.0	.	- 0.4	- 0.5	- 0.3	+ 0.1
Aug	- 0.8	- 0.7	+ 0.1	- 2.1	- 0.8	- 0.8	- 0.1	- 0.0	.	- 0.5	- 0.5	- 0.4	- 0.1

* See Table IV.2, footnote*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. ¹ Excluding deposits under savings and loan contracts, which are classified

as time deposits. ² Savings deposits bearing interest at a rate which exceeds the minimum or basic rate of interest. ³ Including liabilities arising from non-negotiable bearer debt securities.

11 Debt securities and money market paper outstanding of banks (MFIs) in Germany*

€ billion

Period	Negotiable bearer debt securities and money market paper										Non-negotiable bearer debt securities and money market paper ⁶		Subordinated	
	Total	of which				with maturities of					Total	of which with maturities of more than 2 years	negotiable debt securities	non-negotiable debt securities
		Floating rate bonds ¹	Zero coupon bonds ^{1,2}	Foreign currency bonds ^{3,4}	Certificates of deposit	up to and including 1 year		more than 1 year up to and including 2 years						
						Total	of which without a nominal guarantee ⁵	Total	of which without a nominal guarantee ⁵	more than 2 years				
End of year or month*														
2013	1,142.7	315.9	26.3	321.2	54.8	69.0	2.5	34.7	4.4	1,039.0	0.6	0.2	37.0	1.1
2014	1,114.2	286.4	26.3	354.0	69.2	83.6	1.8	26.3	5.0	1,004.3	1.0	0.2	33.7	1.2
2015	1,075.7	189.2	30.2	384.1	88.7	109.8	2.1	28.4	5.7	937.5	0.3	0.2	31.9	0.5
2016 Apr	1,085.7	177.9	32.2	386.4	95.9	118.6	2.4	31.3	5.9	935.7	0.3	0.2	33.3	0.5
May	1,098.6	177.9	32.6	403.2	98.4	120.3	2.7	32.4	6.0	946.0	0.2	0.2	34.0	0.5
June	1,091.5	175.7	32.3	396.8	97.9	119.7	2.5	32.1	5.9	939.7	0.2	0.2	34.1	0.5
July	1,079.0	174.5	30.6	387.9	92.6	114.1	4.0	33.8	6.2	931.1	0.4	0.2	34.0	0.5
Aug	1,083.2	173.3	29.7	393.3	94.4	115.7	4.1	33.7	6.3	933.7	0.4	0.2	33.6	0.5
Changes*														
2014	- 28.7	- 29.5	+ 0.0	+ 32.7	+ 14.4	+ 14.6	- 0.7	- 8.4	+ 0.6	- 35.0	+ 0.4	- 0.0	+ 0.2	+ 0.2
2015	- 38.5	- 97.2	+ 3.9	+ 30.1	+ 19.5	+ 26.2	+ 0.3	+ 2.1	+ 0.7	- 66.8	- 0.8	+ 0.0	- 1.8	- 0.7
2016 Apr	+ 7.8	- 0.5	+ 1.4	+ 8.4	+ 3.6	+ 4.9	+ 0.0	+ 0.2	+ 0.2	+ 2.6	- 0.0	- 0.0	+ 0.5	-
May	+ 13.0	- 0.0	+ 0.4	+ 16.8	+ 2.5	+ 1.7	+ 0.2	+ 1.0	+ 0.0	+ 10.2	- 0.0	- 0.0	+ 0.8	-
June	- 7.2	- 2.2	- 0.3	- 6.5	- 0.4	- 0.5	- 0.2	- 0.4	- 0.1	- 6.3	- 0.0	- 0.0	+ 0.1	+ 0.0
July	- 12.5	- 1.2	- 1.7	- 8.9	- 5.4	- 5.6	+ 1.5	+ 1.7	+ 0.3	- 8.6	+ 0.2	+ 0.0	- 0.1	- 0.0
Aug	+ 4.2	- 1.2	- 1.0	+ 5.4	+ 1.8	+ 1.7	+ 0.1	- 0.0	+ 0.1	+ 2.6	+ 0.0	- 0.0	- 0.4	-

* See Table IV.2, footnote*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. ¹ Including debt securities denominated in foreign currencies. ² Issue value when floated. ³ Including floating rate notes and zero

coupon bonds denominated in foreign currencies. ⁴ Bonds denominated in non-euro-area currencies. ⁵ Negotiable bearer debt securities respectively money market paper with a nominal guarantee of less than 100%. ⁶ Non-negotiable bearer debt securities are classified among bank savings bonds (see also Table IV.10, footnote 2).

IV Banks

12 Building and loan associations (MFIs) in Germany *) Interim statements

€ billion

End of year/month	Number of associations	Balance sheet total 13	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)				Deposits of banks (MFIs) 5		Deposits of non-banks (non-MFIs)		Bearer debt securities outstanding	Capital (including published reserves) 7	Memo item New contracts entered into in year or month 8
			Credit balances and loans (excluding building loans) 1	Building loans 2	Bank debt securities 3	Building loans			Securities (including Treasury bills and Treasury discount paper) 4	Deposits under savings and loan contracts	Sight and time deposits	Deposits under savings and loan contracts	Sight and time deposits 6			
						Loans under savings and loan contracts	Interim and bridging loans	Other building loans								
All building and loan associations																
2014	21	211.6	45.6	0.0	16.6	18.7	87.2	17.3	20.6	1.9	21.3	156.8	5.2	2.8	9.2	94.6
2015	21	213.6	43.1	0.0	17.5	15.8	93.4	17.5	21.4	2.0	21.3	159.2	5.3	2.4	9.9	98.5
2016 June	21	213.6	40.9	0.0	17.2	14.8	95.6	17.7	22.7	2.1	18.6	160.8	5.5	2.5	10.2	7.4
July	21	214.5	41.3	0.0	17.4	14.7	95.8	17.8	22.8	2.1	19.5	160.4	5.5	2.5	10.2	7.0
Aug	20	214.7	41.1	0.0	17.2	14.5	96.3	17.9	22.9	2.2	19.5	160.6	5.5	2.5	10.2	7.0
Private building and loan associations																
2016 June	12	147.5	24.9	–	9.0	11.0	74.4	15.2	9.5	1.4	15.7	105.7	5.1	2.5	6.6	4.6
July	12	148.4	25.4	–	9.2	10.9	74.5	15.2	9.5	1.4	16.7	105.3	5.1	2.5	6.6	4.4
Aug	12	148.6	25.3	–	9.0	10.8	74.8	15.4	9.6	1.4	16.8	105.4	5.1	2.5	6.6	4.4
Public building and loan associations																
2016 June	9	66.1	16.0	0.0	8.2	3.8	21.2	2.6	13.2	0.7	2.8	55.1	0.4	–	3.7	2.9
July	9	66.1	15.9	0.0	8.2	3.8	21.4	2.6	13.2	0.7	2.8	55.1	0.4	–	3.7	2.6
Aug	8	66.1	15.9	0.0	8.2	3.7	21.5	2.6	13.2	0.8	2.7	55.2	0.3	–	3.6	2.6

Trends in building and loan association business

€ billion

Period	Changes in deposits under savings and loan contracts			Capital promised		Capital disbursed					Disbursement commitments outstanding at end of period		Interest and repayments received on building loans 10		Memo item Housing bonuses received 12	
	Amounts paid into savings and loan accounts 9	Interest credited on deposits under savings and loan contracts	Repayments of deposits under cancelled savings and loan contracts	Total	of which Net allocations 11	Total	Allocations				Total	of which Under allocated contracts	Total	of which Repayments during quarter		
							Deposits under savings and loan contracts		Loans under savings and loan contracts 9							Newly granted interim and bridging loans and other building loans
							Total	of which Applied to settlement of interim and bridging loans	Total	of which Applied to settlement of interim and bridging loans						
All building and loan associations																
2014	29.5	2.5	6.5	45.7	27.9	39.9	16.7	4.2	6.1	3.6	17.1	14.5	8.0	10.1	8.4	0.4
2015	28.1	2.5	8.2	51.5	31.2	44.4	19.9	4.2	5.3	3.6	19.2	15.6	8.1	9.5	8.3	0.4
2016 June	2.3	0.0	0.8	4.2	2.3	3.7	1.6	0.3	0.4	0.3	1.8	16.1	8.3	0.7	1.9	0.0
July	2.1	0.0	0.8	4.4	2.7	3.8	1.8	0.4	0.4	0.3	1.6	16.2	8.4	0.6	1.9	0.0
Aug	2.2	0.0	0.7	3.5	1.9	3.3	1.2	0.3	0.4	0.3	1.7	16.0	8.3	0.6	1.9	0.0
Private building and loan associations																
2016 June	1.5	0.0	0.3	3.2	1.7	2.8	1.2	0.2	0.3	0.2	1.4	11.4	5.1	0.5	1.4	0.0
July	1.4	0.0	0.4	3.4	2.0	3.0	1.4	0.3	0.3	0.3	1.3	11.6	5.1	0.5	1.4	0.0
Aug	1.4	0.0	0.4	2.5	1.3	2.5	0.9	0.3	0.3	0.2	1.4	11.4	5.0	0.5	1.4	0.0
Public building and loan associations																
2016 June	0.8	0.0	0.5	1.0	0.6	0.9	0.4	0.1	0.1	0.1	0.4	4.6	3.3	0.2	0.5	0.0
July	0.8	0.0	0.4	1.0	0.7	0.8	0.4	0.1	0.1	0.1	0.3	4.6	3.3	0.2	0.5	0.0
Aug	0.8	0.0	0.3	1.0	0.6	0.8	0.3	0.1	0.1	0.0	0.3	4.6	3.2	0.2	0.5	0.0

* Excluding assets and liabilities and/or transactions of foreign branches. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Including claims on building and loan associations, claims arising from registered debt securities and central bank credit balances. **2** Loans under savings and loan contracts and interim and bridging loans. **3** Including money market paper and small amounts of other securities issued by banks. **4** Including equalisation claims. **5** Including liabilities to building and loan associations. **6** Including small amounts of savings deposits. **7** Including participation rights capital and fund for general banking risks.

8 Total amount covered by the contracts; only contracts newly entered into, for which the contract fee has been fully paid. Increases in the sum contracted count as new contracts. **9** For disbursements of deposits under savings and loan contracts arising from the allocation of contracts see "Capital disbursed". **10** Including housing bonuses credited. **11** Only allocations accepted by the beneficiaries; including allocations applied to settlement of interim and bridging loans. **12** The amounts already credited to the accounts of savers or borrowers are also included in "Amounts paid into savings and loan accounts" and "Interest and repayments received on building loans". **13** See Table IV.2, footnote 1.

IV Banks

13 Assets and liabilities of the foreign branches and foreign subsidiaries of German banks (MFIs) *

€ billion

Period	Number of		Balance sheet total ⁷	Lending to banks (MFIs)					Lending to non-banks (non-MFIs)					Other assets ⁷		
	German banks (MFIs) with foreign branches and/or foreign subsidiaries	foreign branches ¹ and/or foreign subsidiaries		Total	Credit balances and loans			Total	Total	Loans			Total	of which Derivative financial instruments in the trading portfolio		
					German banks	Foreign banks	Money market paper, securities ^{2,3}			to German non-banks	to foreign non-banks	Money market paper, securities ²				
End of year or month *																
2013	56	209	1,726.4	435.6	421.9	141.6	280.3	13.7	519.6	411.3	11.0	400.3	108.3	771.1	485.6	
2014	56	205	1,926.2	548.8	532.2	201.2	331.0	16.5	593.5	473.1	14.0	459.1	120.5	783.8	551.9	
2015	51	198	1,842.9	526.0	508.7	161.3	347.5	17.3	635.1	511.6	14.0	497.6	123.6	681.8	499.0	
2015 Oct	51	199	1,946.7	558.2	540.2	152.9	387.3	18.0	633.7	513.2	13.9	499.3	120.5	754.8	525.1	
Nov	51	199	1,980.5	533.8	515.8	150.0	365.8	18.0	658.8	528.5	14.6	513.9	130.4	787.9	557.2	
Dec	51	198	1,842.9	526.0	508.7	161.3	347.5	17.3	635.1	511.6	14.0	497.6	123.6	681.8	499.0	
2016 Jan	50	196	1,960.5	540.7	523.3	169.1	354.2	17.4	652.2	529.7	14.2	515.5	122.6	767.5	568.7	
Feb	49	192	2,022.6	555.3	538.2	173.5	364.7	17.2	658.4	538.2	14.3	523.9	120.2	808.8	607.9	
Mar	49	192	1,943.8	558.9	543.2	172.4	370.8	15.7	642.2	529.2	14.6	514.6	113.1	742.6	557.5	
Apr	49	192	1,933.2	545.0	529.1	177.2	351.8	15.9	659.8	545.1	14.7	530.4	114.7	728.4	539.0	
May	48	187	1,930.1	563.9	548.9	176.4	372.5	15.0	642.5	529.8	13.6	516.3	112.7	723.7	519.2	
June	49	188	2,036.5	569.2	553.5	182.3	371.2	15.6	674.8	556.9	14.1	542.8	117.9	792.5	593.8	
July	50	187	2,060.2	587.5	572.6	183.1	389.6	14.9	668.3	551.7	13.6	538.1	116.5	804.5	590.3	
Changes *																
2014	-	- 4	+ 119.6	+ 74.4	+ 72.2	+ 59.6	+ 12.6	+ 2.2	+ 38.0	+ 31.4	+ 3.0	+ 28.4	+ 6.6	+ 7.5	+ 66.4	
2015	- 5	- 7	- 145.0	- 56.3	- 56.0	- 40.0	- 16.0	- 0.3	+ 4.5	+ 7.0	+ 0.0	+ 7.0	- 2.6	- 109.0	- 58.2	
2015 Nov	-	-	+ 30.2	- 35.3	- 34.8	- 2.9	- 31.9	- 0.5	+ 10.7	+ 2.9	+ 0.7	+ 2.2	+ 7.8	+ 29.4	+ 23.8	
Dec	-	- 1	- 135.8	+ 0.3	+ 0.7	+ 11.2	- 10.6	- 0.4	- 11.7	- 6.8	- 0.6	- 6.2	- 4.9	- 106.1	- 51.3	
2016 Jan	- 1	- 2	+ 118.2	+ 16.1	+ 15.9	+ 7.9	+ 8.1	+ 0.2	+ 20.9	+ 21.3	+ 0.2	+ 21.1	- 0.4	+ 85.8	+ 71.1	
Feb	- 1	- 4	+ 61.6	+ 13.6	+ 13.8	+ 4.4	+ 9.5	- 0.3	+ 5.1	+ 7.4	+ 0.1	+ 7.3	- 2.3	+ 40.7	+ 38.8	
Mar	-	-	- 75.2	+ 14.9	+ 16.0	- 1.0	+ 17.0	- 1.1	- 1.0	+ 4.0	+ 0.3	+ 3.7	- 5.0	- 62.5	- 39.6	
Apr	-	-	- 10.9	- 14.2	- 14.4	+ 4.8	- 19.2	+ 0.2	+ 15.9	+ 14.4	+ 0.2	+ 14.3	+ 1.4	- 14.5	- 18.8	
May	- 1	- 5	- 4.7	+ 13.3	+ 14.4	- 0.9	+ 15.3	- 1.1	- 25.5	- 22.3	- 1.2	- 21.1	- 3.2	- 6.4	- 24.9	
June	+ 1	+ 1	+ 105.9	+ 4.4	+ 3.8	+ 5.9	- 2.2	+ 0.6	+ 33.6	+ 27.7	+ 0.5	+ 27.2	+ 5.9	+ 68.4	+ 75.4	
July	+ 1	- 1	+ 24.0	+ 18.7	+ 19.4	+ 0.7	+ 18.7	- 0.7	- 4.5	- 3.5	- 0.4	- 3.1	- 1.0	+ 12.2	- 2.6	
Foreign subsidiaries End of year or month *																
2013	33	75	425.2	187.9	158.7	91.4	67.3	29.2	185.4	148.3	26.1	122.3	37.1	52.0	-	
2014	28	63	389.4	154.5	137.9	83.4	54.5	16.7	172.7	141.2	21.6	119.5	31.5	62.2	-	
2015	24	58	376.0	126.5	113.5	50.1	63.4	13.0	184.3	152.5	22.2	130.3	31.8	65.1	-	
2015 Oct	25	59	380.8	130.3	114.9	55.6	59.2	15.4	185.8	152.7	22.8	129.9	33.0	64.8	-	
Nov	25	59	379.5	121.1	107.4	44.5	62.8	13.7	191.7	158.3	22.5	135.8	33.3	66.8	-	
Dec	24	58	376.0	126.5	113.5	50.1	63.4	13.0	184.3	152.5	22.2	130.3	31.8	65.1	-	
2016 Jan	24	58	375.6	129.1	116.5	53.7	62.7	12.7	185.1	152.9	21.7	131.1	32.3	61.3	-	
Feb	24	58	359.4	120.7	108.5	50.7	57.9	12.2	174.1	141.8	22.3	119.6	32.3	64.6	-	
Mar	24	58	352.2	113.6	102.1	47.9	54.2	11.5	173.4	140.6	22.6	118.1	32.8	65.2	-	
Apr	24	58	349.7	116.3	104.9	48.9	56.0	11.4	169.8	137.4	23.0	114.4	32.4	63.7	-	
May	24	57	350.4	115.3	103.9	49.0	54.9	11.4	170.6	138.2	22.9	115.3	32.4	64.5	-	
June	24	57	356.9	117.7	107.5	52.9	54.6	10.2	170.5	138.0	22.9	115.1	32.5	68.7	-	
July	19	56	355.3	116.3	106.2	51.8	54.5	10.1	170.3	137.4	23.7	113.7	32.9	68.7	-	
Changes *																
2014	- 5	- 12	- 46.7	- 39.9	- 26.3	- 8.0	- 18.2	- 13.6	- 17.0	- 11.4	- 4.4	- 7.0	- 5.6	+ 10.1	-	
2015	- 4	- 5	- 23.9	- 33.3	- 28.7	- 33.3	+ 4.6	- 4.6	+ 6.5	+ 6.2	+ 0.6	+ 5.6	+ 0.3	+ 2.9	-	
2015 Nov	-	-	- 4.8	- 10.9	- 8.8	- 11.1	+ 2.3	- 2.1	+ 4.1	+ 3.8	- 0.2	+ 4.1	+ 0.3	+ 2.0	-	
Dec	- 1	- 1	- 0.7	+ 6.8	+ 7.2	+ 5.6	+ 1.7	- 0.4	- 5.9	- 4.3	- 0.3	- 4.0	- 1.5	- 1.6	-	
2016 Jan	-	-	+ 0.6	+ 3.0	+ 3.3	+ 3.6	- 0.3	- 0.3	+ 1.4	+ 0.9	- 0.5	+ 1.4	+ 0.5	+ 3.8	-	
Feb	-	-	- 16.4	- 8.5	- 8.0	- 3.1	- 5.0	- 0.5	- 11.2	- 11.2	+ 0.5	- 11.7	+ 0.0	+ 3.3	-	
Mar	-	-	- 3.7	- 5.2	- 4.8	- 2.7	- 2.1	- 0.4	+ 0.9	+ 0.4	+ 0.3	+ 0.1	+ 0.5	+ 0.6	-	
Apr	-	-	- 2.5	+ 2.7	+ 2.8	+ 1.0	+ 1.8	- 0.1	- 3.7	- 3.3	+ 0.4	- 3.7	- 0.4	- 1.5	-	
May	-	- 1	- 1.1	- 2.0	- 1.8	+ 0.1	- 1.9	- 0.2	+ 0.0	+ 0.0	- 0.1	+ 0.1	- 0.0	+ 0.8	-	
June	-	-	+ 6.7	+ 2.4	+ 3.6	+ 3.9	- 0.3	- 1.3	+ 0.1	- 0.1	- 0.0	- 0.1	+ 0.2	+ 4.2	-	
July	- 5	- 1	- 1.4	- 1.2	- 1.2	- 1.2	- 0.0	- 0.1	- 0.2	- 0.5	+ 0.8	- 1.3	+ 0.4	- 0.0	-	

* In this table "foreign" also includes the country of domicile of the foreign branches and foreign subsidiaries. Statistical revisions have been eliminated from the changes. (Breaks owing to changes in the reporting population have not been eliminated from

the flow figures for the foreign subsidiaries.) The figures for the latest date are always to be regarded as provisional; subsequent revisions, which appear in the following Monthly Report, are not specially marked. ¹ Several branches in a given

IV Banks

Deposits										Money market paper and debt securities out- stand- ing ⁵	Working capital and own funds	Other liabilities ^{6,7}		Period
of banks (MFIs)			of non-banks (non-MFIs)				Foreign non-banks		Total			of which Derivative financial instruments in the trading portfolio		
Total	German banks	Foreign banks	Total	German non-banks ⁴	Short- term	Medium and long- term							Total	
End of year or month *														
													Foreign branches	
890.9	596.4	327.0	269.4	294.5	24.2	19.1	5.1	270.3	125.4	41.2	668.9	484.1	2013	
1,046.7	739.9	416.2	323.7	306.8	20.6	16.1	4.4	286.2	128.4	45.2	705.8	557.5	2014	
1,060.9	715.3	359.3	356.0	345.6	21.1	16.2	4.9	324.6	128.9	49.9	603.1	497.4	2015	
1,124.6	763.8	406.5	357.3	360.8	19.7	15.0	4.7	341.1	141.0	47.6	633.5	520.6	2015 Oct	
1,124.3	742.0	377.3	364.7	382.3	22.0	17.0	5.0	360.3	138.6	48.4	669.2	554.0	Nov	
1,060.9	715.3	359.3	356.0	345.6	21.1	16.2	4.9	324.6	128.9	49.9	603.1	497.4	Dec	
1,101.8	733.9	357.8	376.1	367.9	21.3	16.6	4.8	346.5	129.4	50.0	679.3	566.3	2016 Jan	
1,105.0	734.8	368.7	366.1	370.3	22.1	17.4	4.7	348.2	127.7	49.7	740.1	605.7	Feb	
1,083.8	714.8	344.5	370.3	369.0	23.6	19.5	4.1	345.4	121.3	49.4	689.3	559.2	Mar	
1,108.9	719.0	348.0	371.0	389.9	21.5	17.4	4.1	368.5	117.7	49.4	657.2	541.5	Apr	
1,130.1	746.9	358.9	388.0	383.2	20.7	17.2	3.6	362.5	111.0	49.7	639.4	523.0	May	
1,154.9	762.2	386.5	375.6	392.8	21.3	17.8	3.5	371.5	104.9	49.8	726.9	596.8	June	
1,163.1	772.6	388.8	383.8	390.5	21.3	17.5	3.8	369.2	108.5	49.8	738.9	593.8	July	
Changes *														
+ 101.5	+112.9	+ 89.2	+ 23.6	- 11.4	- 3.7	- 3.0	- 0.7	- 7.7	+ 3.0	+ 4.0	+ 11.1	+ 73.4	2014	
- 30.8	- 53.8	- 57.0	+ 3.2	+ 23.0	+ 0.5	+ 0.0	+ 0.4	+ 22.5	- 2.1	+ 4.7	- 124.1	- 65.8	2015	
- 11.5	- 33.4	- 29.2	- 4.2	+ 21.9	+ 2.3	+ 2.0	+ 0.4	+ 19.6	- 6.0	+ 0.9	+ 35.7	+ 24.6	2015 Nov	
- 55.2	- 18.9	- 18.0	- 0.9	- 36.4	- 1.0	- 0.8	- 0.2	- 35.4	- 7.2	+ 1.5	- 66.8	- 49.3	Dec	
+ 42.4	+ 20.1	- 1.5	+ 21.6	+ 22.3	+ 0.3	+ 0.4	- 0.1	+ 22.0	+ 1.1	+ 0.1	+ 76.2	+ 70.3	2016 Jan	
+ 2.0	- 0.4	+ 10.9	- 11.3	+ 2.4	+ 0.8	+ 0.8	- 0.0	+ 1.6	- 2.2	- 0.3	+ 60.9	+ 39.1	Feb	
- 9.5	- 8.6	- 24.2	+ 15.5	- 0.9	+ 1.5	+ 2.1	- 0.7	- 2.3	- 2.7	- 0.3	- 50.9	- 34.9	Mar	
+ 24.6	+ 3.7	+ 3.5	+ 0.2	+ 20.9	- 2.1	- 2.1	- 0.0	+ 23.0	- 4.0	- 0.0	- 32.0	- 18.0	Apr	
+ 15.1	+ 22.0	+ 10.9	+ 11.1	- 6.9	- 0.7	- 0.2	- 0.5	- 6.2	- 8.3	+ 0.3	- 17.9	- 23.8	May	
+ 24.0	+ 14.3	+ 27.6	- 13.2	+ 9.6	+ 0.6	+ 0.7	- 0.1	+ 9.1	- 6.5	+ 0.0	+ 87.5	+ 74.4	June	
+ 9.0	+ 11.2	+ 2.2	+ 8.9	- 2.2	+ 0.0	- 0.3	+ 0.4	- 2.2	+ 3.8	+ 0.0	+ 12.0	- 2.1	July	
End of year or month *														
													Foreign subsidiaries	
334.2	201.1	113.4	87.7	133.0	18.5	16.4	2.0	114.6	21.3	30.0	39.8	-	2013	
297.1	173.6	101.1	72.5	123.5	20.3	14.5	5.8	103.2	18.4	25.9	48.0	-	2014	
292.3	166.7	99.6	67.1	125.7	13.1	10.5	2.6	112.6	14.4	26.3	42.9	-	2015	
298.3	166.2	91.7	74.5	132.1	14.8	12.3	2.5	117.3	13.4	26.5	42.6	-	2015 Oct	
293.4	159.3	90.2	69.0	134.1	11.8	9.2	2.6	122.3	14.8	26.7	44.7	-	Nov	
292.3	166.7	99.6	67.1	125.7	13.1	10.5	2.6	112.6	14.4	26.3	42.9	-	Dec	
294.1	170.0	101.9	68.1	124.1	11.9	9.4	2.6	112.2	14.5	26.4	40.6	-	2016 Jan	
282.1	157.1	99.1	58.0	125.0	13.2	10.5	2.8	111.8	12.9	24.3	40.1	-	Feb	
275.0	160.5	100.5	59.9	114.5	13.4	10.5	2.9	101.1	13.3	24.2	39.6	-	Mar	
274.5	161.1	102.8	58.3	113.4	13.8	10.9	2.9	99.6	13.5	24.2	37.5	-	Apr	
275.9	164.2	103.6	60.6	111.8	12.7	9.9	2.8	99.1	13.3	24.3	36.8	-	May	
284.5	163.7	101.1	62.6	120.8	12.1	9.3	2.7	108.7	12.3	24.0	36.1	-	June	
282.4	162.9	98.9	64.1	119.4	11.5	8.7	2.7	108.0	12.5	24.4	36.0	-	July	
Changes *														
- 45.5	- 32.4	- 12.3	- 20.1	- 13.1	+ 1.8	- 1.9	+ 3.8	- 14.9	- 3.0	- 4.0	+ 5.8	-	2014	
- 12.3	- 11.2	- 1.5	- 9.7	- 1.1	- 7.2	- 4.0	- 3.2	+ 6.1	- 4.0	+ 0.4	- 7.9	-	2015	
- 7.8	- 8.6	- 1.5	- 7.1	+ 0.8	- 3.0	- 3.1	+ 0.1	+ 3.8	+ 1.4	+ 0.2	+ 1.4	-	2015 Nov	
+ 1.3	+ 8.7	+ 9.3	- 0.6	- 7.4	+ 1.3	+ 1.2	+ 0.0	- 8.7	- 0.4	- 0.4	- 1.2	-	Dec	
+ 2.3	+ 3.6	+ 2.3	+ 1.3	- 1.3	- 1.1	- 1.1	- 0.0	- 0.1	+ 0.1	+ 0.1	- 1.9	-	2016 Jan	
- 12.1	- 12.9	- 2.8	- 10.1	+ 0.9	+ 1.3	+ 1.1	+ 0.2	- 0.5	- 1.6	- 2.1	- 0.7	-	Feb	
- 4.2	+ 4.8	+ 1.4	+ 3.4	- 9.0	+ 0.2	- 0.0	+ 0.2	- 9.2	+ 0.4	- 0.1	+ 0.2	-	Mar	
- 0.5	+ 0.6	+ 2.3	- 1.7	- 1.1	+ 0.4	+ 0.4	+ 0.0	- 1.5	+ 0.2	- 0.1	- 2.1	-	Apr	
- 0.1	+ 2.2	+ 0.8	+ 1.4	- 2.3	- 1.1	- 1.0	- 0.1	- 1.1	- 0.2	+ 0.1	- 1.0	-	May	
+ 8.8	- 0.4	- 2.5	+ 2.1	+ 9.2	- 0.6	- 0.6	- 0.1	+ 9.8	- 1.0	- 0.3	- 0.7	-	June	
- 2.0	- 0.7	- 2.2	+ 1.5	- 1.2	- 0.6	- 0.6	+ 0.0	- 0.6	+ 0.2	+ 0.4	- 0.1	-	July	

country of domicile are regarded as a single branch. **2** Treasury bills, Treasury discount paper and other money market paper, debt securities. **3** Including own debt securities. **4** Excluding subordinated liabilities and non-negotiable debt

securities. **5** Issues of negotiable and non-negotiable debt securities and money market paper. **6** Including subordinated liabilities. **7** See also Table IV.2, footnote 1.

V Minimum reserves

1 Reserve maintenance in the euro area

€ billion

Maintenance period beginning in ¹	Reserve base ²	Required reserves before deduction of lump-sum allowance ³	Required reserves after deduction of lump-sum allowance ⁴	Current accounts ⁵	Excess reserves ⁶	Deficiencies ⁷
2010	10,559.5	211.2	210.7	212.4	1.7	0.0
2011	10,376.3	207.5	207.0	212.3	5.3	0.0
2012	10,648.6	106.5	106.0	489.0	383.0	0.0
2013	10,385.9	103.9	103.4	248.1	144.8	0.0
2014 ⁸	10,677.3	106.8	106.3	236.3	130.1	0.0
2015	11,375.0	113.8	113.3	557.1	443.8	0.0
2016 June	11,630.2	116.3	115.8	657.5	541.6	0.0
July	11,712.7	117.1	116.7	748.8	632.1	0.0
Aug	.	.	.	.	.	.
Sep ^P	11,823.1	118.2	117.8	...	...	...

2 Reserve maintenance in Germany

€ million

Maintenance period beginning in ¹	Reserve base ²	German share of euro-area reserve base in per cent	Required reserves before deduction of lump-sum allowance ³	Required reserves after deduction of lump-sum allowance ⁴	Current accounts ⁵	Excess reserves ⁶	Deficiencies ⁷
2010	2,530,997	24.0	50,620	50,435	51,336	901	0
2011	2,666,422	25.7	53,328	53,145	54,460	1,315	1
2012	2,874,716	27.0	28,747	28,567	158,174	129,607	1
2013	2,743,933	26.4	27,439	27,262	75,062	47,800	2
2014	2,876,931	26.9	28,769	28,595	75,339	46,744	4
2015	3,137,353	27.6	31,374	31,202	174,361	143,159	0
2016 June	3,205,801	27.6	32,058	31,887	196,614	164,727	0
July	3,226,967	27.6	32,270	32,101	229,334	197,233	0
Aug	.	.	.	.	.	.	.
Sep ^P	3,280,948	27.8	32,809	32,643	...	...	...

(a) Required reserves of individual categories of banks

€ million

Maintenance period beginning in ¹	Big banks	Regional banks and other commercial banks	Branches of foreign banks	Landesbanken and savings banks	Credit cooperatives	Mortgage banks	Banks with special, development and other central support tasks
2010	10,633	7,949	1,845	18,128	9,153	556	2,170
2011	10,459	8,992	3,078	18,253	9,437	601	2,324
2012 ³	5,388	4,696	2,477	9,626	4,886	248	1,247
2013	5,189	4,705	1,437	9,306	5,123	239	1,263
2014	5,593	4,966	1,507	9,626	5,375	216	1,312
2015	6,105	5,199	2,012	10,432	5,649	226	1,578
2016 June	5,967	5,196	2,366	10,742	5,805	231	1,583
July	5,978	5,220	2,470	10,751	5,834	232	1,617
Aug	.	.	.	.	.	.	.
Sep	6,076	5,556	2,483	10,847	5,897	236	.

(b) Reserve base by subcategories of liabilities

€ million

Maintenance period beginning in ¹	Liabilities (excluding savings deposits, deposits with building and loan associations and repos) to non-MFIs with agreed maturities of up to 2 years	Liabilities (excluding repos and deposits with building and loan associations) with agreed maturities of up to 2 years to MFIs that are resident in euro-area countries but not subject to minimum reserve requirements	Liabilities (excluding repos and deposits with building and loan associations) with agreed maturities of up to 2 years to banks in non-euro-area countries	Savings deposits with agreed periods of notice of up to 2 years	Liabilities arising from bearer debt securities issued with agreed maturities of up to 2 years and bearer money market paper after deduction of a standard amount for bearer debt certificates or deduction of such paper held by the reporting institution
2010	1,484,334	2,376	344,440	594,119	105,728
2011	1,609,904	3,298	354,235	596,833	102,153
2012 ³	1,734,716	2,451	440,306	602,834	94,453
2013	1,795,844	2,213	255,006	600,702	90,159
2014	1,904,200	1,795	282,843	601,390	86,740
2015	2,063,317	1,879	375,891	592,110	104,146
2016 June	2,128,104	3,241	378,003	590,967	105,797
July	2,149,432	2,352	378,231	589,495	107,539
Aug	.	.	.	.	.
Sep	2,168,562	2,072	418,510	587,510	104,297

¹ The reserve maintenance period starts on the settlement day of the main refinancing operation immediately following the meeting of the Governing Council of the ECB for which the discussion on the monetary policy stance is scheduled. ² Article 3 of the Regulation of the European Central Bank on the application of minimum reserves (excluding liabilities to which a reserve ratio of 0% applies, pursuant to Article 4 (1)). ³ Amount after applying the reserve ratio to the reserve base. The reserve ratio for liabilities with agreed maturities of up to two years was 2% between 1 January 1999 and 17 January 2012. Since 18 January 2012, it was

stood at 1%. ⁴ Article 5 (2) of the Regulation of the European Central Bank on the application of minimum reserves. ⁵ Average credit balances of credit institutions at national central banks. ⁶ Average credit balances less required reserves after deduction of the lump-sum allowance. ⁷ Required reserves after deduction of the lump-sum allowance, including required reserves of Lithuania (€ 0.154 billion). Required reserves of the euro area up to 31 December 2014 amounted to € 106.2 billion.

VI Interest rates

1 ECB interest rates

% per annum

Applicable from	Deposit facility	Main refinancing operations		Marginal lending facility	Applicable from	Deposit facility	Main refinancing operations		Marginal lending facility
		Fixed rate	Minimum bid rate				Fixed rate	Minimum bid rate	
2005 Dec 6	1.25	–	2.25	3.25	2011 Apr 13	0.50	1.25	–	2.00
2006 Mar 8	1.50	–	2.50	3.50	July 13	0.75	1.50	–	2.25
June 15	1.75	–	2.75	3.75	Nov 9	0.50	1.25	–	2.00
Aug 9	2.00	–	3.00	4.00	Dez 14	0.25	1.00	–	1.75
Oct 11	2.25	–	3.25	4.25	2012 July 11	0.00	0.75	–	1.50
Dec 13	2.50	–	3.50	4.50	2013 May 8	0.00	0.50	–	1.00
2007 Mar 14	2.75	–	3.75	4.75	Nov 13	0.00	0.25	–	0.75
June 13	3.00	–	4.00	5.00	2014 June 11	–0.10	0.15	–	0.40
2008 July 9	3.25	–	4.25	5.25	Sep 10	–0.20	0.05	–	0.30
Oct 8	2.75	–	3.75	4.75	2015 Dec 9	–0.30	0.05	–	0.30
Oct 9	3.25	3.75	–	4.25	2016 Mar 16	–0.40	0.00	–	0.25
Nov 12	2.75	3.25	–	3.75					
Dec 10	2.00	2.50	–	3.00					
2009 Jan 21	1.00	2.00	–	3.00					
Mar 11	0.50	1.50	–	2.50					
Apr 8	0.25	1.25	–	2.25					
May 13	0.25	1.00	–	1.75					

1 Pursuant to section 247 of the Civil Code.

2 Base rates

% per annum

Applicable from	Base rate as per Civil Code 1	Applicable from	Base rate as per Civil Code 1
2002 Jan 1	2.57	2009 Jan 1	1.62
July 1	2.47	July 1	0.12
2003 Jan 1	1.97	2011 July 1	0.37
July 1	1.22	2012 Jan 1	0.12
2004 Jan 1	1.14	2013 Jan 1	–0.13
July 1	1.13	July 1	–0.38
2005 Jan 1	1.21	2014 Jan 1	–0.63
July 1	1.17	July 1	–0.73
2006 Jan 1	1.37	2015 Jan 1	–0.83
July 1	1.95	2016 July 1	–0.88
2007 Jan 1	2.70		
July 1	3.19		
2008 Jan 1	3.32		
July 1	3.19		

3 Eurosystem monetary policy operations allotted through tenders *

Date of settlement	Bid amount	Allotment amount	Fixed rate tenders		Variable rate tenders			Running for ... days
			Fixed rate	Minimum bid rate	Marginal rate 1	Weighted average rate		
							% per annum	
Main refinancing operations								
2016 Sep 14	41,581	41,581	0.00	–	–	–	7	
Sep 21	43,178	43,178	0.00	–	–	–	7	
Sep 28	38,740	38,740	0.00	–	–	–	7	
Oct 5	34,368	34,368	0.00	–	–	–	7	
Oct 12	32,886	32,886	0.00	–	–	–	7	
Oct 19	33,428	33,428	0.00	–	–	–	7	
Long-term refinancing operations								
2016 June 30	7,726	7,726	2 ...	–	–	–	91	
July 28	7,010	7,010	2 ...	–	–	–	91	
Sep 1	5,015	5,015	2 ...	–	–	–	91	
Sep 28	45,270	45,270	0.00	–	–	–	1,463	
Sep 29	4,570	4,570	2 ...	–	–	–	84	

* Source: ECB. 1 Lowest or highest interest rate at which funds were allotted or collected. 2 Interest payment on the maturity date; the rate will be fixed at the

average minimum bid rate of the main refinancing operations over the life of this operation.

4 Money market rates, by month *

% per annum

Monthly average	EONIA 1	EURIBOR 2					
		One-week funds	One-month funds	Three-month funds	Six-month funds	Nine-month funds	Twelve-month funds
2016 Mar	– 0.29	– 0.32	– 0.31	– 0.23	– 0.13	– 0.07	– 0.01
Apr	– 0.34	– 0.36	– 0.34	– 0.25	– 0.14	– 0.07	– 0.01
May	– 0.34	– 0.36	– 0.35	– 0.26	– 0.14	– 0.08	– 0.01
June	– 0.33	– 0.37	– 0.36	– 0.27	– 0.16	– 0.10	– 0.03
July	– 0.33	– 0.38	– 0.37	– 0.29	– 0.19	– 0.12	– 0.06
Aug	– 0.34	– 0.38	– 0.37	– 0.30	– 0.19	– 0.12	– 0.05
Sep	– 0.34	– 0.38	– 0.37	– 0.30	– 0.20	– 0.13	– 0.06

* Averages are Bundesbank calculations. Neither the Deutsche Bundesbank nor anyone else can be held liable for any irregularity or inaccuracy of the EONIA rate and the EURIBOR rate. 1 Euro OverNight Index Average: weighted average overnight rate for interbank operations calculated by the European Central Bank since

4 January 1999 on the basis of real turnover according to the act/360 method and published via Reuters. 2 Euro Interbank Offered Rate: unweighted average rate calculated by Reuters since 30 December 1998 according to the act/360 method.

VI Interest rates

5 Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) *

(a) Outstanding amounts °

End of month	Households' deposits				Non-financial corporations' deposits			
	with an agreed maturity of							
	up to 2 years		over 2 years		up to 2 years		over 2 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2015 Aug	0.51	81,011	1.71	221,355	0.26	77,081	2.17	17,717
Sep	0.50	79,461	1.70	221,031	0.26	75,281	2.17	17,611
Oct	0.49	78,623	1.69	220,371	0.25	74,750	2.15	17,702
Nov	0.48	77,788	1.67	219,914	0.24	76,639	2.09	17,194
Dec	0.46	77,515	1.66	221,625	0.22	79,591	2.04	17,364
2016 Jan	0.45	76,746	1.64	221,432	0.22	79,489	2.00	17,335
Feb	0.44	75,932	1.62	221,154	0.21	80,142	2.00	17,271
Mar	0.44	76,809	1.61	221,229	0.20	82,706	1.95	17,573
Apr	0.44	77,166	1.59	220,954	0.19	83,708	1.92	17,490
May	0.43	77,295	1.58	220,985	0.19	80,922	1.86	18,025
June	0.42	77,303	1.56	220,707	0.16	78,910	1.80	18,063
July	0.41	77,112	1.55	219,660	0.14	80,553	1.76	18,143
Aug	0.41	75,607	1.53	219,332	0.14	79,327	1.72	18,129

End of month	Housing loans to households 3						Loans for consumption and other purposes to households 4, 5					
	with a maturity of											
	up to 1 year 6		over 1 year and up to 5 years		over 5 years		up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2015 Aug	2.63	5,233	2.46	27,881	3.44	1,032,080	7.46	54,768	4.51	78,424	4.56	307,560
Sep	2.64	5,135	2.44	27,890	3.41	1,036,799	7.55	55,936	4.48	78,671	4.54	306,905
Oct	2.62	5,160	2.41	27,887	3.38	1,041,492	7.43	54,093	4.44	79,409	4.51	307,750
Nov	2.61	5,139	2.38	27,838	3.36	1,044,861	7.39	53,821	4.42	79,222	4.49	308,002
Dec	2.62	5,029	2.36	27,692	3.33	1,047,658	7.38	54,838	4.39	79,345	4.46	306,514
2016 Jan	2.61	5,011	2.34	27,438	3.30	1,047,865	7.44	52,884	4.35	79,779	4.43	307,381
Feb	2.60	5,022	2.36	27,364	3.27	1,049,663	7.45	53,249	4.31	80,351	4.41	307,866
Mar	2.63	5,014	2.34	27,371	3.24	1,052,498	7.49	54,287	4.29	80,695	4.38	307,355
Apr	2.56	4,928	2.31	27,215	3.21	1,057,019	7.33	52,229	4.27	81,376	4.35	308,474
May	2.57	4,959	2.29	27,187	3.19	1,059,863	7.36	52,678	4.24	81,793	4.33	309,250
June	2.57	4,863	2.28	27,272	3.16	1,064,491	7.39	53,521	4.22	82,252	4.31	309,025
July	2.50	4,836	2.25	27,233	3.13	1,069,851	7.26	51,406	4.20	82,844	4.29	310,390
Aug	2.50	4,772	2.23	27,198	3.10	1,074,183	7.27	51,516	4.17	83,206	4.27	310,914

End of month	Loans to non-financial corporations with a maturity of					
	up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
	2015 Aug	2.82	130,317	2.41	126,738	2.84	587,082
Sep	2.86	132,444	2.39	126,160	2.82	585,043
Oct	2.80	130,602	2.36	127,257	2.80	587,398
Nov	2.82	128,922	2.33	129,015	2.78	594,272
Dec	2.77	125,750	2.29	129,455	2.74	593,021
2016 Jan	2.68	130,505	2.26	129,655	2.72	595,850
Feb	2.67	134,107	2.23	130,842	2.70	598,794
Mar	2.65	137,421	2.20	130,530	2.67	597,332
Apr	2.66	136,364	2.18	131,883	2.64	601,069
May	2.60	136,538	2.15	132,698	2.62	605,918
June	2.62	135,941	2.13	133,455	2.60	604,497
July	2.59	133,112	2.09	133,334	2.57	608,349
Aug	2.60	129,449	2.08	134,293	2.55	613,121

* The interest rate statistics gathered on a harmonised basis in the euro area from January 2003 are collected in Germany on a sample basis. The grossing-up procedure was changed according to the ECB (Guideline ECB/2014/15). The data published hitherto from June 2010 to May 2015 were grossed-up again with the new method. The MFI interest rate statistics are based on the interest rates applied by MFIs and the related volumes of euro-denominated deposits and loans to households and non-financial corporations domiciled in the euro area. The household sector comprises individuals (including sole proprietors) and non-profit institutions serving households. Non-financial corporations include all enterprises other than insurance companies, banks and other financial institutions. The most recent figures are in all cases to be regarded as provisional. Subsequent revisions appearing in the following Monthly Report are not specially marked. Further information on the MFI interest rate statistics can be found on the Bundesbank's website (Statistics / Reporting system / Banking statistics / MFI interest rate statistics). ° The statistics on outstanding amounts are

collected at the end of the month. 1 The effective interest rates are calculated either as annualised agreed interest rates or as narrowly defined effective rates. Both calculation methods cover all interest payments on deposits and loans but not any other related charges which may occur for enquiries, administration, preparation of the documents, guarantees and credit insurance. 2 Data based on monthly balance sheet statistics. 3 Secured and unsecured loans for home purchase, including building and home improvements; including loans granted by building and loan associations and interim credits as well as transmitted loans granted by the reporting agents in their own name and for their own account. 4 Loans for consumption are defined as loans granted for the purpose of personal use in the consumption of goods and services. 5 For the purpose of these statistics, other loans are loans granted for other purposes such as business, debt consolidation, education etc. 6 Including overdrafts (see also footnotes 13 to 15 p 47*).

VI Interest rates

5 Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) * (cont'd) (b) New business +

Households' deposits													
Overnight		with an agreed maturity of						redeemable at notice of ⁸					
		up to 1 year		over 1 year and up to 2 years		over 2 years		up to 3 months		over 3 months			
Reporting period	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million	
2015 Aug	0.14	1,079,170	0.32	5,546	0.65	636	0.94	879	0.43	527,949	0.52	66,653	
Sep	0.14	1,079,060	0.34	6,158	0.87	668	1.12	971	0.42	528,705	0.51	65,229	
Oct	0.15	1,089,962	0.34	5,760	0.71	793	0.90	1,088	0.41	529,980	0.49	63,966	
Nov	0.14	1,107,307	0.34	5,900	0.69	840	0.89	1,196	0.40	530,810	0.47	62,774	
Dec	0.13	1,111,065	0.28	6,140	0.50	1,161	0.97	1,379	0.39	533,865	0.45	61,900	
2016 Jan	0.12	1,117,856	0.35	7,184	0.62	1,024	1.00	1,360	0.37	534,775	0.43	60,627	
Feb	0.12	1,123,332	0.34	6,226	0.71	914	1.03	1,493	0.36	536,409	0.40	59,334	
Mar	0.11	1,120,146	0.34	6,804	0.82	1,137	0.93	1,721	0.34	535,575	0.39	58,239	
Apr	0.10	1,140,220	0.35	5,852	0.69	994	0.94	1,130	0.32	534,792	0.38	57,125	
May	0.10	1,142,947	0.34	5,430	0.69	747	0.89	901	0.31	534,122	0.37	56,154	
June	0.08	1,149,604	0.27	6,027	0.73	759	0.83	935	0.30	533,649	0.36	55,415	
July	0.08	1,168,427	0.27	5,846	0.57	856	0.80	903	0.28	533,501	0.35	54,560	
Aug	0.08	1,171,644	0.33	5,081	0.61	1,147	0.86	961	0.27	533,503	0.34	53,749	

Non-financial corporations' deposits									
Overnight		with an agreed maturity of							
		up to 1 year		over 1 year and up to 2 years		over 2 years			
Reporting period	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	
2015 Aug	0.06	354,182	0.11	8,622	0.30	312	0.73	305	
Sep	0.05	357,208	0.15	8,732	0.22	723	0.54	351	
Oct	0.05	373,013	0.10	10,805	0.28	798	0.43	528	
Nov	0.05	377,900	0.11	10,676	0.39	574	0.56	326	
Dec	0.04	375,456	0.07	14,914	0.36	1,338	0.57	872	
2016 Jan	0.03	370,533	0.10	9,780	0.32	1,283	0.42	489	
Feb	0.03	369,125	0.08	10,334	0.48	890	0.50	244	
Mar	0.05	369,344	- 0.03	14,907	0.20	931	1.34	1,057	
Apr	0.05	377,546	- 0.01	10,820	0.13	851	0.40	439	
May	0.01	380,942	- 0.02	9,700	0.18	694	0.52	1,123	
June	0.01	376,365	- 0.02	10,619	0.16	689	0.46	858	
July	0.01	378,718	- 0.02	9,596	0.14	569	0.25	476	
Aug	0.01	388,519	- 0.06	9,726	0.19	451	0.39	286	

Loans to households																
Loans for other purposes to households with an initial rate fixation of ⁵																
Total		of which renegotiated loans ^{9, 10}		floating rate or up to 1 year ⁹		over 1 year and up to 5 years		over 5 years		of which loans to sole proprietors						
		Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	
2015 Aug	2.12	6,485	2.01	2,170	1.88	3,121	2.72	909	2.21	2,455	2.06	1,801	2.83	694	2.16	1,665
Sep	2.19	6,448	1.99	2,333	1.91	3,289	2.96	838	2.30	2,321	1.96	1,949	3.21	618	2.23	1,576
Oct	2.07	7,280	1.93	2,886	1.76	3,823	2.75	966	2.29	2,491	1.97	2,264	2.88	745	2.21	1,636
Nov	2.03	6,561	1.97	2,146	1.75	3,295	2.74	872	2.17	2,394	2.07	1,872	2.81	694	2.13	1,556
Dec	2.05	8,344	2.03	2,796	1.81	4,005	2.75	1,136	2.11	3,203	2.06	2,469	2.80	886	2.06	2,163
2016 Jan	1.96	7,252	2.01	2,816	1.68	3,753	2.63	1,054	2.11	2,445	2.04	2,153	2.70	823	2.03	1,617
Feb	2.05	6,669	2.10	2,300	1.87	3,388	2.64	904	2.08	2,377	2.15	2,032	2.76	690	2.05	1,528
Mar	2.02	7,255	1.87	2,578	1.77	3,549	2.70	996	2.09	2,710	1.96	2,167	2.81	756	2.03	1,796
Apr	2.03	6,381	1.89	2,492	1.81	3,375	2.68	981	2.09	2,025	2.02	2,079	2.87	757	2.01	1,420
May	2.00	5,898	1.92	1,926	1.77	2,921	2.71	876	2.03	2,101	2.01	1,859	2.97	647	1.97	1,372
June	2.02	6,820	1.93	2,359	1.84	3,200	2.58	1,134	1.98	2,486	2.09	1,953	2.67	898	1.89	1,769
July	1.89	6,818	1.73	2,543	1.69	3,394	2.66	936	1.89	2,488	1.88	2,323	2.82	724	1.85	1,614
Aug	2.02	5,947	1.95	1,989	1.94	2,697	2.80	793	1.85	2,457	1.99	1,789	2.96	589	1.89	1,569

For footnotes * and 1 to 6, see p 44*. + In the case of deposits with an agreed maturity and all loans excluding revolving loans and overdrafts, credit card debt, new business covers all new agreements between households or non-financial corporations and the bank. The interest rates are calculated as volume-weighted average rates of all new agreements concluded during the reporting month. In the case of overnight deposits, deposits redeemable at notice, revolving loans and overdrafts, credit card debt, new business is collected in the same way as outstanding amounts

for the sake of simplicity. This means that all outstanding deposit and lending business at the end of the month has to be incorporated in the calculation of average rates of interest. ⁷ Estimated. The volume of new business is extrapolated to form the underlying total using a grossing-up procedure. ⁸ Including non-financial corporations' deposits; including fidelity and growth premia. ⁹ Excluding overdrafts. ¹⁰ Collected from December 2014.

VI Interest rates

5 Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) * (cont'd) (b) New business +

Loans to households (cont'd)											
Loans for consumption with an initial rate fixation of 4											
Reporting period	Total (including charges)	Total		of which renegotiated loans 9, 10		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years	
	Annual percentage rate of charge 11 % pa	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million
Total loans											
2015 Aug	6.34	6.26	7,313	7.71	1,263	5.33	309	4.98	3,020	7.31	3,984
Sep	6.28	6.21	7,331	7.63	1,200	5.20	338	4.94	3,052	7.28	3,941
Oct	6.28	6.20	7,233	7.69	1,135	5.17	309	4.88	3,104	7.36	3,820
Nov	6.21	6.15	6,657	7.58	1,055	5.24	276	4.90	2,993	7.32	3,388
Dec	6.03	5.97	6,067	7.30	934	5.67	316	4.78	2,867	7.19	2,884
2016 Jan	6.44	6.37	7,338	7.52	1,426	5.59	309	4.99	2,938	7.41	4,091
Feb	6.25	6.20	7,862	7.44	1,444	5.55	322	4.94	3,329	7.22	4,280
Mar	6.06	6.04	8,415	7.33	1,833	5.49	341	4.79	3,577	7.07	4,497
Apr	6.21	6.19	8,734	7.33	1,814	5.89	310	4.88	3,548	7.16	4,876
May	6.22	6.20	8,244	7.47	1,715	5.89	306	4.90	3,329	7.16	4,609
June	6.20	6.18	8,940	7.47	1,864	5.73	314	4.87	3,616	7.15	5,010
July	6.20	6.18	8,468	7.50	1,764	5.97	298	4.77	3,405	7.20	4,765
Aug	6.08	6.06	8,302	7.36	1,643	5.87	329	4.70	3,402	7.09	4,571
of which: collateralised loans 12											
2015 Aug	-	3.49	240	-	-	3.05	18	3.86	144	2.92	78
Sep	-	3.28	238	-	-	2.52	38	3.90	116	2.78	84
Oct	-	3.33	244	-	-	2.33	41	3.87	131	2.89	72
Nov	-	3.58	218	-	-	2.84	23	3.90	136	3.14	59
Dec	-	3.39	219	-	-	2.72	22	3.89	128	2.66	69
2016 Jan	-	3.32	191	-	-	2.50	21	3.72	111	2.85	59
Feb	-	3.51	220	-	-	2.85	33	3.84	135	3.08	52
Mar	-	3.29	260	-	-	2.58	25	3.71	158	2.65	77
Apr	-	3.49	206	-	-	2.75	13	3.80	145	2.77	48
May	-	3.56	202	-	-	2.69	18	3.95	135	2.79	49
June	-	3.62	213	-	-	2.95	17	3.96	141	2.94	55
July	-	3.53	193	-	-	2.85	18	3.82	135	2.86	40
Aug	-	3.52	216	-	-	3.00	16	3.83	149	2.80	51

Loans to households (cont'd)													
Housing loans with an initial rate fixation of 3													
Reporting period	Total (including charges)	Total		of which renegotiated loans 9,10		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years and up to 10 years		over 10 years	
	Annual percentage rate of charge 11 % pa	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million
Total loans													
2015 Aug	2.09	2.06	19,745	2.15	4,445	2.27	2,290	1.95	1,939	1.92	7,566	2.15	7,950
Sep	2.07	2.03	19,161	2.08	4,209	2.17	2,344	1.98	1,851	1.92	7,276	2.12	7,690
Oct	2.07	2.05	19,874	2.04	5,455	2.11	2,577	1.99	2,125	1.94	7,230	2.14	7,942
Nov	2.04	2.02	18,426	2.11	4,212	2.27	2,190	1.94	1,874	1.89	7,319	2.09	7,043
Dec	1.98	1.95	19,521	2.02	4,769	2.16	2,713	1.88	2,045	1.83	7,385	2.01	7,378
2016 Jan	2.00	1.97	18,507	2.05	5,833	2.22	2,413	1.87	2,054	1.84	6,800	2.05	7,240
Feb	1.97	1.96	18,778	2.16	4,870	2.45	2,584	1.86	1,994	1.79	6,837	1.97	7,363
Mar	1.85	1.82	22,396	1.94	4,799	2.10	2,618	1.82	2,256	1.70	8,246	1.86	9,276
Apr	1.93	1.88	17,859	1.94	4,981	2.16	2,206	1.82	1,820	1.67	6,054	1.97	7,779
May	1.86	1.79	17,968	2.03	3,654	2.19	2,133	1.83	1,698	1.62	6,635	1.83	7,502
June	1.82	1.76	21,409	1.94	4,079	2.04	2,567	1.85	1,931	1.60	7,424	1.79	9,487
July	1.78	1.73	20,287	1.83	4,970	2.01	2,464	1.79	1,866	1.59	7,230	1.75	8,727
Aug	1.74	1.68	19,902	1.86	4,075	2.18	2,185	1.77	1,758	1.49	7,192	1.69	8,767
of which: collateralised loans 12													
2015 Aug	-	1.98	9,203	-	-	2.23	794	1.71	1,016	1.86	3,653	2.11	3,740
Sep	-	1.96	8,434	-	-	2.13	912	1.74	878	1.87	3,334	2.07	3,310
Oct	-	1.99	9,323	-	-	2.10	995	1.71	1,063	1.86	3,583	2.16	3,682
Nov	-	1.94	8,245	-	-	2.21	812	1.69	888	1.83	3,378	2.05	3,167
Dec	-	1.86	8,294	-	-	2.06	969	1.63	915	1.77	3,272	1.95	3,138
2016 Jan	-	1.92	8,349	-	-	2.30	916	1.62	1,003	1.80	3,276	2.04	3,154
Feb	-	1.89	7,875	-	-	2.47	987	1.62	875	1.73	3,048	1.95	2,965
Mar	-	1.74	9,786	-	-	2.01	1,002	1.63	1,075	1.63	3,807	1.81	3,902
Apr	-	1.89	7,980	-	-	2.17	848	1.53	843	1.62	2,827	2.14	3,462
May	-	1.71	7,343	-	-	2.08	783	1.53	752	1.54	2,804	1.81	3,004
June	-	1.67	9,111	-	-	1.96	956	1.55	849	1.53	3,475	1.75	3,831
July	-	1.65	8,675	-	-	1.86	927	1.51	833	1.53	3,387	1.75	3,528
Aug	-	1.58	8,476	-	-	1.97	770	1.47	774	1.42	3,412	1.67	3,520

For footnotes * and 1 to 6, see p 44*. For footnotes +, 7 to 10, see p 45*. For footnote 12, see p 47*. 11 Annual percentage rate of charge, which contains other

related charges which may occur for enquiries, administration, preparation of the documents, guarantees and credit insurance.

VI Interest rates

5 Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) * (cont'd) (b) New business +

Reporting period	Loans to households (cont'd)						Loans to non-financial corporations					
	Revolving loans 13 and overdrafts 14 credit card debt 15		<i>of which</i>				Revolving loans 13 and overdrafts 14 credit card debt 15		<i>of which</i>			
			Revolving loans 13 and overdrafts 14		Extended credit card debt				Revolving loans 13 and overdrafts 14		Extended credit card debt	
Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	
2015 Aug	8.91	41,624	8.93	34,639	15.39	3,989	4.01	64,895	4.03	64,693		
Sep	8.95	42,843	9.01	35,907	15.43	3,899	4.08	65,570	4.10	65,322		
Oct	8.89	41,116	8.89	34,203	15.43	3,971	4.00	62,917	4.01	62,664		
Nov	8.82	40,622	8.82	33,577	15.32	4,064	3.92	65,212	3.94	64,959		
Dec	8.69	41,921	8.80	34,544	15.31	3,938	3.94	61,493	3.96	61,270		
2016 Jan	8.83	40,469	8.78	33,630	15.36	4,043	3.82	65,219	3.84	65,010		
Feb	8.82	41,049	8.81	34,005	15.36	4,071	3.79	67,167	3.80	66,930		
Mar	8.81	42,187	8.80	35,211	15.42	3,982	3.84	68,638	3.85	68,394		
Apr	8.70	40,129	8.67	33,142	15.24	4,067	3.83	66,708	3.85	66,461		
May	8.72	40,781	8.75	33,466	15.21	4,135	3.70	67,212	3.71	66,974		
June	8.75	41,709	8.77	34,494	15.23	4,093	3.74	67,687	3.75	67,430		
July	8.61	39,874	8.62	32,504	15.22	4,152	3.66	65,412	3.67	65,180		
Aug	8.61	40,210	8.63	32,811	15.22	4,137	3.73	63,559	3.74	63,321		

Reporting period	Loans to non-financial corporations (cont'd)															
	Total		<i>of which</i>				Loans up to €1 million with an initial rate fixation of 16				Loans over €1 million with an initial rate fixation of 16					
			renegotiated loans 9, 10		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years	
Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	
Total loans																
2015 Aug	1.62	49,640	1.67	14,967	2.64	6,644	2.99	1,260	2.03	1,321	1.28	33,589	1.99	1,497	1.98	5,329
Sep	1.84	60,340	1.82	19,271	2.78	8,061	2.91	1,323	2.08	1,333	1.56	39,892	1.69	1,704	2.11	8,027
Oct	1.68	57,781	1.57	20,890	2.64	8,271	2.89	1,452	2.07	1,254	1.37	37,386	1.71	2,319	1.86	7,099
Nov	1.67	51,840	1.63	16,651	2.71	7,599	2.91	1,381	2.09	1,254	1.30	32,330	1.98	2,249	1.81	7,027
Dec	1.68	71,770	1.68	21,964	2.63	8,367	2.90	1,688	1.98	1,765	1.42	46,829	1.79	3,286	1.82	9,835
2016 Jan	1.60	56,798	1.62	19,979	2.58	7,835	2.87	1,331	2.02	1,328	1.26	38,673	2.16	2,309	1.90	5,322
Feb	1.54	52,765	1.61	15,300	2.71	7,805	2.78	1,310	1.93	1,160	1.20	34,426	1.42	2,142	1.67	5,922
Mar	1.64	62,713	1.70	19,300	2.67	8,680	2.73	1,524	1.88	1,394	1.35	41,099	1.76	2,294	1.68	7,722
Apr	1.55	57,589	1.60	19,803	2.60	8,290	2.74	1,645	1.82	1,410	1.23	38,162	1.56	1,933	1.68	6,149
May	1.47	53,170	1.55	15,321	2.59	7,987	2.73	1,363	1.85	1,338	1.11	34,259	1.55	1,651	1.64	6,572
June	1.52	66,550	1.68	19,903	2.61	8,992	2.79	1,600	1.76	1,526	1.23	43,829	1.57	2,249	1.55	8,354
July	1.46	62,584	1.55	21,116	2.44	8,339	2.67	1,484	1.72	1,554	1.16	41,120	1.88	2,329	1.53	7,758
Aug	1.43	54,014	1.58	14,307	2.44	7,384	2.62	1,340	1.68	1,416	1.14	33,035	1.48	2,109	1.40	8,730
<i>of which: collateralised loans 12</i>																
2015 Aug	1.65	6,913	.	.	2.14	546	2.69	128	1.86	445	1.41	4,037	1.91	302	1.93	1,455
Sep	1.93	9,689	.	.	2.07	584	2.73	101	1.92	380	1.63	5,151	1.65	395	2.44	3,078
Oct	1.72	9,269	.	.	1.99	722	2.53	160	1.94	448	1.60	5,036	1.83	752	1.78	2,151
Nov	1.76	7,680	.	.	2.04	503	2.62	130	1.92	395	1.48	4,036	2.31	1,162	1.87	1,454
Dec	1.61	13,483	.	.	1.98	636	2.57	150	1.76	539	1.47	7,249	1.84	1,438	1.67	3,471
2016 Jan	1.65	9,419	.	.	2.01	674	2.55	125	1.89	463	1.33	6,286	3.51	656	1.93	1,215
Feb	1.60	8,658	.	.	2.07	554	2.29	149	1.84	382	1.45	4,958	1.69	627	1.71	1,988
Mar	1.62	10,561	.	.	1.94	611	2.60	154	1.73	406	1.50	5,407	1.79	1,089	1.66	2,894
Apr	1.59	9,251	.	.	1.95	660	2.39	153	1.67	438	1.49	5,471	1.92	530	1.57	1,999
May	1.58	5,951	.	.	2.03	479	2.60	134	1.65	406	1.47	2,864	1.57	364	1.55	1,704
June	1.58	10,056	.	.	1.91	601	2.51	159	1.64	468	1.56	4,885	1.72	1,003	1.46	2,940
July	1.53	10,322	.	.	1.87	681	2.38	161	1.53	544	1.35	5,526	1.95	929	1.61	2,481
Aug	1.54	7,519	.	.	2.01	523	2.54	119	1.51	410	1.40	3,645	1.71	452	1.57	2,370

For footnotes * and 1 to 6, see p 44*. For footnotes + and 7 to 10, see p 45*. For footnote 11, see p 46*. **12** Collected from June 2010. For the purposes of the interest rate statistics, a loan is considered to be secured if collateral (among others financial collateral, real estate collateral, debt securities) in at least the same value as the loan amount has been posted, pledged or assigned. **13** From June 2010 including revolving loans which have all the following features: (a) the borrower may use or withdraw the funds to a pre-approved credit limit without giving prior notice to the lender; (b) the amount of available credit can increase and decrease as funds are borrowed and repaid; (c) the loan may be used repeatedly; (d) there is no

obligation of regular repayment of funds. **14** Overdrafts are defined as debit balances on current accounts. They include all bank overdrafts regardless of whether they are within or beyond the limits agreed between customers and the bank. **15** From June 2010 including convenience and extended credit card debt. Convenience credit is defined as the credit granted at an interest rate of 0% in the period between payment transactions effectuated with the card during one billing cycle and the date at which the debt balances from this specific billing cycle become due. **16** The amount category refers to the single loan transaction considered as new business.

VII Insurance corporations and pension funds

1 Assets *

€ billion

End of year/quarter	Assets									
	Total	Financial assets								Non-financial assets
		Total	Cash and deposits with banks (MFIs) ¹	Debt securities (including financial derivatives)	Loans granted ²	Shares and other equity ³	Investment fund shares/units	Ceded share of insurance technical reserves	Other financial assets	
Insurance corporations and pension funds ⁴										
2006	1,771.5	1,709.2	524.1	149.9	244.8	261.5	385.6	74.5	68.7	62.3
2007	1,838.3	1,779.8	558.3	155.1	248.2	275.3	409.6	70.2	63.1	58.5
2008	1,770.6	1,714.8	574.5	159.4	243.3	228.9	379.7	65.8	63.4	55.8
2009	1,836.8	1,779.6	588.9	173.9	259.8	210.5	426.9	58.6	61.2	57.1
2010	1,961.9	1,900.5	570.9	210.4	267.2	223.5	501.4	59.9	67.2	61.4
2011	2,011.2	1,947.8	576.3	226.2	271.9	221.9	522.1	62.2	67.1	63.4
2012	2,162.8	2,095.7	560.1	287.2	277.9	223.8	619.5	63.1	64.2	67.1
2013	2,236.7	2,165.2	540.6	310.5	284.7	224.1	678.5	64.2	62.7	71.5
2014	2,444.5	2,367.3	523.2	384.5	300.5	232.5	790.1	68.8	67.6	77.2
2015	2,536.5	2,454.1	488.7	421.6	309.2	246.9	841.7	77.0	69.0	82.4
2014 Q3	2,392.9	2,317.6	531.4	365.3	294.9	229.0	763.7	67.5	65.8	75.3
Q4	2,444.5	2,367.3	523.2	384.5	300.5	232.5	790.1	68.8	67.6	77.2
2015 Q1	2,539.4	2,461.4	517.4	414.0	305.1	242.1	843.7	70.6	68.4	78.1
Q2	2,489.5	2,410.8	509.4	396.7	304.8	238.9	819.2	72.6	69.2	78.6
Q3	2,507.3	2,427.5	498.0	412.5	308.0	241.6	823.8	74.7	68.9	79.8
Q4	2,536.5	2,454.1	488.7	421.6	309.2	246.9	841.7	77.0	69.0	82.4
2016 Q1	2,598.2	2,514.1	486.8	456.3	310.8	248.3	863.1	78.9	70.0	84.1
Q2	2,637.1	2,552.4	478.6	480.8	312.6	248.5	882.7	78.7	70.6	84.7
Insurance corporations										
2006	1,489.2	1,444.6	410.4	127.6	224.7	254.2	292.7	73.1	62.0	44.6
2007	1,526.2	1,485.5	432.5	130.7	226.4	267.1	304.0	68.2	56.6	40.7
2008	1,454.7	1,416.5	436.7	133.7	221.7	221.4	284.3	63.4	55.2	38.2
2009	1,490.3	1,452.2	440.4	146.2	236.4	202.7	317.6	55.6	53.2	38.1
2010	1,553.3	1,513.1	420.0	170.9	243.2	210.7	356.5	56.5	55.4	40.3
2011	1,584.6	1,542.9	419.8	191.3	246.0	210.4	361.4	58.4	55.5	41.7
2012	1,694.4	1,651.1	405.1	246.2	251.7	211.4	425.1	59.0	52.7	43.3
2013	1,742.1	1,695.7	386.3	268.0	257.1	211.1	462.3	59.8	51.0	46.4
2014	1,892.0	1,842.7	371.6	327.4	271.4	215.9	542.3	63.9	50.2	49.3
2015	1,953.4	1,901.7	336.3	357.3	278.7	228.7	578.3	71.6	50.7	51.8
2014 Q3	1,856.7	1,808.2	378.3	313.4	266.6	213.5	523.2	62.7	50.3	48.6
Q4	1,892.0	1,842.7	371.6	327.4	271.4	215.9	542.3	63.9	50.2	49.3
2015 Q1	1,967.9	1,918.2	365.3	352.8	275.7	224.9	583.1	65.6	50.8	49.7
Q2	1,925.8	1,875.9	357.5	337.9	275.3	221.6	564.6	67.5	51.5	49.9
Q3	1,938.2	1,887.7	347.5	350.0	278.1	224.0	567.7	69.5	51.0	50.5
Q4	1,953.4	1,901.7	336.3	357.3	278.7	228.7	578.3	71.6	50.7	51.8
2016 Q1	2,007.2	1,954.1	336.2	386.6	280.0	230.0	596.3	73.4	51.6	53.1
Q2	2,033.9	1,980.7	328.6	408.0	281.7	229.6	607.7	73.1	51.9	53.2
Pension funds ⁴										
2006	282.3	264.6	113.8	22.4	20.1	7.3	92.8	1.5	6.7	17.7
2007	312.1	294.3	125.8	24.4	21.9	8.2	105.6	1.9	6.6	17.8
2008	315.9	298.3	137.8	25.6	21.6	7.4	95.3	2.4	8.2	17.5
2009	346.5	327.4	148.4	27.7	23.3	7.7	109.3	3.0	8.0	19.1
2010	408.5	387.4	150.9	39.5	24.0	12.8	144.9	3.5	11.8	21.1
2011	426.6	404.9	156.5	34.9	25.9	11.5	160.8	3.8	11.6	21.7
2012	468.4	444.6	155.1	40.9	26.2	12.4	194.4	4.1	11.5	23.8
2013	494.6	469.6	154.3	42.5	27.6	13.0	216.2	4.4	11.7	25.1
2014	552.5	524.6	151.7	57.1	29.1	16.7	247.8	4.9	17.4	27.8
2015	583.0	552.4	152.4	64.3	30.4	18.2	263.3	5.4	18.3	30.6
2014 Q3	536.2	509.4	153.0	52.0	28.3	15.5	240.5	4.7	15.4	26.8
Q4	552.5	524.6	151.7	57.1	29.1	16.7	247.8	4.9	17.4	27.8
2015 Q1	571.5	543.2	152.1	61.2	29.4	17.3	260.6	5.0	17.6	28.3
Q2	563.7	534.9	151.8	58.8	29.6	17.3	254.7	5.1	17.7	28.8
Q3	569.2	539.9	150.6	62.5	29.9	17.7	256.0	5.3	17.9	29.3
Q4	583.0	552.4	152.4	64.3	30.4	18.2	263.3	5.4	18.3	30.6
2016 Q1	591.1	560.0	150.6	69.7	30.7	18.3	266.8	5.5	18.4	31.0
Q2	603.2	571.7	150.0	72.8	30.9	18.8	275.0	5.5	18.6	31.5

Source: Bundesbank calculations based on supervisory data of the Federal Financial Supervisory Authority (BaFin). * Valuation of securities based on current market values; valuation of other items based on book values. Figures from 2014 Q3 on have been revised. ¹ Including registered bonds, borrower's note loans and Pfandbriefe of monetary financial institutions. ² Including deposits retained on assumed reinsurance. ³ Including participation certificates ("Genuss-Scheine"). ⁴ The term "pension

funds" refers to the institutional sector "insurance corporations and pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes ("Pensionskassen", pension funds supervised by BaFin, Contractual Trust Arrangements (CTAs; included as from 2010) and public, church and municipal supplementary pension funds) and occupational pension schemes for the self-employed. Social security funds are not included.

VII Insurance corporations and pension funds

2 Liabilities *

€ billion									
Liabilities									
End of year/quarter	Total	Debt securities (including financial derivatives)	Loans received ¹	Shares and other equity ²	Insurance technical reserves			Other liabilities	Net worth ⁴
					Total	Net equity of households in life insurance and pension fund reserves ³	Unearned premiums and reserves for outstanding claims		
Insurance corporations and pension funds ⁵									
2006	1,771.5	8.4	91.6	210.0	1,318.8	1,049.1	269.6	81.3	61.5
2007	1,838.3	11.7	88.9	214.8	1,377.9	1,119.2	258.7	78.2	66.9
2008	1,770.6	14.7	77.0	136.0	1,396.3	1,141.5	254.8	74.7	71.8
2009	1,836.8	16.2	71.6	136.2	1,460.5	1,211.6	249.0	73.1	79.2
2010	1,961.9	17.8	72.3	137.6	1,573.3	1,318.9	254.4	71.5	89.3
2011	2,011.2	17.0	72.1	111.8	1,625.0	1,360.3	264.7	71.5	113.8
2012	2,162.8	22.4	77.1	158.9	1,708.3	1,437.1	271.2	71.3	124.8
2013	2,236.7	16.9	81.8	197.7	1,794.1	1,514.4	279.7	71.7	74.5
2014	2,444.5	17.3	89.0	202.7	1,903.8	1,605.5	298.3	72.3	159.4
2015	2,536.5	18.3	96.6	226.0	1,995.9	1,683.2	312.8	71.9	127.8
2014 Q3	2,392.9	17.6	86.3	188.0	1,870.6	1,575.6	295.0	73.3	157.1
Q4	2,444.5	17.3	89.0	202.7	1,903.8	1,605.5	298.3	72.3	159.4
2015 Q1	2,539.4	19.0	90.4	223.1	1,942.6	1,635.6	307.0	73.0	191.4
Q2	2,489.5	17.9	91.9	206.2	1,958.3	1,649.6	308.7	72.5	142.7
Q3	2,507.3	17.5	94.3	208.4	1,976.5	1,665.6	311.0	72.2	138.4
Q4	2,536.5	18.3	96.6	226.0	1,995.9	1,683.2	312.8	71.9	127.8
2016 Q1	2,598.2	17.7	97.8	231.7	2,027.1	1,707.3	319.9	73.2	150.6
Q2	2,637.1	17.6	97.9	201.1	2,041.0	1,722.3	318.8	73.3	206.2
Insurance corporations									
2006	1,489.2	8.4	89.8	202.0	1,061.3	792.0	269.2	79.1	48.6
2007	1,526.2	11.7	86.4	206.7	1,090.1	831.7	258.3	75.7	55.6
2008	1,454.7	14.7	74.2	130.6	1,095.7	841.3	254.4	72.3	67.2
2009	1,490.3	16.2	68.3	130.8	1,136.4	887.8	248.5	71.1	67.5
2010	1,553.3	17.8	68.7	131.8	1,191.3	937.3	254.0	69.4	74.4
2011	1,584.6	17.0	68.3	107.0	1,224.3	960.1	264.2	69.6	98.3
2012	1,694.4	22.4	73.1	152.0	1,280.0	1,009.2	270.8	69.5	97.4
2013	1,742.1	16.9	77.7	188.7	1,340.7	1,061.4	279.3	68.8	49.2
2014	1,892.0	17.3	84.3	193.0	1,411.6	1,113.8	297.8	70.5	115.3
2015	1,953.4	18.3	91.6	215.1	1,472.9	1,160.6	312.3	70.2	85.4
2014 Q3	1,856.7	17.6	81.8	179.3	1,394.2	1,099.7	294.5	70.1	113.7
Q4	1,892.0	17.3	84.3	193.0	1,411.6	1,113.8	297.8	70.5	115.3
2015 Q1	1,967.9	19.0	85.6	212.5	1,443.0	1,136.4	306.6	71.2	136.6
Q2	1,925.8	17.9	87.2	196.4	1,453.2	1,145.0	308.3	70.7	100.3
Q3	1,938.2	17.5	89.5	198.5	1,464.5	1,154.0	310.5	70.5	97.6
Q4	1,953.4	18.3	91.6	215.1	1,472.9	1,160.6	312.3	70.2	85.4
2016 Q1	2,007.2	17.7	92.8	220.6	1,499.3	1,179.8	319.4	71.4	105.4
Q2	2,033.9	17.6	92.9	191.3	1,506.6	1,188.3	318.3	71.5	154.0
Pension funds ⁵									
2006	282.3	–	1.8	8.0	257.5	257.1	0.4	2.1	12.9
2007	312.1	–	2.4	8.1	287.8	287.5	0.3	2.5	11.2
2008	315.9	–	2.8	5.4	300.6	300.2	0.4	2.4	4.7
2009	346.5	–	3.2	5.4	324.2	323.7	0.4	1.9	11.7
2010	408.5	–	3.6	5.8	382.1	381.7	0.4	2.1	15.0
2011	426.6	–	3.8	4.8	400.6	400.2	0.5	1.9	15.5
2012	468.4	–	4.1	6.9	428.3	427.9	0.4	1.8	27.3
2013	494.6	–	4.2	8.9	453.4	452.9	0.5	2.9	25.3
2014	552.5	–	4.7	9.7	492.1	491.6	0.5	1.8	44.2
2015	583.0	–	4.9	11.0	523.0	522.6	0.5	1.7	42.4
2014 Q3	536.2	–	4.5	8.7	476.4	475.9	0.5	3.1	43.4
Q4	552.5	–	4.7	9.7	492.1	491.6	0.5	1.8	44.2
2015 Q1	571.5	–	4.7	10.5	499.7	499.2	0.5	1.8	54.8
Q2	563.7	–	4.8	9.8	505.1	504.6	0.5	1.7	42.4
Q3	569.2	–	4.8	9.9	512.0	511.6	0.5	1.7	40.7
Q4	583.0	–	4.9	11.0	523.0	522.6	0.5	1.7	42.4
2016 Q1	591.1	–	5.0	11.2	527.9	527.4	0.5	1.7	45.3
Q2	603.2	–	5.0	9.8	534.4	533.9	0.5	1.8	52.3

Source: Bundesbank calculations based on supervisory data of the Federal Financial Supervisory Authority (BaFin). * Valuation of securities based on current market values; valuation of other items based on book values. Quarterly data and data as from 2015 are partially estimated. Figures from 2014 Q3 on have been revised. ¹ Including deposits retained on ceded business. ² Including participation certificates ("Genuss-Scheine"). ³ Including ageing provisions of health insurance schemes and premium reserves of accident insurance schemes with guaranteed premium refund. ⁴ As defined in the European System of Accounts (ESA 1995), net worth is the difference

between total assets and the remaining liability items. Own funds are the sum of net worth and "shares and other equity". ⁵ The term "pension funds" refers to the institutional sector "insurance corporations and pension funds" of the ESA. Pension funds thus comprise company pension schemes ("Pensionskassen", pension funds supervised by BaFin, Contractual Trust Arrangements (CTAs; included as from 2010) and public, church and municipal supplementary pension funds) and occupational pension schemes for the self-employed. Social security funds are not included.

VIII Capital market

1 Sales and purchases of debt securities and shares in Germany

€ million

Period	Debt securities																					
	Sales = total purchases	Sales					Purchases															
		Domestic debt securities 1					Residents															
		Total	Bank debt securities	Corporate bonds (non-MFIs) 2	Public debt securities 3	Foreign debt securities 4	Total 5	Credit institutions including building and loan associations 6	Deutsche Bundesbank	Other sectors 7	Non-residents 8											
2004	233,890	133,711	64,231	10,778	58,703	100,179	108,119	121,841	.	-	13,723	125,772										
2005	252,658	110,542	39,898	2,682	67,965	142,116	94,718	61,740	.	.	32,978	157,940										
2006	242,006	102,379	40,995	8,943	52,446	139,627	125,423	68,893	.	.	56,530	116,583										
2007	217,798	90,270	42,034	20,123	28,111	127,528	-	26,762	96,476	.	-	123,238	244,560									
2008	76,490	66,139	-	45,712	86,527	25,322	10,351	18,236	68,049	.	-	49,813	58,254									
2009	70,208	-	538	-	114,902	22,709	91,655	70,747	90,154	12,973	8,645	77,181	-	19,945								
2010	146,620	-	1,212	-	7,621	24,044	-	17,635	147,831	92,682	-	103,271	22,967	172,986	53,938							
2011	33,649	-	13,575	-	46,796	850	59,521	20,075	-	23,876	-	94,793	36,805	34,112	57,525							
2012	51,813	-	21,419	-	98,820	-	8,701	86,103	73,231	-	3,767	-	42,017	-	3,573	41,823	55,580					
2013	-	12,603	-	101,616	-	117,187	-	153	89,013	18,583	-	25,778	-	12,708	57,069	-	31,185					
2014	63,381	-	31,962	-	47,404	-	1,330	16,776	95,341	51,779	-	12,124	-	11,951	75,854	-	11,601					
2015	32,891	-	36,010	-	65,778	26,762	3,006	68,902	123,662	-	66,330	121,164	68,828	-	90,773	-	-					
2015 Oct	4,370	-	1,263	-	5,758	-	6,129	-	892	5,633	6,801	-	12,250	12,664	-	6,387	-	2,432				
2015 Nov	821	-	2,159	-	14,282	-	1,729	-	13,853	1,338	5,797	-	3,259	12,847	-	10,309	-	6,618				
2015 Dec	59,323	-	57,836	-	55,168	996	-	3,664	-	1,487	-	13,826	-	39,384	11,090	-	14,468	-	45,497			
2016 Jan	8,853	-	1,881	-	7,474	2,924	-	12,279	10,733	6,823	2,236	12,023	-	7,436	-	2,029	-	-				
2016 Feb	31,114	-	19,483	-	14,851	1,224	-	3,407	11,631	20,916	2,002	12,911	-	6,003	-	10,198	-	-				
2016 Mar	26,539	-	12,729	-	1,330	4,510	-	6,889	13,810	26,890	1,261	13,401	-	12,228	-	351	-	-				
2016 Apr	12,556	-	3,469	-	7,238	1,970	-	12,677	16,025	34,517	-	5,143	-	15,821	-	23,839	-	21,961				
2016 May	32,838	-	29,686	-	8,729	3,993	-	16,964	3,152	15,400	-	6,052	-	18,093	-	3,359	-	17,438				
2016 June	-	5,007	-	7,553	-	2,177	-	4,636	-	740	-	2,545	-	8,528	-	16,907	-	6,841	-	20,227		
2016 July	-	30,730	-	26,603	-	16,263	-	1,055	-	11,394	-	4,127	-	1,577	-	9,959	-	18,064	-	9,682	-	29,152
2016 Aug	-	19,604	-	18,041	-	7,011	-	942	-	11,972	-	1,563	-	12,150	-	10,241	-	13,001	-	9,390	-	7,454

€ million

Period	Shares											
	Sales = total purchases	Sales			Purchases							
		Domestic shares 9		Foreign shares 10	Residents				Non-residents 13			
		Total	Bank debt securities	Corporate bonds (non-MFIs) 2	Total 11	Credit institutions 6	Other sectors 12	Total	Credit institutions	Other sectors	Non-residents	
2004	-	3,317	-	10,157	-	13,474	7,432	5,045	-	2,387	-	10,748
2005	32,364	13,766	18,597	1,036	10,208	-	9,172	-	31,329			
2006	26,276	9,061	17,214	7,528	11,323	-	3,795	-	18,748			
2007	-	5,009	10,053	-	15,062	-	62,308	-	6,702	-	55,606	57,299
2008	-	29,452	11,326	-	40,778	2,743	-	23,079	-	25,822	-	32,194
2009	35,980	23,962	12,018	30,496	-	8,335	38,831	-	5,484			
2010	37,767	20,049	17,719	36,406	7,340	29,066	1,361					
2011	25,833	21,713	4,120	40,804	670	40,134	-	14,971				
2012	15,061	5,120	9,941	14,405	10,259	4,146	656					
2013	21,553	10,106	11,447	18,344	11,991	6,353	3,209					
2014	47,506	18,778	28,728	39,661	17,203	22,458	7,845					
2015	38,855	7,668	31,187	24,017	-	5,421	29,438	14,838				
2015 Oct	1,268	903	365	838	150	988	2,106					
2015 Nov	4,836	640	4,196	1,526	5,566	-	4,040	3,310				
2015 Dec	5,812	1,100	4,712	6,195	-	4,336	10,531	383				
2016 Jan	-	1,294	120	-	1,414	367	-	5,901	6,268	-	1,661	
2016 Feb	-	611	66	-	677	1,539	-	5,401	6,940	-	2,150	
2016 Mar	-	8,290	59	-	8,231	5,935	-	1,861	4,074	-	2,355	
2016 Apr	-	949	39	-	988	472	-	639	1,111	-	1,421	
2016 May	-	5,585	288	-	5,297	6,964	-	2,838	4,126	-	1,379	
2016 June	-	1,068	335	-	733	3,576	-	330	3,906	-	2,508	
2016 July	-	2,930	464	-	2,466	2,672	-	2,128	4,800	-	258	
2016 Aug	-	4,824	1,063	-	3,761	3,398	-	2,256	1,142	-	1,426	

1 Net sales at market values plus/minus changes in issuers' portfolios of their own debt securities. 2 Including cross-border financing within groups from January 2011. 3 Including Federal Railways Fund, Federal Post Office and Treuhand agency. 4 Net purchases or net sales (-) of foreign debt securities by residents; transaction values. 5 Domestic and foreign debt securities. 6 Book values; statistically adjusted. 7 Residual; also including purchases of domestic and foreign securities by domestic mutual funds. Up to end-2008, data comprise Deutsche Bundesbank. 8 Net purchases or net sales (-) of domestic debt securities by non-residents; transaction

values. 9 Excluding shares of public limited investment companies; at issue prices. 10 Net purchases or net sales (-) of foreign shares (including direct investment) by residents; transaction values. 11 Domestic and foreign shares. 12 Residual; also including purchases of domestic and foreign securities by domestic mutual funds. 13 Net purchases or net sales (-) of domestic shares (including direct investment) by non-residents; transaction values. — The figures for the most recent date are provisional; revisions are not specially marked.

VIII Capital market

2 Sales of debt securities issued by residents *

€ million nominal value

Period	Total	Bank debt securities ¹				Other bank debt securities	Corporate bonds (non-MFIs) ²	Public debt securities ³	Memo item Foreign DM/euro bonds issued by German-managed syndicates
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions				
Gross sales ⁴									
2004	990,399	688,844	33,774	90,815	162,353	401,904	31,517	270,040	12,344
2005	988,911	692,182	28,217	103,984	160,010	399,969	24,352	272,380	600
2006	925,863	622,055	24,483	99,628	139,193	358,750	29,975	273,834	69
2007	1,021,533	743,616	19,211	82,720	195,722	445,963	15,043	262,872	-
2008	1,337,337	961,271	51,259	70,520	382,814	456,676	95,093	280,974	-
2009	1,533,616	1,058,815	40,421	37,615	331,566	649,215	76,379	398,423	-
2010	1,375,138	757,754	36,226	33,539	363,828	324,160	53,654	563,731	-
2011	1,337,772	658,781	31,431	24,295	376,876	226,180	86,615	592,376	-
2012	1,340,568	702,781	36,593	11,413	446,153	208,623	63,259	574,529	-
2013	1,433,628	908,107	25,775	12,963	692,611	176,758	66,630	458,891	-
2014	1,362,056	829,864	24,202	13,016	620,409	172,236	79,873	452,321	-
2015	1,359,422	852,045	35,840	13,376	581,410	221,417	106,676	400,700	-
2016 Jan	120,383	77,552	1,810	1,099	54,961	19,682	6,448	36,384	-
Feb	127,058	80,388	6,236	886	55,057	18,208	4,135	42,535	-
Mar	111,271	61,483	2,722	1,030	38,521	19,209	9,240	40,548	-
Apr	115,428	69,506	1,282	536	53,522	14,167	5,762	40,160	-
May	109,656	67,125	3,518	355	48,486	14,766	7,177	35,353	-
June	98,036	56,397	1,402	1,345	35,416	18,235	3,694	37,944	-
July ⁵	106,809	64,060	3,695	231	47,806	12,328	5,516	37,234	-
Aug	84,466	47,957	3,758	952	35,486	7,762	2,439	34,070	-
of which: Debt securities with maturities of more than four years ⁶									
2004	424,769	275,808	20,060	48,249	54,075	153,423	20,286	128,676	4,320
2005	425,523	277,686	20,862	63,851	49,842	143,129	16,360	131,479	400
2006	337,969	190,836	17,267	47,814	47,000	78,756	14,422	132,711	69
2007	315,418	183,660	10,183	31,331	50,563	91,586	13,100	118,659	-
2008	387,516	190,698	13,186	31,393	54,834	91,289	84,410	112,407	-
2009	361,999	185,575	20,235	20,490	59,809	85,043	55,240	121,185	-
2010	381,687	169,174	15,469	15,139	72,796	65,769	34,649	177,863	-
2011	368,039	153,309	13,142	8,500	72,985	58,684	41,299	173,431	-
2012	421,018	177,086	23,374	6,482	74,386	72,845	44,042	199,888	-
2013	372,805	151,797	16,482	10,007	60,662	64,646	45,244	175,765	-
2014	420,006	157,720	17,678	8,904	61,674	69,462	56,249	206,037	-
2015	414,593	179,150	25,337	9,199	62,237	82,379	68,704	166,742	-
2016 Jan	29,680	15,067	1,810	1,099	7,480	4,678	3,168	11,446	-
Feb	36,168	19,792	5,716	540	9,953	3,582	1,579	14,797	-
Mar	37,922	17,301	2,209	1,030	6,745	7,317	5,178	15,444	-
Apr	30,946	11,246	1,207	511	4,680	4,848	4,481	15,219	-
May	36,255	17,367	2,711	55	8,707	5,895	4,908	13,980	-
June	34,458	16,553	1,291	711	6,590	7,962	2,098	15,808	-
July ⁵	34,008	14,977	2,759	231	9,154	2,833	3,897	15,134	-
Aug	24,960	11,808	2,630	502	4,541	4,134	931	12,221	-
Net sales ⁷									
2004	167,233	81,860	1,039	52,615	50,142	83,293	18,768	66,605	22,124
2005	141,715	65,798	2,151	34,255	37,242	64,962	10,099	65,819	35,963
2006	129,423	58,336	12,811	20,150	44,890	46,410	15,605	55,482	19,208
2007	86,579	58,168	10,896	46,629	42,567	73,127	3,683	32,093	29,750
2008	119,472	8,517	15,052	65,773	25,165	34,074	82,653	28,302	31,607
2009	76,441	75,554	858	80,646	25,579	21,345	48,508	103,482	21,037
2010	21,566	87,646	3,754	63,368	28,296	48,822	23,748	85,464	10,904
2011	22,518	54,582	1,657	44,290	32,904	44,852	3,189	80,289	5,989
2012	85,298	100,198	4,177	41,660	3,259	51,099	6,401	21,298	2,605
2013	140,017	125,932	17,364	37,778	4,027	66,760	1,394	15,479	3,057
2014	34,020	56,899	6,313	23,856	862	25,869	10,497	12,383	2,626
2015	65,147	77,273	9,271	9,754	2,758	74,028	25,300	13,174	1,441
2016 Jan	6,853	4,029	3,139	445	4,467	3,145	2,324	13,206	-
Feb	16,450	12,194	4,786	42	6,832	534	122	4,133	-
Mar	11,323	4,244	977	477	1,174	2,571	4,323	2,756	219
Apr	8,359	7,324	236	1,468	6,691	1,865	1,909	17,592	159
May	28,473	9,196	1,402	660	9,052	2,206	3,294	15,983	590
June	3,182	4,261	2,543	3,575	1,322	534	4,057	5,135	-
July ⁵	22,944	15,024	858	1,014	14,406	463	884	8,803	59
Aug	19,464	5,831	3,209	34	4,897	2,241	342	13,975	-

* For definitions, see the explanatory notes in the Statistical Supplement 2 Capital market statistics on p 21 ff. ¹ Excluding registered bank debt securities. ² Including cross-border financing within groups from January 2011. ³ Including Federal Railways Fund, Federal Post Office and Treuhand agency. ⁴ Gross sales means only

initial sales of newly issued securities. ⁵ Sectoral reclassification of debt securities. ⁶ Maximum maturity according to the terms of issue. ⁷ Gross sales less redemptions.

VIII Capital market

3 Amounts outstanding of debt securities issued by residents *

€ million nominal value

End of year or month/ Maturity in years	Bank debt securities ¹						Corporate bonds (non-MFIs)	Public debt securities	Memo item Foreign DM/Euro bonds issued by German-managed syndicates
	Total	Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions	Other bank debt securities			
2004	2,773,007	1,685,766	159,360	553,927	316,745	655,734	73,844	1,013,397	170,543
2005	2,914,723	1,751,563	157,209	519,674	323,587	751,093	83,942	1,079,218	134,580
2006	3,044,145	1,809,899	144,397	499,525	368,476	797,502	99,545	1,134,701	115,373
2007	3,130,723	1,868,066	133,501	452,896	411,041	870,629	95,863	1,166,794	85,623
2008	3,250,195	1,876,583	150,302	377,091	490,641	858,550	178,515	1,195,097	54,015
2009	3,326,635	1,801,029	151,160	296,445	516,221	837,203	227,024	1,298,581	32,978
2010	3,348,201 ²	1,570,490	147,529	232,954	544,517 ²	645,491	250,774 ²	1,526,937	22,074
2011	3,370,721	1,515,911	149,185	188,663	577,423	600,640	247,585	1,607,226	16,085
2012	3,285,422 ²	1,414,349	145,007	147,070	574,163 ²	548,109 ²	220,456 ²	1,650,617	13,481
2013	3,145,329	1,288,340	127,641	109,290	570,136	481,273	221,851	1,635,138	10,422
2014	3,111,308	1,231,445	121,328	85,434	569,409	455,274	232,342	1,647,520	7,797
2015	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377	6,356
2016 Feb	3,055,758	1,170,396	132,246	75,276	578,109	384,765	260,058	1,625,304	6,356
Mar	3,067,081	1,174,640	133,223	74,800	579,283	387,335	264,380	1,628,060	6,137
Apr	3,058,722	1,181,964	133,459	73,331	585,974	389,200	266,289	1,610,468	5,978
May	3,087,195	1,191,160	132,057	72,672	595,026	391,406	269,584	1,626,451	5,389
June	3,084,013	1,186,899	129,514	69,097	596,349	391,940	265,527	1,631,587	5,389
July ²	3,061,069	1,171,875	130,372	68,083	632,445	340,975	266,411	1,622,783	5,330
Aug	3,080,533	1,177,707	133,581	68,049	637,342	338,734	266,068	1,636,758	5,330

Breakdown by remaining period to maturity ³

Position at end-August 2016

	Bank debt securities ¹	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions	Other bank debt securities	Corporate bonds (non-MFIs)	Public debt securities	Memo item Foreign DM/Euro bonds issued by German-managed syndicates	
less than 2	1,036,419	465,299	38,075	27,960	270,046	129,220	50,284	520,837	1,876
2 to less than 4	658,979	283,669	39,291	16,654	161,439	66,285	50,263	325,047	204
4 to less than 6	448,466	182,318	25,330	9,697	96,851	50,438	35,050	231,099	341
6 to less than 8	303,173	86,718	16,424	6,466	39,833	23,996	24,373	192,081	1,333
8 to less than 10	224,563	74,138	9,222	4,971	38,890	21,055	13,235	137,191	111
10 to less than 15	133,881	30,722	4,810	1,599	11,480	12,833	14,663	88,496	498
15 to less than 20	46,592	14,126	152	650	10,816	2,508	4,799	27,667	-
20 and more	228,461	40,715	278	52	7,987	32,398	73,403	114,343	967

* Including debt securities temporarily held in the issuers' portfolios. ¹ Excluding debt securities handed to the trustee for temporary safe custody. ² Sectoral reclassification of debt securities. ³ Calculated from month under review until final

maturity for debt securities falling due en bloc and until mean maturity of the residual amount outstanding for debt securities not falling due en bloc.

4 Shares in circulation issued by residents *

€ million nominal value

Period	Share capital = circulation at end of period under review	Net increase or net decrease (-) during period under review	Change in domestic public limited companies' capital due to							Memo item Share circulation at market values (market capitalisation) level at end of period under review ²				
			cash payments and ex-change of convertible bonds ¹	issue of bonus shares	contribution of claims and other real assets	contribution of shares, mining shares, GmbH shares, etc	merger and transfer of assets	change of legal form	reduction of capital and liquidation					
2004	164,802	2,669	3,960	1,566	276	696	220	-	1,760	-	2,286	887,217		
2005	163,071	-	1,733	2,470	1,040	694	268	-	1,443	-	3,060	1,058,532		
2006	163,764	695	2,670	3,347	604	954	-	1,868	-	1,256	-	3,761	1,279,638	
2007	164,560	799	3,164	1,322	200	269	-	682	-	1,847	-	1,636	1,481,930	
2008	168,701	4,142	5,006	1,319	152	0	-	428	-	608	-	1,306	830,622	
2009	175,691	6,989	12,476	398	97	-	-	3,741	-	1,269	-	974	927,256	
2010	174,596	-	1,096	3,265	497	178	10	-	486	-	993	-	3,569	1,091,220
2011	177,167	2,570	6,390	552	462	604	9	-	552	-	762	-	3,532	924,214
2012	178,617	1,449	3,046	129	570	476	-	-	478	-	594	-	2,411	1,150,188
2013	171,741	-	6,879	2,971	718	476	-	-	1,432	-	619	-	8,992	1,432,658
2014	177,097	5,356	5,332	1,265	1,714	1,714	-	-	465	-	1,044	-	1,446	1,478,063
2015	177,416	319	4,634	397	599	599	-	-	1,394	-	1,385	-	2,535	1,614,442
2016 Feb	177,125	-	154	52	-	1	-	-	0	-	63	-	144	1,435,286
Mar	177,113	-	12	57	-	0	-	-	0	-	2	-	67	1,512,940
Apr	176,705	-	408	31	-	34	-	-	281	-	2	-	188	1,528,339
May	175,609	-	1,097	209	14	5	-	-	4	-	378	-	942	1,529,297
June	175,694	-	85	213	67	228	-	-	30	-	305	-	87	1,432,091
July	176,196	502	425	148	5	5	-	-	83	-	49	-	40	1,527,172
Aug	176,572	376	1,061	35	19	19	-	-	495	-	121	-	124	1,566,154

* Excluding shares of public limited investment companies. ¹ Including shares issued out of company profits. ² Enterprises listed on the Regulated Market (the introduction of which marked the end of the division of organised trading segments into an

official and a regulated market on 1 November 2007) are included as well as enterprises listed on the Open Market. Source: Bundesbank calculations based on data of the Herausgebergemeinschaft Wertpapier-Mitteilungen and the Deutsche Börse AG.

VIII Capital market

5 Yields and indices on German securities

Period	Yields on debt securities outstanding issued by residents ¹							Price indices ^{2,3}			
	Public debt securities				Bank debt securities			Debt securities		Shares	
	Total	Total	Listed Federal securities		Total	With a residual maturity of 9 and including 10 years ⁴	Corporate bonds (non-MFIs)	German bond index (REX)	iBoxx € Germany price index	CDAX share price index	German share index (DAX)
			Total	With a residual maturity of 9 and including 10 years ⁴							
% per annum								Average daily rate	End-1998 = 100	End-1987 = 100	End-1987 = 1000
2004	3.7	3.7	3.7	4.0	3.6	4.2	4.0	120.19	99.89	268.32	4,256.08
2005	3.1	3.2	3.2	3.4	3.1	3.5	3.7	120.92	101.09	335.59	5,408.26
2006	3.8	3.7	3.7	3.8	3.8	4.0	4.2	116.78	96.69	407.16	6,596.92
2007	4.3	4.3	4.2	4.2	4.4	4.5	5.0	114.85	94.62	478.65	8,067.32
2008	4.2	4.0	4.0	4.0	4.5	4.7	6.3	121.68	102.06	266.33	4,810.20
2009	3.2	3.1	3.0	3.2	3.5	4.0	5.5	123.62	100.12	320.32	5,957.43
2010	2.5	2.4	2.4	2.7	2.7	3.3	4.0	124.96	102.95	368.72	6,914.19
2011	2.6	2.4	2.4	2.6	2.9	3.5	4.3	131.48	109.53	304.60	5,898.35
2012	1.4	1.3	1.3	1.5	1.6	2.1	3.7	135.11	111.18	380.03	7,612.39
2013	1.4	1.3	1.3	1.6	1.3	2.1	3.4	132.11	105.92	466.53	9,552.16
2014	1.0	1.0	1.0	1.2	0.9	1.7	3.0	139.68	114.37	468.39	9,805.55
2015	0.5	0.4	0.4	0.5	0.5	1.2	2.4	139.52	112.42	508.80	10,743.01
2016 Apr	0.2	0.1	0.1	0.1	0.3	1.1	2.2	141.89	112.67	474.25	10,038.97
May	0.2	0.1	0.1	0.1	0.3	1.0	2.1	142.19	113.75	478.01	10,262.74
June	0.0	–	0.1	–	0.0	0.2	0.7	143.74	116.88	450.95	9,680.09
July	–	0.1	–	0.2	–	0.2	0.7	144.06	116.16	481.02	10,337.50
Aug	–	0.1	–	0.2	–	0.1	0.6	144.30	115.34	491.68	10,592.69
Sep	–	0.1	–	0.2	–	0.1	0.6	144.47	115.53	490.14	10,511.02

¹ Bearer debt securities with maximum maturities according to the terms of issue of over 4 years if their mean residual maturities exceed 3 years. Convertible debt securities, etc. debt securities with unscheduled redemption, zero-coupon bonds, floating-rate notes and bonds not denominated in euro are not included. Group yields for the various categories of securities are weighted by the amounts outstan-

ding of the debt securities included in the calculation. Monthly figures are calculated on the basis of the yields on all the business days in a month. The annual figures are the unweighted means of the monthly figures. ² End of year or month. ³ Source: Deutsche Börse AG. ⁴ Only debt securities eligible as underlying instruments for futures contracts; calculated as unweighted averages.

6 Sales and purchases of mutual fund shares in Germany

Period	Sales										Purchases				
	Open-end domestic mutual funds ¹ (sales receipts)										Residents				
	Sales = total purchases	Total	Mutual funds open to the general public					Foreign funds ⁴	Total	Credit institutions including building and loan associations ²		Other sectors ³		Non-residents ⁵	
			Total	Money market funds	Securities-based funds	Real estate funds	Specialised funds			Total	Total	of which Foreign mutual fund shares	Total		of which Foreign mutual fund shares
of which																of which
2004	14,435	1,453	– 3,978	– 6,160	– 1,246	3,245	5,431	12,982	10,267	8,446	3,796	1,821	9,186	4,168	
2005	85,268	41,718	6,400	– 124	7,001	– 3,186	35,317	43,550	79,252	21,290	7,761	57,962	35,789	6,016	
2006	47,264	19,535	– 14,257	490	– 9,362	– 8,814	33,791	27,729	39,006	14,676	5,221	24,330	22,508	8,258	
2007	55,778	13,436	– 7,872	– 4,839	– 12,848	6,840	21,307	42,342	51,309	– 229	4,240	51,538	38,102	4,469	
2008	2,598	– 7,911	– 14,409	– 12,171	– 11,149	799	6,498	10,509	11,315	– 16,625	– 9,252	27,940	19,761	– 8,717	
2009	49,929	43,747	10,966	– 5,047	11,749	2,686	32,780	6,182	38,132	– 14,995	– 8,178	53,127	14,361	11,796	
2010	106,190	84,906	13,381	– 148	8,683	1,897	71,345	21,284	102,591	3,873	6,290	98,718	14,994	3,598	
2011	46,511	45,221	– 1,340	– 379	– 2,037	1,562	46,561	1,291	39,474	– 7,576	– 694	47,050	1,984	7,036	
2012	111,236	89,942	2,084	– 1,036	97	3,450	87,859	21,293	114,676	– 3,062	– 1,562	117,738	22,855	– 3,438	
2013	123,743	91,337	9,184	– 574	5,596	3,376	82,153	32,407	117,675	771	100	116,904	32,305	6,069	
2014	139,011	97,711	3,998	– 473	862	1,000	93,713	41,302	144,168	819	– 1,745	143,349	43,046	– 5,154	
2015	181,632	146,136	30,420	318	22,345	3,636	115,716	35,495	176,116	7,362	494	168,754	35,001	5,515	
2016 Feb	13,857	9,934	1,404	– 79	469	704	8,530	3,924	14,315	557	107	13,758	3,817	– 457	
Mar	11,178	7,620	1,620	– 191	657	836	6,000	3,558	12,939	1,053	915	11,886	2,643	– 1,761	
Apr	12,939	6,740	1,705	– 76	940	496	5,035	6,199	14,526	671	– 230	13,855	6,429	– 1,587	
May	9,441	8,249	2,461	– 50	1,132	1,111	5,788	1,192	9,280	887	– 65	8,393	1,257	161	
June	11,123	10,640	1,664	42	565	755	8,976	483	11,561	557	– 87	11,004	570	– 439	
July	9,383	7,899	1,862	– 195	1,706	280	6,038	1,484	10,904	1,208	186	9,696	1,298	– 1,521	
Aug	8,533	5,151	1,038	– 125	843	109	4,113	3,382	9,091	– 922	– 1,679	10,013	5,061	– 558	

¹ Including public limited investment companies. ² Book values. ³ Residual. ⁴ Net purchases or net sales (–) of foreign fund shares by residents; transaction values. ⁵ Net purchases or net sales (–) of domestic fund shares by non-residents;

transaction values. — The figures for the most recent date are provisional; revisions are not specially marked.

IX Financial accounts

1 Acquisition of financial assets and external financing of non-financial corporations (non-consolidated)

€ billion

Item	2013	2014	2015	2015				2016	
				Q1	Q2	Q3	Q4	Q1	Q2
Acquisition of financial assets									
Currency and deposits	4.45	– 7.75	37.62	– 10.96	3.60	28.00	16.99	– 1.30	5.16
Debt securities	0.65	– 1.26	– 0.93	– 1.48	0.56	0.51	– 0.52	0.87	– 3.32
short-term debt securities	1.56	– 1.62	– 0.77	– 1.06	0.93	– 1.42	0.78	0.98	– 0.70
long-term debt securities	– 0.91	– 2.88	– 0.15	– 0.42	– 0.37	1.93	– 1.29	– 0.10	– 2.62
Memo item									
Debt securities of domestic sectors	– 1.27	– 1.88	– 0.73	– 0.07	0.24	– 0.94	– 0.38	0.51	– 2.54
Non-financial corporations	0.81	– 0.05	– 0.79	– 0.53	0.59	– 1.17	– 0.52	0.66	– 0.12
Financial corporations	– 2.14	– 1.26	1.93	0.75	– 0.27	0.87	0.58	0.31	– 1.80
General government	0.07	– 0.57	– 0.41	– 0.28	– 0.08	0.39	– 0.44	– 0.46	– 0.62
Debt securities of the rest of the world	1.91	0.62	– 1.66	– 1.41	0.32	– 0.42	– 0.14	0.37	– 0.78
Loans	9.29	14.41	30.52	23.08	5.87	1.37	0.20	6.50	– 5.35
short-term loans	27.76	36.06	25.14	20.41	1.63	1.12	1.97	3.21	– 0.62
long-term loans	– 18.47	– 21.66	5.39	2.67	4.23	0.25	– 1.77	3.29	– 4.74
Memo item									
to domestic sectors	2.20	10.40	12.08	– 17.89	– 1.12	0.52	– 5.20	0.78	– 4.40
Non-financial corporations	3.91	– 0.31	2.42	– 1.41	0.05	4.33	– 0.56	3.28	– 8.39
Financial corporations	– 1.81	10.65	9.68	19.30	– 1.17	– 3.81	– 4.64	– 2.50	3.99
General government	0.10	0.06	– 0.02	– 0.01	– 0.01	– 0.01	– 0.01	0.00	0.00
to the rest of the world	7.09	4.01	18.44	5.19	6.99	0.85	5.41	5.72	– 0.95
Equity and investment fund shares	39.87	9.93	47.49	3.74	8.00	14.77	20.99	10.03	4.14
Equity	32.22	20.31	31.15	– 4.41	5.18	10.89	19.49	9.58	4.89
Listed shares of domestic sectors	8.70	– 1.62	– 10.41	– 16.68	1.41	1.98	2.88	– 6.00	– 0.77
Non-financial corporations	9.65	– 5.39	– 8.04	– 14.10	1.07	2.12	2.86	– 6.17	– 0.94
Financial corporations	– 0.95	3.78	– 2.37	– 2.59	0.34	– 0.14	0.02	0.17	0.17
Listed shares of the rest of the world	3.37	– 4.85	12.38	13.99	– 0.15	– 4.46	3.00	0.66	– 0.60
Other equity ¹	20.16	26.77	29.18	– 1.72	3.92	13.37	13.61	14.92	6.26
Investment fund shares	7.65	– 10.38	16.35	8.15	2.82	3.87	1.50	0.45	– 0.75
Money market fund shares	– 0.15	0.23	0.21	– 0.25	0.17	– 0.06	0.35	– 0.30	– 0.10
Non-MMF investment fund shares	7.80	– 10.61	16.13	8.40	2.65	3.93	1.15	0.75	– 0.65
Insurance technical reserves	3.02	1.05	2.97	0.59	0.86	0.88	0.64	2.40	2.61
Financial derivatives	6.49	– 1.26	3.02	3.55	– 2.41	2.06	– 0.19	– 0.26	2.60
Other accounts receivable	173.71	– 95.11	53.33	– 29.56	48.50	12.20	22.19	10.35	– 9.01
Total	237.47	– 80.01	174.03	– 11.04	64.97	59.79	60.31	28.59	– 3.17
External financing									
Debt securities	12.78	1.26	7.78	3.58	4.91	0.46	– 1.17	10.40	4.60
short-term securities	– 1.12	– 11.63	1.96	1.26	– 0.04	1.01	– 0.27	2.04	0.18
long-term securities	13.90	12.89	5.82	2.32	4.95	– 0.55	– 0.89	8.36	4.43
Memo item									
Debt securities of domestic sectors	5.10	– 4.27	– 1.76	– 0.95	2.73	– 0.72	– 1.19	4.97	– 1.44
Non-financial corporations	0.81	– 0.05	– 0.79	– 0.53	0.59	– 0.32	– 0.52	0.66	– 0.12
Financial corporations	2.85	4.12	2.07	1.26	1.85	– 0.44	– 0.60	3.59	2.13
General government	– 0.05	0.00	0.02	0.01	– 0.00	0.01	– 0.01	– 0.00	0.00
Households	1.50	0.20	0.46	0.22	0.29	0.03	– 0.07	0.73	– 0.57
Debt securities of the rest of the world	7.67	– 3.01	6.02	2.63	2.19	1.18	0.03	5.43	3.16
Loans	26.84	– 13.42	42.49	28.46	16.70	– 1.39	– 1.28	33.16	7.42
short-term loans	24.45	1.81	24.56	8.46	14.91	– 2.82	4.01	18.03	– 2.94
long-term loans	2.40	– 15.23	17.92	20.00	1.78	1.43	– 5.29	15.13	10.36
Memo item									
from domestic sectors	– 4.95	4.59	17.88	21.81	6.28	0.00	– 10.21	21.63	– 8.09
Non-financial corporations	3.91	– 0.31	2.42	– 1.41	0.05	4.33	– 0.56	3.28	– 8.39
Financial corporations	12.46	16.45	22.68	15.58	7.26	– 1.53	1.37	12.18	– 0.31
General government	– 21.31	– 11.55	– 7.23	7.63	– 1.03	– 2.81	– 11.02	6.18	0.61
from the rest of the world	31.74	– 18.01	24.60	6.65	10.41	– 1.39	8.93	11.53	15.51
Equity	12.04	27.88	15.04	0.05	5.40	5.89	3.69	3.25	2.13
Listed shares of domestic sectors	– 4.47	– 0.97	– 6.66	– 1.81	– 3.65	0.73	11.39	– 2.68	3.28
Non-financial corporations	9.65	– 5.39	– 8.04	– 14.10	1.07	2.12	2.86	– 6.17	– 0.94
Financial corporations	– 5.02	1.59	11.05	17.66	– 5.34	– 6.36	5.09	– 1.14	3.22
General government	– 0.88	0.03	0.11	0.06	0.01	0.02	0.01	0.03	0.03
Households	– 8.21	2.80	3.55	– 5.43	0.61	4.95	3.43	4.61	0.98
Quoted shares of the rest of the world	7.80	9.72	– 0.64	2.08	5.36	1.97	– 10.04	2.72	– 2.86
Other equity ¹	8.70	19.13	9.02	– 0.22	3.70	3.20	2.34	3.21	1.71
Insurance technical reserves	6.34	6.41	5.06	1.27	1.27	1.27	1.27	1.27	1.27
Financial derivatives and employee stock options	3.72	1.93	– 8.22	10.89	– 16.16	– 1.04	– 1.92	8.63	– 2.20
Other accounts payable	19.83	– 10.06	58.33	28.90	18.93	0.49	10.01	8.40	1.27
Total	81.54	13.98	120.48	73.14	31.05	5.69	10.60	65.11	14.49

¹ Including unlisted shares.

IX Financial accounts

2 Financial assets and liabilities of non-financial corporations (non-consolidated)

End-of-year level, end-of-quarter level; € billion

Item	2013	2014	2015	2015				2016	
				Q1	Q2	Q3	Q4	Q1	Q2
Financial assets									
Currency and deposits	411.3	405.8	462.6	386.9	396.3	431.0	462.6	454.1	464.8
Debt securities	45.0	49.6	47.8	48.6	48.4	48.4	47.8	48.8	45.7
short-term debt securities	5.1	6.8	6.0	5.7	6.7	5.2	6.0	7.0	6.3
long-term debt securities	39.9	42.9	41.7	42.9	41.7	43.2	41.7	41.7	39.3
Memo item									
Debt securities of domestic sectors	24.6	22.9	23.3	23.0	23.0	23.8	23.3	23.8	21.4
Non-financial corporations	4.7	4.6	3.6	4.1	4.5	4.2	3.6	4.3	4.2
Financial corporations	13.8	12.7	14.5	13.5	13.2	14.0	14.5	14.8	13.0
General government	6.1	5.7	5.2	5.4	5.3	5.6	5.2	4.8	4.2
Debt securities of the rest of the world	20.5	26.7	24.4	25.6	25.4	24.7	24.4	24.9	24.3
Loans	446.5	465.6	495.9	493.2	498.0	497.3	495.9	500.1	495.0
short-term loans	340.0	375.8	399.8	398.6	399.5	399.7	399.8	401.8	401.5
long-term loans	106.5	89.8	96.2	94.6	98.4	97.7	96.2	98.4	93.5
Memo item									
to domestic sectors	304.7	315.1	327.2	333.0	331.8	332.4	327.2	328.0	323.6
Non-financial corporations	216.5	216.2	218.7	214.8	214.9	219.2	218.7	221.9	213.5
Financial corporations	82.1	92.8	102.4	112.1	110.9	107.1	102.4	100.0	104.0
General government	6.0	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
to the rest of the world	141.8	150.5	168.8	160.2	166.1	165.0	168.8	172.1	171.5
Equity and investment fund shares	1,658.3	1,726.5	1,905.6	1,954.8	1,888.8	1,781.0	1,905.6	1,839.6	1,808.9
Equity	1,520.2	1,591.0	1,753.6	1,803.8	1,738.8	1,631.2	1,753.6	1,688.5	1,657.2
Listed shares of domestic sectors	275.4	262.2	273.0	290.6	274.6	239.0	273.0	248.1	239.4
Non-financial corporations	269.8	252.2	266.6	283.1	267.4	233.2	266.6	242.0	233.7
Financial corporations	5.7	10.0	6.3	7.4	7.2	5.9	6.3	6.1	5.7
Listed shares of the rest of the world	54.2	50.0	62.5	65.7	63.5	58.7	62.5	62.8	62.1
Other equity ¹	1,190.6	1,278.8	1,418.2	1,447.5	1,400.7	1,333.5	1,418.2	1,377.6	1,355.7
Investment fund shares	138.1	135.5	151.9	151.0	150.0	149.8	151.9	151.1	151.7
Money market fund shares	1.1	1.2	1.4	0.9	1.1	1.0	1.4	1.0	1.1
Non-MMF investment fund shares	137.0	134.4	150.6	150.1	149.0	148.8	150.6	150.1	150.6
Insurance technical reserves	46.1	47.3	50.0	47.9	48.6	49.3	50.0	52.6	55.2
Financial derivatives	16.8	22.7	24.0	25.9	23.0	24.6	24.0	23.3	25.5
Other accounts receivable	891.1	857.8	927.7	899.7	926.7	921.7	927.7	921.2	921.3
Total	3,515.1	3,575.4	3,913.6	3,857.1	3,829.8	3,753.4	3,913.6	3,839.7	3,816.4
Liabilities									
Debt securities	138.9	150.9	156.8	159.5	157.2	158.1	156.8	173.1	179.0
short-term securities	13.4	1.8	3.0	2.3	2.3	3.3	3.0	5.1	5.3
long-term securities	125.4	149.1	153.7	157.1	154.9	154.8	153.7	168.0	173.7
Memo item									
Debt securities of domestic sectors	51.1	60.2	58.7	62.6	62.7	60.7	58.7	65.9	68.2
Non-financial corporations	4.7	4.6	3.6	4.1	4.5	4.2	3.6	4.3	4.2
Financial corporations	30.8	39.8	40.0	42.0	42.8	41.3	40.0	46.0	49.1
General government	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Households	15.6	15.8	15.0	16.4	15.3	15.2	15.0	15.6	14.9
Debt securities of the rest of the world	87.8	90.7	98.1	96.8	94.5	97.4	98.1	107.2	110.8
Loans	1,411.2	1,383.6	1,427.3	1,417.0	1,433.1	1,431.3	1,427.3	1,457.7	1,462.8
short-term loans	494.2	496.0	521.0	508.7	522.3	518.2	521.0	537.2	534.0
long-term loans	917.0	887.6	906.3	908.3	910.8	913.1	906.3	920.5	928.8
Memo item									
from domestic sectors	1,091.5	1,078.1	1,092.6	1,099.7	1,106.2	1,107.0	1,092.6	1,114.4	1,102.2
Non-financial corporations	216.5	216.2	218.7	214.8	214.9	219.2	218.7	221.9	213.5
Financial corporations	809.3	805.6	825.4	821.9	829.5	828.1	825.4	834.3	829.6
General government	65.6	56.3	48.6	63.0	61.8	59.8	48.6	58.2	59.0
from the rest of the world	319.8	305.5	334.6	317.3	326.9	324.3	334.6	343.3	360.7
Equity	2,436.6	2,542.2	2,670.9	2,860.2	2,715.7	2,484.8	2,670.9	2,567.4	2,487.3
Listed shares of domestic sectors	571.9	570.0	626.4	681.4	625.1	551.6	626.4	585.2	569.6
Non-financial corporations	269.8	252.2	266.6	283.1	267.4	233.2	266.6	242.0	233.7
Financial corporations	120.3	133.9	150.1	181.9	159.4	130.8	150.1	140.3	139.2
General government	35.2	35.2	43.4	42.9	39.5	41.1	43.4	41.5	40.4
Households	146.6	148.7	166.2	173.4	158.8	146.5	166.2	161.5	156.3
Quoted shares of the rest of the world	670.8	719.9	756.3	839.8	789.6	693.2	756.3	724.7	684.7
Other equity ¹	1,194.0	1,252.3	1,288.3	1,339.0	1,301.0	1,240.0	1,288.3	1,257.5	1,233.0
Insurance technical reserves	243.9	250.3	255.4	251.6	252.8	254.1	255.4	256.6	257.9
Financial derivatives and employee stock options	37.3	54.0	42.0	63.9	46.6	44.7	42.0	49.8	46.7
Other accounts payable	961.6	987.6	1,057.6	1,038.4	1,022.5	1,024.7	1,057.6	1,044.1	1,048.4
Total	5,229.5	5,368.6	5,609.9	5,790.5	5,627.9	5,397.8	5,609.9	5,548.6	5,482.2

¹ Including unlisted shares.

IX Financial accounts

3 Acquisition of financial assets and external financing of households (non-consolidated)

€ billion

Item	2013	2014	2015	2015				2016	
				Q1	Q2	Q3	Q4	Q1	Q2
Acquisition of financial assets									
Currency and deposits	63.87	85.82	96.77	14.97	30.80	11.88	39.13	8.10	25.29
Currency	8.08	15.64	25.61	4.48	6.84	6.40	7.90	2.40	1.03
Deposits	55.79	70.18	71.16	10.49	23.96	5.48	31.24	5.70	24.26
Transferable deposits	89.41	73.84	100.96	19.30	34.43	15.01	32.22	7.24	28.09
Time deposits	- 9.78	8.74	- 9.22	- 2.32	- 3.12	- 4.21	0.44	0.83	2.16
Savings deposits (including savings certificates)	- 23.85	- 12.41	- 20.58	- 6.49	- 7.35	- 5.32	- 1.43	- 2.37	- 5.99
Debt securities	- 17.81	- 18.00	- 17.40	- 7.38	- 5.09	- 1.87	- 3.07	- 1.76	- 4.10
short-term debt securities	- 0.36	- 0.67	0.75	0.29	0.31	0.28	- 0.13	0.10	- 0.62
long-term debt securities	- 17.45	- 17.33	- 18.16	- 7.66	- 5.40	- 2.14	- 2.95	- 1.86	- 3.48
Memo item									
Debt securities of domestic sectors	- 14.86	- 15.08	- 9.34	- 4.76	- 2.98	- 0.16	- 1.45	1.08	- 1.57
Non-financial corporations	1.24	0.02	0.39	0.21	0.23	0.02	- 0.07	0.67	- 0.59
Financial corporations	- 12.46	- 12.52	- 6.80	- 4.05	- 2.40	0.44	- 0.78	0.74	- 0.36
General government	- 3.64	- 2.58	- 2.93	- 0.91	- 0.81	- 0.61	- 0.60	- 0.33	- 0.63
Debt securities of the rest of the world	- 2.94	- 2.93	- 8.06	- 2.62	- 2.11	- 1.71	- 1.62	- 2.84	- 2.53
Equity and investment fund shares	9.63	36.87	46.39	4.53	10.53	16.85	14.48	15.67	11.57
Equity	- 0.41	12.17	15.03	- 6.26	2.87	11.73	6.69	10.26	5.22
Listed Shares of domestic sectors	- 5.63	4.61	4.06	- 6.53	1.13	6.67	2.79	6.59	2.69
Non-financial corporations	- 5.29	2.69	3.77	- 5.50	0.49	6.03	2.76	4.52	0.69
Financial corporations	- 0.35	1.93	0.28	- 1.03	0.64	0.64	0.03	2.07	2.00
Quoted shares of the rest of the world	2.99	3.70	6.75	0.66	0.80	3.00	2.30	1.65	1.21
Other equity ¹	2.24	3.86	4.22	- 0.39	0.95	2.07	1.60	2.02	1.32
Investment fund shares	10.04	24.70	31.36	10.79	7.66	5.12	7.79	5.41	6.35
Money market fund shares	- 0.30	- 0.34	- 0.57	- 0.16	- 0.02	- 0.10	- 0.30	- 0.30	- 0.15
Non-MMF investment fund shares	10.34	25.04	31.93	10.95	7.68	5.22	8.09	5.71	6.50
Non-life insurance technical reserves and provision for calls under standardised guarantees	26.02	24.47	20.08	5.29	4.89	4.78	5.12	5.83	5.86
Life insurance and annuity entitlements	31.69	30.40	31.36	11.15	6.89	6.19	7.14	17.35	6.06
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	19.39	35.34	31.30	11.81	6.71	5.81	6.96	5.28	6.58
Financial derivatives and employee stock options	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts receivable ²	14.16	- 33.07	- 24.48	12.74	- 9.93	- 1.79	- 25.51	10.30	- 3.72
Total	146.96	161.82	184.01	53.12	44.79	41.86	44.25	60.77	47.54
External financing									
Loans	11.96	20.59	39.11	3.46	11.39	14.88	9.39	6.01	15.84
short-term loans	- 3.31	- 1.98	- 3.17	1.00	- 1.26	- 1.51	- 1.40	- 0.42	- 0.91
long-term loans	15.27	22.57	42.28	2.46	12.64	16.39	10.79	6.43	16.76
Memo item									
Mortgage loans	18.89	24.87	36.54	2.17	9.85	14.08	10.45	4.29	12.16
Consumer loans	- 0.30	1.21	5.44	1.57	2.15	1.40	0.32	2.11	3.93
Entrepreneurial loans	- 6.64	- 5.49	- 2.88	- 0.29	- 0.61	- 0.60	- 1.38	- 0.38	- 0.24
Memo item									
Loans from monetary financial institutions	12.60	18.87	39.35	3.27	11.60	15.09	9.38	5.24	13.81
Loans from other financial institutions	- 0.60	1.72	- 0.24	0.18	- 0.22	- 0.22	0.01	0.77	2.04
Loans from general government and rest of the world	- 0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Financial derivatives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts payable	- 0.01	0.78	- 1.26	- 0.22	- 0.30	- 0.37	- 0.37	0.15	0.03
Total	11.94	21.37	37.85	3.23	11.09	14.51	9.03	6.15	15.88

¹ Including unlisted shares. ² Including accumulated interest-bearing surplus shares with insurance corporations.

IX Financial accounts

4 Financial assets and liabilities of households (non-consolidated)

End-of-year level, end-of-quarter level; € billion

Item	2013	2014	2015	2015				2016	
				Q1	Q2	Q3	Q4	Q1	Q2
Financial assets									
Currency and deposits	1,910.8	1,998.1	2,094.9	2,013.0	2,043.8	2,055.7	2,094.9	2,103.1	2,128.4
Currency	112.0	127.7	153.3	132.2	139.0	145.4	153.3	155.7	156.7
Deposits	1,798.8	1,870.4	1,941.6	1,880.9	1,904.8	1,910.3	1,941.6	1,947.4	1,971.6
Transferable deposits	907.8	981.4	1,082.4	1,000.6	1,035.1	1,050.1	1,082.4	1,089.8	1,117.9
Time deposits	245.9	256.4	246.8	254.0	250.9	246.4	246.8	248.3	250.4
Savings deposits (including savings certificates)	645.1	632.7	612.4	626.2	618.9	613.8	612.4	609.3	603.4
Debt securities	179.0	162.2	139.8	156.8	149.2	144.0	139.8	137.1	133.5
short-term debt securities	2.7	2.1	2.9	2.4	2.7	3.0	2.9	2.9	2.3
long-term debt securities	176.3	160.1	136.9	154.3	146.5	141.0	136.9	134.2	131.2
Memo item									
Debt securities of domestic sectors	116.9	102.4	89.4	98.6	94.3	92.2	89.4	89.6	87.8
Non-financial corporations	14.2	14.1	13.4	14.8	13.7	13.5	13.4	13.9	13.1
Financial corporations	90.7	78.7	69.5	75.1	72.9	71.5	69.5	69.4	69.0
General government	12.0	9.6	6.5	8.7	7.8	7.1	6.5	6.3	5.7
Debt securities of the rest of the world	62.0	59.8	50.3	58.2	54.9	51.8	50.3	47.6	45.7
Equity and investment fund shares	885.9	951.4	1,040.7	1,051.1	1,018.4	982.1	1,040.7	1,024.3	1,028.5
Equity	487.6	508.9	555.9	563.4	537.0	518.3	555.9	544.9	540.7
Listed Shares of domestic sectors	167.4	169.7	188.9	197.9	179.6	168.4	188.9	181.8	174.6
Non-financial corporations	140.4	142.1	158.7	165.4	151.1	140.2	158.7	154.1	148.6
Financial corporations	26.9	27.6	30.3	32.5	28.5	28.2	30.3	27.6	26.0
Quoted shares of the rest of the world	55.8	64.0	74.8	74.6	71.7	67.9	74.8	73.1	76.8
Other equity ¹	264.4	275.3	292.2	290.9	285.7	282.0	292.2	290.1	289.2
Investment fund shares	398.3	442.5	484.8	487.7	481.3	463.8	484.8	479.3	487.8
Money market fund shares	4.4	4.0	3.4	3.8	3.8	3.7	3.4	3.1	3.0
Non-MMF investment fund shares	393.8	438.5	481.4	483.8	477.5	460.1	481.4	476.3	484.7
Non-life insurance technical reserves and provision for calls under standardised guarantees	291.3	307.3	324.4	311.5	315.8	320.0	324.4	330.2	336.1
Life insurance and annuity entitlements	847.3	885.6	919.5	897.7	905.1	911.8	919.5	936.8	942.8
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	708.3	752.1	786.4	759.4	764.0	770.6	786.4	791.7	798.3
Financial derivatives and employee stock options	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts receivable ²	36.7	35.8	34.1	35.5	35.2	34.8	34.1	33.8	33.5
Total	4,859.4	5,092.6	5,339.8	5,225.1	5,231.6	5,219.0	5,339.8	5,357.0	5,401.0
Liabilities									
Loans	1,549.6	1,570.5	1,607.6	1,572.7	1,583.9	1,598.4	1,607.6	1,614.0	1,629.8
short-term loans	66.4	64.6	60.9	65.6	64.1	62.6	60.9	60.5	59.6
long-term loans	1,483.2	1,505.9	1,546.7	1,507.1	1,519.8	1,535.8	1,546.7	1,553.5	1,570.2
Memo item									
Mortgage loans	1,092.9	1,118.0	1,154.7	1,120.2	1,130.2	1,144.0	1,154.7	1,159.1	1,171.3
Consumer loans	188.7	188.9	191.9	189.2	191.2	192.2	191.9	194.0	197.8
Entrepreneurial loans	268.0	263.6	260.9	263.3	262.5	262.1	260.9	260.9	260.7
Memo item									
Loans from monetary financial institutions	1,458.4	1,477.6	1,514.9	1,479.6	1,491.0	1,505.7	1,514.9	1,520.5	1,534.3
Loans from other financial institutions	91.2	92.9	92.7	93.1	92.9	92.7	92.7	93.5	95.5
Loans from general government and rest of the world	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial derivatives	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts payable	15.6	16.4	14.9	17.0	16.4	16.3	14.9	15.6	15.6
Total	1,565.2	1,586.9	1,622.4	1,589.7	1,600.3	1,614.7	1,622.4	1,629.6	1,645.4

¹ Including unlisted shares. ² Including accumulated interest-bearing surplus shares with insurance corporations.

X Public finances in Germany

1 General government: deficit and debt level as defined in the Maastricht Treaty

Period	General government	Central government	State government	Local government	Social security funds	General government	Central government	State government	Local government	Social security funds
	€ billion					as a percentage of GDP				
Deficit/surplus¹										
2010	-108.9	-84.1	-20.6	-8.1	+3.8	-4.2	-3.3	-0.8	-0.3	+0.1
2011	-25.9	-29.4	-11.4	-0.3	+15.3	-1.0	-1.1	-0.4	-0.0	+0.6
2012	-1.4	-16.1	-5.9	+2.2	+18.4	-0.0	-0.6	-0.2	+0.1	+0.7
2013 P	-5.7	-8.1	-3.1	+0.2	+5.3	-0.2	-0.3	-0.1	+0.0	+0.2
2014 P	+8.1	+8.6	-0.9	-2.5	+3.0	+0.3	+0.3	-0.0	-0.1	+0.1
2015 P	+22.6	+10.7	+4.7	+4.7	+2.5	+0.7	+0.4	+0.2	+0.2	+0.1
2014 H1 P	+10.9	+1.4	-0.8	+3.8	+6.5	+0.8	+0.1	-0.1	+0.3	+0.5
H2 P	-2.8	+7.2	-0.2	-6.3	-3.5	-0.2	+0.5	-0.0	-0.4	-0.2
2015 H1 P	+14.1	+2.4	+3.5	+5.6	+2.6	+1.0	+0.2	+0.2	+0.4	+0.2
H2 P	+8.5	+8.3	+1.2	-0.9	-0.1	+0.5	+0.5	+0.1	-0.1	-0.0
2016 H1 pe	+18.5	+9.7	+0.4	+2.5	+5.9	+1.2	+0.6	+0.0	+0.2	+0.4
Debt level²										
End of year or quarter										
2010	2,088.7	1,334.0	629.7	143.0	1.3	81.0	51.7	24.4	5.5	0.1
2011	2,128.1	1,344.0	657.0	143.4	1.3	78.7	49.7	24.3	5.3	0.0
2012 P	2,204.5	1,387.7	685.4	148.0	1.2	79.9	50.3	24.8	5.4	0.0
2013 P	2,189.2	1,390.3	663.9	151.1	1.3	77.5	49.2	23.5	5.3	0.0
2014 P	2,188.7	1,396.3	656.7	152.2	1.4	74.9	47.8	22.5	5.2	0.0
2015 P	2,157.9	1,372.5	652.6	152.3	1.4	71.2	45.3	21.5	5.0	0.0
2014 Q1 P	2,178.4	1,386.6	659.6	149.9	1.2	76.2	48.5	23.1	5.2	0.0
Q2 P	2,184.8	1,394.6	657.4	151.0	1.1	75.9	48.5	22.8	5.2	0.0
Q3 P	2,186.0	1,390.9	659.8	151.5	1.1	75.4	48.0	22.8	5.2	0.0
Q4 P	2,188.7	1,396.3	656.7	152.2	1.4	74.9	47.8	22.5	5.2	0.0
2015 Q1 P	2,194.6	1,397.6	665.2	152.6	1.4	74.5	47.4	22.6	5.2	0.0
Q2 P	2,160.6	1,380.4	644.8	152.4	1.4	72.6	46.4	21.7	5.1	0.0
Q3 P	2,162.3	1,374.6	652.3	153.2	1.5	72.0	45.8	21.7	5.1	0.0
Q4 P	2,157.9	1,372.5	652.6	152.3	1.4	71.2	45.3	21.5	5.0	0.0
2016 Q1 P	2,167.0	1,382.2	645.5	156.1	1.2	70.9	45.2	21.1	5.1	0.0
Q2 P	2,168.2	1,390.9	641.6	154.1	1.1	70.1	45.0	20.8	5.0	0.0

Sources: Federal Statistical Office and Bundesbank calculations. **1** The deficit/surplus in accordance with ESA 2010 corresponds to the Maastricht definition. **2** Quarterly

GDP ratios are based on the national output of the four preceding quarters.

2 General government: revenue, expenditure and fiscal deficit/surplus as shown in the national accounts*

Period	Revenue				Expenditure						Deficit/surplus	Memo item Total tax burden ¹
	Total	of which			Total	of which						
	Taxes	Social contributions	Other	Social benefits	Compensation of employees	Interest	Gross capital formation	Other				
€ billion												
2010	1,110.3	556.2	426.2	127.9	1,219.2	634.5	203.5	63.9	59.4	258.0	-108.9	986.5
2011	1,182.7	598.8	442.3	141.7	1,208.6	633.9	208.6	67.5	61.4	237.2	-25.9	1,045.6
2012	1,220.4	624.9	454.3	141.2	1,221.8	645.5	212.3	63.1	61.5	239.3	-1.4	1,083.7
2013 P	1,258.0	650.6	465.0	142.4	1,263.7	666.5	217.9	56.0	60.7	262.5	-5.7	1,119.9
2014 P	1,306.3	674.0	482.0	150.3	1,298.2	692.5	224.1	52.0	60.9	268.7	+8.1	1,160.7
2015 P	1,356.5	706.3	500.8	149.4	1,333.9	723.4	228.6	47.3	64.3	270.3	+22.6	1,212.5
as a percentage of GDP												
2010	43.0	21.6	16.5	5.0	47.3	24.6	7.9	2.5	2.3	10.0	-4.2	38.2
2011	43.8	22.2	16.4	5.2	44.7	23.4	7.7	2.5	2.3	8.8	-1.0	38.7
2012	44.2	22.7	16.5	5.1	44.3	23.4	7.7	2.3	2.2	8.7	-0.0	39.3
2013 P	44.5	23.0	16.5	5.0	44.7	23.6	7.7	2.0	2.1	9.3	-0.2	39.6
2014 P	44.7	23.1	16.5	5.1	44.4	23.7	7.7	1.8	2.1	9.2	+0.3	39.7
2015 P	44.7	23.3	16.5	4.9	44.0	23.9	7.5	1.6	2.1	8.9	+0.7	40.0
Percentage growth rates												
2010	+1.8	+0.3	+2.5	+6.1	+4.2	+1.5	+2.9	-1.7	+1.9	+14.8	.	+1.3
2011	+6.5	+7.7	+3.8	+10.7	-0.9	-0.1	+2.5	+5.7	+3.3	-8.1	.	+6.0
2012	+3.2	+4.4	+2.7	-0.3	+1.1	+1.8	+1.8	-6.5	+0.2	+0.9	.	+3.6
2013 P	+3.1	+4.1	+2.4	+0.8	+3.4	+3.3	+2.6	-11.2	-1.3	+9.7	.	+3.3
2014 P	+3.8	+3.6	+3.7	+5.5	+2.7	+3.9	+2.8	-7.2	+0.4	+2.3	.	+3.6
2015 P	+3.8	+4.8	+3.9	-0.5	+2.7	+4.5	+2.0	-9.1	+5.4	+0.6	.	+4.5

Source: Federal Statistical Office. * Figures in accordance with ESA 2010. **1** Taxes and social contributions plus customs duties.

X Public finances in Germany

3 General government: budgetary development (as per government's financial statistics)

€ billion

Period	Central, state and local government ¹									Social security funds ²			General government, total			
	Revenue			Expenditure						Deficit / surplus	Revenue ⁶	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus
	Total ⁴	of which		Total ⁴	of which ³											
		Taxes	Financial transactions ⁵		Personnel expenditure	Current grants	Interest	Fixed asset formation	Financial transactions ⁵							
2009	623.0	524.0	7.1	713.1	187.1	286.6	63.4	38.6	34.8	- 90.1	492.1	506.0	- 14.0	1,013.4	1,117.5	- 104.0
2010	634.7	530.6	7.9	713.6	190.7	308.5	57.7	39.7	11.4	- 78.9	516.5	512.9	+ 3.7	1,033.7	1,108.9	- 75.2
2011	689.6	573.4	22.8	711.6	194.3	301.3	56.8	38.5	13.7	- 22.0	526.3	511.3	+ 15.0	1,104.2	1,111.2	- 7.0
2012 P	745.0	600.0	14.7	770.2	218.8	285.2	69.9	42.6	25.5	- 25.2	536.2	518.9	+ 17.3	1,171.1	1,179.0	- 7.9
2013 P	761.8	619.7	14.7	773.6	225.3	286.9	65.7	42.8	23.5	- 11.8	536.7	532.0	+ 4.7	1,198.1	1,205.2	- 7.0
2014 P	791.8	643.6	11.3	786.7	236.0	292.9	57.1	45.9	17.6	+ 5.1	554.4	551.1	+ 3.2	1,245.1	1,236.8	+ 8.4
2015 P	832.1	673.3	10.4	802.9	243.5	302.0	49.9	46.3	12.7	+ 29.2	574.2	572.5	+ 1.7	1,302.8	1,271.9	+ 30.9
2014 Q1 P	188.2	153.6	2.0	193.9	56.7	77.9	20.0	7.8	2.3	- 5.7	132.8	136.1	- 3.3	296.0	305.0	- 9.0
Q2 P	193.1	157.4	2.2	188.1	56.9	71.8	9.8	9.8	8.2	+ 5.0	136.4	135.8	+ 0.6	304.5	299.0	+ 5.6
Q3 P	192.2	157.5	3.4	193.5	57.1	71.2	17.7	11.3	4.0	- 1.4	136.3	137.4	- 1.1	303.1	305.5	- 2.4
Q4 P	219.0	174.9	3.5	211.8	65.4	73.5	9.5	16.5	3.1	+ 7.2	148.3	141.5	+ 6.8	341.6	327.6	+ 14.0
2015 Q1 P	196.0	160.9	2.4	198.8	58.5	80.5	18.4	7.7	2.5	- 2.8	137.3	142.8	- 5.4	307.6	315.8	- 8.2
Q2 P	208.4	167.7	1.5	185.2	59.5	73.2	7.2	9.1	3.0	+ 23.1	142.4	142.3	+ 0.1	325.0	301.8	+ 23.2
Q3 P	202.9	159.0	3.8	198.1	62.3	70.9	16.6	11.6	3.4	+ 4.7	141.2	143.4	- 2.1	318.2	315.6	+ 2.6
Q4 P	222.2	178.1	2.6	219.4	63.2	77.3	7.6	17.1	3.7	+ 2.8	152.7	145.3	+ 7.4	349.1	338.9	+ 10.2

Source: Bundesbank calculations based on Federal Statistical Office data. ¹ Annual figures based on the calculations of the Federal Statistical Office. Bundesbank supplementary estimations for the reporting years after 2011 that are not yet available. The quarterly figures do not contain the special purpose associations included in the annual calculations, but they do not contain numerous other off-budget entities which are assigned to the general government sector as defined in the national accounts. From 2012, also including the bad bank FMSW. ² Furthermore, the annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional.

The quarterly figures for some insurance sectors are estimated. ³ The development of the types of expenditure recorded here is influenced in part by statistical changes. ⁴ Including discrepancies in clearing transactions between central, state and local government. ⁵ On the revenue side, this contains proceeds booked as disposals of equity interests and as loan repayments. On the expenditure side, this contains the acquisition of equity interests and loans granted. ⁶ Including central government liquidity assistance to the Federal Employment Agency.

4 Central, state and local government: budgetary development (as per government's financial statistics)

€ billion

Period	Central government			State government ^{2,3}			Local government ³		
	Revenue ¹	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus
2009	282.6	317.1	- 34.5	260.1	287.1	- 26.9	170.8	178.3	- 7.5
2010	288.7	333.1	- 44.4	266.8	287.3	- 20.5	175.4	182.3	- 6.9
2011	307.1	324.9	- 17.7	286.5	295.9	- 9.4	183.9	184.9	- 1.0
2012 P	312.5	335.3	- 22.8	311.0	316.1	- 5.1	200.0	198.5	+ 1.5
2013 P	313.2	335.6	- 22.4	324.3	323.9	+ 0.4	207.6	206.3	+ 1.3
2014 P	322.9	323.3	- 0.3	338.3	336.1	+ 2.1	218.7	218.7	- 0.1
2015 P	338.2	326.4	+ 11.8	355.1	350.4	+ 4.7	232.7	229.1	+ 3.6
2014 Q1 P	69.8	80.4	- 10.6	80.3	81.0	- 0.7	45.1	50.0	- 4.8
Q2 P	77.7	76.7	+ 0.9	82.3	80.4	+ 1.9	54.8	52.0	+ 2.8
Q3 P	82.5	85.3	- 2.9	82.7	80.4	+ 2.3	53.9	54.4	- 0.5
Q4 P	92.9	80.8	+ 12.2	92.0	94.0	- 2.0	63.0	61.0	+ 2.0
2015 Q1 P	74.4	81.6	- 7.1	84.2	84.5	- 0.3	46.3	52.1	- 5.8
Q2 P	86.5	72.6	+ 13.9	87.0	83.6	+ 3.4	58.1	53.4	+ 4.7
Q3 P	85.9	89.0	- 3.2	87.8	84.2	+ 3.6	57.5	56.3	+ 1.2
Q4 P	91.4	83.3	+ 8.1	94.1	96.6	- 2.6	69.0	65.9	+ 3.0

Source: Bundesbank calculations based on Federal Statistical Office data. ¹ Any amounts of the Bundesbank's profit distribution exceeding the reference value that were used to repay parts of the debt of central government's special funds are not included here. ² Including the local authority level of the city-states Berlin, Bremen and Hamburg. ³ For state government from 2011, for local government from 2012: quarterly data of core budgets and off-budget entities which are assigned to the general

government sector, up to and including 2013: excluding special purpose associations. Annual figures up to and including 2011: excluding off-budget entities, but including special accounts and special purpose associations based on the calculations of the Federal Statistical Office. For the following years, Bundesbank supplementary estimations.

X Public finances in Germany

5 Central, state and local government: tax revenue

€ million

Period	Total	Central and state government and European Union				Local government 3	Balance of untransferred tax shares 4	Memo item Amounts deducted in the federal budget 5
		Total	Central government 1	State government 1	European Union 2			
2009	524,000	455,615	252,842	182,273	20,501	68,419	- 34	24,846
2010	530,587	460,230	254,537	181,326	24,367	70,385	- 28	28,726
2011	573,352	496,738	276,598	195,676	24,464	76,570	+ 43	28,615
2012	600,046	518,963	284,801	207,846	26,316	81,184	- 101	28,498
2013	619,708	535,173	287,641	216,430	31,101	84,274	+ 262	27,775
2014	643,624	556,008	298,518	226,504	30,986	87,418	+ 198	27,772
2015	673,276	580,485	308,849	240,698	30,938	93,003	- 212	27,241
2014 Q1	153,971	130,986	64,962	54,529	11,495	15,287	+ 7,698	6,638
Q2	158,118	135,358	72,082	56,178	7,098	23,160	- 400	6,803
Q3	156,886	135,698	75,711	55,194	4,794	21,380	- 192	7,577
Q4	174,650	153,966	85,763	60,603	7,599	27,592	- 6,908	6,754
2015 Q1	161,068	137,183	68,215	57,237	11,731	15,722	+ 8,163	6,433
Q2	167,763	143,248	76,762	59,298	7,188	24,814	- 299	6,633
Q3	166,468	143,854	79,783	59,551	4,520	23,006	- 392	7,558
Q4	177,978	156,200	84,089	64,613	7,499	29,461	- 7,684	6,618
2016 Q1	170,358	144,841	74,113	61,972	8,755	17,121	+ 8,396	6,488
Q2	176,879	152,042	82,184	64,684	5,175	25,205	- 368	6,512
2015 July	.	46,607	25,316	19,962	1,329	.	.	3,053
Aug	.	42,043	23,429	16,559	2,055	.	.	2,253
2016 July	.	45,538	23,479	19,654	2,405	.	.	3,061
Aug	.	42,302	22,652	17,193	2,457	.	.	2,261

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. 1 Before deducting or adding supplementary central government grants, shares in energy tax revenue, compensation for the transfer of motor vehicle tax to central government and consolidation aid, which central government remits to state government. See the last column for the volume of these amounts which are deducted from tax revenue in the federal budget. 2 Custom duties and shares in VAT

and gross national income accruing to the EU from central government tax revenue. 3 Including local government taxes in the city-states Berlin, Bremen and Hamburg. Including revenue from offshore wind farms. 4 Difference between local government's share in the joint taxes received by the state government cash offices in the period in question (see Table X. 6) and the amounts passed on to local government in the same period. 5 Volume of the positions mentioned under footnote 1.

6 Central and state government and European Union: tax revenue, by type

€ million

Period	Total 1	Joint taxes						Local business tax transfers 6	Central government taxes 7	State government taxes 7	EU customs duties	Memo item Local government share in joint taxes		
		Income taxes 2				Turnover taxes 5								
	Total	Wage tax 3	Assessed income tax	Corporation tax	Investment income tax 4	Total	Turnover tax	Turnover tax on imports						
2009	484,880	193,684	135,165	26,430	7,173	24,916	176,991	141,907	35,084	4,908	89,318	16,375	3,604	29,265
2010	488,731	192,816	127,904	31,179	12,041	21,691	180,042	136,459	43,582	5,925	93,426	12,146	4,378	28,501
2011	527,255	213,534	139,749	31,996	15,634	26,155	190,033	138,957	51,076	6,888	99,133	13,095	4,571	30,517
2012	551,785	231,555	149,065	37,262	16,934	28,294	194,635	142,439	52,196	7,137	99,794	14,201	4,462	32,822
2013	570,213	245,909	158,198	42,280	19,508	25,923	196,843	148,315	48,528	7,053	100,454	15,723	4,231	35,040
2014	593,039	258,875	167,983	45,613	20,044	25,236	203,110	154,228	48,883	7,142	101,804	17,556	4,552	37,031
2015	620,287	273,258	178,891	48,580	19,583	26,204	209,921	159,015	50,905	7,407	104,204	20,339	5,159	39,802
2014 Q1	140,035	62,941	39,035	11,808	5,610	6,487	50,533	38,904	11,629	134	20,893	4,481	1,053	9,049
Q2	144,418	65,233	40,767	11,963	5,068	7,435	49,166	37,194	11,972	1,785	22,874	4,318	1,042	9,059
Q3	144,482	60,838	40,538	10,022	4,314	5,965	51,148	38,733	12,415	1,911	24,945	4,395	1,244	8,783
Q4	164,104	69,863	47,642	11,820	5,052	5,349	52,264	39,397	12,867	3,312	33,091	4,361	1,214	10,139
2015 Q1	146,924	66,225	41,557	13,134	5,438	6,097	51,852	40,050	11,803	143	22,268	5,207	1,228	9,741
Q2	153,155	69,728	44,267	12,323	5,851	7,287	50,754	38,063	12,691	1,760	24,892	4,838	1,183	9,907
Q3	153,307	66,010	43,251	10,666	4,452	7,640	53,203	40,029	13,174	2,019	25,637	5,029	1,409	9,453
Q4	166,901	71,295	49,816	12,457	3,842	5,180	54,111	40,873	13,238	3,484	31,407	5,265	1,339	10,701
2016 Q1	154,892	70,790	42,583	14,569	8,433	5,204	54,408	42,268	12,141	173	22,553	5,673	1,294	10,051
Q2	162,096	74,489	45,311	12,943	7,329	8,905	52,705	40,195	12,510	1,957	25,783	5,952	1,210	10,054
2015 July	49,328	20,202	15,708	- 598	- 141	5,233	17,178	12,760	4,418	1,731	8,074	1,705	439	2,722
Aug	44,611	14,861	14,299	- 419	- 441	1,423	18,770	14,150	4,620	284	8,590	1,613	493	2,568
2016 July	48,367	19,524	16,148	- 214	- 289	3,301	17,280	13,033	4,246	1,779	7,669	1,692	422	2,829
Aug	44,824	15,025	14,277	- 568	- 129	1,445	18,935	14,572	4,363	265	8,361	1,793	444	2,522

Source: Federal Ministry of Finance and Bundesbank calculations. 1 This total, unlike that in Table X. 5, does not include the receipts from the equalisation of burdens levies, local business tax (less local business tax transfers to central and state government), real property taxes and other local government taxes, or the balance of untransferred tax shares. 2 Respective percentage share of central, state and local government in revenue: wage tax and assessed income tax 42.5:42.5:15, corporation tax and non-assessed taxes on earnings 50:50:-, final withholding tax on interest income and capital gains, non-assessed taxes on earnings 44:44:12. 3 After

deducting child benefit and subsidies for supplementary private pension plans. 4 Final withholding tax on interest income and capital gains, non-assessed taxes on earnings. 5 The allocation of revenue to central, state and local government, which is adjusted at more regular intervals, is regulated in section 1 of the Revenue Adjustment Act. Respective percentage share of central, state and local government in revenue for 2015: 52.3:45.5:2.2. The EU share is deducted from central government's share. 6 Respective percentage share of central and state government for 2015: 22.4:77.6. 7 For the breakdown, see Table X. 7.

X Public finances in Germany

7 Central, state and local government: individual taxes

€ million

Period	Central government taxes ¹								State government taxes ¹				Local government taxes		
	Energy tax	Tobacco tax	Solidarity surcharge	Insurance tax	Motor vehicle tax ²	Electricity tax	Spirits tax	Other	Motor vehicle tax ²	Tax on the acquisition of land and buildings	Inheritance tax	Other ³	Total	of which	
														Local business tax ⁴	Real property taxes
2009	39,822	13,366	11,927	10,548	3,803	6,278	2,101	1,473	4,398	4,857	4,550	2,571	44,028	32,421	10,936
2010	39,838	13,492	11,713	10,284	8,488	6,171	1,990	1,449	.	5,290	4,404	2,452	47,780	35,712	11,315
2011	40,036	14,414	12,781	10,755	8,422	7,247	2,149	3,329	.	6,366	4,246	2,484	52,984	40,424	11,674
2012	39,305	14,143	13,624	11,138	8,443	6,973	2,121	4,047	.	7,389	4,305	2,508	55,398	42,345	12,017
2013	39,364	13,820	14,378	11,553	8,490	7,009	2,102	3,737	.	8,394	4,633	2,696	56,549	43,027	12,377
2014	39,758	14,612	15,047	12,046	8,501	6,638	2,060	3,143	.	9,339	5,452	2,764	57,728	43,763	12,691
2015	39,594	14,921	15,930	12,419	8,805	6,593	2,070	3,872	.	11,249	6,290	2,801	60,396	45,752	13,215
2014 Q1	4,675	2,477	3,577	5,642	1,861	1,550	556	555	.	2,385	1,314	782	14,070	10,829	2,880
Q2	9,868	3,708	3,955	2,096	2,517	1,718	470	-1,458	.	2,149	1,501	668	15,485	11,684	3,495
Q3	10,029	3,735	3,498	2,423	2,265	1,716	499	779	.	2,387	1,331	677	14,316	10,458	3,529
Q4	15,185	4,691	4,016	1,886	1,859	1,653	535	3,266	.	2,418	1,306	638	13,858	10,792	2,786
2015 Q1	4,704	2,223	3,783	5,825	2,454	1,806	570	904	.	2,760	1,668	779	14,288	10,912	2,982
Q2	9,512	3,683	4,278	2,187	2,361	1,465	470	937	.	2,561	1,617	660	16,368	12,383	3,636
Q3	10,159	3,981	3,714	2,436	2,108	1,643	496	1,102	.	3,021	1,335	672	15,180	11,118	3,697
Q4	15,220	5,034	4,155	1,972	1,883	1,678	534	930	.	2,906	1,670	689	14,561	11,339	2,899
2016 Q1	4,620	2,722	3,979	5,946	2,489	1,685	565	547	.	3,217	1,668	787	15,639	12,090	3,121
Q2	9,860	4,139	4,470	2,269	2,366	1,515	473	691	.	2,952	2,283	717	16,740	12,635	3,715
2015 July	3,201	1,374	1,027	628	756	584	156	347	.	1,029	446	229	.	.	.
Aug	3,366	1,406	874	1,257	650	553	169	315	.	997	394	222	.	.	.
2016 July	3,365	715	1,082	654	768	546	171	368	.	981	488	223	.	.	.
Aug	3,384	1,125	908	1,264	710	546	165	260	.	1,077	482	234	.	.	.

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. ¹ For the sum total, see Table X. 6. ² As of 1 July 2009, motor vehicle tax revenue is attributable to central government. Postings to state government shown there-

after relate to the booking of cash flows. ³ Notably betting, lottery and beer tax. ⁴ Including revenue from offshore wind farms.

8 German pension insurance scheme: budgetary development and assets*

€ million

Period	Revenue ^{1,2}			Expenditure ^{1,2}				Deficit/surplus	Assets ^{1,4}					Memo item Administrative assets
	Total	of which		Total	of which		Total		Deposits ⁵	Securities	Equity interests, mortgages and other loans ⁶	Real estate		
		Contributions ³	Payments from central government		Pension payments	Pensioners' health insurance								
2009	244,689	169,183	74,313	244,478	208,475	14,431	+ 211	16,821	16,614	23	64	120	4,525	
2010	250,133	172,767	76,173	248,076	211,852	14,343	+ 2,057	19,375	18,077	1,120	73	105	4,464	
2011	254,968	177,424	76,200	250,241	212,602	15,015	+ 4,727	24,965	22,241	2,519	88	117	4,379	
2012	259,700	181,262	77,193	254,604	216,450	15,283	+ 5,096	30,481	28,519	1,756	104	102	4,315	
2013	260,166	181,991	77,067	258,268	219,560	15,528	+ 1,898	33,114	29,193	3,701	119	100	4,250	
2014	269,115	189,080	78,940	265,949	226,204	15,978	+ 3,166	36,462	32,905	3,317	146	94	4,263	
2015	276,129	194,486	80,464	277,717	236,634	16,705	- 1,588	35,556	32,795	2,506	167	88	4,228	
2014 Q1	64,138	44,355	19,534	64,615	55,266	3,897	- 477	32,669	28,668	3,781	121	99	4,251	
Q2	66,857	47,145	19,453	64,697	55,085	3,891	+ 2,160	35,181	31,167	3,791	126	97	4,260	
Q3	66,129	45,992	19,865	66,801	56,909	3,991	- 672	33,678	30,264	3,191	129	94	4,256	
Q4	71,927	51,577	20,096	69,548	59,225	4,192	+ 2,379	36,442	32,901	3,317	129	94	4,275	
2015 Q1	65,923	45,653	20,025	68,435	58,671	4,125	- 2,512	34,084	31,583	2,262	148	92	4,255	
Q2	68,700	48,483	19,945	68,443	58,390	4,113	+ 257	34,319	31,797	2,276	152	93	4,254	
Q3	67,538	47,280	20,006	70,165	59,931	4,228	- 2,627	32,246	29,722	2,276	156	92	4,259	
Q4	73,393	53,096	19,971	70,326	59,963	4,233	+ 3,067	35,574	32,794	2,506	158	117	4,242	
2016 Q1	68,182	47,397	20,665	70,076	60,143	4,239	- 1,894	33,865	31,194	2,406	179	86	4,223	
Q2	71,291	50,372	20,548	70,418	60,097	4,238	+ 873	34,427	31,892	2,265	183	87	4,220	

Sources: Federal Ministry of Labour and Social Affairs and German pension insurance scheme. * Excluding the German pension insurance scheme for the mining, railway and maritime industries. ¹ The final annual figures do not tally with the quarterly figures, as the latter are all provisional. ² Including financial compensation payments. Ex-

cluding investment spending and proceeds. ³ Including contributions for recipients of government cash benefits. ⁴ Largely corresponds to the sustainability reserves. End of year or quarter. ⁵ Including cash. ⁶ Excluding loans to other social security funds.

X Public finances in Germany

9 Federal Employment Agency: budgetary development*

€ million

Period	Revenue				Expenditure							Deficit/ surplus	Deficit offsetting grant or loan from central govern- ment
	Total ¹	of which			Total	of which							
		Contri- butions	Insolvency compen- sation levy	Central government subscriptions		Unemploy- ment benefit ²	Short-time working benefits ³	Job promotion ⁴	Re- integration payment ⁵	Insolvency benefit payment	Adminis- trative expendi- ture ⁶		
2009	34,254	22,046	711	7,777	48,057	17,291	5,322	9,849	4,866	1,617	5,398	- 13,804	-
2010	37,070	22,614	2,929	7,927	45,213	16,602	4,125	9,297	5,256	740	5,322	- 8,143	5,207
2011	37,563	25,433	37	8,046	37,524	13,776	1,324	8,369	4,510	683	5,090	+ 40	-
2012	37,429	26,570	314	7,238	34,842	13,823	828	6,699	3,822	982	5,117	+ 2,587	-
2013	32,636	27,594	1,224	245	32,574	15,411	1,082	6,040	.	912	5,349	+ 61	-
2014	33,725	28,714	1,296	-	32,147	15,368	710	6,264	.	694	5,493	+ 1,578	-
2015	35,159	29,941	1,333	-	31,439	14,846	771	6,295	.	654	5,597	+ 3,720	-
2014 Q1	7,844	6,696	299	-	8,693	4,379	311	1,605	.	199	1,239	- 849	-
Q2	8,352	7,143	331	-	8,036	3,902	197	1,593	.	211	1,259	+ 316	-
Q3	8,249	6,991	318	-	7,551	3,641	123	1,458	.	163	1,313	+ 698	-
Q4	9,280	7,884	347	-	7,868	3,446	79	1,609	.	122	1,682	+ 1,412	-
2015 Q1	8,209	6,969	310	-	8,599	4,267	387	1,586	.	165	1,287	- 390	-
Q2	8,758	7,467	326	-	7,856	3,758	214	1,591	.	172	1,318	+ 902	-
Q3	8,573	7,285	329	-	7,319	3,501	82	1,455	.	164	1,368	+ 1,254	-
Q4	9,619	8,220	367	-	7,665	3,320	87	1,662	.	152	1,624	+ 1,954	-
2016 Q1	8,376	7,271	261	-	7,984	4,083	395	1,739	.	150	984	+ 393	-
Q2	8,991	7,737	278	-	7,807	3,648	203	1,847	.	147	1,288	+ 1,184	-

Source: Federal Employment Agency. * Including transfers to the civil servants' pension fund. ¹ Excluding central government deficit offsetting grant or loan. ² Unemployment benefit in case of unemployment. ³ Including seasonal short-time working benefits and restructuring short-time working benefits, restructuring measures and refunds of social security contributions. ⁴ Vocational training, measures to

encourage job take-up, rehabilitation, compensation top-up payments and promotion of business start-ups. ⁵ Until 2012. From 2005 to 2007: compensatory amount. ⁶ Including collection charges to other statutory social security funds, excluding administrative expenditure within the framework of the basic allowance for job seekers.

10 Statutory health insurance scheme: budgetary development

€ million

Period	Revenue ¹			Expenditure ¹								Deficit/ surplus
	Total	of which		Total	of which							
		Contri- butions ²	Central government funds ³		Hospital treatment	Pharma- ceuticals	Medical treatment	Dental treatment ⁴	Thera- peutical treatment and aids	Sickness benefits	Adminis- trative expendi- ture ⁵	
2009	169,837	158,662	7,200	170,825	55,977	30,696	27,635	11,219	9,578	7,258	8,949	- 988
2010 ⁶	179,529	160,797	15,700	175,804	56,697	30,147	28,432	11,419	10,609	7,797	9,554	+ 3,725
2011	189,049	170,875	15,300	179,599	58,501	28,939	29,056	11,651	11,193	8,529	9,488	+ 9,450
2012	193,314	176,388	14,000	184,289	60,157	29,156	29,682	11,749	11,477	9,171	9,711	+ 9,025
2013	196,405	182,179	11,500	194,537	62,886	30,052	32,799	12,619	12,087	9,758	9,979	+ 1,867
2014	203,143	189,089	10,500	205,589	65,711	33,093	34,202	13,028	13,083	10,619	10,063	- 2,445
2015	210,147	195,774	11,500	213,727	67,979	34,576	35,712	13,488	13,674	11,227	10,482	- 3,580
2014 Q1	49,164	45,113	3,500	50,990	16,868	8,097	8,582	3,262	3,029	2,693	2,313	- 1,827
Q2	49,290	46,757	1,769	51,332	16,463	8,234	8,600	3,304	3,282	2,651	2,404	- 2,042
Q3	49,992	46,637	2,634	51,035	16,335	8,266	8,392	3,152	3,313	2,607	2,391	- 1,043
Q4	54,604	50,593	2,597	52,017	15,997	8,496	8,642	3,347	3,444	2,665	2,907	+ 2,588
2015 Q1	50,407	46,846	2,875	53,255	17,532	8,554	8,961	3,379	3,216	2,935	2,360	- 2,848
Q2	51,850	48,371	2,875	53,351	17,157	8,661	8,976	3,385	3,376	2,730	2,433	- 1,501
Q3	51,888	48,472	2,875	52,884	16,899	8,621	8,808	3,262	3,398	2,732	2,508	- 996
Q4	55,872	52,085	2,875	54,124	16,553	8,773	8,998	3,449	3,618	2,834	3,102	+ 1,747
2016 Q1	53,320	49,292	3,500	55,424	18,044	8,879	9,374	3,470	3,419	2,955	2,458	- 2,104
Q2	54,988	51,009	3,500	55,603	17,686	9,005	9,362	3,478	3,528	2,963	2,599	- 615

Source: Federal Ministry of Health. ¹ The final annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional. Excluding revenue and expenditure as part of the risk structure compensation scheme. ² Including contributions from subsidised low-paid part-time employment. ³ Federal grant and liquid-ity assistance. ⁴ Including dentures. ⁵ Net, ie after deducting reimbursements for ex-

penses for levying contributions incurred by other social insurance funds. Including administrative expenditure on disease management programmes. ⁶ Data on individual expenditure categories for 2010 only partly comparable with prior-year figures owing to a change in the statistical definition.

X Public finances in Germany

11 Statutory long-term care insurance scheme: budgetary development*

€ million

Period	Revenue ¹		Expenditure ¹					Deficit/ surplus		
	Total	of which Contributions ²	Total	of which						
				Non-cash care benefits	In-patient care	Nursing benefit	Contributions to pension insur- ance scheme ³		Administrative expenditure	
2009	21,300	21,137	20,314	2,742	9,274	4,443	878	984	+	986
2010	21,864	21,659	21,539	2,933	9,567	4,673	869	1,028	+	325
2011	22,294	22,145	21,962	3,002	9,700	4,735	881	1,034	+	331
2012	23,082	22,953	22,988	3,135	9,961	5,073	881	1,083	+	95
2013	24,972	24,891	24,405	3,389	10,058	5,674	896	1,155	+	567
2014	25,974	25,893	25,457	3,570	10,263	5,893	946	1,216	+	517
2015	30,825	30,751	29,101	3,717	10,745	6,410	960	1,273	+	1,723
2014 Q1	6,168	6,141	6,290	871	2,542	1,463	229	315	-	123
Q2	6,404	6,386	6,260	848	2,554	1,466	236	309	+	144
Q3	6,405	6,386	6,442	932	2,577	1,481	237	299	-	37
Q4	6,933	6,918	6,462	907	2,590	1,529	238	288	+	471
2015 Q1	7,252	7,228	6,906	906	2,655	1,571	236	333	+	346
Q2	7,611	7,592	7,139	902	2,666	1,591	239	311	+	472
Q3	7,626	7,609	7,390	930	2,701	1,613	239	326	+	236
Q4	8,198	8,180	7,571	966	2,722	1,682	240	295	+	626
2016 Q1	7,600	7,578	7,587	941	2,703	1,613	238	389	+	13
Q2	7,918	7,901	7,659	949	2,724	1,665	244	331	+	259

Source: Federal Ministry of Health. * Including transfers to the long-term care provident fund. ¹ The final annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional. ² Since 2005 including special contributions for

childless persons (0.25% of income subject to insurance contributions). ³ For non-professional carers.

12 Central government: borrowing in the market

€ million

Period	Total new borrowing ¹		of which Change in money market loans	of which Change in money market deposits
	Gross ²	Net		
2009	+ 312,729	+ 66,821	- 8,184	+ 106
2010	+ 302,694	+ 42,397	- 5,041	+ 1,607
2011	+ 264,572	+ 5,890	- 4,876	- 9,036
2012	+ 263,334	+ 31,728	+ 6,183	+ 13,375
2013	+ 246,781	+ 19,473	+ 7,292	- 4,601
2014	+ 192,540	- 2,378	- 3,190	+ 891
2015	+ 167,655	- 16,386	- 5,884	- 1,916
2014 Q1	+ 43,862	- 3,551	- 9,267	- 9,556
Q2	+ 58,444	+ 9,500	+ 6,281	+ 10,589
Q3	+ 47,215	- 8,035	- 2,111	- 10,817
Q4	+ 43,018	- 292	+ 1,907	+ 10,675
2015 Q1	+ 52,024	- 3,086	+ 4,710	- 7,612
Q2	+ 36,214	- 5,404	- 12,133	+ 6,930
Q3	+ 46,877	- 1,967	- 806	- 1,091
Q4	+ 32,541	- 5,929	+ 2,344	- 142
2016 Q1	+ 61,598	+ 10,650	+ 8,501	- 19,345
Q2	+ 60,691	+ 4,204	+ 3,694	+ 4,084

Source: Federal Republic of Germany – Finance Agency. ¹ Including the Financial Market Stabilisation Fund, the Investment and Repayment Fund and the Restructuring Fund for Credit Institutions. ² After deducting repurchases.

13 General government: debt by creditor*

€ million

Period (End of year or quarter)	Total	Banking system		Domestic non-banks		Foreign creditors ^{pe}
		Bundes- bank	Domestic MFIs ^{pe}	Other do- mestic fi- nancial cor- porations ^{pe}	Other domestic creditors ¹	
2009	1,785,468	4,440	556,048	188,858	138,591	897,531
2010	2,088,726	4,440	691,572	208,244	131,939	1,052,532
2011	2,128,123	4,440	642,358	208,075	120,745	1,152,505
2012	2,204,507	4,440	646,022	200,458	139,984	1,213,603
2013	2,189,153	4,440	636,617	190,956	144,524	1,212,616
2014 ^p	2,188,671	4,440	623,661	190,364	130,527	1,239,679
2015 ^p	2,157,880	77,220	610,429	186,682	146,173	1,137,375
2014 Q1 ^p	2,178,434	4,440	633,639	190,651	129,784	1,219,920
Q2 ^p	2,184,835	4,440	631,114	189,890	129,978	1,229,413
Q3 ^p	2,185,986	4,440	632,943	189,142	126,665	1,232,797
Q4 ^p	2,188,671	4,440	623,661	190,364	130,527	1,239,679
2015 Q1 ^p	2,194,643	12,335	630,965	189,258	135,350	1,226,734
Q2 ^p	2,160,596	34,310	617,084	187,360	137,228	1,184,615
Q3 ^p	2,162,331	54,990	620,916	188,234	138,627	1,159,565
Q4 ^p	2,157,880	77,220	610,429	186,682	146,173	1,137,375
2016 Q1 ^p	2,167,043	100,051	611,769	183,184	144,912	1,127,127
Q2 ^p	2,168,192	133,297	598,358	181,386	158,980	1,096,171

Source: Bundesbank calculations based on data from the Federal Statistical Office. * As defined in the Maastricht Treaty. ¹ Calculated as a residual.

X Public finances in Germany

14 Central, state and local government: debt by category*

€ million

Period (End of year or quarter)	Total	Treasury discount paper (Bubills) 1	Treasury notes 2,3	Five-year Federal notes (Bobls) 2	Federal savings notes	Federal bonds (Bunds) 2	Day-bond	Direct lending by credit institu- tions 4	Loans from non-banks		Old debt	
									Social security funds	Other 4	Equal- isation claims 5	Other 5,6
Central, state and local government												
2010	1,732,851	87,042	391,851	195,534	8,704	628,957	1,975	302,716	21	111,609	4,440	2
2011	1,752,903	60,272	414,250	214,211	8,208	644,894	2,154	292,606	102	111,765	4,440	2
2012	1,791,254	57,172	417,469	234,355	6,818	667,198	1,725	288,806	70	113,198	4,440	2
2013	1,816,017	50,128	423,441	245,372	4,488	684,951	1,397	291,429	46	110,323	4,440	2
2014 Q1	1,809,286	41,870	417,260	259,344	4,130	688,047	1,314	282,383	21	110,476	4,440	2
Q2	1,821,829	39,049	419,662	253,524	3,773	703,513	1,262	285,729	16	110,859	4,440	2
Q3	1,818,450	34,149	427,125	265,789	3,068	691,607	1,219	280,889	16	110,147	4,440	2
Q4	1,817,015	27,951	429,633	259,186	2,375	703,812	1,187	276,723	42	111,664	4,440	2
2015 Q1	1,821,890	28,317	425,257	250,432	2,271	707,905	1,155	290,509	42	111,561	4,440	2
Q2	1,807,271	29,575	421,582	243,299	2,031	722,562	1,133	271,661	42	110,944	4,440	2
Q3	1,811,599	26,213	424,534	256,613	1,677	715,763	1,106	270,467	42	110,741	4,440	2
Q4	1,804,625	19,431	429,818	246,940	1,305	725,285	1,070	263,303	59	112,972	4,440	2
2016 Q1 P	1,815,357	21,804	427,090	240,281	1,205	730,533	1,051	279,869	59	109,023	4,440	2
Q2 P	1,811,955	29,543	427,813	235,389	1,108	727,922	1,033	276,877	59	107,769	4,440	2
Central government^{7,8}												
2010	1,075,415	85,867	126,220	195,534	8,704	628,582	1,975	13,349	-	10,743	4,440	2
2011	1,081,304	58,297	130,648	214,211	8,208	644,513	2,154	9,382	-	9,450	4,440	2
2012	1,113,032	56,222	117,719	234,355	6,818	666,775	1,725	16,193	-	8,784	4,440	2
2013	1,132,505	50,004	110,029	245,372	4,488	684,305	1,397	23,817	-	8,652	4,440	2
2014 Q1	1,128,954	41,608	107,914	259,344	4,130	687,001	1,314	14,551	-	8,651	4,440	2
Q2	1,138,455	37,951	105,639	253,524	3,773	702,467	1,262	20,781	-	8,616	4,440	2
Q3	1,130,420	33,293	104,763	265,789	3,068	690,561	1,219	18,745	-	8,541	4,440	2
Q4	1,130,128	27,951	103,445	259,186	2,375	702,515	1,187	20,509	-	8,518	4,440	2
2015 Q1	1,127,042	26,495	102,203	250,432	2,271	706,308	1,155	25,289	-	8,448	4,440	2
Q2	1,121,637	27,535	101,090	243,299	2,031	720,715	1,133	13,021	-	8,373	4,440	2
Q3	1,119,670	24,157	98,087	256,613	1,677	713,766	1,106	11,776	-	8,046	4,440	2
Q4	1,113,741	18,536	96,389	246,940	1,305	723,238	1,070	13,825	-	7,996	4,440	2
2016 Q1	1,124,391	20,526	98,232	240,281	1,205	728,457	1,051	22,533	-	7,664	4,440	2
Q2	1,128,595	28,369	99,417	235,389	1,108	725,469	1,033	26,236	-	7,133	4,440	2
State government												
2010	528,696	1,176	265,631	.	.	.	.	167,429	1	94,459	.	1
2011	537,870	1,975	283,601	.	.	.	.	154,844	62	97,387	.	1
2012	540,836	950	299,750	.	.	.	.	138,698	52	101,386	.	1
2013	545,814	125	313,412	.	.	.	.	133,899	35	98,343	.	1
2014 Q1	540,134	261	309,346	.	.	.	.	132,020	10	98,495	.	1
Q2	542,656	1,098	314,024	.	.	.	.	128,616	5	98,913	.	1
Q3	546,756	856	322,362	.	.	.	.	125,257	5	98,276	.	1
Q4	544,419	0	326,188	.	.	.	.	119,529	5	98,697	.	1
2015 Q1	547,487	1,821	323,055	.	.	.	.	123,943	5	98,662	.	1
Q2	538,594	2,040	320,492	.	.	.	.	117,935	5	98,121	.	1
Q3	544,260	2,056	326,447	.	.	.	.	117,506	5	98,245	.	1
Q4	543,311	895	333,429	.	.	.	.	109,985	5	98,996	.	1
2016 Q1 P	542,072	1,278	328,858	.	.	.	.	116,551	5	95,379	.	1
Q2 P	536,189	1,173	328,397	.	.	.	.	111,956	6	94,657	.	1
Local government⁹												
2010	128,740	.	.	.	.	375	.	121,938	20	6,407	.	.
2011	133,730	.	.	.	.	381	.	128,380	40	4,929	.	.
2012	137,386	.	.	.	.	423	.	133,916	18	3,029	.	.
2013	137,697	.	.	.	.	646	.	133,713	11	3,328	.	.
2014 Q1	140,198	.	.	.	.	1,046	.	135,811	11	3,330	.	.
Q2	140,719	.	.	.	.	1,046	.	136,332	11	3,330	.	.
Q3	141,274	.	.	.	.	1,046	.	136,888	11	3,330	.	.
Q4	142,468	.	.	.	.	1,297	.	136,686	37	4,448	.	.
2015 Q1	147,362	.	.	.	.	1,597	.	141,278	37	4,450	.	.
Q2	147,039	.	.	.	.	1,847	.	140,705	37	4,450	.	.
Q3	147,669	.	.	.	.	1,997	.	141,185	37	4,450	.	.
Q4	147,573	.	.	.	.	2,047	.	139,493	54	5,980	.	.
2016 Q1 P	148,894	.	.	.	.	2,076	.	140,785	54	5,980	.	.
Q2 P	147,171	.	.	.	.	2,453	.	138,685	54	5,980	.	.

Source: Bundesbank calculations based on data from the Federal Statistical Office. * Excluding direct intergovernmental borrowing. 1 Including Treasury financing paper. 2 Excluding issuers' holdings of their own securities. 3 Treasury notes issued by state government include long-term notes. 4 Mainly loans against borrowers' notes and cash advances. Including loans raised abroad. Other loans from non-banks, including loans from public supplementary pension funds and liabilities arising from the investment assistance levy. 5 Excluding offsets against outstanding claims. 6 Old debt mainly denominated in foreign currency, in accordance with the London Debts Agreement, old liabilities arising from housing construction and liabil-

ities arising from housing construction by the former GDR's armed forces and from housing construction in connection with the return of the troops of the former USSR stationed in eastern Germany to their home country; excluding debt securities in own portfolios. 7 In contrast to the capital market statistics, the debt incurred through the joint issuance of Federal securities is recorded here under central government and its special funds in accordance with the agreed allocation ratios. 8 From January 2011, including debt of the Restructuring Fund for Credit Institutions. 9 Including debt of municipal special purpose associations. Data other than year-end figures have been estimated.

XI Economic conditions in Germany

1 Origin and use of domestic product, distribution of national income

Item	2013	2014	2015	2013	2014	2015	2015					2016		
	2013	2014	2015	2013	2014	2015	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
	Index 2010=100			Annual percentage change										
At constant prices, chained														
I Origin of domestic product														
Production sector (excluding construction)	104.8	110.0	111.8	- 0.4	5.0	- 1.6	4.5	0.8	- 1.9	- 1.7	1.9	0.9	3.9	
Construction	100.2	101.6	101.4	- 2.3	1.4	- 0.2	- 1.6	- 2.2	- 0.8	- 0.8	2.4	1.0	5.2	
Wholesale/retail trade, transport and storage, hotel and restaurant services	106.2	106.6	108.6	- 0.7	0.4	1.9	0.7	2.2	1.8	1.6	1.9	1.2	3.8	
Information and communication	120.2	125.9	129.1	3.8	4.8	2.5	4.9	1.7	2.8	2.5	3.0	2.4	2.9	
Financial and insurance activities	111.2	105.8	106.5	9.7	- 4.8	0.7	- 4.0	- 0.6	2.2	1.6	- 0.4	1.5	1.8	
Real estate activities	103.3	101.8	102.6	1.7	- 1.5	0.9	- 2.0	0.5	0.8	0.9	1.2	0.5	0.8	
Business services ¹	104.0	106.6	109.0	0.5	2.4	2.3	2.1	1.6	2.6	2.1	3.0	2.3	4.5	
Public services, education and health	102.4	103.1	105.2	0.1	0.7	2.0	1.1	2.1	2.3	2.1	1.6	1.6	2.4	
Other services	97.8	97.3	97.6	- 1.7	- 0.5	0.3	- 0.1	- 0.2	0.3	0.2	0.9	0.2	2.1	
Gross value added	104.7	106.3	107.9	0.5	1.5	1.6	1.3	1.1	1.7	1.6	1.8	1.2	3.2	
Gross domestic product ²	104.7	106.4	108.2	0.5	1.6	1.7	1.7	1.3	1.8	1.8	2.1	1.5	3.1	
II Use of domestic product														
Private consumption ³	103.5	104.4	106.5	0.7	0.9	2.0	1.4	2.1	1.7	2.2	2.1	1.7	2.4	
Government consumption	103.2	104.5	107.4	1.2	1.2	2.7	1.6	2.2	2.8	2.6	3.4	4.4	3.9	
Machinery and equipment	101.3	106.8	110.7	- 2.1	5.5	3.7	3.0	1.5	1.8	4.4	6.4	4.0	4.4	
Premises	107.5	109.5	109.8	- 1.1	1.9	0.3	0.4	- 2.0	- 0.0	0.1	3.1	2.4	5.1	
Other investment ⁴	107.1	111.4	113.5	0.6	4.0	1.9	3.2	2.0	1.6	1.8	2.1	2.4	2.7	
Changes in inventories ^{5, 6}	.	.	.	0.5	- 0.1	- 0.5	0.1	- 0.4	- 1.0	- 0.2	- 0.3	- 0.3	- 0.4	
Domestic demand	103.0	104.5	106.2	0.9	1.4	1.6	1.7	1.2	0.7	2.0	2.5	2.1	2.8	
Net exports ⁶	.	.	.	- 0.4	0.3	0.2	0.1	0.1	1.2	- 0.1	- 0.3	- 0.5	0.6	
Exports	113.4	118.0	124.1	1.9	4.1	5.2	4.6	5.5	6.7	4.9	3.6	1.6	4.9	
Imports	110.3	114.8	121.0	3.1	4.0	5.5	5.0	6.0	4.9	6.0	5.0	3.1	4.5	
Gross domestic product ²	104.7	106.4	108.2	0.5	1.6	1.7	1.7	1.3	1.8	1.8	2.1	1.5	3.1	
At current prices (€ billion)														
III Use of domestic product														
Private consumption ³	1,565.7	1,594.4	1,636.0	1.8	1.8	2.6	2.1	2.4	2.5	2.7	2.8	2.2	2.8	
Government consumption	542.2	561.1	583.7	4.3	3.5	4.0	3.4	3.3	4.1	3.8	4.9	6.1	5.4	
Machinery and equipment	180.5	191.5	200.2	- 1.8	6.1	4.6	3.9	2.4	2.6	5.3	7.4	5.0	5.4	
Premises	277.2	288.7	295.0	1.5	4.2	2.2	2.0	- 0.0	1.9	1.9	4.9	4.0	7.0	
Other investment ⁴	99.5	105.0	108.6	1.6	5.5	3.5	4.6	3.7	3.2	3.3	3.7	3.8	4.0	
Changes in inventories ⁵	- 7.2	- 7.4	- 20.2	.	.	.	.	.	.	.	.	.	.
Domestic use	2,657.8	2,733.2	2,803.3	2.6	2.8	2.6	2.9	2.0	1.8	2.9	3.6	3.1	3.6	
Net exports	168.4	190.7	229.5	.	.	.	.	.	.	.	.	.	.
Exports	1,284.7	1,334.8	1,418.8	1.3	3.9	6.3	5.0	6.2	8.6	6.2	4.2	0.9	2.9	
Imports	1,116.4	1,144.1	1,189.3	1.5	2.5	3.9	3.6	3.7	4.5	4.7	2.8	0.1	0.3	
Gross domestic product ²	2,826.2	2,923.9	3,032.8	2.5	3.5	3.7	3.5	3.2	3.8	3.7	4.2	3.2	4.6	
IV Prices (2010=100)														
Private consumption	104.6	105.6	106.2	1.1	1.0	0.6	0.7	0.3	0.8	0.5	0.6	0.5	0.4	
Gross domestic product	104.6	106.6	108.7	2.0	1.8	2.0	1.8	1.9	2.0	1.9	2.1	1.7	1.4	
Terms of trade	98.2	99.5	102.0	1.1	1.3	2.6	1.7	3.0	2.1	2.5	2.6	2.3	2.2	
V Distribution of national income														
Compensation of employees	1,430.0	1,485.5	1,539.9	2.8	3.9	3.7	3.8	3.2	3.8	3.8	3.9	4.1	3.4	
Entrepreneurial and property income	677.7	694.1	723.4	2.2	2.4	4.2	0.5	4.0	3.6	4.1	5.3	1.9	9.8	
National income	2,107.8	2,179.5	2,263.2	2.6	3.4	3.8	2.9	3.4	3.8	3.9	4.3	3.3	5.3	
<i>Memo item:</i> Gross national income	2,893.9	2,988.9	3,098.8	2.5	3.3	3.7	3.1	3.3	3.4	3.7	4.2	3.4	4.7	

Source: Federal Statistical Office; figures computed in August 2016. ¹ Professional, scientific, technical, administration and support service activities. ² Gross value added plus taxes on products (netted with subsidies on products). ³ Including non-profit in-

stitutions serving households. ⁴ Intellectual property rights (inter alia, computer software and entertainment, literary or artistic originals) and cultivated assets. ⁵ Including net increase in valuables. ⁶ Contribution of growth to GDP.

XI Economic conditions in Germany

2 Output in the production sector*

Adjusted for working-day variations ◦

Production sector, total	of which:											
	Construc- tion	Energy	Industry									
			Total	of which: by main industrial grouping				of which: by economic sector				
				Inter- mediate goods	Capital goods	Durable goods	Non- durable goods	Manu- facture of basic metals and fabricated metal products	Manu- facture of computers, electronic and optical products and electrical equipment	Machinery and equipment	Motor vehicles, trailers and semi- trailers	
2010=100												
% of total ¹	100.00	11.24	10.14	78.62	31.02	33.31	2.49	11.80	10.41	10.37	12.17	11.62
Period												
2012	106.3	105.9	97.4	107.5	104.6	113.3	100.5	99.8	107.3	107.8	115.2	112.7
2013	106.4	105.6	96.4	107.8	104.4	114.0	100.1	100.6	108.3	106.0	113.8	114.8
2014	107.9	108.4	92.7	109.8	106.3	116.6	100.5	102.2	111.3	108.7	115.1	119.5
2015	108.5	106.0	97.5	110.3	106.2	117.6	102.8	101.9	111.4	109.5	114.8	119.3
2015 Q2	108.4	108.3	91.3	110.6	107.7	117.5	101.5	100.7	113.4	108.0	115.9	120.3
Q3	109.0	113.8	93.1	110.4	107.4	116.6	100.2	103.2	112.2	111.0	113.5	117.5
Q4	111.3	117.9	100.7	111.7	103.3	122.6	105.4	104.4	109.7	111.3	122.5	116.5
2016 Q1	106.8	86.4	101.9	110.3	107.6	116.6	106.7	100.7	112.9	108.9	109.1	124.9
Q2 ^r	109.0	108.0	89.1	111.6	108.3	119.0	104.4	101.1	114.4	109.3	113.0	124.2
2015 Aug ²	102.1	110.2	90.7	102.4	102.5	103.8	90.8	100.8	105.8	105.0	105.6	96.9
Sep	113.3	115.1	94.5	115.5	109.9	125.1	112.7	103.9	116.0	116.2	118.9	128.9
Oct	113.9	119.0	99.0	115.2	110.2	123.2	109.5	106.7	117.6	112.6	116.1	130.3
Nov	115.7	120.6	101.3	116.9	109.5	127.0	113.4	108.7	117.1	115.8	121.3	129.5
Dec	104.2	114.2	101.7	103.1	90.2	117.7	93.4	97.7	94.3	105.5	130.1	89.7
2016 Jan	100.3	71.5	106.5	103.6	103.2	105.7	100.1	99.6	107.6	102.2	96.1	114.8
Feb	104.1	84.7	96.9	107.9	105.1	114.9	105.4	96.1	110.0	106.6	106.3	125.4
Mar	115.9	103.1	102.4	119.5	114.6	129.1	114.5	106.4	121.2	117.9	125.0	134.5
Apr ^r	108.3	104.8	91.3	110.9	108.0	118.0	105.1	99.8	114.1	107.4	110.1	127.9
May ^r	106.4	106.7	89.8	108.5	107.2	113.1	97.9	101.0	112.2	105.6	107.8	116.0
June ^r	112.2	112.6	86.1	115.4	109.6	125.8	110.1	102.4	116.9	114.9	121.0	128.6
July ^{2,x}	110.3	118.4	91.8	111.6	109.3	117.9	100.3	102.5	113.6	112.2	111.8	122.0
Aug ^{2,x,p}	104.0	110.2	91.2	104.7	103.5	107.3	96.0	102.7	106.5	106.8	105.1	104.6
Annual percentage change												
2012	- 0.4	- 1.0	+ 1.9	- 0.6	- 2.2	+ 1.3	- 3.6	- 1.5	- 1.7	- 2.2	+ 1.8	+ 0.1
2013	+ 0.1	- 0.3	- 1.0	+ 0.3	- 0.2	+ 0.6	- 0.4	+ 0.8	+ 0.9	- 1.7	- 1.2	+ 1.9
2014	+ 1.4	+ 2.7	- 3.8	+ 1.9	+ 1.8	+ 2.3	+ 0.4	+ 1.6	+ 2.8	+ 2.5	+ 1.1	+ 4.1
2015	+ 0.6	- 2.2	+ 5.2	+ 0.5	- 0.1	+ 0.9	+ 2.3	- 0.3	+ 0.1	+ 0.7	- 0.3	- 0.2
2015 Q2	+ 1.2	- 2.0	+ 6.4	+ 1.1	+ 0.2	+ 1.8	+ 3.4	+ 0.6	+ 0.9	+ 1.2	+ 3.4	- 1.3
Q3	+ 1.0	- 2.3	+ 7.5	+ 0.9	+ 0.2	+ 1.6	+ 3.3	+ 0.4	+ 1.0	+ 0.3	- 1.3	+ 2.6
Q4	- 0.3	- 0.7	+ 1.1	- 0.4	- 0.3	- 0.2	+ 0.7	- 1.6	- 1.0	+ 0.1	- 2.2	- 2.0
2016 Q1	+ 1.5	+ 2.8	- 2.6	+ 1.9	+ 1.3	+ 2.5	+ 2.5	+ 1.4	+ 2.3	+ 1.2	+ 1.7	+ 1.8
Q2 ^r	+ 0.6	- 0.2	- 2.5	+ 0.9	+ 0.6	+ 1.2	+ 2.9	+ 0.4	+ 0.9	+ 1.2	- 2.5	+ 3.2
2015 Aug ²	+ 2.4	- 1.3	+ 6.7	+ 2.5	+ 0.6	+ 4.8	+ 8.9	+ 0.3	+ 1.9	- 0.3	- 0.7	+ 15.6
Sep	+ 0.2	- 2.6	+ 5.1	+ 0.2	+ 0.5	+ 0.2	+ 2.0	- 1.2	+ 1.0	+ 0.8	- 4.3	- 1.0
Oct	+ 0.2	- 0.8	+ 0.6	+ 0.3	- 0.7	+ 2.1	+ 1.2	- 2.8	+ 0.6	- 1.7	- 0.2	+ 3.5
Nov	± 0.0	+ 0.1	+ 2.9	- 0.3	± 0.0	- 0.9	+ 1.3	+ 0.2	- 1.6	- 0.3	- 1.7	- 3.6
Dec	- 1.0	- 1.5	- 0.2	- 1.2	- 0.1	- 1.7	- 0.5	- 2.3	- 2.1	+ 2.7	- 4.4	- 7.0
2016 Jan	+ 2.6	+ 1.0	+ 0.1	+ 3.1	+ 1.4	+ 4.8	+ 5.1	+ 2.4	+ 3.0	+ 1.7	+ 1.6	+ 6.3
Feb	+ 1.8	+ 7.9	- 4.2	+ 2.0	+ 2.0	+ 2.0	+ 1.6	+ 1.7	+ 2.0	+ 1.3	+ 2.2	+ 0.1
Mar	+ 0.3	+ 0.1	- 3.9	+ 0.8	+ 0.7	+ 1.0	+ 1.1	+ 0.4	+ 2.0	+ 0.8	+ 1.5	- 0.2
Apr ^r	+ 0.8	- 0.9	- 4.2	+ 1.6	+ 1.1	+ 2.0	+ 2.9	+ 1.1	+ 1.0	+ 2.9	- 1.9	+ 5.9
May ^r	- 0.3	- 0.8	+ 0.4	- 0.3	+ 0.8	- 1.7	- 1.8	+ 1.2	+ 0.3	- 0.5	- 3.8	- 3.3
June ^r	+ 1.1	+ 1.0	- 3.6	+ 1.5	- 0.2	+ 3.2	+ 7.3	- 1.1	+ 1.5	+ 1.2	- 1.9	+ 7.0
July ^{2,x}	- 1.3	+ 2.1	- 2.5	- 1.6	- 0.5	- 2.6	+ 3.2	- 2.2	- 1.0	+ 0.4	- 3.7	- 3.7
Aug ^{2,x,p}	+ 1.9	± 0.0	+ 0.6	+ 2.2	+ 1.0	+ 3.4	+ 5.7	+ 1.9	+ 0.7	+ 1.7	- 0.5	+ 7.9

Source of the unadjusted figures: Federal Statistical Office. * For explanatory notes, see Statistical Supplement Seasonally adjusted business statistics, Tables II.10 to II.12. ◦ Using the Census X-12-ARIMA method, version 0.2.8. ¹ Share of gross value added at factor cost of the production sector in the base year 2010. ² Influenced by

a change in holiday dates. ^x Provisional; adjusted in advance by the Federal Statistical Office, by way of estimates, to the results of the Quarterly Production Survey or the Quarterly Survey in the specialised construction industry, respectively.

XI Economic conditions in Germany

3 Orders received by industry *

Adjusted for working-day variations ◦

Period	Industry		of which:				Consumer goods		of which:			
	2010=100	Annual percent-age change	Intermediate goods		Capital goods		2010=100	Annual percent-age change	Durable goods		Non-durable goods	
			2010=100	Annual percent-age change	2010=100	Annual percent-age change			2010=100	Annual percent-age change	2010=100	Annual percent-age change
Total												
2011	109.9	+ 10.5	109.1	+ 9.6	111.2	+ 11.8	103.8	+ 4.2	105.3	+ 5.8	103.3	+ 3.7
2012	106.9	- 2.7	104.2	- 4.5	109.2	- 1.8	103.8	± 0.0	99.4	- 5.6	105.3	+ 1.9
2013	109.4	+ 2.3	103.3	- 0.9	114.3	+ 4.7	105.9	+ 2.0	101.8	+ 2.4	107.4	+ 2.0
2014	112.4	+ 2.7	103.9	+ 0.6	118.6	+ 3.8	110.8	+ 4.6	102.4	+ 0.6	113.7	+ 5.9
2015	114.8	+ 2.1	103.0	- 0.9	123.2	+ 3.9	114.3	+ 3.2	106.7	+ 4.2	116.9	+ 2.8
2015 Aug	102.7	+ 2.4	93.4	- 1.2	108.4	+ 5.3	109.7	- 0.6	99.5	+ 5.9	113.3	- 2.5
Sep	112.0	+ 0.1	100.0	- 1.8	120.1	+ 1.0	114.2	+ 1.6	116.4	+ 6.7	113.5	- 0.1
Oct	113.8	- 1.0	102.9	- 3.9	120.6	± 0.0	120.2	+ 4.9	114.8	+ 5.8	122.1	+ 4.5
Nov	116.6	+ 1.7	105.3	+ 1.1	124.9	+ 2.1	115.4	+ 1.9	109.6	+ 4.6	117.4	+ 1.0
Dec	110.6	- 1.9	90.3	- 2.5	125.5	- 2.6	106.3	+ 8.8	98.7	+ 6.2	109.0	+ 9.7
2016 Jan	114.1	+ 0.2	102.8	- 5.2	120.3	+ 2.0	126.6	+ 11.6	116.1	+ 10.6	130.3	+ 12.0
Feb	112.4	+ 0.1	100.6	- 1.8	120.0	+ 1.4	119.2	- 0.7	104.1	+ 2.8	124.4	- 1.8
Mar	127.3	+ 1.4	108.8	- 3.9	141.1	+ 4.3	123.1	+ 4.9	118.0	+ 3.6	124.9	+ 5.2
Apr	113.8	- 1.9	105.0	+ 1.1	120.4	- 4.0	111.6	+ 0.8	117.1	+ 12.8	109.6	- 3.1
May	112.2	- 1.3	101.1	- 3.3	120.1	- 0.3	111.9	+ 0.9	100.3	- 1.5	115.9	+ 1.6
June	118.6	- 3.9	102.5	- 3.9	130.6	- 4.3	113.9	- 0.3	110.8	+ 2.6	114.9	- 1.4
July	114.9	- 1.5	103.0	- 1.9	123.1	- 1.0	117.1	- 1.3	109.9	+ 1.9	119.6	- 2.4
Aug P	104.2	+ 1.5	93.9	+ 0.5	110.4	+ 1.8	112.3	+ 2.4	103.2	+ 3.7	115.5	+ 1.9
From the domestic market												
2011	109.7	+ 10.3	109.7	+ 10.3	110.8	+ 11.4	103.5	+ 3.9	110.2	+ 10.9	101.1	+ 1.5
2012	103.9	- 5.3	103.3	- 5.8	105.4	- 4.9	99.2	- 4.2	101.9	- 7.5	98.2	- 2.9
2013	104.4	+ 0.5	101.9	- 1.4	107.6	+ 2.1	100.4	+ 1.2	102.8	+ 0.9	99.5	+ 1.3
2014	105.6	+ 1.1	100.8	- 1.1	110.9	+ 3.1	102.4	+ 2.0	102.8	± 0.0	102.2	+ 2.7
2015	107.4	+ 1.7	99.0	- 1.8	116.3	+ 4.9	105.2	+ 2.7	102.1	- 0.7	106.3	+ 4.0
2015 Aug	98.9	+ 1.0	93.1	- 1.0	103.5	+ 2.5	106.6	+ 3.6	99.7	+ 4.2	109.1	+ 3.5
Sep	105.4	+ 3.1	96.2	- 0.6	114.3	+ 6.8	107.8	+ 2.4	115.0	+ 2.4	105.3	+ 2.4
Oct	107.8	- 1.1	98.8	- 3.1	116.8	+ 0.4	108.3	+ 1.5	113.0	+ 2.1	106.7	+ 1.3
Nov	110.4	+ 4.2	102.0	+ 1.8	119.1	+ 6.2	108.3	+ 5.6	108.4	+ 2.0	108.2	+ 6.8
Dec	97.9	+ 0.7	84.1	- 4.2	112.8	+ 4.4	90.8	+ 2.7	83.6	- 1.4	93.4	+ 4.1
2016 Jan	105.6	- 2.3	98.3	- 5.7	112.7	+ 0.4	107.1	+ 0.8	105.1	+ 3.3	107.8	- 0.1
Feb	105.6	+ 0.6	95.0	- 2.4	115.5	+ 3.3	110.1	- 0.7	99.4	+ 0.5	113.9	- 1.1
Mar	117.2	- 4.2	102.9	- 5.1	132.3	- 4.2	113.1	+ 2.0	114.7	+ 5.7	112.6	+ 0.7
Apr	108.7	+ 0.6	102.2	+ 1.7	116.3	- 0.9	101.8	+ 2.7	105.1	+ 5.3	100.6	+ 1.8
May	105.1	- 0.7	95.6	- 5.4	114.5	+ 2.9	105.5	+ 4.7	94.6	+ 2.6	109.4	+ 5.4
June	108.5	+ 1.2	96.7	- 4.0	121.6	+ 6.2	100.6	- 1.4	101.2	+ 1.2	100.4	- 2.2
July	106.5	- 5.2	98.9	- 2.6	114.5	- 7.3	104.6	- 5.5	102.2	- 2.3	105.4	- 6.6
Aug P	99.8	+ 0.9	91.4	- 1.8	107.7	+ 4.1	103.3	- 3.1	102.9	+ 3.2	103.5	- 5.1
From abroad												
2011	109.9	+ 10.3	108.4	+ 8.8	111.4	+ 11.8	104.1	+ 4.5	101.0	+ 1.4	105.2	+ 5.6
2012	109.3	- 0.5	105.2	- 3.0	111.6	+ 0.2	107.7	+ 3.5	97.3	- 3.7	111.3	+ 5.8
2013	113.5	+ 3.8	104.8	- 0.4	118.5	+ 6.2	110.7	+ 2.8	100.8	+ 3.6	114.1	+ 2.5
2014	117.9	+ 3.9	107.4	+ 2.5	123.4	+ 4.1	118.0	+ 6.6	102.1	+ 1.3	123.5	+ 8.2
2015	120.7	+ 2.4	107.8	+ 0.4	127.4	+ 3.2	122.1	+ 3.5	110.7	+ 8.4	126.0	+ 2.0
2015 Aug	105.8	+ 3.5	93.8	- 1.4	111.4	+ 7.0	112.4	- 3.8	99.3	+ 7.2	116.9	- 6.7
Sep	117.3	- 2.0	104.5	- 3.0	123.6	- 2.1	119.7	+ 1.0	117.6	+ 10.6	120.4	- 1.9
Oct	118.6	- 1.0	107.7	- 4.7	122.9	- 0.2	130.4	+ 7.4	116.3	+ 9.2	135.2	+ 6.9
Nov	121.7	- 0.2	109.2	+ 0.2	128.4	- 0.2	121.5	- 0.7	110.7	+ 7.0	125.2	- 2.9
Dec	121.0	- 3.4	97.7	- 0.6	133.3	- 6.0	119.6	+ 13.2	111.8	+ 11.8	122.3	+ 13.7
2016 Jan	121.0	+ 1.9	108.2	- 4.6	125.0	+ 3.0	143.3	+ 19.9	125.6	+ 16.5	149.4	+ 21.0
Feb	118.0	- 0.3	107.1	- 1.1	122.7	+ 0.2	126.9	- 0.8	108.2	+ 4.7	133.3	- 2.3
Mar	135.5	+ 5.8	115.8	- 2.6	146.5	+ 9.7	131.6	+ 7.0	120.9	+ 1.9	135.3	+ 8.7
Apr	118.0	- 3.7	108.3	+ 0.4	122.9	- 5.8	119.9	- 0.6	127.6	+ 18.9	117.3	- 6.3
May	118.0	- 1.8	107.5	- 1.0	123.6	- 2.1	117.3	- 1.9	105.2	- 4.5	121.5	- 1.1
June	126.9	- 7.1	109.4	- 3.9	136.2	- 9.3	125.2	+ 0.2	119.2	+ 3.7	127.2	- 0.9
July	121.8	+ 1.5	107.8	- 1.3	128.4	+ 2.7	127.7	+ 1.7	116.6	+ 5.5	131.6	+ 0.6
Aug P	107.8	+ 1.9	96.8	+ 3.2	112.1	+ 0.6	120.0	+ 6.8	103.4	+ 4.1	125.7	+ 7.5

Source of the unadjusted figures: Federal Statistical Office. * At current prices; for explanatory notes, see Statistical Supplement Seasonally adjusted business statistics,

Tables II.14 to II.16. ◦ Using the Census X-12-ARIMA method, version 0.2.8.

XI Economic conditions in Germany

4 Orders received by construction *

Adjusted for working-day variations ◦

Period	Breakdown by type of construction										Breakdown by client ¹					
	Building										Civil engineering					
	Total		Housing construction		Industrial construction		Public sector construction				Industry		Public sector ²			
	Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change	
2010 = 100		2010 = 100		2010 = 100		2010 = 100		2010 = 100		2010 = 100		2010 = 100		2010 = 100		
2011	107.1	+ 7.5	112.1	+ 12.4	120.5	+ 21.0	113.6	+ 13.8	91.5	- 8.1	102.0	+ 2.5	112.7	+ 13.2	95.9	- 3.7
2012	114.7	+ 7.1	121.4	+ 8.3	132.4	+ 9.9	124.2	+ 9.3	91.8	+ 0.3	107.9	+ 5.8	118.8	+ 5.4	103.4	+ 7.8
2013	119.2	+ 3.9	126.5	+ 4.2	140.6	+ 6.2	128.1	+ 3.1	93.9	+ 2.3	111.9	+ 3.7	121.9	+ 2.6	107.7	+ 4.2
2014	118.5	- 0.6	127.2	+ 0.6	146.6	+ 4.3	126.8	- 1.0	90.6	- 3.5	109.9	- 1.8	121.8	- 0.1	104.0	- 3.4
2015	124.2	+ 4.8	133.6	+ 5.0	165.4	+ 12.8	124.3	- 2.0	98.5	+ 8.7	114.8	+ 4.5	122.6	+ 0.7	109.3	+ 5.1
2015 July	132.0	- 3.4	139.4	- 0.4	184.5	+ 28.1	120.3	- 18.4	107.2	- 1.9	124.6	- 6.5	120.7	- 13.6	122.4	- 6.1
Aug	123.9	+ 2.0	130.1	+ 6.2	157.6	+ 24.1	123.1	- 5.7	96.8	+ 7.9	117.6	- 2.3	119.3	- 4.3	115.0	- 0.8
Sep	134.3	+ 10.3	151.3	+ 16.3	202.3	+ 35.8	133.8	+ 3.7	103.1	+ 7.3	117.3	+ 3.3	128.3	+ 4.0	113.1	+ 3.5
Oct	117.7	+ 3.5	128.0	- 1.0	158.4	+ 4.2	116.4	- 10.0	102.8	+ 21.7	107.4	+ 9.6	120.5	+ 1.1	98.6	+ 6.4
Nov	118.8	+ 19.6	137.1	+ 21.3	152.4	+ 17.1	144.6	+ 24.0	84.9	+ 24.3	100.5	+ 17.3	140.4	+ 28.9	83.2	+ 7.8
Dec	123.3	+ 21.0	135.0	+ 10.6	166.7	+ 8.0	125.4	+ 8.9	101.2	+ 27.6	111.6	+ 36.4	114.8	+ 4.6	114.6	+ 57.2
2016 Jan	108.5	+ 13.9	117.7	+ 15.5	147.4	+ 20.5	106.6	+ 6.1	92.0	+ 40.0	99.3	+ 11.8	111.5	+ 7.0	89.7	+ 19.0
Feb	120.6	+ 15.0	126.0	+ 11.0	157.8	+ 15.4	115.4	+ 9.2	94.7	+ 4.2	115.3	+ 19.7	109.5	+ 5.7	117.1	+ 25.4
Mar	164.7	+ 15.5	168.4	+ 12.3	227.3	+ 19.9	146.7	+ 9.9	117.0	- 2.9	161.0	+ 19.0	150.0	+ 9.6	154.6	+ 19.2
Apr	150.9	+ 18.8	155.3	+ 16.7	195.8	+ 14.2	142.3	+ 20.0	114.0	+ 13.0	146.6	+ 21.3	140.3	+ 18.8	143.8	+ 21.7
May	157.4	+ 18.5	176.1	+ 27.4	209.6	+ 24.8	173.7	+ 32.6	117.6	+ 16.1	138.7	+ 8.9	156.0	+ 19.4	137.9	+ 14.0
June	165.1	+ 19.9	181.0	+ 24.4	223.4	+ 27.7	174.6	+ 25.5	116.8	+ 9.5	149.1	+ 14.7	161.3	+ 20.3	145.5	+ 15.0
July	152.7	+ 15.7	163.7	+ 17.4	194.8	+ 5.6	158.6	+ 31.8	117.4	+ 9.5	141.8	+ 13.8	144.2	+ 19.5	144.5	+ 18.1

Source of the unadjusted figures: Federal Statistical Office. * At current prices; values exclusive of value-added tax; for explanatory notes, see Statistical Supplement Seasonally adjusted business statistics, Table II.21. ◦ Using the Census X-12-ARIMA

method, version 0.2.8. ¹ Excluding housing construction orders. ² Including road construction.

5 Retail trade turnover, sales of motor vehicles *

Adjusted for calendar variations ◦

Period	Retail trade												Wholesale and retail trade and repair of motor vehicles and motorcycles			
											of which: by enterprises main product range ¹					
			Food, beverages, tobacco ²		Textiles, clothing footwear and leather goods		Information and communications equipment		Construction and flooring materials, household appliances, furniture		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles					
	At current prices		At prices in year 2010		At current prices		At current prices		At current prices		At current prices					
	Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change		Annual percentage change	
2010 = 100		2010 = 100		2010 = 100		2010 = 100		2010 = 100		2010 = 100		2010 = 100		2010 = 100		
2011	102.7	+ 2.6	101.1	+ 1.0	102.5	+ 2.3	101.6	+ 1.8	99.4	- 0.5	103.7	+ 3.7	100.3	+ 0.3	107.1	+ 7.9
2012	104.5	+ 1.8	100.8	- 0.3	105.2	+ 2.6	102.3	+ 0.7	99.0	- 0.4	104.6	+ 0.9	100.7	+ 0.4	105.8	- 1.2
2013	106.2	+ 1.6	101.3	+ 0.5	109.0	+ 3.6	103.1	+ 0.8	95.4	- 3.6	102.3	- 2.2	103.4	+ 2.7	104.5	- 1.2
2014	108.2	+ 1.9	102.8	+ 1.5	111.6	+ 2.4	104.9	+ 1.7	94.6	- 0.8	101.9	- 0.4	110.7	+ 7.1	107.1	+ 2.5
2015 ³	111.0	+ 2.6	105.4	+ 2.5	114.8	+ 2.9	105.4	+ 0.5	95.7	+ 1.2	104.7	+ 2.7	116.5	+ 5.2	115.5	+ 7.8
2015 Aug ³	107.7	+ 2.1	102.5	+ 2.1	115.2	+ 6.3	96.3	- 9.9	86.2	+ 3.0	99.1	- 0.2	111.5	+ 4.1	105.9	+ 6.4
Sep	108.2	+ 3.1	102.6	+ 3.4	110.1	+ 3.8	112.3	+ 4.5	93.1	+ 1.6	102.1	+ 3.3	113.6	+ 4.8	114.5	+ 6.9
Oct	114.2	+ 2.3	107.8	+ 1.9	115.6	+ 1.9	120.6	+ 6.1	97.9	- 0.6	110.7	+ 1.9	119.3	+ 4.4	124.8	+ 7.6
Nov	115.6	+ 2.6	109.6	+ 2.0	116.4	+ 3.1	104.5	- 2.8	110.8	+ 1.2	114.6	+ 3.6	122.6	+ 5.9	124.5	+ 10.4
Dec	131.3	+ 3.3	125.6	+ 3.1	133.9	+ 3.6	124.5	+ 0.8	148.4	+ 1.2	113.4	+ 5.6	130.6	+ 4.0	106.5	+ 4.6
2016 Jan	103.7	+ 2.5	99.7	+ 2.2	108.2	+ 3.4	92.3	+ 3.9	98.7	- 2.3	93.1	+ 3.0	116.2	+ 4.0	105.7	+ 10.1
Feb	99.8	+ 2.1	95.5	+ 2.1	105.6	+ 3.5	80.6	- 1.2	85.8	+ 0.2	94.2	+ 4.0	113.3	+ 4.6	110.6	+ 9.0
Mar	113.4	+ 0.8	107.4	+ 0.8	117.0	+ 1.2	98.0	- 7.5	91.3	+ 1.7	112.1	- 0.1	123.6	+ 4.3	134.5	+ 4.7
Apr	112.7	+ 0.8	106.0	+ 0.8	117.1	+ 0.2	113.4	+ 4.0	82.0	+ 0.5	111.2	+ 2.1	118.6	+ 2.4	130.5	+ 6.1
May	113.1	+ 1.5	106.4	+ 1.4	118.7	+ 1.1	109.6	+ 1.6	79.4	- 2.2	109.4	+ 1.1	118.2	+ 4.9	125.7	+ 4.2
June	110.3	+ 1.8	104.2	+ 1.7	116.2	+ 1.8	104.3	- 1.0	85.1	+ 4.0	103.3	+ 1.1	117.0	+ 3.3	128.2	+ 5.6
July	113.5	+ 1.9	107.8	+ 1.5	119.1	+ 3.0	108.9	+ 0.7	90.0	- 0.8	106.6	+ 3.1	123.8	+ 3.5	122.5	+ 3.2
Aug	109.0	+ 1.2	103.5	+ 1.0	115.7	+ 0.4	98.3	+ 2.1	84.1	- 2.4	101.2	+ 2.1	116.4	+ 4.4	...	...

Source of the unadjusted figures: Federal Statistical Office. * Excluding value-added tax; For explanatory notes, see Statistical Supplement Seasonally adjusted business statistics, Table II.24. ◦ Using the Census X-12-ARIMA method, version 0.2.8. ¹ In

stores. ² Including stalls and markets. ³ Figures from January 2015 are provisional, in some cases revised, and particularly uncertain in recent months owing to estimates for missing reports.

XI Economic conditions in Germany

6 Labour market *

Period	Employment 1		Employment subject to social contributions 2,3						Short time workers 4		Unemployment 5		Unem- ploid- ment rate 5,6 in %	Vacan- cies, 5,7 thou- sands
	Thou- sands	Annual percentage change	Total		of which:			Solely jobs exempt from social contri- butions 2	Total	of which: Cyclically induced	Total	of which: Recipients of insured unem- ploid- ment benefits		
			Thou- sands	Annual percentage change	Produc- tion sector	Services excluding temporary employ- ment	Tempo- rary employ- ment							
2011	41,577	+ 1.4	28,687	+ 2.4	8,580	19,094	794	5,014	148	100	2,976	893	7.1	466
2012	42,062	+ 1.2	29,341	+ 2.3	8,739	19,604	773	4,981	112	67	2,897	902	6.8	478
2013	42,327	+ 0.6	29,713	+ 1.3	8,783	19,958	743	5,017	124	77	2,950	970	6.9	457
2014	42,662	+ 0.8	30,197	+ 1.6	8,860	20,332	770	5,029	94	49	2,898	933	6.7	490
2015	43,057	+ 0.9	30,822	+ 2.1	8,937	20,839	806	4,856	88	44	2,795	859	6.4	569
2013 Q3	42,512	+ 0.6	29,776	+ 1.2	8,810	19,955	772	5,050	70	57	2,903	934	6.7	471
Q4	42,644	+ 0.5	30,118	+ 1.2	8,878	20,234	774	5,028	92	61	2,827	891	6.6	455
2014 Q1	42,214	+ 0.8	29,809	+ 1.4	8,760	20,103	730	4,991	178	58	3,109	1,078	7.2	452
Q2	42,626	+ 0.9	30,080	+ 1.7	8,829	20,255	753	5,043	72	56	2,886	900	6.6	487
Q3	42,849	+ 0.8	30,284	+ 1.7	8,896	20,344	800	5,065	50	37	2,860	909	6.6	512
Q4	42,958	+ 0.7	30,614	+ 1.6	8,956	20,625	796	5,018	77	46	2,738	846	6.3	510
2015 Q1	42,512	+ 0.7	30,360	+ 1.8	8,833	20,551	756	4,863	169	51	2,993	1,011	6.9	515
Q2	42,985	+ 0.8	30,671	+ 2.0	8,895	20,740	792	4,863	61	47	2,772	822	6.3	560
Q3	43,272	+ 1.0	30,927	+ 2.1	8,974	20,864	840	4,868	47	33	2,759	827	6.3	595
Q4	43,457	+ 1.2	31,329	+ 2.3	9,049	21,201	837	4,828	77	46	2,655	775	6.0	604
2016 Q1	43,053	+ 1.3	31,064	+ 2.3	8,927	21,120	793	4,786	166	50	2,892	932	6.6	610
Q2	8 43,514	8 + 1.2	9 31,333	9 + 2.2	9 8,985	9 21,284	9 821	9 4,830	9 ...	9 46	2,674	782	10 6.1	653
Q3	...	...	...	...	...	...	...	...	...	...	2,651	808	6.0	682
2013 May	42,301	+ 0.7	29,637	+ 1.2	8,763	19,902	734	5,036	86	74	2,937	935	6.8	457
June	42,390	+ 0.6	29,616	+ 1.1	8,764	19,866	747	5,066	99	86	2,865	897	6.6	459
July	42,425	+ 0.7	29,596	+ 1.2	8,769	19,817	773	5,086	81	68	2,914	943	6.8	469
Aug	42,475	+ 0.5	29,843	+ 1.2	8,826	20,002	776	5,031	60	47	2,946	956	6.8	471
Sep	42,635	+ 0.6	30,165	+ 1.4	8,906	20,228	786	5,003	70	56	2,849	904	6.6	473
Oct	42,731	+ 0.6	30,181	+ 1.2	8,900	20,255	785	5,011	83	70	2,801	870	6.5	466
Nov	42,710	+ 0.5	30,149	+ 1.1	8,889	20,252	779	5,048	80	67	2,806	881	6.5	458
Dec	42,490	+ 0.5	29,884	+ 1.2	8,783	20,161	731	5,048	114	45	2,874	923	6.7	440
2014 Jan	42,164	+ 0.7	29,736	+ 1.4	8,739	20,060	726	4,977	189	63	3,136	1,104	7.3	425
Feb	42,183	+ 0.8	29,784	+ 1.5	8,750	20,088	729	4,976	193	57	3,138	1,105	7.3	456
Mar	42,296	+ 0.9	29,932	+ 1.7	8,797	20,162	742	4,990	152	55	3,055	1,026	7.1	476
Apr	42,486	+ 0.9	30,060	+ 1.7	8,826	20,244	749	5,030	77	60	2,943	938	6.8	485
May	42,643	+ 0.8	30,125	+ 1.6	8,836	20,292	751	5,060	72	56	2,882	893	6.6	481
June	42,748	+ 0.8	30,175	+ 1.9	8,854	20,295	779	5,087	66	52	2,833	869	6.5	495
July	42,780	+ 0.8	30,121	+ 1.8	8,860	20,219	800	5,100	54	40	2,871	909	6.6	502
Aug	42,804	+ 0.8	30,312	+ 1.6	8,904	20,362	802	5,046	44	32	2,902	934	6.7	515
Sep	42,964	+ 0.8	30,663	+ 1.7	8,992	20,608	813	5,013	51	39	2,808	885	6.5	518
Oct	43,053	+ 0.8	30,676	+ 1.6	8,980	20,645	808	5,021	61	49	2,733	836	6.3	517
Nov	43,010	+ 0.7	30,636	+ 1.6	8,960	20,645	798	5,020	63	52	2,717	834	6.3	515
Dec	42,810	+ 0.8	30,398	+ 1.7	8,864	20,565	753	5,012	107	39	2,764	867	6.4	498
2015 Jan	42,443	+ 0.7	30,276	+ 1.8	8,815	20,498	747	4,846	169	50	3,032	1,043	7.0	485
Feb	42,464	+ 0.7	30,342	+ 1.9	8,819	20,546	756	4,821	183	52	3,017	1,034	6.9	519
Mar	42,630	+ 0.8	30,528	+ 2.0	8,865	20,651	777	4,829	154	50	2,932	955	6.8	542
Apr	42,820	+ 0.8	30,645	+ 1.9	8,895	20,723	784	4,850	67	54	2,843	868	6.5	552
May	43,002	+ 0.8	30,718	+ 2.0	8,901	20,776	794	4,875	57	44	2,762	815	6.3	557
June	43,134	+ 0.9	30,771	+ 2.0	8,915	20,788	819	4,902	59	45	2,711	782	6.2	572
July	43,177	+ 0.9	30,744	+ 2.1	8,934	20,724	840	4,908	49	35	2,773	830	6.3	589
Aug	43,232	+ 1.0	30,986	+ 2.2	8,993	20,899	846	4,841	40	26	2,796	851	6.4	597
Sep	43,408	+ 1.0	31,330	+ 2.2	9,076	21,150	850	4,810	51	39	2,708	799	6.2	600
Oct	43,492	+ 1.0	31,365	+ 2.2	9,067	21,203	846	4,813	61	47	2,649	764	6.0	612
Nov	43,526	+ 1.2	31,384	+ 2.4	9,059	21,243	842	4,845	66	52	2,633	764	6.0	610
Dec	43,353	+ 1.3	31,145	+ 2.5	8,963	21,163	798	4,843	105	39	2,681	798	6.1	591
2016 Jan	42,979	+ 1.3	30,967	+ 2.3	8,904	21,060	784	4,775	169	48	2,920	961	6.7	581
Feb	43,011	+ 1.3	31,055	+ 2.3	8,921	21,116	793	4,771	177	50	2,911	947	6.6	614
Mar	43,170	+ 1.3	31,195	+ 2.2	8,951	21,205	804	4,783	152	52	2,845	888	6.5	635
Apr	43,344	+ 1.2	9 31,314	9 + 2.2	9 8,983	9 21,278	9 811	9 4,809	9 ...	9 55	2,744	817	6.3	640
May	43,530	+ 1.2	9 31,407	9 + 2.2	9 9,000	9 21,333	9 828	9 4,853	9 ...	9 44	2,654	774	10 6.0	655
June	8 43,667	8 + 1.2	9 31,363	9 + 1.9	9 8,990	9 21,280	9 846	9 4,871	9 ...	9 40	2,614	754	5.9	665
July	8 43,712	8 + 1.2	9 31,240	9 + 1.6	9 8,973	9 21,172	9 853	9 4,868	9 ...	9 31	2,661	805	6.0	674
Aug	8 43,738	8 + 1.2	...	...	...	...	...	...	...	...	2,684	830	6.1	685
Sep	...	...	...	...	...	...	...	...	...	...	2,608	787	5.9	687

Sources: Federal Statistical Office; Federal Employment Agency. * Annual and quarterly figures: averages; calculated by the Bundesbank; deviations from the official figures are due to rounding. 1 Workplace concept; averages. 2 Monthly figures: end of month. 3 From January 2012, excluding all persons taking up federal voluntary service or a year of social or ecological work. 4 Number within a given month. 5 Mid-month level. 6 Relative to the total civilian labour force. 7 Excluding government-assisted forms of employment and seasonal jobs, including jobs located

abroad. 8 Initial preliminary estimate by the Federal Statistical Office. 9 Unadjusted figures estimated by the Federal Employment Agency. In 2014 and 2015, the estimated values for Germany deviated from the final data by a maximum of 0.3 % for employees subject to social contributions, by a maximum of 1.4 % for persons solely in jobs exempt from social contributions, and by a maximum of 31.2 % for cyclically induced short-time work. 10 From May 2016 calculated on the basis of new labour force figures.

XI Economic conditions in Germany

7 Prices

Period	Consumer price index											Indices of foreign trade prices		HWWI Index of World Market Prices of Raw Materials 4	
	Total	of which					Construction price index	Index of producer prices of industrial products sold on the domestic market 3	Index of producer prices of agricultural products 3	Exports	Imports	Energy 5	Other raw materials 6		
		Food	Other durable and non-durable consumer goods excluding energy 1	Energy 1	Services excluding house rents 2	House rents 2									
	2010 = 100													2015 = 100	
Index level															
2011	7	102.1	102.2	100.8	110.1	101.0	101.3	102.9	105.3	113.4	103.3	106.4	155.2	135.9	
2012	7	104.1	105.7	102.0	116.4	102.4	102.5	105.7	107.0	119.4	104.9	108.7	166.8	128.7	
2013		105.7	110.4	103.0	118.0	103.8	103.8	107.9	106.9	120.7	104.3	105.9	160.2	117.6	
2014		106.6	111.5	103.9	115.5	105.5	105.4	109.7	105.8	111.1	104.0	103.6	142.8	108.3	
2015		106.9	112.4	105.1	107.4	106.9	106.7	111.3	103.9	107.0	104.9	100.9	100.0	100.0	
2014 Nov		106.7	110.4	104.7	113.5	105.7	105.9	110.1	105.5	103.6	104.2	102.7	126.7	106.7	
2014 Dec		106.7	110.8	104.4	109.1	107.0	106.0		104.8	102.7	103.9	101.0	108.2	104.9	
2015 Jan		105.6	111.4	103.6	105.6	105.3	106.1		104.2	102.4	104.4	100.2	92.1	106.8	
2015 Feb		106.5	112.3	104.0	107.8	106.9	106.2	110.8	104.3	104.8	104.7	101.6	108.0	105.9	
2015 Mar		107.0	112.2	105.1	109.3	106.8	106.3		104.4	105.1	105.3	102.6	109.0	107.1	
2015 Apr		107.0	113.2	105.3	109.8	106.0	106.5		104.5	106.0	105.6	103.2	115.5	105.6	
2015 May		107.1	113.2	105.1	110.9	106.2	106.5	111.1	104.5	104.8	105.4	103.0	116.8	104.7	
2015 June		107.0	112.6	104.9	110.4	106.3	106.6		104.4	105.3	105.3	102.5	113.3	103.4	
2015 July		107.2	111.8	104.4	109.8	107.8	106.7		104.4	104.5	105.4	101.8	106.0	101.6	
2015 Aug		107.2	111.5	104.9	107.5	108.1	106.8	111.5	103.9	102.1	104.9	100.3	91.5	96.0	
2015 Sep		107.0	112.1	105.9	105.7	107.0	106.9		103.5	107.4	104.6	99.6	90.8	94.1	
2015 Oct		107.0	112.7	106.1	104.9	106.9	107.0		103.1	108.9	104.4	99.3	91.6	93.4	
2015 Nov		107.1	112.9	106.0	105.0	107.1	107.1	111.8	102.9	107.6	104.5	99.1	89.6	92.7	
2015 Dec		107.0	112.4	105.6	102.0	108.4	107.1		102.4	107.3	104.1	97.9	77.5	89.4	
2016 Jan		106.1	112.4	105.0	99.5	106.8	107.3		101.7	106.8	103.9	96.4	64.5	88.2	
2016 Feb		106.5	113.2	105.1	98.6	107.7	107.4	112.5	101.2	106.0	103.4	95.8	64.0	88.6	
2016 Mar		107.3	113.7	106.1	99.6	108.8	107.5		101.2	106.5	103.6	96.5	72.3	93.6	
2016 Apr		106.9	113.8	106.8	100.5	106.6	107.6		101.3	105.9	103.5	96.4	75.1	95.5	
2016 May		107.2	113.2	106.7	102.1	107.5	107.7	113.1	101.7	106.0	103.7	97.3	82.6	97.2	
2016 June		107.3	112.7	106.1	103.3	108.0	107.8		102.1	106.4	103.9	97.8	87.9	98.9	
2016 July		107.6	113.0	105.6	102.1	109.5	107.9		102.3	109.9	104.1	97.9	84.4	100.2	
2016 Aug		107.6	112.5	105.9	101.2	109.6	108.1	113.7	102.2	106.6	104.0	97.7	83.9	98.6	
2016 Sep		107.7	112.6	107.0	101.9	108.5	108.3		102.0	...	...	...	83.9	97.0
Annual percentage change															
2011	7	+ 2.1	+ 2.2	+ 0.8	+ 10.1	+ 1.0	+ 1.3	+ 2.9	+ 5.3	+ 13.4	+ 3.3	+ 6.4	+ 33.7	+ 15.8	
2012	7	+ 2.0	+ 3.4	+ 1.2	+ 5.7	+ 1.4	+ 1.2	+ 2.7	+ 1.6	+ 5.3	+ 1.5	+ 2.2	+ 7.5	+ 5.3	
2013		+ 1.5	+ 4.4	+ 1.0	+ 1.4	+ 1.4	+ 1.3	+ 2.1	- 0.1	+ 1.1	- 0.6	- 2.6	- 4.0	- 8.6	
2014		+ 0.9	+ 1.0	+ 0.9	- 2.1	+ 1.6	+ 1.5	+ 1.7	- 1.0	- 8.0	- 0.3	- 2.2	- 10.9	- 7.9	
2015		+ 0.3	+ 0.8	+ 1.2	- 7.0	+ 1.3	+ 1.2	+ 1.5	- 1.8	- 3.7	+ 0.9	- 2.6	- 30.0	- 7.7	
2014 Nov		+ 0.6	+ 0.0	+ 0.8	- 2.5	+ 1.3	+ 1.4	+ 1.6	- 0.9	- 15.3	+ 0.3	- 2.1	- 20.4	- 4.8	
2014 Dec		+ 0.2	- 1.2	+ 1.1	- 6.6	+ 1.4	+ 1.4		- 1.7	- 16.1	+ 0.1	- 3.7	- 32.7	- 6.3	
2015 Jan		- 0.3	- 1.3	+ 0.8	- 9.0	+ 1.2	+ 1.3		- 2.2	- 14.3	+ 0.4	- 4.4	- 41.4	- 3.2	
2015 Feb		+ 0.1	- 0.4	+ 0.8	- 7.3	+ 1.7	+ 1.3	+ 1.5	- 2.1	- 12.2	+ 0.7	- 3.0	- 30.1	- 4.6	
2015 Mar		+ 0.3	- 0.1	+ 0.9	- 5.7	+ 1.3	+ 1.3		- 1.7	- 12.7	+ 1.4	- 1.4	- 27.3	- 2.9	
2015 Apr		+ 0.5	+ 1.1	+ 1.1	- 5.9	+ 1.2	+ 1.3		- 1.5	- 12.5	+ 1.6	- 0.6	- 21.6	- 6.4	
2015 May		+ 0.7	+ 1.4	+ 1.2	- 5.0	+ 1.8	+ 1.2	+ 1.5	- 1.3	- 11.8	+ 1.4	- 0.8	- 21.5	- 5.8	
2015 June		+ 0.3	+ 1.0	+ 1.4	- 5.9	+ 0.9	+ 1.2		- 1.4	- 10.5	+ 1.3	- 1.4	- 25.0	- 4.6	
2015 July		+ 0.2	+ 0.4	+ 1.2	- 6.2	+ 1.0	+ 1.2		- 1.7	- 8.3	+ 1.2	- 1.7	- 26.5	- 5.1	
2015 Aug		+ 0.2	+ 0.8	+ 1.4	- 7.6	+ 1.1	+ 1.1	+ 1.4	- 1.3	- 8.4	+ 0.8	- 3.1	- 35.5	- 10.4	
2015 Sep		+ 0.0	+ 1.1	+ 1.3	- 9.3	+ 1.1	+ 1.2		- 2.1	- 0.5	+ 0.3	- 4.0	- 37.2	- 10.4	
2015 Oct		+ 0.3	+ 1.6	+ 1.5	- 8.6	+ 1.4	+ 1.1		- 2.3	+ 5.0	+ 0.2	- 4.1	- 32.5	- 11.6	
2015 Nov		+ 0.4	+ 2.3	+ 1.2	- 7.5	+ 1.3	+ 1.1	+ 1.5	- 2.5	+ 3.9	+ 0.3	- 3.5	- 29.3	- 13.1	
2015 Dec		+ 0.3	+ 1.4	+ 1.1	- 6.5	+ 1.3	+ 1.0		- 2.3	+ 4.5	+ 0.2	- 3.1	- 28.4	- 14.8	
2016 Jan		+ 0.5	+ 0.9	+ 1.4	- 5.8	+ 1.4	+ 1.1		- 2.4	+ 4.3	- 0.5	- 3.8	- 30.0	- 17.4	
2016 Feb		+ 0.0	+ 0.8	+ 1.1	- 8.5	+ 0.7	+ 1.1	+ 1.5	- 3.0	+ 1.1	- 1.2	- 5.7	- 40.7	- 16.3	
2016 Mar		+ 0.3	+ 1.3	+ 1.0	- 8.9	+ 1.9	+ 1.1		- 3.1	+ 1.3	- 1.6	- 5.9	- 33.7	- 12.6	
2016 Apr		- 0.1	+ 0.5	+ 1.4	- 8.5	+ 0.6	+ 1.0		- 3.1	- 0.1	- 2.0	- 6.6	- 35.0	- 9.6	
2016 May		+ 0.1	+ 0.0	+ 1.5	- 7.9	+ 1.2	+ 1.1	+ 1.8	- 2.7	+ 1.1	- 1.6	- 5.5	- 29.3	- 7.2	
2016 June		+ 0.3	+ 0.1	+ 1.1	- 6.4	+ 1.6	+ 1.1		- 2.2	+ 1.0	- 1.3	- 4.6	- 22.4	- 4.4	
2016 July		+ 0.4	+ 1.1	+ 1.1	- 7.0	+ 1.6	+ 1.1		- 2.0	+ 5.2	- 1.2	- 3.8	- 20.4	- 1.4	
2016 Aug		+ 0.4	+ 0.9	+ 1.0	- 5.9	+ 1.4	+ 1.2	+ 2.0	- 1.6	+ 4.4	- 0.9	- 2.6	- 8.3	+ 2.7	
2016 Sep		+ 0.7	+ 0.4	+ 1.0	- 3.6	+ 1.4	+ 1.3		- 1.4	...	...	...	- 7.6	+ 3.1

Source: Federal Statistical Office and Bundesbank calculation based on data provided by the Federal Statistical Office; for the Index of World Market Prices of Raw Materials: HWWI. 1 Electricity, gas and other fuels. 2 Net rents. 3 Excluding value-added tax. 4 For the euro area, in euro. 5 Coal, crude oil (Brent) and natural

gas. 6 Food, beverages and tobacco as well as industrial raw materials. 7 From May 2011 and from January 2012, increase in tobacco tax. 8 From September 2015 onwards, provisional figures.

XI Economic conditions in Germany

8 Households' income *

Period	Gross wages and salaries ¹		Net wages and salaries ²		Monetary social benefits received ³		Mass income ⁴		Disposable income ⁵		Saving ⁶		Saving ratio ⁷
	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	As percentage
2008	1,008.1	4.0	670.8	3.4	356.2	0.4	1,027.0	2.3	1,582.6	2.6	165.9	4.9	10.5
2009	1,009.5	0.1	672.6	0.3	380.7	6.9	1,053.3	2.6	1,569.2	- 0.8	156.2	- 5.9	10.0
2010	1,039.0	2.9	702.2	4.4	385.3	1.2	1,087.5	3.2	1,606.4	2.4	160.1	2.5	10.0
2011	1,088.6	4.8	729.4	3.9	380.4	- 1.3	1,109.8	2.0	1,653.7	2.9	158.2	- 1.2	9.6
2012	1,133.0	4.1	756.8	3.8	387.6	1.9	1,144.5	3.1	1,695.6	2.5	157.6	- 0.4	9.3
2013	1,167.5	3.0	778.4	2.9	396.1	2.2	1,174.5	2.6	1,719.8	1.4	154.1	- 2.2	9.0
2014	1,213.0	3.9	807.1	3.7	407.7	2.9	1,214.8	3.4	1,759.5	2.3	165.1	7.1	9.4
2015	1,260.6	3.9	836.6	3.6	422.9	3.7	1,259.4	3.7	1,811.2	2.9	175.2	6.1	9.7
2015 Q1	292.2	3.4	193.7	2.7	107.6	4.0	301.3	3.1	447.6	2.9	57.8	6.5	12.9
Q2	308.5	4.1	200.1	3.5	104.2	4.3	304.4	3.8	449.5	2.8	41.9	6.1	9.3
Q3	311.3	4.0	211.1	3.8	105.7	3.5	316.8	3.7	454.8	3.0	37.1	6.0	8.2
Q4	348.7	4.2	231.6	4.5	105.3	3.0	337.0	4.0	459.3	3.0	38.4	5.7	8.4
2016 Q1	305.0	4.4	201.8	4.2	109.5	1.8	311.3	3.3	457.9	2.3	59.4	2.8	13.0
Q2	319.4	3.5	207.6	3.7	106.9	2.6	314.5	3.3	462.7	2.9	43.6	4.2	9.4

Source: Federal Statistical Office; figures computed in August 2016. * Households including non-profit institutions serving households. **1** Residence concept. **2** After deducting the wage tax payable on gross wages and salaries and employees' contributions to the social security funds. **3** Social security benefits in cash from the social security funds, central, state and local government and foreign countries, pension payments (net), private funded social benefits, less social contributions on social benefits, consumption-related taxes and public charges. **4** Net wages and

salaries plus monetary social benefits received. **5** Mass income plus operating surplus, mixed income, property income (net), other current transfers received, income of non-profit institutions serving households, less taxes (excluding wage tax and consumption-related taxes) and other current transfers paid. Including the increase in claims on company pension funds. **6** Including the increase in claims on company pension funds. **7** Saving as a percentage of disposable income.

9 Negotiated pay rates (overall economy)

Period	Index of negotiated wages ¹								Memo item: Wages and salaries per employee ³	
	On an hourly basis		On a monthly basis							
			Total		Total excluding one-off payments		Basic pay rates ²			
2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	
2008	96.4	2.8	96.3	2.9	96.1	3.1	95.9	3.3	97.6	2.4
2009	98.4	2.0	98.3	2.0	98.3	2.3	98.2	2.4	97.6	- 0.1
2010	100.0	1.7	100.0	1.8	100.0	1.7	100.0	1.8	100.0	2.5
2011	101.7	1.7	101.8	1.8	101.8	1.8	101.8	1.8	103.4	3.4
2012	104.5	2.7	104.5	2.7	104.8	2.9	104.7	2.9	106.2	2.7
2013	107.1	2.5	107.1	2.5	107.4	2.5	107.3	2.5	108.4	2.0
2014	110.3	3.0	110.2	2.9	110.4	2.8	110.4	2.9	111.4	2.8
2015	112.9	2.4	112.8	2.3	113.0	2.4	113.0	2.4	114.4	2.7
2015 Q1	104.5	2.2	104.4	2.2	104.3	2.3	111.7	2.4	107.4	2.4
Q2	105.9	2.3	105.8	2.2	106.1	2.3	112.9	2.4	112.2	2.9
Q3	115.2	2.5	115.0	2.4	115.4	2.4	113.7	2.5	112.6	2.7
Q4	126.1	2.4	125.9	2.4	126.2	2.3	113.9	2.4	125.1	2.7
2016 Q1	106.6	2.0	106.4	1.9	106.8	2.3	114.3	2.3	110.5	2.8
Q2	108.2	2.2	108.0	2.2	108.1	1.9	115.2	2.1	114.6	2.1
2016 Feb	106.4	2.1	106.2	2.1	106.5	2.3	114.1	2.3	.	.
Mar	107.0	1.6	106.8	1.6	107.2	2.3	114.8	2.3	.	.
Apr	108.3	2.0	108.1	2.0	108.3	1.9	114.9	2.0	.	.
May	108.2	1.9	108.0	1.9	108.3	1.8	115.4	2.3	.	.
June	108.2	2.6	108.0	2.6	107.7	1.9	115.3	1.9	.	.
July	136.2	2.0	135.9	1.9	136.3	2.0	115.8	2.0	.	.
Aug	108.2	2.0	107.9	2.0	108.3	2.0	116.0	2.0	.	.

1 Current data are normally revised on account of additional reports. **2** Excluding one-off payments and covenants (capital formation benefits, special payments, such as annual bonuses, holiday pay, Christmas bonuses (13th monthly salary payment)

and retirement provisions). **3** Source: Federal Statistical Office; figures computed in August 2016.

XI Economic conditions in Germany

10 Assets, equity and liabilities of listed non-financial groups *

End-of-year/end-of-quarter data

Period	Assets									Equity and liabilities						
	Total assets	Non-current assets	of which			Current assets	of which			Equity	Liabilities					
			Intangible assets	Tangible assets	Financial assets		Inventories	Trade receivables	Cash ¹		Total	Long-term		Short-term		
												Total	of which Financial debt	Total	Financial debt	Trade payables
Total (€ billion)																
2011	1,838.5	1,116.0	340.0	477.4	232.9	722.5	190.6	180.4	119.3	537.8	1,300.7	663.6	347.3	637.1	176.8	160.9
2012	1,904.7	1,178.7	380.6	490.5	240.6	726.0	189.9	179.1	125.9	561.6	1,343.1	719.0	380.1	624.1	180.0	160.6
2013	1,938.4	1,196.1	387.1	499.5	241.0	742.3	189.0	179.8	139.0	576.1	1,362.3	726.4	383.3	635.9	191.3	166.8
2014	2,117.2	1,311.0	433.0	534.4	260.1	806.3	204.4	190.7	135.8	588.0	1,529.2	835.3	434.3	693.9	216.0	179.8
2015	2,277.6	1,428.2	476.5	582.6	283.4	849.4	216.8	195.8	140.8	641.9	1,635.6	887.8	475.2	747.8	234.6	186.1
2015 Q1	2,257.4	1,399.4	456.7	558.9	284.4	858.0	220.3	212.5	139.0	607.7	1,649.8	910.0	454.1	739.7	224.9	184.3
Q2	2,218.5	1,384.0	459.8	557.6	281.8	834.5	219.1	204.4	132.0	629.9	1,588.6	857.6	449.8	731.0	224.7	180.7
Q3	2,206.1	1,368.1	450.6	553.4	277.8	838.0	219.0	195.9	142.1	622.7	1,583.4	861.4	450.4	722.0	213.9	179.3
Q4	2,277.6	1,428.2	476.5	582.6	283.4	849.4	216.8	195.8	140.8	641.9	1,635.6	887.8	475.2	747.8	234.6	186.1
as a percentage of total assets																
2011	100.0	60.7	18.5	26.0	12.7	39.3	10.4	9.8	6.5	29.3	70.8	36.1	18.9	34.7	9.6	8.8
2012	100.0	61.9	20.0	25.8	12.6	38.1	10.0	9.4	6.6	29.5	70.5	37.8	20.0	32.8	9.5	8.4
2013	100.0	61.7	20.0	25.8	12.4	38.3	9.8	9.3	7.2	29.7	70.3	37.5	19.8	32.8	9.9	8.6
2014	100.0	61.9	20.5	25.2	12.3	38.1	9.7	9.0	6.4	27.8	72.2	39.5	20.5	32.8	10.2	8.5
2015	100.0	62.7	20.9	25.6	12.4	37.3	9.5	8.6	6.2	28.2	71.8	39.0	20.9	32.8	10.3	8.2
2015 Q1	100.0	62.0	20.2	24.8	12.6	38.0	9.8	9.4	6.2	26.9	73.1	40.3	20.1	32.8	10.0	8.2
Q2	100.0	62.4	20.7	25.1	12.7	37.6	9.9	9.2	6.0	28.4	71.6	38.7	20.3	33.0	10.1	8.2
Q3	100.0	62.0	20.4	25.1	12.6	38.0	9.9	8.9	6.4	28.2	71.8	39.1	20.4	32.7	9.7	8.1
Q4	100.0	62.7	20.9	25.6	12.4	37.3	9.5	8.6	6.2	28.2	71.8	39.0	20.9	32.8	10.3	8.2
Groups with a focus on the production sector (€ billion) ²																
2011	1,474.2	860.6	221.7	373.8	214.9	613.6	172.3	143.6	92.7	421.6	1,052.6	530.5	260.8	522.2	151.2	116.7
2012	1,540.7	921.3	258.9	388.0	222.1	619.4	172.5	140.4	98.1	443.7	1,097.0	581.8	286.6	515.2	161.0	116.5
2013	1,559.6	933.2	259.1	398.7	224.1	626.4	172.7	140.0	106.6	457.3	1,102.3	580.9	286.2	521.4	170.4	118.6
2014	1,693.7	1,016.3	278.4	425.8	246.5	677.4	187.0	143.6	102.1	456.2	1,237.5	667.4	325.9	570.0	194.4	126.4
2015	1,819.7	1,102.0	305.8	460.6	268.2	717.7	199.9	150.0	108.1	490.9	1,328.8	712.5	360.0	616.3	209.5	131.2
2015 Q1	1,810.1	1,084.9	291.7	445.3	269.4	725.2	202.3	162.9	108.4	470.3	1,339.8	730.0	341.4	609.8	202.0	134.5
Q2	1,782.5	1,075.0	295.2	446.2	267.7	707.5	202.0	156.0	107.0	492.7	1,289.8	693.7	343.5	596.1	195.9	132.0
Q3	1,771.2	1,058.9	286.4	440.9	263.7	712.3	201.8	148.8	114.7	482.6	1,288.5	697.3	345.0	591.2	185.1	129.7
Q4	1,819.7	1,102.0	305.8	460.6	268.2	717.7	199.9	150.0	108.1	490.9	1,328.8	712.5	360.0	616.3	209.5	131.2
as a percentage of total assets																
2011	100.0	58.4	15.0	25.4	14.6	41.6	11.7	9.7	6.3	28.6	71.4	36.0	17.7	35.4	10.3	7.9
2012	100.0	59.8	16.8	25.2	14.4	40.2	11.2	9.1	6.4	28.8	71.2	37.8	18.6	33.4	10.5	7.6
2013	100.0	59.8	16.6	25.6	14.4	40.2	11.1	9.0	6.8	29.3	70.7	37.3	18.4	33.4	10.9	7.6
2014	100.0	60.0	16.4	25.1	14.6	40.0	11.0	8.5	6.0	26.9	73.1	39.4	19.2	33.7	11.5	7.5
2015	100.0	60.6	16.8	25.3	14.7	39.4	11.0	8.2	5.9	27.0	73.0	39.2	19.8	33.9	11.5	7.2
2015 Q1	100.0	59.9	16.1	24.6	14.9	40.1	11.2	9.0	6.0	26.0	74.0	40.3	18.9	33.7	11.2	7.4
Q2	100.0	60.3	16.6	25.0	15.0	39.7	11.3	8.8	6.0	27.6	72.4	38.9	19.3	33.4	11.0	7.4
Q3	100.0	59.8	16.2	24.9	14.9	40.2	11.4	8.4	6.5	27.3	72.8	39.4	19.5	33.4	10.5	7.3
Q4	100.0	60.6	16.8	25.3	14.7	39.4	11.0	8.2	5.9	27.0	73.0	39.2	19.8	33.9	11.5	7.2
Groups with a focus on the services sector (€ billion)																
2011	364.3	255.4	118.3	103.6	17.9	108.9	18.3	36.8	26.6	116.2	248.1	133.1	86.5	115.0	25.6	44.1
2012	364.0	257.4	121.7	102.6	18.4	106.5	17.4	38.7	27.9	117.9	246.1	137.1	93.6	108.9	18.9	44.2
2013	378.8	262.9	128.0	100.8	16.8	115.9	16.3	39.8	32.4	118.8	260.0	145.4	97.1	114.5	20.8	48.2
2014	423.5	294.7	154.7	108.6	13.6	128.9	17.4	47.1	33.7	131.8	291.7	167.9	108.4	123.8	21.6	53.4
2015	457.8	326.2	170.7	122.1	15.2	131.7	16.9	45.8	32.8	151.0	306.8	175.3	115.1	131.5	25.1	54.9
2015 Q1	447.3	314.5	165.0	113.6	14.9	132.8	17.9	49.6	30.6	137.3	310.0	180.1	112.7	129.9	23.0	49.8
Q2	436.0	309.1	164.6	111.4	14.1	126.9	17.1	48.3	25.0	137.3	298.8	163.9	106.3	134.9	28.8	48.7
Q3	434.9	309.2	164.2	112.5	14.1	125.6	17.2	47.1	27.4	140.0	294.8	164.0	105.3	130.8	28.8	49.6
Q4	457.8	326.2	170.7	122.1	15.2	131.7	16.9	45.8	32.8	151.0	306.8	175.3	115.1	131.5	25.1	54.9
as a percentage of total assets																
2011	100.0	70.1	32.5	28.5	4.9	29.9	5.0	10.1	7.3	31.9	68.1	36.5	23.8	31.6	7.0	12.1
2012	100.0	70.7	33.4	28.2	5.1	29.3	4.8	10.6	7.7	32.4	67.6	37.7	25.7	29.9	5.2	12.1
2013	100.0	69.4	33.8	26.6	4.4	30.6	4.3	10.5	8.6	31.4	68.6	38.4	25.6	30.2	5.5	12.7
2014	100.0	69.6	36.5	25.6	3.2	30.4	4.1	11.1	8.0	31.1	68.9	39.6	25.6	29.2	5.1	12.6
2015	100.0	71.2	37.3	26.7	3.3	28.8	3.7	10.0	7.2	33.0	67.0	38.3	25.1	28.7	5.5	12.0
2015 Q1	100.0	70.3	36.9	25.4	3.3	29.7	4.0	11.1	6.8	30.7	69.3	40.3	25.2	29.0	5.1	11.1
Q2	100.0	70.9	37.8	25.6	3.2	29.1	3.9	11.1	5.7	31.5	68.5	37.6	24.4	30.9	6.6	11.2
Q3	100.0	71.1	37.8	25.9	3.2	28.9	3.9	10.8	6.3	32.2	67.8	37.7	24.2	30.1	6.6	11.4
Q4	100.0	71.2	37.3	26.7	3.3	28.8	3.7	10.0	7.2	33.0	67.0	38.3	25.1	28.7	5.5	12.0

* Non-financial groups listed in Germany which publish IFRS consolidated financial statements on a quarterly basis and make a noteworthy contribution to value added in Germany. Excluding groups in real estate activities. Beginning with the 2016 reporting year, the frequency of the consolidated financial statement statistics will be

reduced from quarterly to half-yearly. First results for the period ending 30 June 2016 will be made available in December of this year. ¹ Including cash equivalents. ² Including groups in agriculture and forestry.

XI Economic conditions in Germany

11 Revenues and operating income of listed non-financial groups *

Period	Revenues		Operating income before depreciation and amortisation (EBITDA ¹)		Operating income before depreciation and amortisation (EBITDA ¹) as a percentage of revenues					Operating income (EBIT)		Operating income (EBIT) as a percentage of revenues				
					Weighted average		Distribution ²					Weighted average		Distribution ²		
							First quartile	Median	Third quartile					First quartile	Median	Third quartile
€ billion	Annual change in % ³	€ billion	Annual change in % ³	%	Annual change in percentage points ³	%	%	%	€ billion	Annual change in % ³	%	Annual change in percentage points ³	%	%	%	
Total																
2008	1,307.5	6.4	164.5	-5.6	12.6	-1.6	5.8	11.6	17.6	80.9	-16.6	6.2	-1.7	2.5	6.6	12.1
2009	1,175.4	-10.5	138.4	-16.4	11.8	-0.8	4.0	9.5	15.8	57.9	-28.0	4.9	-1.2	0.3	5.1	9.3
2010	1,340.0	13.2	184.3	30.4	13.8	1.8	6.0	11.2	18.6	100.4	64.9	7.5	2.3	3.1	6.5	12.1
2011	1,434.5	8.4	177.9	-0.3	12.4	-1.1	5.5	10.7	17.4	94.6	-5.4	6.6	-1.0	2.7	6.6	11.9
2012	1,552.7	6.6	190.8	3.3	12.3	-0.4	5.0	10.0	17.4	96.9	-7.1	6.2	-0.9	1.8	6.0	10.9
2013	1,557.4	-0.5	188.5	-2.5	12.1	-0.2	5.0	9.9	18.2	99.9	6.2	6.4	0.4	1.8	5.8	10.8
2014	1,586.1	1.0	200.7	4.9	12.7	0.5	5.6	10.2	17.2	109.2	7.4	6.9	0.4	1.8	6.2	11.1
2015	1,672.6	6.7	199.5	-0.4	11.9	-0.9	5.9	10.5	17.3	91.8	-15.5	5.5	-1.4	1.4	6.4	10.8
2013 Q2	393.6	1.1	48.3	-1.4	12.3	-0.3	4.1	9.2	16.7	27.3	-4.8	6.9	-0.4	0.9	4.9	10.2
Q3	384.3	-1.6	47.2	-1.0	12.3	0.1	5.1	10.3	16.1	25.6	99.8	6.7	3.5	1.3	5.8	11.8
Q4	406.7	-0.4	47.6	-1.6	11.7	-0.1	5.2	11.1	19.5	20.5	-12.2	5.0	-0.7	0.9	6.7	12.6
2014 Q1	381.5	-0.1	50.2	8.9	13.2	1.1	3.7	8.7	16.2	30.6	15.3	8.0	1.1	0.1	5.1	10.2
Q2	386.7	-2.0	47.9	-0.2	12.4	0.2	4.6	9.7	16.9	26.4	-2.3	6.8	-0.0	1.3	5.7	11.1
Q3	394.7	-2.8	49.9	3.9	12.6	0.1	5.4	11.3	18.3	28.6	8.2	7.2	0.4	1.8	6.8	12.7
Q4	423.6	3.0	52.8	7.2	12.5	0.5	4.0	11.6	19.3	23.5	8.7	5.6	0.3	0.5	6.7	12.0
2015 Q1	409.8	7.3	51.2	1.9	12.5	-0.7	4.5	9.7	17.2	28.8	-5.9	7.0	-1.0	-0.8	5.9	11.4
Q2	425.7	9.9	52.9	10.3	12.4	0.0	4.7	9.7	16.6	30.8	16.7	7.2	0.4	1.3	5.6	10.9
Q3	416.8	5.4	49.5	-0.6	11.9	-0.7	4.8	10.5	16.6	17.2	-39.5	4.1	-3.1	1.0	6.3	11.5
Q4	437.0	4.6	46.3	-12.2	10.6	-2.0	6.9	11.5	18.3	15.4	-35.1	3.5	-2.1	2.0	7.4	12.3
Groups with a focus on the production sector ⁴																
2008	966.1	7.2	122.6	-6.2	12.7	-1.8	5.8	11.3	15.6	62.0	-17.1	6.4	-1.9	2.4	6.7	11.4
2009	854.1	-11.5	97.7	-19.9	11.4	-1.2	2.9	9.2	14.0	41.9	-31.0	4.9	-1.4	-1.3	4.7	8.8
2010	999.2	15.7	139.1	38.1	13.9	2.3	6.3	11.2	16.2	77.7	70.0	7.8	2.5	2.9	7.0	11.9
2011	1,098.9	10.6	131.9	-2.6	12.0	-1.6	5.3	10.7	16.2	74.8	-6.5	6.8	-1.3	2.1	6.8	11.2
2012	1,194.3	7.6	143.1	5.5	12.0	-0.2	5.0	10.1	15.9	83.0	2.8	7.0	-0.3	1.7	6.1	9.8
2013	1,195.9	-0.7	140.2	-2.2	11.7	-0.2	4.3	9.9	15.4	75.1	-5.1	6.3	-0.3	1.2	5.6	9.8
2014	1,217.7	0.9	149.9	5.7	12.3	0.6	5.1	9.4	15.1	81.8	7.8	6.7	0.4	1.0	5.8	9.9
2015	1,301.7	6.8	146.3	-2.1	11.2	-1.0	6.2	10.3	15.3	64.8	-19.3	5.0	-1.7	1.5	6.3	9.8
2013 Q2	303.3	1.4	36.0	-2.1	11.9	-0.4	3.6	9.1	15.2	20.6	-8.4	6.8	-0.7	0.4	5.0	9.4
Q3	290.7	-2.2	33.4	-0.4	11.5	0.2	4.5	10.1	15.0	17.5	15.3	6.0	1.0	0.8	5.7	10.1
Q4	311.6	-0.5	34.6	1.9	11.1	0.3	4.5	10.7	15.5	14.3	-7.3	4.6	-0.3	0.0	6.0	10.4
2014 Q1	297.8	0.1	39.1	6.4	13.1	0.8	3.5	8.7	14.5	25.0	10.4	8.4	0.8	0.3	5.3	9.0
Q2	297.2	-2.3	36.1	0.3	12.1	0.3	4.0	9.4	15.3	20.5	-0.2	6.9	0.2	1.1	5.3	10.6
Q3	300.0	3.3	36.4	6.3	12.1	0.3	4.2	10.3	16.0	20.9	12.6	7.0	0.6	1.2	6.3	10.3
Q4	322.9	2.8	38.4	10.1	11.9	0.8	3.3	10.6	15.6	15.5	9.1	4.8	0.3	-0.7	6.1	10.3
2015 Q1	319.0	7.0	41.2	5.4	12.9	-0.2	5.4	9.7	14.9	25.3	1.4	7.9	-0.4	0.9	6.0	9.6
Q2	329.0	10.5	40.1	11.2	12.2	0.1	4.4	9.5	15.2	24.1	18.0	7.3	0.5	1.4	5.3	9.7
Q3	316.5	5.3	34.3	-5.2	10.8	-1.2	4.6	10.0	15.1	8.8	-54.6	2.8	-4.0	1.0	5.8	10.1
Q4	338.0	4.9	30.7	-19.4	9.1	-2.8	5.9	11.0	16.2	6.6	-53.7	2.0	-2.8	2.0	6.4	10.8
Groups with a focus on the services sector																
2008	341.4	4.0	41.9	-3.7	12.3	-1.0	5.9	12.5	19.7	19.0	-14.6	5.6	-1.2	2.8	6.6	12.7
2009	321.3	-7.4	40.8	-4.9	12.7	0.3	4.7	10.7	20.3	16.0	-16.3	5.0	-0.5	1.7	5.7	12.7
2010	340.8	5.8	45.2	8.7	13.3	0.3	5.9	10.8	19.9	22.7	46.7	6.7	1.7	3.3	5.9	12.4
2011	335.6	1.5	45.9	7.6	13.7	0.8	5.7	10.6	20.9	19.8	-0.8	5.9	-0.1	3.2	6.4	13.8
2012	358.4	3.0	47.7	-3.3	13.3	-0.9	5.1	10.0	23.2	13.9	-47.1	3.9	-3.0	2.1	5.7	14.0
2013	361.5	-0.1	48.2	-3.5	13.3	-0.5	5.3	9.9	21.1	24.8	91.7	6.9	3.0	2.7	5.9	12.2
2014	368.4	1.0	50.8	2.2	13.8	0.2	6.2	12.7	23.2	27.4	5.7	7.4	0.3	2.9	7.2	14.1
2015	370.9	6.4	53.3	5.3	14.4	-0.1	5.9	11.1	22.0	27.0	-1.5	7.3	-0.6	1.2	6.5	14.0
2013 Q2	90.3	-0.3	12.2	1.0	13.5	0.2	4.9	9.4	19.2	6.7	12.0	7.4	0.8	1.2	4.8	13.9
Q3	93.5	0.5	13.8	-2.8	14.8	-0.5	5.7	10.7	21.0	8.1	307.7	8.6	12.5	2.0	6.2	13.1
Q4	95.1	0.1	13.0	-11.1	13.6	-1.7	6.4	13.2	24.0	6.2	-24.2	6.6	-1.9	2.0	8.1	16.1
2014 Q1	83.7	-0.6	11.1	20.1	13.3	2.3	3.8	8.9	21.2	5.6	49.8	6.7	2.2	-0.4	4.6	13.1
Q2	89.5	-0.5	11.9	-1.8	13.3	-0.2	4.8	10.4	18.7	6.0	-10.0	6.7	-0.7	1.4	6.0	13.0
Q3	94.7	1.1	13.5	-2.9	14.2	-0.6	7.1	13.1	24.6	7.7	-3.4	8.1	-0.4	3.1	7.8	13.8
Q4	100.7	3.7	14.4	-1.6	14.3	-0.7	5.4	15.6	25.3	8.1	7.5	8.0	0.2	2.1	8.4	19.5
2015 Q1	90.9	8.7	10.1	-12.1	11.1	-2.7	3.8	9.6	22.2	3.5	-45.4	3.9	-3.4	-2.6	5.6	14.3
Q2	96.7	7.8	12.8	7.0	13.2	-0.1	5.0	11.4	21.7	6.7	11.2	6.9	0.2	1.3	6.7	13.8
Q3	100.3	5.9	15.2	13.8	15.2	1.1	5.2	12.1	20.0	8.4	9.1	8.4	0.3	0.7	7.1	13.1
Q4	99.0	3.5	15.6	9.7	15.7	0.9	7.7	14.0	25.8	8.7	9.2	8.8	0.5	2.1	9.6	17.4

* Non-financial groups listed in Germany which publish IFRS consolidated financial statements on a quarterly basis and make a noteworthy contribution to value added in Germany. Excluding groups in real estate activities. Beginning with the 2016 reporting year, the frequency of the consolidated financial statement statistics will be reduced from quarterly to half-yearly. First results for the period ending 30 June 2016 will be made available in December of this year. ¹ Earnings before interest, taxes, de-

preciation and amortisation. ² Quantile data are based on the groups' unweighted return on sales. ³ Adjusted for substantial changes in the basis of consolidation of large groups and in the reporting sample. See the explanatory notes in the Statistical Supplement Seasonally adjusted business statistics. ⁴ Including groups in agriculture and forestry.

XII External sector

1 Major items of the balance of payments of the euro area *

€ million

Item	2013 r	2014 r	2015 r	2015 r	2016				
				Q4	Q1 r	Q2 r	May r	June	July p
A Current account	+ 215,988	+ 241,245	+ 323,657	+ 104,364	+ 60,319	+ 87,847	+ 17,207	+ 36,138	+ 31,469
1 Goods									
Exports	1,913,552	1,963,183	2,112,240	539,337	501,817	534,918	172,383	186,232	170,150
Imports	1,703,376	1,721,836	1,757,521	441,137	421,349	427,480	139,580	146,801	138,254
Balance	+ 210,173	+ 241,345	+ 354,720	+ 98,200	+ 80,466	+ 107,438	+ 32,803	+ 39,431	+ 31,896
2 Services									
Receipts	646,905	710,777	767,970	200,174	177,972	192,545	63,790	68,239	67,993
Expenditure	576,355	633,319	709,178	187,723	168,455	177,665	58,221	62,241	60,335
Balance	+ 70,546	+ 77,458	+ 58,792	+ 12,452	+ 9,518	+ 14,880	+ 5,569	+ 5,998	+ 7,658
3 Primary income									
Receipts	610,254	626,709	632,419	164,036	138,530	150,646	49,968	52,645	44,677
Expenditure	530,432	562,506	588,637	140,247	123,747	162,511	63,631	54,578	41,843
Balance	+ 79,822	+ 64,203	+ 43,783	+ 23,790	+ 14,783	- 11,865	- 13,663	- 1,933	+ 2,834
4 Secondary income									
Receipts	86,685	91,481	103,901	26,869	22,490	27,478	10,022	9,336	7,707
Expenditure	231,239	233,243	237,538	56,949	66,939	50,083	17,524	16,693	18,625
Balance	- 144,555	- 141,764	- 133,639	- 30,078	- 44,448	- 22,606	- 7,502	- 7,358	- 10,919
B Capital account	+ 19,338	+ 13,053	- 12,363	+ 8,957	- 1,329	+ 387	- 325	+ 308	+ 189
C Financial account (Increase: +)	+ 423,350	+ 329,295	+ 299,839	+ 156,954	+ 4,701	+ 92,034	+ 10,921	+ 60,044	- 771
1 Direct investment	+ 27,130	+ 62,686	+ 245,526	+ 21,176	+ 40,654	- 25,468	+ 12,367	- 20,174	+ 19,310
By resident units abroad	+ 512,758	+ 161,435	+ 821,514	+ 227,721	+ 115,238	- 21,035	+ 32,732	- 45,794	+ 15,790
By non-resident units in the euro area	+ 485,627	+ 98,749	+ 575,987	+ 206,545	+ 74,586	+ 4,432	+ 20,364	- 25,620	- 3,519
2 Portfolio investment	- 27,145	+ 68,959	+ 108,975	+ 123,343	+ 92,830	+ 174,236	+ 4,817	+ 49,230	+ 52,799
By resident units abroad	+ 271,362	+ 460,696	+ 403,915	+ 111,503	+ 134,117	+ 127,007	+ 26,143	+ 45,013	+ 41,891
Equity and investment fund shares	+ 167,450	+ 141,720	+ 21,878	+ 2,998	- 18,293	+ 4,916	+ 397	- 1,557	+ 11,302
Long-term debt securities	+ 77,038	+ 226,560	+ 369,718	+ 75,107	+ 140,465	+ 114,326	+ 35,531	+ 18,911	+ 49,797
Short-term debt securities	+ 26,876	+ 92,414	+ 12,318	+ 33,397	+ 11,946	+ 7,763	- 9,786	+ 27,659	- 19,209
By non-resident units in the euro area	+ 298,505	+ 391,735	+ 294,939	- 11,840	+ 41,288	- 47,230	+ 21,326	- 4,218	- 10,908
Equity and investment fund shares	+ 203,379	+ 282,558	+ 268,432	+ 88,079	- 14,336	+ 73,844	+ 2,609	+ 46,750	+ 31,168
Long-term debt securities	+ 62,540	+ 127,161	+ 75,120	- 51,537	+ 31,034	- 171,949	+ 5,969	- 61,291	- 13,852
Short-term debt securities	+ 32,585	- 17,984	- 48,612	- 48,382	+ 24,591	+ 50,876	+ 12,748	+ 10,324	- 28,225
3 Financial derivatives and employee stock options	+ 31,797	+ 45,483	+ 85,767	+ 55,616	+ 27,332	- 47,780	- 13,991	- 12,366	+ 6,116
4 Other investment	+ 386,921	+ 147,803	- 150,999	- 47,760	- 157,084	- 11,140	+ 4,619	+ 42,658	- 78,117
Eurosysteem	+ 57,976	+ 55,898	- 13,611	+ 3,184	- 7,278	- 19,282	+ 5,413	- 17,900	- 3,092
General government	- 8,831	+ 11,850	+ 19,268	+ 3,248	+ 7,153	+ 1,344	+ 3,045	+ 2,040	- 1,085
MFIs (excluding the Eurosysteem)	+ 275,227	+ 98,549	- 124,235	- 44,442	- 89,483	- 24,197	+ 8,714	+ 31,930	- 77,280
Enterprises and households	+ 62,547	- 18,491	- 32,416	- 9,747	- 67,477	+ 30,999	- 12,551	+ 26,590	+ 3,340
5 Reserve assets	+ 4,647	+ 4,361	+ 10,569	+ 4,579	+ 970	+ 2,186	+ 3,109	+ 695	- 877
D Net errors and omissions	+ 188,025	+ 74,997	- 11,455	+ 43,634	- 54,289	+ 3,802	- 5,960	+ 23,598	- 32,428

* Source: ECB, according to the international standards of the Balance of Payments Manual in the 6th edition of the International Monetary Fund.

XII External sector

2 Major items of the balance of payments of the Federal Republic of Germany (balances)

€ million

Period	Current account							Financial account (Net lending: + / net borrowing: -)				
	Total	Goods (fob/fob) ¹		Services (fob/fob) ³	Primary income	Secondary income	Balance of capital account ⁴	Total	of which Reserve assets	Errors and omissions ⁵		
		Total	of which Supplementary trade items ²									
2001	- 7,911	+ 101,273	+ 3,321	- 62,833	- 17,195	- 29,155	- 3,258	+ 947	- 6,032	+ 12,116		
2002	+ 41,655	+ 142,103	+ 6,008	- 45,440	- 25,596	- 29,413	- 4,010	+ 8,038	- 2,065	- 29,606		
2003	+ 31,347	+ 130,021	- 2,105	- 48,708	- 18,920	- 31,047	+ 5,920	+ 47,559	- 445	+ 10,292		
2004	+ 101,205	+ 153,166	- 6,859	- 38,713	+ 16,860	- 30,109	- 119	+ 112,834	- 1,470	+ 11,748		
2005	+ 105,730	+ 157,010	- 6,068	- 40,600	+ 20,905	- 31,585	- 2,334	+ 96,436	- 2,182	- 6,960		
2006	+ 135,959	+ 161,447	- 4,205	- 34,641	+ 41,453	- 32,300	- 1,328	+ 157,142	- 2,934	+ 22,511		
2007	+ 169,636	+ 201,989	- 922	- 34,881	+ 36,332	- 33,804	- 1,597	+ 183,169	+ 953	+ 15,130		
2008	+ 143,318	+ 184,521	- 3,586	- 31,467	+ 24,724	- 34,461	- 893	+ 121,336	+ 2,008	- 21,088		
2009	+ 141,233	+ 141,167	- 6,064	- 19,648	+ 54,757	- 35,043	- 1,858	+ 129,693	+ 8,648	- 9,683		
2010	+ 144,890	+ 161,146	- 5,892	- 27,041	+ 50,665	- 39,880	+ 1,219	+ 92,757	+ 1,613	- 53,351		
2011	+ 164,581	+ 163,426	- 8,900	- 32,482	+ 69,156	- 35,520	+ 1,642	+ 120,858	+ 2,836	- 45,365		
2012	+ 193,593	+ 200,401	- 10,518	- 32,775	+ 65,825	- 39,858	- 413	+ 144,802	+ 1,297	- 48,378		
2013	+ 190,420	+ 211,647	- 4,331	- 43,223	+ 65,754	- 43,758	- 591	+ 219,079	+ 838	+ 29,251		
2014	+ 212,880	+ 226,499	- 7,739	- 35,353	+ 62,387	- 40,653	+ 1,138	+ 244,445	- 2,564	+ 30,426		
2015	+ 256,144	+ 263,185	- 4,407	- 31,230	+ 63,739	- 39,550	- 159	+ 225,551	- 2,213	- 30,434		
2013 Q3	+ 41,102	+ 50,743	- 3,290	- 16,483	+ 16,129	- 9,287	- 5	+ 54,577	- 785	+ 13,480		
Q4	+ 62,069	+ 53,496	- 1,273	- 6,470	+ 26,157	- 11,114	- 1,738	+ 71,549	+ 1,464	+ 11,218		
2014 Q1	+ 48,137	+ 52,292	+ 168	- 6,298	+ 17,061	- 14,918	+ 2,142	+ 60,275	- 565	+ 9,996		
Q2	+ 44,982	+ 54,295	- 2,031	- 7,242	+ 4,641	- 6,712	+ 519	+ 55,959	- 610	+ 10,457		
Q3	+ 54,257	+ 60,313	- 2,818	- 15,461	+ 17,223	- 7,818	+ 367	+ 59,285	+ 332	+ 4,661		
Q4	+ 65,503	+ 59,599	- 3,058	- 6,352	+ 23,462	- 11,206	- 1,890	+ 68,926	- 1,722	+ 5,312		
2015 Q1	+ 58,230	+ 60,426	- 1,680	- 4,714	+ 18,340	- 15,822	+ 218	+ 30,366	- 21	- 28,082		
Q2	+ 58,504	+ 69,391	- 2,043	- 5,941	+ 2,107	- 7,052	+ 1,098	+ 72,772	- 465	+ 13,170		
Q3	+ 65,959	+ 68,045	+ 577	- 13,852	+ 18,393	- 6,628	+ 703	+ 64,092	- 1,455	- 2,570		
Q4	+ 73,451	+ 65,323	- 1,260	- 6,722	+ 24,898	- 10,048	- 2,178	+ 58,322	- 272	- 12,951		
2016 Q1	+ 64,695	+ 64,437	+ 333	- 5,707	+ 19,425	- 13,460	- 417	+ 23,864	+ 1,228	- 40,414		
Q2	+ 72,635	+ 77,642	+ 38	- 5,040	+ 4,515	- 4,482	+ 1,557	+ 51,583	+ 761	- 22,608		
2014 Mar	+ 21,752	+ 19,819	+ 1,391	- 1,263	+ 6,413	- 3,217	+ 239	+ 35,273	+ 708	+ 13,281		
Apr	+ 16,501	+ 18,418	- 720	- 1,585	+ 2,911	- 3,243	+ 186	+ 29,516	+ 151	+ 12,830		
May	+ 12,180	+ 17,917	- 1,675	- 1,948	- 2,726	- 1,063	- 72	+ 9,391	- 631	- 2,717		
June	+ 16,301	+ 17,960	+ 363	- 3,708	+ 4,456	- 2,406	+ 405	+ 17,051	- 130	+ 345		
July	+ 20,303	+ 22,747	- 1,684	- 4,991	+ 5,562	- 3,016	- 402	+ 13,450	+ 431	- 6,451		
Aug	+ 10,707	+ 14,254	- 748	- 6,617	+ 5,430	- 2,359	+ 426	+ 13,062	+ 166	+ 1,930		
Sep	+ 23,247	+ 23,312	- 385	- 3,853	+ 6,231	- 2,442	+ 343	+ 32,773	- 265	+ 9,182		
Oct	+ 21,331	+ 22,823	- 1,448	- 4,994	+ 6,058	- 2,556	- 112	+ 15,292	+ 203	- 5,928		
Nov	+ 18,686	+ 18,095	- 382	- 2,039	+ 6,130	- 3,500	+ 152	+ 22,905	+ 30	+ 4,067		
Dec	+ 25,486	+ 18,681	- 1,228	+ 681	+ 11,274	- 5,150	- 1,930	+ 30,729	- 1,955	+ 7,173		
2015 Jan	+ 14,904	+ 15,713	- 1,154	- 1,713	+ 5,103	- 4,199	+ 20	- 3,642	+ 372	- 18,567		
Feb	+ 16,279	+ 19,585	- 948	- 1,625	+ 5,826	- 7,505	+ 24	+ 11,595	+ 266	- 4,709		
Mar	+ 27,046	+ 25,129	+ 422	- 1,376	+ 7,411	- 4,117	+ 173	+ 22,413	- 660	- 4,806		
Apr	+ 21,546	+ 22,552	- 1,240	- 1,432	+ 3,303	- 2,877	+ 348	+ 31,171	- 69	+ 9,276		
May	+ 11,683	+ 21,472	- 437	- 2,002	- 5,805	- 1,982	+ 557	+ 17,540	- 78	+ 5,299		
June	+ 25,275	+ 25,366	- 367	- 2,507	+ 4,609	- 2,194	+ 192	+ 24,061	- 318	- 1,406		
July	+ 25,385	+ 25,485	- 1,024	- 4,339	+ 6,553	- 2,314	+ 462	+ 20,319	- 1,170	- 5,528		
Aug	+ 14,429	+ 16,856	+ 472	- 5,423	+ 5,735	- 2,739	+ 40	+ 19,460	- 180	+ 4,991		
Sep	+ 26,144	+ 25,704	+ 1,129	- 4,090	+ 6,106	- 1,575	+ 201	+ 24,313	- 105	- 2,033		
Oct	+ 22,157	+ 24,283	+ 23	- 5,847	+ 6,808	- 3,087	- 94	+ 16,508	+ 154	- 5,555		
Nov	+ 25,372	+ 22,723	- 378	- 1,741	+ 6,874	- 2,485	+ 163	+ 20,149	- 548	- 5,386		
Dec	+ 25,922	+ 18,317	- 905	+ 866	+ 11,216	- 4,476	- 2,248	+ 21,665	+ 123	- 2,010		
2016 Jan	+ 14,159	+ 13,749	- 183	- 2,455	+ 5,140	- 2,275	- 89	- 5,464	- 186	- 19,534		
Feb	+ 20,895	+ 22,625	+ 673	- 1,143	+ 6,932	- 7,518	+ 426	+ 9,544	+ 1,478	- 11,778		
Mar	+ 29,641	+ 28,063	- 158	- 2,109	+ 7,353	- 3,666	+ 754	+ 19,784	- 64	- 9,103		
Apr	+ 28,090	+ 27,390	- 188	- 845	+ 3,238	- 1,692	+ 1,267	+ 36,312	+ 696	+ 6,955		
May	+ 18,225	+ 23,581	+ 500	- 1,584	- 3,181	- 591	+ 153	+ 4,135	+ 776	- 14,242		
June	+ 26,320	+ 26,671	- 274	- 2,611	+ 4,458	- 2,199	+ 137	+ 11,136	- 711	- 15,321		
July	+ 20,207	+ 21,174	+ 508	- 3,868	+ 6,337	- 3,435	- 135	+ 19,073	+ 342	- 999		
Aug ^p	+ 17,865	+ 22,190	+ 322	- 5,567	+ 5,752	- 4,509	- 97	+ 13,721	+ 93	- 4,047		

¹ Excluding freight and insurance costs of foreign trade. ² For example, warehouse transactions for the account of residents, deductions of goods returned and deductions of exports and imports in connection with goods for processing. ³ Including freight and insurance costs of foreign trade. ⁴ Including net

acquisition/disposal of non-produced non-financial assets. ⁵ Statistical errors and omissions, resulting from the difference between the balance on the financial account and the balances on the current account and the capital account.

XII External sector

3 Foreign trade (special trade) of the Federal Republic of Germany, by country and group of countries *

€ million

Ländergruppe/Land		2013	2014	2015	2016					
					Jan. / Jul.	Apr.	May	Jun	Jul	Aug P
All countries ¹	Exports	1,088,025	1,123,746	1,196,378	699,204	104,155	97,096	106,723	96,389	96,509
	Imports	890,393	910,145	948,503	549,499	78,682	76,246	81,989	76,921	76,516
	Balance	+ 197,632	+ 213,601	+ 247,874	+ 149,705	+ 25,473	+ 20,850	+ 24,734	+ 19,467	+ 19,993
I European countries	Exports	743,067	761,914	805,238	479,790	71,041	66,811	72,709	65,376	...
	Imports	625,934	642,738	654,053	381,046	55,373	53,147	57,255	53,503	...
	Balance	+ 117,133	+ 119,176	+ 151,185	+ 98,744	+ 15,668	+ 13,663	+ 15,454	+ 11,873	...
1 EU member states (28)	Exports	618,383	648,446	693,902	414,451	61,297	57,537	62,551	56,215	...
	Imports	509,738	527,117	543,491	321,428	46,830	45,049	48,523	45,066	...
	Balance	+ 108,645	+ 121,329	+ 150,411	+ 93,023	+ 14,466	+ 12,488	+ 14,027	+ 11,148	...
Euro-area (19) countries	Exports	405,220	413,753	435,046	259,481	38,512	36,111	38,996	35,554	...
	Imports	343,487	350,550	356,884	210,705	30,426	29,427	32,114	29,883	...
	Balance	+ 61,732	+ 63,203	+ 78,162	+ 48,776	+ 8,086	+ 6,685	+ 6,882	+ 5,671	...
<i>of which</i>										
Austria	Exports	56,217	55,807	58,115	34,555	5,185	4,762	5,203	4,781	...
	Imports	36,734	36,218	37,287	22,427	3,244	3,085	3,382	3,305	...
	Balance	+ 19,483	+ 19,590	+ 20,828	+ 12,129	+ 1,941	+ 1,678	+ 1,820	+ 1,477	...
Belgium and Luxembourg	Exports	47,954	47,345	46,416	27,584	4,146	3,881	4,166	3,623	...
	Imports	41,965	42,548	40,104	24,242	3,505	3,090	4,301	3,289	...
	Balance	+ 5,989	+ 4,797	+ 6,312	+ 3,342	+ 640	+ 791	- 135	+ 334	...
France	Exports	99,250	100,580	102,950	60,072	8,915	8,110	8,922	7,987	...
	Imports	63,489	66,714	66,924	39,859	5,692	5,652	5,911	5,654	...
	Balance	+ 35,761	+ 33,866	+ 36,026	+ 20,213	+ 3,223	+ 2,459	+ 3,011	+ 2,334	...
Italy	Exports	53,212	54,240	58,066	36,450	5,302	5,093	5,494	5,223	...
	Imports	46,911	48,522	49,056	30,274	4,333	4,355	4,511	4,571	...
	Balance	+ 6,301	+ 5,718	+ 9,011	+ 6,176	+ 969	+ 739	+ 984	+ 652	...
Netherlands	Exports	70,975	72,736	79,475	45,811	6,668	6,305	6,918	6,610	...
	Imports	88,698	87,796	87,942	48,282	6,812	6,875	7,072	6,925	...
	Balance	- 17,723	- 15,060	- 8,467	- 2,470	- 144	- 570	- 153	- 315	...
Spain	Exports	31,349	34,820	38,783	24,013	3,658	3,454	3,661	3,203	...
	Imports	23,639	24,804	26,462	16,233	2,482	2,350	2,445	2,144	...
	Balance	+ 7,709	+ 10,016	+ 12,322	+ 7,780	+ 1,176	+ 1,105	+ 1,216	+ 1,059	...
Other EU member states	Exports	213,163	234,693	258,856	154,970	22,785	21,426	23,555	20,661	...
	Imports	166,251	176,567	186,607	110,723	16,404	15,622	16,409	15,184	...
	Balance	+ 46,912	+ 58,126	+ 72,249	+ 44,247	+ 6,380	+ 5,803	+ 7,145	+ 5,477	...
<i>of which</i>										
United Kingdom	Exports	71,280	79,163	89,293	51,675	7,334	6,707	7,831	6,923	...
	Imports	39,466	38,545	38,322	20,747	3,038	2,950	2,892	2,894	...
	Balance	+ 31,815	+ 40,618	+ 50,970	+ 30,928	+ 4,296	+ 3,757	+ 4,939	+ 4,029	...
2 Other European countries	Exports	124,684	113,468	111,336	65,339	9,744	9,274	10,158	9,161	...
	Imports	116,196	115,621	110,562	59,618	8,543	8,098	8,731	8,436	...
	Balance	+ 8,488	- 2,153	+ 774	+ 5,721	+ 1,201	+ 1,176	+ 1,427	+ 725	...
<i>of which</i>										
Switzerland	Exports	46,924	46,202	49,279	28,889	4,228	3,949	4,371	4,099	...
	Imports	38,321	39,392	42,467	24,758	3,728	3,259	3,756	3,535	...
	Balance	+ 8,603	+ 6,810	+ 6,812	+ 4,131	+ 499	+ 690	+ 614	+ 565	...
II Non-European countries	Exports	341,213	358,337	388,569	218,052	32,901	30,176	33,751	30,753	...
	Imports	264,459	267,407	294,449	168,399	23,308	23,047	24,733	23,418	...
	Balance	+ 76,754	+ 90,930	+ 94,120	+ 49,653	+ 9,593	+ 7,129	+ 9,017	+ 7,334	...
1 Africa	Exports	21,803	22,505	24,038	14,265	2,324	1,953	2,112	1,818	...
	Imports	23,108	20,242	18,242	9,308	1,289	1,294	1,521	1,318	...
	Balance	- 1,305	+ 2,263	+ 5,796	+ 4,957	+ 1,035	+ 659	+ 591	+ 500	...
2 America	Exports	130,427	135,293	157,416	85,890	12,432	11,790	13,119	12,142	...
	Imports	75,023	74,191	84,924	47,982	6,872	6,747	6,998	6,839	...
	Balance	+ 55,404	+ 61,103	+ 72,492	+ 37,908	+ 5,560	+ 5,043	+ 6,121	+ 5,303	...
<i>of which</i>										
United States	Exports	89,348	95,928	113,990	62,205	9,028	7,884	9,519	8,836	...
	Imports	48,582	49,207	59,641	33,740	4,832	4,767	4,720	4,738	...
	Balance	+ 40,766	+ 46,721	+ 54,349	+ 28,465	+ 4,196	+ 3,117	+ 4,799	+ 4,098	...
3 Asia	Exports	179,038	190,973	196,869	112,126	17,252	15,691	17,603	15,885	...
	Imports	162,960	170,050	188,345	109,321	14,878	14,703	15,978	15,027	...
	Balance	+ 16,077	+ 20,923	+ 8,525	+ 2,805	+ 2,374	+ 988	+ 1,625	+ 857	...
<i>of which</i>										
Middle East	Exports	32,754	35,462	39,697	20,793	3,450	3,176	3,164	2,370	...
	Imports	8,921	7,865	7,318	3,656	455	580	571	515	...
	Balance	+ 23,833	+ 27,598	+ 32,378	+ 17,137	+ 2,995	+ 2,597	+ 2,594	+ 1,855	...
Japan	Exports	17,076	16,910	17,031	10,192	1,459	1,371	1,542	1,587	...
	Imports	19,492	19,007	20,220	12,593	1,857	1,771	1,877	1,712	...
	Balance	- 2,416	- 2,097	- 3,190	- 2,401	- 398	- 400	- 335	- 125	...
People's Republic of China ²	Exports	66,912	74,369	71,385	42,713	6,550	5,836	6,814	6,413	...
	Imports	74,544	79,828	91,697	52,149	6,918	6,789	7,597	7,182	...
	Balance	- 7,633	- 5,459	- 20,312	- 9,436	- 368	- 953	- 783	- 769	...
New industrial countries and emerging markets of Asia ³	Exports	45,894	48,476	51,669	28,804	4,406	3,926	4,581	4,072	...
	Imports	36,672	38,782	42,443	24,653	3,343	3,886	3,678	3,308	...
	Balance	+ 9,222	+ 9,695	+ 9,226	+ 4,150	+ 1,063	+ 540	+ 903	+ 764	...
4 Oceania and polar regions	Exports	9,946	9,566	10,246	5,771	894	743	916	908	...
	Imports	3,368	2,924	2,938	1,787	270	303	236	235	...
	Balance	+ 6,578	+ 6,641	+ 7,307	+ 3,984	+ 624	+ 439	+ 680	+ 673	...

* Source: Federal Statistical Office. Exports (fob) by country of destination, imports (cif) by country of origin. Individual countries and groups of countries according to the current position. Euro-area including Lithuania. ¹ Including fuel and other

supplies for ships and aircraft and other data not classifiable by region. ² Excluding Hong Kong. ³ Brunei Darussalam, Hong Kong, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Taiwan and Thailand.

XII External sector

4 Services and Primary income of the Federal Republic of Germany (balances)

€ million

Period	Services								Primary income		
	Total	of which							Compensation of employees	Investment income	Other primary income ³
		Transport	Travel ¹	Financial services	Charges for the use of intellectual property	Tele-communications, computer and information services	Other business services	Government goods and services ²			
2011	- 32,482	- 8,533	- 33,755	+ 7,812	+ 2,389	+ 857	- 6,787	+ 2,939	+ 3,358	+ 64,718	+ 1,081
2012	- 32,775	- 10,189	- 35,422	+ 8,793	+ 3,030	+ 1,442	- 9,459	+ 3,103	+ 3,155	+ 61,666	+ 1,005
2013	- 43,223	- 12,075	- 37,713	+ 8,123	+ 3,605	- 758	- 5,912	+ 3,078	+ 523	+ 64,008	+ 1,223
2014	- 35,353	- 13,254	- 37,653	+ 7,817	+ 4,274	+ 2,600	- 1,785	+ 3,035	+ 259	+ 61,258	+ 871
2015	- 31,230	- 12,655	- 36,632	+ 10,181	+ 5,118	+ 3,796	- 3,659	+ 3,102	+ 735	+ 63,370	- 366
2014 Q4	- 6,352	- 3,312	- 7,278	+ 2,076	+ 1,130	+ 1,550	- 1,206	+ 705	+ 132	+ 19,643	+ 3,687
2015 Q1	- 4,714	- 2,926	- 5,740	+ 2,319	+ 1,306	+ 278	- 347	+ 904	+ 799	+ 18,598	- 1,057
Q2	- 5,941	- 2,218	- 7,808	+ 2,272	+ 1,093	+ 1,298	- 1,155	+ 830	- 31	+ 3,256	- 1,118
Q3	- 13,852	- 3,352	- 14,495	+ 2,779	+ 847	+ 292	- 594	+ 770	- 445	+ 20,042	- 1,204
Q4	- 6,722	- 4,158	- 8,590	+ 2,811	+ 1,872	+ 1,928	- 1,563	+ 598	+ 411	+ 21,474	+ 3,013
2016 Q1	- 5,707	- 2,439	- 6,421	+ 2,272	+ 1,243	+ 249	- 1,168	+ 840	+ 754	+ 19,316	- 645
Q2	- 5,040	- 1,190	- 8,057	+ 2,369	+ 1,119	+ 1,108	- 955	+ 855	- 154	+ 5,752	- 1,084
2015 Oct	- 5,847	- 1,409	- 5,526	+ 686	+ 436	+ 197	- 675	+ 235	+ 144	+ 7,076	- 411
Nov	- 1,741	- 1,530	- 1,759	+ 1,044	+ 609	+ 260	- 683	+ 220	+ 139	+ 7,175	- 440
Dec	+ 866	- 1,220	- 1,304	+ 1,081	+ 826	+ 1,471	- 205	+ 143	+ 128	+ 7,223	+ 3,864
2016 Jan	- 2,455	- 921	- 1,687	+ 952	+ 184	- 459	- 722	+ 276	+ 258	+ 5,227	- 345
Feb	- 1,143	- 1,039	- 1,723	+ 607	+ 774	+ 165	- 138	+ 290	+ 272	+ 6,590	+ 70
Mar	- 2,109	- 479	- 3,011	+ 714	+ 285	+ 543	- 308	+ 274	+ 224	+ 7,498	- 370
Apr	- 845	- 443	- 1,174	+ 809	+ 480	- 5	- 666	+ 300	- 33	+ 3,726	- 455
May	- 1,584	- 277	- 3,302	+ 854	+ 743	+ 197	- 268	+ 251	- 90	- 2,748	- 344
June	- 2,611	- 470	- 3,582	+ 707	- 104	+ 916	- 22	+ 305	- 32	+ 4,774	- 285
July	- 3,868	- 394	- 4,284	+ 725	+ 568	- 204	- 411	+ 296	- 173	+ 6,867	- 357
Aug ^P	- 5,567	- 582	- 6,541	+ 621	+ 843	+ 145	- 286	+ 265	- 130	+ 6,286	- 405

¹ Since 2001, the sample results of a household survey have been used on the expenditure side. ² Domestic public authorities' receipts from and expenditure on services, not included elsewhere; including the receipts from foreign military bases.

³ Includes, inter alia, taxes on leasing, production and imports transferred to the EU as well as subsidies received from the EU.

5 Secondary income of the Federal Republic of Germany (balances)

€ million

Period	General government				All sectors excluding general government ²			
	Total	Total	of which		Total	of which		
			Current international cooperation ¹	Current taxes on income, wealth etc.		Personal transfers between resident and nonresident households ³	of which Workers' remittances	
2011	- 35,520	- 21,293	- 4,446	+ 6,718	- 14,227	- 2,977	- 2,977	
2012	- 39,858	- 25,493	- 5,214	+ 5,206	- 14,366	- 2,952	- 2,952	
2013	- 43,758	- 29,708	- 5,611	+ 6,177	- 14,050	- 3,250	- 3,229	
2014	- 40,653	- 28,169	- 6,076	+ 8,088	- 12,485	- 3,476	- 3,451	
2015	- 39,550	- 25,546	- 7,065	+ 9,800	- 14,004	- 3,540	- 3,523	
2014 Q4	- 11,206	- 8,633	- 1,944	+ 759	- 2,573	- 866	- 863	
2015 Q1	- 15,822	- 12,975	- 2,614	+ 1,327	- 2,847	- 885	- 881	
Q2	- 7,052	- 1,803	- 1,161	+ 6,278	- 5,249	- 885	- 881	
Q3	- 6,628	- 3,850	- 1,196	+ 1,212	- 2,778	- 885	- 881	
Q4	- 10,048	- 6,918	- 2,094	+ 981	- 3,130	- 885	- 881	
2016 Q1	- 13,460	- 10,054	- 2,704	+ 1,284	- 3,406	- 1,270	- 1,267	
Q2	- 4,482	- 998	- 1,618	+ 5,527	- 3,484	- 1,056	- 1,053	
2015 Oct	- 3,087	- 2,281	- 394	+ 197	- 806	- 295	- 294	
Nov	- 2,485	- 1,543	- 722	+ 77	- 941	- 295	- 294	
Dec	- 4,476	- 3,094	- 979	+ 707	- 1,383	- 295	- 294	
2016 Jan	- 2,275	- 1,167	- 1,181	+ 586	- 1,109	- 441	- 440	
Feb	- 7,518	- 6,258	- 1,079	+ 281	- 1,260	- 441	- 440	
Mar	- 3,666	- 2,629	- 444	+ 416	- 1,038	- 388	- 387	
Apr	- 1,692	- 703	- 509	+ 1,217	- 989	- 354	- 353	
May	- 591	+ 555	- 408	+ 3,020	- 1,147	- 351	- 350	
June	- 2,199	- 850	- 701	+ 1,290	- 1,348	- 351	- 350	
July	- 3,435	- 2,335	- 451	+ 378	- 1,100	- 352	- 350	
Aug ^P	- 4,509	- 3,013	- 982	+ 257	- 1,497	- 351	- 350	

¹ Excluding capital transfers, where identifiable. Includes current international cooperation and other current transfers. ² Includes insurance premiums and claims

(excluding life insurance policies). ³ Transfers between resident and non-resident households.

6 Capital account of the Federal Republic of Germany (balances)

€ million

Period	Total	Non-produced non-financial assets	Capital transfers
2011	+ 1,642	+ 1,148	+ 494
2012	- 413	+ 1,745	- 2,158
2013	- 591	+ 1,076	- 1,667
2014	+ 1,138	+ 2,782	- 1,643
2015	- 159	+ 2,136	- 2,295
2014 Q4	- 1,890	+ 332	- 2,222
2015 Q1	+ 218	- 10	+ 228
Q2	+ 1,098	+ 1,143	- 45
Q3	+ 703	+ 870	- 167
Q4	- 2,178	+ 134	- 2,312
2016 Q1	- 417	- 676	+ 259
Q2	+ 1,557	+ 2,072	- 516
2015 Oct	- 94	+ 141	- 235
Nov	+ 163	+ 274	- 110
Dec	- 2,248	- 281	- 1,966
2016 Jan	- 89	+ 2	- 91
Feb	+ 426	+ 188	+ 238
Mar	- 754	- 866	+ 112
Apr	+ 1,267	+ 1,411	- 144
May	+ 153	+ 244	- 91
June	+ 137	+ 417	- 281
July	- 135	+ 98	- 233
Aug ^P	- 97	+ 162	- 259

XII External sector

7 Financial account of the Federal Republic of Germany (net)

€ million

Item	2013	2014	2015	2015		2016			
				Q4	Q1	Q2	June	July	Aug P
I Net domestic investment abroad (Increase: +)	+ 60,705	+ 299,954	+ 253,658	- 53,343	+ 154,533	+ 158,948	+ 59,315	- 465	+ 27,386
1 Direct investment	+ 68,688	+ 85,658	+ 98,017	+ 29,606	+ 30,747	+ 11,281	+ 6,565	+ 6,615	- 754
Equity of which	+ 43,586	+ 66,413	+ 69,542	+ 22,053	+ 22,203	+ 10,478	+ 953	+ 4,858	+ 6,895
Reinvestment of earnings ¹	+ 17,880	+ 21,373	+ 15,866	+ 4,442	+ 7,335	+ 5,100	+ 569	+ 3,158	+ 3,396
Debt instruments	+ 25,103	+ 19,246	+ 28,475	+ 7,552	+ 8,544	+ 804	+ 5,613	+ 1,757	- 7,648
2 Portfolio investment	+ 140,366	+ 149,023	+ 124,134	+ 17,656	+ 47,212	+ 34,264	+ 4,587	- 819	+ 8,486
Shares ²	+ 18,946	+ 12,380	+ 19,737	+ 7,552	+ 1,314	+ 4,668	+ 1,559	+ 1,824	+ 3,541
Investment fund shares ³	+ 32,407	+ 41,302	+ 35,495	+ 4,620	+ 9,724	+ 7,875	+ 483	+ 1,484	+ 3,382
Long-term debt securities ⁴	+ 84,469	+ 95,794	+ 73,923	+ 6,023	+ 31,209	+ 26,381	+ 4,665	- 1,048	+ 891
Short-term debt securities ⁵	+ 4,543	- 454	- 5,021	- 539	+ 4,965	- 4,659	- 2,120	- 3,079	+ 672
3. Financial derivatives and employee stock options ⁶	+ 23,944	+ 31,769	+ 25,796	+ 5,492	+ 4,925	+ 3,940	+ 51	+ 3,126	+ 1,940
4. Other investment ⁷	- 173,131	+ 36,069	+ 7,923	- 105,825	+ 70,420	+ 108,702	+ 48,823	- 9,729	+ 17,620
Monetary financial institutions ⁸	- 56,929	+ 76,305	- 90,287	- 110,672	+ 11,342	+ 38,457	+ 23,914	+ 19,509	- 2,170
Long-term	- 50,777	+ 21,149	- 2,803	- 15,050	+ 1,948	+ 8,368	+ 1,255	+ 1,189	+ 5,611
Short-term	- 6,152	+ 55,156	- 87,484	- 95,622	+ 9,394	+ 30,089	+ 22,659	+ 18,320	- 7,781
Enterprises and households ⁹	+ 21,335	- 7,517	- 13,097	- 22,398	+ 29,038	- 4,036	- 4,893	- 8,000	- 1,344
Long-term	+ 7,033	+ 2,091	+ 12,588	+ 1,260	- 772	- 219	- 1,500	- 371	+ 675
Short-term	+ 14,302	- 9,608	- 25,685	- 23,658	+ 29,810	- 3,817	- 3,394	- 7,629	- 2,019
General government	+ 7,982	+ 17,161	- 12,057	- 1,790	+ 5,061	+ 2,400	+ 4,276	- 487	+ 3,975
Long-term	+ 15,663	- 405	- 7,425	- 1,202	- 1,367	- 832	- 634	- 843	- 160
Short-term	- 7,681	+ 17,566	- 4,632	- 588	+ 6,428	+ 3,232	+ 4,910	+ 356	+ 4,135
Bundesbank	- 145,519	- 49,880	+ 123,364	+ 29,035	+ 24,980	+ 71,881	+ 25,526	- 20,750	+ 17,159
5. Reserve assets	+ 838	- 2,564	- 2,213	- 272	+ 1,228	+ 761	- 711	+ 342	+ 93
II Net foreign investment in the reporting country (Increase: +)	- 158,374	+ 55,510	+ 28,106	- 111,665	+ 130,669	+ 107,365	+ 48,179	- 19,539	+ 13,664
1 Direct investment	+ 47,079	+ 6,240	+ 41,579	+ 4,087	+ 26,907	+ 35,086	+ 22,893	- 4,266	+ 1,228
Equity of which	+ 685	+ 23,991	+ 18,498	+ 1,593	+ 6,492	+ 5,101	- 328	+ 1,496	+ 1,879
Reinvestment of earnings ¹	- 4,538	+ 3,662	+ 5,765	- 1,378	+ 3,677	+ 800	- 798	+ 1,339	+ 1,216
Debt instruments	+ 46,394	- 17,751	+ 23,081	+ 2,494	+ 20,416	+ 29,985	+ 23,220	- 5,761	- 652
2 Portfolio investment	- 20,184	+ 11,583	- 75,003	- 49,097	+ 6,102	- 32,275	- 23,175	- 30,432	+ 8,282
Shares ²	+ 4,933	+ 5,137	+ 10,255	+ 4,866	- 2,998	- 5,660	- 2,509	+ 241	+ 1,386
Investment fund shares ³	+ 6,069	- 5,154	+ 5,515	+ 584	- 2,777	- 1,864	- 439	- 1,521	- 558
Long-term debt securities ⁴	- 8,329	+ 14,785	- 97,980	- 32,606	- 6,427	- 32,283	- 20,747	- 15,379	+ 5,358
Short-term debt securities ⁵	- 22,857	- 3,185	+ 7,207	- 21,941	+ 18,303	+ 7,533	+ 520	- 13,773	+ 2,096
3. Other investment ⁷	- 185,270	+ 37,687	+ 61,529	- 66,655	+ 97,659	+ 104,554	+ 48,462	+ 15,159	+ 4,155
Monetary financial institutions ⁸	- 158,518	+ 32,484	- 41,137	- 99,455	+ 41,213	+ 68,410	+ 11,578	+ 35,931	+ 375
Long-term	- 16,819	- 14,555	- 19,517	- 1,753	- 3,913	- 3,177	- 403	+ 2,899	+ 2,285
Short-term	- 141,699	+ 47,039	- 21,621	- 97,702	+ 45,126	+ 71,587	+ 11,981	+ 33,033	- 1,910
Enterprises and households ⁹	- 1,957	+ 16,777	+ 18,120	+ 5,579	+ 39,419	- 486	+ 8,541	- 20,145	- 5,912
Long-term	- 13,166	- 2,008	+ 15,290	- 1,038	+ 141	- 1,454	- 792	+ 863	+ 74
Short-term	+ 11,209	+ 18,785	+ 2,829	+ 6,616	+ 39,278	+ 968	+ 9,333	- 21,008	- 5,987
General government	- 1,900	- 5,610	- 11,235	+ 204	+ 5,643	+ 6,643	+ 10,177	- 3,390	+ 1,029
Long-term	+ 8,979	- 931	- 3,654	+ 283	- 2,478	+ 2,897	+ 2,725	- 28	- 6
Short-term	- 10,878	- 4,680	- 7,582	- 79	+ 8,121	+ 3,746	+ 7,452	- 3,361	+ 1,036
Bundesbank	- 22,895	- 5,964	+ 95,782	+ 27,018	+ 11,384	+ 29,988	+ 18,165	+ 2,762	+ 8,663
III Net financial account (Net lending: + / net borrowing: -)	+ 219,079	+ 244,445	+ 225,551	+ 58,322	+ 23,864	+ 51,583	+ 11,136	+ 19,073	+ 13,721

¹ Estimate based on data on direct investment stocks abroad and in the Federal Republic of Germany (see Special Statistical Publication 10). ² Including participation certificates. ³ Including reinvestment of earnings. ⁴ Up to and including 2012, without accrued interest. Long-term: original maturity of more than one year or unlimited. ⁵ Short-term: original maturity up to one year. ⁶ Balance of transactions

arising from options and financial futures contracts as well as employee stock options. ⁷ Includes in particular loans, trade credits as well as currency and deposits. ⁸ Excluding Bundesbank. ⁹ Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households.

XII. External sector

8. External position of the Bundesbank since the beginning of European monetary union °

€ million

End of reporting period	External assets									External-liabilities 3,4	Net external position (col 1 minus col 10)
	Total	Reserve assets					Other investment				
		Gold and gold receivables	Special drawing rights	Reserve position in the IMF	Currency, deposits and securities	Total	of which Clearing accounts within the ESCB 1	Portfolio investment 2			
1	2	3	4	5	6	7	8	9	10	11	
1999 Jan 5	95,316	93,940	29,312	1,598	6,863	56,167	1,376	–	–	9,628	85,688
1999	141,958	93,039	32,287	1,948	6,383	52,420	48,919	26,275	–	7,830	134,128
2000	100,762	93,815	32,676	1,894	5,868	53,377	6,947	– 6,851	–	8,287	92,475
2001	76,147	93,215	35,005	2,032	6,689	49,489	– 17,068	– 30,857	–	10,477	65,670
2002	103,948	85,002	36,208	1,888	6,384	40,522	18,780	4,995	166	66,213	37,735
2003	95,394	76,680	36,533	1,540	6,069	32,538	18,259	4,474	454	83,296	12,098
2004	93,110	71,335	35,495	1,512	5,036	29,292	21,110	7,851	665	95,014	– 1,904
2005	130,268	86,181	47,924	1,601	2,948	33,708	43,184	29,886	902	115,377	14,891
2006	104,389	84,765	53,114	1,525	1,486	28,640	18,696	5,399	928	134,697	– 30,308
2007	179,492	92,545	62,433	1,469	949	27,694	84,420	71,046	2,527	176,569	2,923
2008	230,775	99,185	68,194	1,576	1,709	27,705	129,020	115,650	2,570	237,893	– 7,118
2009	323,286	125,541	83,939	13,263	2,705	25,634	190,288	177,935	7,458	247,645	75,641
2010	524,695	162,100	115,403	14,104	4,636	27,957	337,921	325,553	24,674	273,241	251,454
2011	714,662	184,603	132,874	14,118	8,178	29,433	475,994	463,311	54,065	333,730	380,932
2012	921,002	188,630	137,513	13,583	8,760	28,774	668,672	655,670	63,700	424,999	496,003
2013	721,741	143,753	94,876	12,837	7,961	28,080	523,153	510,201	54,834	401,524	320,217
2014	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	396,623	282,181
2015	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	493,509	307,199
2014 Jan	716,868	149,930	100,432	13,030	8,080	28,388	512,785	500,357	54,153	405,409	311,459
Feb	718,317	152,432	104,678	12,862	7,728	27,165	511,660	499,232	54,225	394,012	324,305
Mar	687,557	150,615	102,179	12,866	7,720	27,850	482,503	470,075	54,440	382,743	304,814
Apr	692,956	150,048	101,564	13,057	7,893	27,534	490,117	477,688	52,792	403,530	289,426
May	680,888	148,949	100,274	13,213	7,912	27,550	479,290	466,862	52,649	406,416	274,472
June	678,136	153,017	104,600	13,213	7,582	27,622	474,245	461,817	50,874	399,788	278,348
July	660,521	154,885	105,317	13,497	7,665	28,406	455,977	443,548	49,659	378,120	282,401
Aug	681,324	156,411	106,079	13,794	7,339	29,199	476,732	464,303	48,181	380,001	301,323
Sep	696,802	156,367	104,629	14,113	7,751	29,873	492,348	479,920	48,087	386,216	310,586
Oct	681,790	154,133	101,929	14,125	7,628	30,450	481,136	468,708	46,521	396,445	285,345
Nov	682,969	155,424	103,245	14,045	7,520	30,615	480,294	467,866	47,250	400,850	282,119
Dec	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	396,623	282,181
2015 Jan	751,062	176,741	121,607	14,895	6,488	33,751	527,698	515,266	46,623	452,230	298,833
Feb	744,552	172,120	116,647	14,956	6,361	34,157	525,795	513,365	46,637	444,069	300,483
Mar	767,856	176,922	119,988	15,311	5,944	35,679	544,130	531,701	46,804	435,366	332,490
Apr	762,437	171,758	116,812	14,967	5,796	34,184	544,620	532,192	46,058	436,617	325,820
May	758,500	173,842	118,141	15,124	5,744	34,833	538,619	526,191	46,039	437,079	321,421
June	756,263	168,299	113,838	15,000	5,617	33,844	543,502	531,074	44,461	440,233	316,029
July	763,247	163,071	108,872	15,172	4,919	34,107	555,013	542,585	45,162	446,157	317,090
Aug	781,286	162,917	110,012	14,934	5,164	32,807	573,712	561,284	44,657	443,522	337,764
Sep	774,428	161,922	108,959	14,941	5,191	32,831	567,602	555,174	44,903	466,216	308,212
Oct	786,694	166,664	112,836	15,126	5,199	33,503	575,246	562,818	44,784	474,882	311,811
Nov	813,320	163,816	108,820	15,475	5,217	34,303	604,946	592,518	44,558	491,813	321,506
Dec	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	493,509	307,199
2016 Jan	807,971	164,656	111,126	15,055	5,197	33,278	599,427	587,000	43,888	485,028	322,943
Feb	839,336	177,917	122,535	15,109	6,899	33,374	617,434	605,006	43,985	501,590	337,745
Mar	837,375	171,266	117,844	14,730	6,730	31,962	621,617	609,190	44,491	504,447	332,928
Apr	856,266	175,738	121,562	14,793	6,759	32,623	638,201	625,774	42,327	509,204	347,063
May	884,887	173,927	118,133	14,970	6,839	33,984	667,972	655,544	42,988	516,540	368,347
June	922,232	184,628	128,963	14,746	6,780	34,139	693,498	681,070	44,106	534,708	387,524
July	904,044	186,300	130,417	14,698	6,736	34,449	672,748	660,320	44,996	537,414	366,631
Aug	918,692	183,951	128,171	14,685	6,642	34,452	689,906	677,479	44,834	546,066	372,626
Sep	957,860	183,796	128,795	14,657	6,605	33,738	728,554	715,738	45,510	572,879	384,981

° Assets and liabilities vis-à-vis all countries within and outside the euro area. Up to December 2000, the levels at the end of each quarter are shown, owing to revaluations, at market prices; within each quarter, however, the levels are computed on the basis of cumulative transaction values. From January 2001, all end-of-month levels are valued at market prices. 1 Mainly net claims on TARGET2 balances (according to

the respective country designation), since November 2000 also balances with non-euro-area central banks within the ESCB. 2 Mainly long-term debt securities from issuers within the euro area. 3 Including estimates of currency in circulation abroad. 4 See Deutsche Bundesbank, Monthly Report, October 2014, p. 22. 5 Euro opening balance sheet of the Bundesbank as at 1 January 1999.

XII External sector

9 Assets and liabilities of enterprises in Germany (other than banks) vis-à-vis non-residents *

€ million

End of year or month	Claims on non-residents						Liabilities vis-à-vis non-residents							
	Total	Balances with foreign banks	Claims on foreign non-banks					Total	Loans from foreign banks	Liabilities vis-à-vis foreign non-banks				
			Total	from financial operations	from trade credits					Total	from financial operations	from trade credits		
					Total	Credit terms granted	Advance payments effected					Total	Credit terms used	Advance payments received
All countries														
2012	740,809	271,964	468,845	294,248	174,597	158,825	15,772	910,837	170,262	740,575	578,391	162,184	94,292	67,892
2013	785,507	281,970	503,537	323,869	179,668	164,454	15,214	936,110	143,112	792,998	630,740	162,258	95,301	66,957
2014	822,028	278,523	543,506	357,855	185,651	170,854	14,797	939,809	150,429	789,379	624,860	164,519	98,104	66,415
2015	852,363	264,278	588,085	395,013	193,072	178,495	14,576	976,497	142,494	834,003	652,968	181,035	108,750	72,285
2016 Mar	883,207	287,250	595,957	400,697	195,260	180,437	14,822	1,027,771	165,906	861,865	679,384	182,481	108,046	74,435
Apr	890,888	298,645	592,243	397,288	194,955	179,780	15,175	1,027,429	167,545	859,884	679,990	179,894	105,422	74,472
May	881,076	281,620	599,455	405,152	194,303	179,006	15,297	1,027,622	148,798	878,823	699,546	179,278	104,941	74,337
June	880,231	275,683	604,547	404,619	199,928	184,927	15,001	1,051,943	151,906	900,037	715,827	184,209	109,968	74,241
July ^r	872,867	269,516	603,351	408,811	194,540	179,557	14,984	1,025,343	137,347	887,996	708,327	179,669	105,137	74,532
Aug	864,306	271,830	592,476	406,008	186,469	171,482	14,986	1,018,459	133,955	884,503	709,908	174,595	99,795	74,800
Industrial countries ¹														
2012	653,244	269,560	383,684	265,387	118,297	104,957	13,339	824,118	167,853	656,265	542,976	113,289	79,107	34,181
2013	694,860	278,667	416,194	294,116	122,077	108,620	13,458	849,161	141,744	707,417	593,197	114,219	79,543	34,676
2014	720,924	273,624	447,300	321,894	125,406	112,308	13,098	851,172	149,212	701,960	585,678	116,282	81,103	35,179
2015	747,289	260,378	486,912	354,225	132,687	119,558	13,129	881,625	137,526	744,099	617,932	126,168	89,593	36,575
2016 Mar	778,357	283,324	495,033	359,834	135,199	121,844	13,355	927,197	154,259	772,937	645,563	127,374	89,901	37,474
Apr	784,153	295,131	489,022	355,235	133,787	120,105	13,682	930,270	158,850	771,420	646,146	125,274	87,540	37,734
May	774,260	277,851	496,410	363,225	133,184	119,399	13,785	931,064	140,435	790,629	665,236	125,393	87,134	38,259
June	773,332	271,873	501,459	363,357	138,102	124,648	13,454	950,300	141,757	808,543	680,114	128,428	91,144	37,285
July ^r	767,312	265,844	501,468	368,406	133,062	119,682	13,380	930,002	132,545	797,457	673,228	124,229	87,151	37,078
Aug	760,154	268,213	491,941	366,016	125,926	112,537	13,389	922,122	128,036	794,087	674,646	119,440	82,285	37,155
EU member states ¹														
2012	541,602	247,534	294,068	209,426	84,642	74,167	10,474	695,152	156,550	538,602	458,488	80,114	53,607	26,507
2013	586,790	264,116	322,674	235,608	87,066	76,539	10,527	710,428	127,372	583,057	503,394	79,662	53,339	26,323
2014	606,568	258,507	348,061	259,475	88,585	77,975	10,611	712,497	134,943	577,555	496,878	80,677	53,797	26,880
2015	613,734	242,218	371,516	276,868	94,648	84,071	10,577	725,496	127,114	598,383	513,560	84,823	58,469	26,354
2016 Mar	643,718	266,225	377,494	281,292	96,201	85,399	10,803	768,240	145,494	622,746	536,094	86,652	59,707	26,945
Apr	655,949	278,786	377,162	281,741	95,422	84,334	11,087	767,248	148,165	619,084	535,043	84,041	56,975	27,065
May	645,080	260,815	384,265	288,942	95,323	84,146	11,177	766,982	130,473	636,509	552,330	84,180	56,627	27,553
June	636,918	254,792	382,126	284,614	97,513	86,675	10,838	778,440	128,084	650,357	564,103	86,253	59,287	26,966
July ^r	632,816	248,022	384,794	291,338	93,456	82,665	10,791	762,484	122,432	640,052	557,228	82,824	56,116	26,708
Aug	628,307	251,471	376,837	288,405	88,431	77,623	10,809	753,945	118,565	635,380	555,461	79,920	53,045	26,874
of which: Euro-area member states ²														
2012	392,642	188,317	204,325	149,452	54,873	48,975	5,898	572,475	110,053	462,423	408,485	53,937	36,741	17,196
2013	427,049	197,297	229,752	173,609	56,143	49,968	6,175	602,056	101,150	500,906	447,404	53,502	36,670	16,832
2014	449,392	203,069	246,323	189,755	56,568	50,348	6,220	598,660	105,883	492,777	440,290	52,487	35,568	16,919
2015	457,947	195,011	262,936	201,414	61,522	54,913	6,609	589,407	91,735	497,672	444,542	53,130	37,976	15,155
2016 Mar	472,348	204,988	267,360	205,072	62,289	55,497	6,792	620,115	100,578	519,537	464,419	55,118	39,855	15,263
Apr	479,513	208,903	270,610	207,865	62,745	55,745	7,001	624,101	107,214	516,886	463,344	53,543	38,321	15,222
May	473,673	202,636	271,037	208,569	62,468	55,501	6,967	621,900	96,071	525,829	472,502	53,327	37,892	15,434
June	469,798	198,645	271,153	207,677	63,476	56,689	6,787	634,180	96,858	537,322	482,312	55,011	39,693	15,318
July ^r	463,405	194,782	268,623	207,441	61,182	54,455	6,727	621,855	92,779	529,076	476,124	52,952	37,770	15,182
Aug	461,937	196,653	265,284	207,224	58,059	51,307	6,752	620,166	91,482	528,683	477,926	50,758	35,502	15,256
Emerging economies and developing countries ³														
2012	87,552	2,404	85,147	28,858	56,289	53,856	2,432	86,688	2,409	84,279	35,415	48,864	15,181	33,683
2013	90,640	3,303	87,337	29,751	57,586	55,829	1,757	86,946	1,368	85,578	37,543	48,035	15,755	32,280
2014	101,101	4,899	96,202	35,957	60,244	58,546	1,699	88,634	1,217	87,417	39,182	48,235	17,001	31,234
2015	104,086	3,093	100,994	40,788	60,205	58,375	1,448	90,701	997	89,704	34,836	54,868	19,157	35,710
2016 Mar	103,883	3,114	100,769	40,851	59,917	58,450	1,467	89,814	1,087	88,728	33,621	55,106	18,145	36,961
Apr	105,756	2,701	103,055	42,041	61,014	59,521	1,493	89,565	1,301	88,264	33,645	54,619	17,881	36,738
May	105,804	2,956	102,848	41,893	60,956	59,444	1,512	89,407	1,412	87,995	34,110	53,885	17,806	36,078
June	105,866	2,995	102,871	41,228	61,643	60,096	1,547	92,780	1,526	91,254	35,513	55,741	18,785	36,956
July ^r	104,512	2,855	101,656	40,370	61,286	59,682	1,604	91,998	1,659	90,339	34,900	55,440	17,986	37,453
Aug	102,875	2,566	100,309	39,957	60,351	58,754	1,597	91,449	1,272	90,176	35,062	55,114	17,470	37,645

* The assets and liabilities vis-à-vis non-residents of banks (MFIs) in Germany are shown in Table 4 of Section IV, "Banks". Statistical increases and decreases have not been eliminated; to this extent, the changes in totals are not comparable with the figures shown in Table XI.7. From December 2012 onwards, the results base on a extended survey and a new calculation method. ¹ From July 2013 including

Croatia. ² From January 2011 including Estonia; from January 2014 including Latvia; from January 2015 including Lithuania. ³ All countries that are not regarded as industrial countries. From January 2011 including Bonaire, St.Eustatius, Saba and Curacao and St.Martin (Dutch part); up to June 2013 including Croatia. ^r Corrected.

XII External sector

10 ECB's euro foreign exchange reference rates of selected currencies *

EUR 1 = currency units ...

Yearly or monthly average	Australia AUD	Canada CAD	China CNY ¹	Denmark DKK	Japan JPY	Norway NOK	Sweden SEK	Switzerland CHF	United Kingdom GBP	United States USD
1999	1.6523	1.5840	.	7.4355	121.32	8.3104	8.8075	1.6003	0.65874	1.0658
2000	1.5889	1.3706	² 7.6168	7.4538	99.47	8.1129	8.4452	1.5579	0.60948	0.9236
2001	1.7319	1.3864	7.4131	7.4521	108.68	8.0484	9.2551	1.5105	0.62187	0.8956
2002	1.7376	1.4838	7.8265	7.4305	118.06	7.5086	9.1611	1.4670	0.62883	0.9456
2003	1.7379	1.5817	9.3626	7.4307	130.97	8.0033	9.1242	1.5212	0.69199	1.1312
2004	1.6905	1.6167	10.2967	7.4399	134.44	8.3697	9.1243	1.5438	0.67866	1.2439
2005	1.6320	1.5087	10.1955	7.4518	136.85	8.0092	9.2822	1.5483	0.68380	1.2441
2006	1.6668	1.4237	10.0096	7.4591	146.02	8.0472	9.2544	1.5729	0.68173	1.2556
2007	1.6348	1.4678	10.4178	7.4506	161.25	8.0165	9.2501	1.6427	0.68434	1.3705
2008	1.7416	1.5594	10.2236	7.4560	152.45	8.2237	9.6152	1.5874	0.79628	1.4708
2009	1.7727	1.5850	9.5277	7.4462	130.34	8.7278	10.6191	1.5100	0.89094	1.3948
2010	1.4423	1.3651	8.9712	7.4473	116.24	8.0043	9.5373	1.3803	0.85784	1.3257
2011	1.3484	1.3761	8.9960	7.4506	110.96	7.7934	9.0298	1.2326	0.86788	1.3920
2012	1.2407	1.2842	8.1052	7.4437	102.49	7.4751	8.7041	1.2053	0.81087	1.2848
2013	1.3777	1.3684	8.1646	7.4579	129.66	7.8067	8.6515	1.2311	0.84926	1.3281
2014	1.4719	1.4661	8.1857	7.4548	140.31	8.3544	9.0985	1.2146	0.80612	1.3285
2015	1.4777	1.4186	6.9733	7.4587	134.31	8.9496	9.3535	1.0679	0.72584	1.1095
2015 Oct	1.5586	1.4685	7.1346	7.4601	134.84	9.2892	9.3485	1.0882	0.73287	1.1235
Nov	1.5011	1.4248	6.8398	7.4602	131.60	9.2572	9.3133	1.0833	0.70658	1.0736
Dec	1.5009	1.4904	7.0193	7.4612	132.36	9.4642	9.2451	1.0827	0.72595	1.0877
2016 Jan	1.5510	1.5447	7.1393	7.4619	128.32	9.5899	9.2826	1.0941	0.75459	1.0860
Feb	1.5556	1.5317	7.2658	7.4628	127.35	9.5628	9.4105	1.1018	0.77559	1.1093
Mar	1.4823	1.4697	7.2220	7.4569	125.39	9.4300	9.2848	1.0920	0.78020	1.1100
Apr	1.4802	1.4559	7.3461	7.4427	124.29	9.3224	9.2027	1.0930	0.79230	1.1339
May	1.5461	1.4626	7.3864	7.4386	123.21	9.3036	9.2948	1.1059	0.77779	1.1311
June	1.5173	1.4477	7.4023	7.4371	118.45	9.3278	9.3338	1.0894	0.79049	1.1229
July	1.4694	1.4428	7.3910	7.4390	115.25	9.3690	9.4742	1.0867	0.84106	1.1069
Aug	1.4690	1.4557	7.4537	7.4408	113.49	9.3030	9.4913	1.0881	0.85521	1.1212
Sep	1.4768	1.4677	7.4819	7.4475	114.22	9.1971	9.5655	1.0919	0.85228	1.1212

* Averages: Bundesbank calculations based on the daily euro foreign exchange reference rates published by the ECB; for additional euro foreign exchange reference rates, see Statistical Supplement 5, Exchange rate statistics. ¹ Up to March 2005, ECB indicative rates. ² Average from 13 January to 29 December 2000.

11 Euro-area member states and irrevocable euro conversion rates in the third stage of European Economic and Monetary Union

From	Country	Currency	ISO currency code	EUR 1 = currency units ...	
1999 January 1	Austria	Austrian schilling	ATS	13.7603	
	Belgium	Belgian franc	BEF	40.3399	
	Finland	Finnish markka	FIM	5.94573	
	France	French franc	FRF	6.55957	
	Germany	Deutsche Mark	DEM	1.95583	
	Ireland	Irish pound	IEP	0.787564	
	Italy	Italian lira	ITL	1,936.27	
	Luxembourg	Luxembourg franc	LUF	40.3399	
	Netherlands	Dutch guilder	NLG	2.20371	
	Portugal	Portuguese escudo	PTE	200.482	
	Spain	Spanish peseta	ESP	166.386	
	2001 January 1	Greece	Greek drachma	GRD	340.750
	2007 January 1	Slovenia	Slovenian tolar	SIT	239.640
2008 January 1	Cyprus	Cyprus pound	CYP	0.585274	
	Malta	Maltese lira	MTL	0.429300	
2009 January 1	Slovakia	Slovak koruna	SKK	30.1260	
2011 January 1	Estonia	Estonian kroon	EEK	15.6466	
2014 January 1	Latvia	Latvian lats	LVL	0.702804	
2015 January 1	Lithuania	Lithuanian litas	LTL	3.45280	

XII External sector

12 Effective exchange rates of the Euro and indicators of the German economy's price competitiveness *

1999 Q1=100

Period	Effective exchange rate of the Euro				Indicators of the German economy's price competitiveness								
	EER-19 ¹				EER-38 ²			Based on the deflators of total sales ³			Based on consumer price indices		
	Nominal	In real terms based on consumer price indices	In real terms based on the deflators of gross domestic product ³	In real terms based on unit labour costs of national economy ³	Nominal	In real terms based on consumer price indices ⁴	26 selected industrial countries ⁵			37 countries ⁶	26 selected industrial countries ⁵	37 countries ⁶	56 countries ⁷
							Total	Euro-area countries	Non-euro-area countries				
1999	96.3	96.0	96.1	96.0	96.5	95.8	97.8	99.5	95.8	97.6	98.2	98.0	97.7
2000	87.1	86.5	85.9	85.2	87.9	85.8	91.7	97.3	85.1	90.7	92.9	91.9	90.8
2001	87.8	87.1	86.5	86.1	90.5	86.9	91.5	96.4	85.9	90.0	92.9	91.4	90.8
2002	90.1	90.2	89.5	89.5	95.0	90.5	92.2	95.4	88.5	90.6	93.5	91.9	91.7
2003	100.7	101.2	100.4	100.8	106.9	101.4	95.6	94.5	97.6	94.8	97.1	96.5	96.7
2004	104.5	105.0	103.3	104.3	111.5	105.1	95.9	93.2	100.0	95.1	98.5	98.0	98.3
2005	102.9	103.5	101.2	102.3	109.5	102.5	94.7	91.9	99.1	92.9	98.5	96.9	96.6
2006	102.8	103.5	100.5	101.2	109.4	101.8	93.5	90.3	98.5	91.2	98.6	96.5	95.8
2007	106.3	106.2	102.4	103.5	112.9	103.8	94.4	89.4	102.5	91.5	100.9	97.9	97.0
2008	109.4	108.3	103.8	106.7	117.1	105.8	94.6	88.0	105.6	90.5	102.2	97.8	97.1
2009	110.8	109.0	104.6	111.5	120.0	106.8	94.8	88.8	104.8	91.0	101.8	98.0	97.5
2010	103.6	101.3	96.3	103.4	111.5	97.8	92.3	88.4	98.4	87.2	98.8	93.6	92.0
2011	103.3	100.2	94.2	102.1	112.2	97.2	91.9	88.2	97.8	86.4	98.2	92.8	91.3
2012	97.6	95.0	88.7	95.8	107.0	92.4	90.1	88.2	92.8	83.8	95.9	89.8	88.2
2013	101.2	98.2	91.8	98.9	111.9	95.5	92.5	88.7	98.6	85.8	98.3	91.6	90.3
2014	101.8	97.8	92.0	100.0	114.7	96.0	93.3	89.6	99.2	86.5	98.5	91.8	91.0
2015	92.4	88.4	83.9	90.7	106.5	87.8	90.9	90.7	90.9	83.2	94.7	86.9	86.3
2013 Sep	101.6	98.4			113.2	96.4					98.5	91.7	90.8
Oct	102.5	99.0			114.1	96.8					98.9	92.1	91.1
Nov	102.2	98.7	92.9	99.6	114.1	96.6	93.3	89.0	100.4	86.6	98.8	92.1	91.1
Dec	103.4	99.9			115.7	98.0					99.3	92.7	91.9
2014 Jan	103.0	99.4			115.8	97.9					99.2	92.5	91.9
Feb	103.2	99.6	93.6	101.9	116.3	98.2	93.7	89.2	100.9	87.1	99.0	92.6	92.0
Mar	104.3	100.6			117.5	99.0					99.3	93.1	92.4
Apr	104.2	100.4			117.0	98.4					99.2	93.0	92.2
May	103.6	99.5	93.4	101.4	116.1	97.3	93.6	89.5	100.2	87.3	98.8	92.6	91.5
June	102.7	98.7			115.1	96.5					98.7	92.3	91.2
July	102.3	98.2			114.7	95.9					98.6	92.2	91.0
Aug	101.5	97.4	91.3	99.5	114.0	95.3	93.0	89.6	98.4	86.3	98.4	91.8	90.7
Sep	99.9	95.9			112.3	93.9					98.0	91.0	89.9
Oct	99.1	95.0			111.8	93.2					97.6	90.4	89.4
Nov	99.0	94.9	89.6	97.3	111.9	93.2	92.8	90.0	97.3	85.5	97.7	90.3	89.5
Dec	99.0	94.8			113.1	93.8					97.6	90.2	89.8
2015 Jan	95.2	91.1			108.9	90.1					95.7	88.2	87.5
Feb	93.3	89.5	84.3	91.7	107.0	88.7	90.9	90.5	91.2	83.2	95.2	87.5	86.8
Mar	90.6	86.9			103.8	85.9					94.3	86.1	85.2
Apr	89.7	86.1			102.4	84.7					94.0	85.7	84.5
May	91.6	87.8	82.6	89.7	104.7	86.5	90.5	90.6	90.0	82.6	94.6	86.6	85.6
June	92.3	88.5			106.0	87.5					94.7	86.9	86.1
July	91.3	87.5			105.1	86.6					94.3	86.3	85.6
Aug	93.0	88.9	84.3	91.1	108.1	88.9	91.0	90.8	91.2	83.4	94.9	87.2	87.0
Sep	93.8	89.6			109.6	90.1					95.2	87.6	87.7
Oct	93.6	89.6			109.0	89.6					95.1	87.6	87.4
Nov	91.1	87.1	84.3	90.5	106.0	86.8	91.1	90.9	91.0	83.5	94.1	86.2	85.8
Dec	92.5	88.3			108.0	88.3					94.3	86.7	86.5
2016 Jan	93.6	89.1			109.9	89.6					94.5	87.2	87.3
Feb	94.7	90.0			111.3	90.8	91.5	91.2	91.8	84.3	95.0	87.6	87.7
Mar	94.1	89.5			110.0	89.9					95.0	87.4	87.3
Apr	94.8	90.1			110.6	90.2					95.4	87.9	87.6
May	95.1	90.5			111.1	90.7	91.6	91.2	92.1	84.6	95.2	88.1	87.9
June	94.7	90.2			110.5	90.3					95.0	87.9	87.6
July	94.9	90.4			110.2	89.9					95.3	88.0	87.4
Aug	95.2	90.6			110.6	90.2					95.4	88.0	87.4
Sep	95.4	90.7			110.9	90.3					95.4	88.0	87.5

* The effective exchange rate corresponds to the weighted external value of the currency concerned. The method of calculating the indicators of the German economy's price competitiveness is consistent with the procedure used by the ECB to compute the effective exchange rates of the euro (see Monthly Report, November 2001, pp 50-53, May 2007, pp 31-35 and August 2015, pp 40-42). For more detailed information on methodology see the ECB's Occasional Paper No 134 (www.ecb.eu). A decline in the figures implies an increase in competitiveness. ¹ ECB calculations are based on the weighted averages of the changes in the bilateral exchange rates of the euro against the currencies of the following countries: Australia, Bulgaria, Canada, China, Croatia, Czech Republic, Denmark, Hong Kong, Hungary, Japan, Norway, Poland, Romania, Singapore, South Korea, Sweden, Switzerland, the United Kingdom and the United States. Where current price and wage indices were not available, estimates were used. ² ECB calculations. Includes countries belonging to the EER-19 group (see footnote 1) and additional Algeria,

Argentina, Brazil, Chile, Iceland, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, Philippines, Russian Federation, South Africa, Taiwan, Thailand, Turkey and Venezuela. ³ Annual and quarterly averages. ⁴ Data for Argentina are currently not available due to the state of emergency in the national statistical system declared by the government of Argentina on 7 January 2016. As a consequence, Argentina is not included in the calculation of the EER-38 CPI deflated series from February 2016. The policy regarding the inclusion of Argentina will be reconsidered in the future depending on further developments. ⁵ Euro-area countries (from 2001 including Greece, from 2007 including Slovenia, from 2008 including Cyprus and Malta, from 2009 including Slovakia, from 2011 including Estonia, from 2014 including Latvia, from 2015 including Lithuania) as well as Canada, Denmark, Japan, Norway, Sweden, Switzerland, the United Kingdom and the United States. ⁶ Euro-area countries and countries belonging to the EER-19 group. ⁷ Euro-area countries and countries belonging to the EER-38 group (see footnote 2).

Overview of publications by the Deutsche Bundesbank

This overview provides information about selected recent economic and statistical publications by the Deutsche Bundesbank. Unless otherwise indicated, these publications are available in both English and German, in printed form and on the Bundesbank's website.

The publications are available free of charge from the External Communication Division. Up-to-date figures for some statistical datasets are also available on the Bundesbank's website.

■ Annual Report

- The supervision of less significant institutions in the Single Supervisory Mechanism

■ Financial Stability Review

February 2016

- The current economic situation in Germany

■ Monthly Report

For information on the articles published between 2000 and 2015 see the index attached to the January 2016 Monthly Report.

March 2016

- On the weakness of global trade
- German balance of payments in 2015
- Household wealth and finances in Germany: results of the 2014 survey
- The role and effects of the Agreement on Net Financial Assets (ANFA) in the context of implementing monetary policy

Monthly Report articles

November 2015

- The current economic situation in Germany

December 2015

- Outlook for the German economy – macro-economic projections for 2016 and 2017
- German enterprises' profitability and financing in 2014
- Deposit protection in Germany

April 2016

- Stock market valuations – theoretical basics and enhancing the metrics
- The Phillips curve as an instrument for analysing prices and forecasting inflation in Germany

May 2016

- The current economic situation in Germany

January 2016

- The impact of alternative indicators of price competitiveness on real exports of goods and services
- Investment in the euro area

June 2016

- Outlook for the German economy – macro-economic projections for 2016 and 2017 and an outlook for 2018

- The macroeconomic impact of quantitative easing in the euro area
- Structure and dynamics of manufacturing production depth as reflected in the financial statements of German enterprises

July 2016

- Evolution of the Bank Lending Survey since the onset of the financial crisis
- Approaches to resolving sovereign debt crises in the euro area
- Bank recovery and resolution – the new TLAC and MREL minimum requirements

August 2016

- The current economic situation in Germany

September 2016

- Distributional effects of monetary policy
- Globalisation and the transmission of global financial shocks to the euro-area countries – implications for (national) economic policy
- The performance of German credit institutions in 2015

October 2016

- Local government finances: Development and selected aspects
- Significance and impact of high-frequency trading in the German capital market

Statistical Supplements to the Monthly Report

- 1 Banking statistics^{1, 2}
- 2 Capital market statistics^{1, 2}
- 3 Balance of payments statistics^{1, 2}
- 4 Seasonally adjusted business statistics^{1, 2}
- 5 Exchange rate statistics²

Special Publications

Makro-ökonomisches Mehr-Länder-Modell, November 1996³

Europäische Organisationen und Gremien im Bereich von Währung und Wirtschaft, May 1997³

Die Zahlungsbilanz der ehemaligen DDR 1975 bis 1989, August 1999³

The market for German Federal securities, May 2000

Macro-Econometric Multi-Country Model: MEMMOD, June 2000

Bundesbank Act, September 2002

Weltweite Organisationen und Gremien im Bereich von Währung und Wirtschaft, March 2013³

Die Europäische Union: Grundlagen und Politikbereiche außerhalb der Wirtschafts- und Währungsunion, April 2005³

Die Deutsche Bundesbank – Aufgabenfelder, rechtlicher Rahmen, Geschichte, April 2006³

European economic and monetary union, April 2008

■ Special Statistical Publications

- 1 Banking statistics guidelines, July 2016^{2, 4}
- 2 Bankenstatistik Kundensystematik, July 2016^{2, 3}
- 3 Aufbau der bankstatistischen Tabellen, July 2013^{2, 3}
- 4 Financial accounts for Germany 2010 to 2015, May 2016²
- 5 Hochgerechnete Angaben aus Jahresabschlüssen deutscher Unternehmen von 1997 bis 2013, May 2015^{2, 3}
- 6 Verhältniszahlen aus Jahresabschlüssen deutscher Unternehmen von 2012 bis 2013, May 2016^{2, 3}
- 7 Notes on the coding list for the balance of payments statistics, September 2013²
- 8 The balance of payments statistics of the Federal Republic of Germany, 2nd edition, February 1991^o
- 9 Securities deposits, August 2005
- 10 Foreign direct investment stock statistics, April 2016^{1, 2}
- 11 Balance of payments by region, July 2013
- 12 Technologische Dienstleistungen in der Zahlungsbilanz, June 2011³

■ Discussion Papers*

- 32/2016
 Below the zero lower bound – a shadow-rate term structure model for the euro area
- 33/2016
 Optimal unemployment insurance and international risk sharing
- 34/2016
 Cross-border transmission of emergency liquidity
- 35/2016
 Solving RE models with discontinuous policy rules – an application to minimum wage setting in Germany
- 36/2016
 On the suitability of alternative competitiveness indicators for explaining real exports of advanced economies
- 37/2016
 Potential implications of a NSFR on German banks' credit supply and profitability
- 38/2016
 The effects of government bond purchases on leverage constraints of banks and non-financial firms
- 39/2016
 Learning about banks' net worth and the slow recovery after the financial crisis
- 40/2016
 Thoughts on a fiscal union in EMU
- 41/2016
 Financial shocks and inflation dynamics

^o Not available on the website.

* As of 2000 these publications have been made available on the Bundesbank's website in German and English. Since the beginning of 2012, no longer subdivided into series 1 and series 2.

For footnotes, see p 86•.

■ Banking legislation

- 1 Bundesbank Act, July 2013, and Statute of the European System of Central Banks and of the European Central Bank, June 1998
- 2 Banking Act, July 2014²

2a Solvency Regulation, December 2006²
Liquidity Regulation, December 2006²

- 1 Only the headings and explanatory notes to the data contained in the German originals are available in English.
- 2 Available on the website only.
- 3 Available in German only.
- 4 Only some parts of the Special Statistical Publications are provided in English. The date refers to the German issue, which may be of a more recent date than the English one.