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

Postal address
Postfach 10 06 02
60006 Frankfurt am Main
Germany

Tel +49 69 9566 0

Fax +49 69 9566 3077

<http://www.bundesbank.de>

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■ Contents

■ Commentaries	5
Economic conditions.....	5
Public finances.....	7
Securities markets.....	9
Balance of payments.....	11
■ Monetary policy indicators at the lower bound based on term structure models	13
<i>A lower bound model for the euro area including survey data</i>	18
<i>Analysis of the impact of monetary policy shocks on macroeconomic variables using the effective monetary stimulus indicator</i>	30
■ Distributed ledger technologies in payments and securities settlement: potential and risks	35
<i>Blockchain research project</i>	47
■ The performance of German credit institutions in 2016	51
<i>Methodological notes</i>	53
<i>New discounting methodology for calculating pension obligations</i>	55
<i>Overview of the results of the 2017 low-interest-rate survey</i>	57
■ Changes to the investment funds statistics: scope enhancements, results and outlook	87
<i>Calculating performance indices for securities-based investment funds</i>	91

■ 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 Data unknown, not to be published or not meaningful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

German economy remains on steep growth path in Q3 2017

The German economy is likely to have continued on its steep growth path in the third quarter of 2017, albeit with slightly less momentum than in the first half of the year. While brisk industrial activity remains an important driver of growth, as in the first half of the year, the economic indicators show that at the start of the third quarter it was somewhat more moderate than the continuing buoyant mood among industrial enterprises would imply. Nevertheless, the persistently high level of new industrial orders dampened of late only by a – presumably temporary – lack of large orders, the continued extremely buoyant construction activity, the exceptionally upbeat sentiment among consumers and the undiminished substantial growth in employment are testament to a very good economic situation.

Industry

Industrial output up again slightly

Industrial activity recovered in July from its short but significant setback of the previous month and returned to the upward trend seen since the beginning of the year. In July, industrial output was up by a seasonally adjusted ¼% on the upwardly revised June level; it was thus slightly higher than the average of the second quarter. While output of intermediate goods rose significantly (+1%), producers of capital and consumer goods suffered some small setbacks (-½% and -¼% respectively). Holiday effects, which are often responsible for severe fluctuations in the summer months, clearly did not play a key role this year.

New orders dampened by weak large orders

In July, industrial orders fell by ¾% in seasonally adjusted terms on the month. The principal dampener was the low level of large orders, with orders otherwise up ½% in seasonally ad-

justed terms. Overall, the inflow of new orders slightly exceeded the average of the second quarter (+¼%) and excluding large orders was up a clear 1½%. In regional terms, the lack of large orders was evident primarily in orders from the euro area, where there was a significant decrease overall compared with the average of the second quarter (-2%). By contrast, domestic orders (+¾%) and orders from non-euro area countries (+1%) were clearly up on their average volume in the second quarter. In the breakdown by sector, orders for intermediate goods and capital goods expanded by 1% and ¼% respectively, while the inflow of orders for consumer goods contracted sharply following the steep growth in the second quarter (-2¾%).

Compared with June, industrial sales decreased by ¼% in seasonally adjusted terms, falling back to the average level of the preceding quarter. While sales to domestic customers were down, turnover with counterparties from the euro area and non-euro area countries increased. Nominal exports of goods rose slightly on the month (+¼%) but were still significantly below the average of the second quarter (-1¼%). After the elimination of price effects, the decline was more moderate. By contrast, in terms of value, the imports of goods posted a very steep month-on-month increase (+2¼%), also clearly surpassing the level of the second quarter after adjustment for price effects.

Industrial sales virtually unchanged, foreign trade up again

Construction

In July, construction output rose by a seasonally adjusted ½% on the month, which was nonetheless slightly short of the average level in the second quarter (-¼%). Activity in the main construction sector contracted distinctly compared with the second quarter (-¾%), with the decrease impacting both general construction and civil engineering. By contrast, output in the

Construction output remains at high level

Economic conditions in Germany*				
Seasonally adjusted				
Orders received (volume); 2010 = 100				
Period	Industry			Main construction
	Total	of which		
		Domestic	Foreign	
2016 Q4	115.0	109.5	119.5	133.0
2017 Q1	113.8	107.6	118.9	133.5
Q2	114.7	108.0	120.2	130.0
May	114.8	105.6	122.3	125.4
June	115.8	110.7	120.0	130.3
July	115.0	108.9	120.0	...
Output; 2010 = 100				
Period	Industry			Construction
	Total	of which		
		Intermediate goods	Capital goods	
2016 Q4	111.8	107.7	119.2	108.2
2017 Q1	113.3	109.0	120.8	112.6
Q2	114.9	110.8	122.5	115.8
May	115.8	110.9	124.2	115.5
June	114.6	110.3	122.3	114.9
July	115.0	111.8	121.9	115.5
Foreign trade; € billion				
Period	Exports	Imports	Balance	Memo item Current account balance in € billion
	2016 Q4	305.75	245.64		60.11	62.04
2017 Q1	314.38	254.50	59.88	64.51
Q2	319.22	258.13	61.09	59.10
May	107.94	87.65	20.29	19.56
June	104.99	83.79	21.20	23.70
July	105.18	85.64	19.54	21.14
Labour market				
Period	Employment	Vacancies ¹	Unemployment	Unemployment rate in %
	Number in thousands			
2016 Q4	43,872	679	2,644	6.0
2017 Q1	44,083	693	2,585	5.9
Q2	44,221	712	2,544	5.7
June	44,269	721	2,545	5.7
July	44,311	732	2,537	5.7
Aug	...	741	2,532	5.7
Prices				
Period	Import prices	Producer prices of industrial products	Construction prices ²	Harmonised consumer prices
	2010 = 100			2015 = 100
2016 Q4	100.0	103.1	114.1	101.0
2017 Q1	102.3	104.3	115.5	101.5
Q2	101.1	104.5	116.6	101.8
June	100.1	104.4	.	101.9
July	99.9	104.6	.	102.1
Aug	...	...	.	102.2

* 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.

finishing trades increased markedly (+1/2%). New orders in the main construction industry in the second quarter – the last period for which figures are available – fell by a seasonally adjusted 2 1/2% compared with the high level of the first quarter. Nevertheless, a sustained wide range of orders, a persistently high number of building permits, a record high assessment of the current situation and improving expectations indicate buoyant construction activity.

Labour market

Employment continued its steep ascent at the beginning of the third quarter. In July, the seasonally adjusted number of persons in work overall in Germany went up by 42,000 on the month. The year-on-year rate of increase, at 1.6% or 698,000 persons, was exceptionally steep. The extremely favourable overall development is predominantly driven by the ongoing expansion in employment subject to social security contributions. However, the reference value of +809,000 employees for the same month one year earlier – the estimate here referring to June – has a slight upward bias.¹ By contrast, the number of persons working exclusively in low-paid part-time jobs has been in decline for some time now. The number of self-employed persons, which had also fallen previously, seems to have stabilised of late, however. Leading indicators of the demand for labour such as the Ifo employment barometer, the Federal Employment Agency's BA-X job index or the labour market barometer of the Institute for Employment Research (IAB) are all at a very high level, suggesting the positive job growth is set to continue in the next few months.

Strong increase in employment; outlook remains favourable

¹ This is based on figures for employment subject to social security contributions being underreported for June and July 2016 owing to a processing error in the registration of jobs subject to social security contributions at the Federal Employment Agency. According to the Federal Employment Agency, although the figures from August last year onwards were corrected in spring 2017, the revision of June and July 2016, the first two months affected, is not planned until a later point in time.

Registered unemployment remains at low level

In August, seasonally adjusted unemployment was only marginally down on the month. There were 2.53 million persons registered as unemployed with the Federal Employment Agency, with the unemployment rate holding steady at 5.7%. Compared with the same month one year earlier, 139,000 fewer persons were out of work, and the unemployment rate was 0.4 percentage point lower. The unemployment component of the IAB labour market barometer moved close to the neutral threshold recently, which means that a more sideways movement is to be expected in the next few months.

Prices

Crude oil prices higher again

In August, crude oil prices were up by just over 4½% on the previous month's level. This was due not only to expectations of a reduced supply, but at times also to production losses and lower inventories. Crude oil prices went up further in the first half of September. As this report went to press, the price of a barrel of Brent crude oil stood at US\$55½, with crude oil futures now being traded at a slight discount.

Decline in import prices excluding energy, but rise in producer prices

Import prices fell further in seasonally adjusted terms in July. Energy prices increased but the importing of other goods became distinctly cheaper against the backdrop of the marked appreciation of the euro. By contrast, the strengthening euro had hardly any impact on industrial producer prices, which were up slightly both in aggregate terms and excluding energy. The year-on-year figure fell to 1.9% overall in the case of import prices and remained approximately constant at +2.3% in the case of industrial producer products sold domestically.

Consumer prices continue to rise

Consumer prices (HICP) continued to rise in August, increasing by 0.1% in seasonally adjusted terms. Non-energy industrial goods became more expensive, mainly due to a significant increase in clothing prices with the introduction of new collections. There was no decline in the

prices of other non-energy industrial goods, despite the steep appreciation of the euro. Energy and food prices went up only slightly overall. In the case of services, marked reductions in the prices of travel services were largely offset by other services becoming more expensive. Annual headline HICP inflation increased from +1.5% to +1.8% (with CPI also up from +1.7% to +1.8%), while HICP inflation excluding energy and food held steady at +1.5%. In the autumn, headline inflation is likely to fall temporarily, mainly reflecting base effects, but core inflation is set to pick up gradually.

Public finances

Statutory health insurance scheme

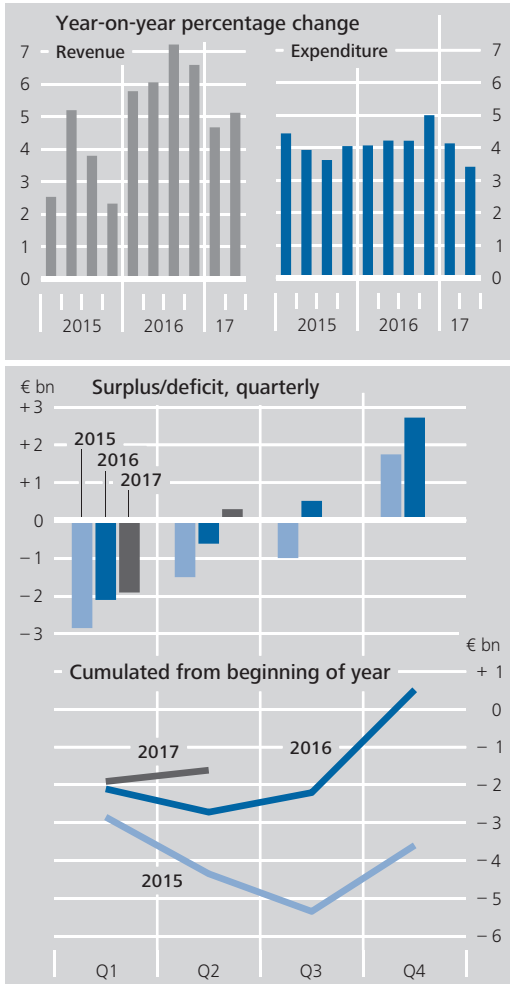
Overall, the statutory health insurance (SHI) scheme posted a slight surplus of almost €½ billion in the second quarter of 2017, compared with a deficit of €½ billion in the same period last year. A financial improvement was seen in both areas of the scheme. The health insurance institutions, still experiencing much weaker than expected expenditure growth, increased their surplus by €½ billion on the year, while the health fund reduced its deficit by just under €½ billion thanks to a continued rise in contribution receipts. The health fund made special transfers – which are to be drawn from its reserves – totalling €½ billion, primarily to the health insurance institutions.

Continued financial improvement in SHI scheme

The health insurance institutions' revenue, which mainly consists of transfers from the health fund, rose by 4½%, while growth in their expenditure (+3½%) was, by contrast, perceptibly lower. Above all, the major expenditure items pharmaceuticals (+2½%) and hospital treatment (+3%) increased only moderately. In addition, less significant items such as sickness benefit also saw disproportionately low spending growth, with home nursing even experiencing a substantial decline. On the other hand, the rise in outlays on remedies and

Lower than expected expenditure growth drives up health insurance institutions' surplus

Finances of the statutory health insurance scheme*



Source: Federal Ministry of Health. * Health fund and health insurance institutions (consolidated). Preliminary quarterly results.
 Deutsche Bundesbank

4½%, growth in expenditure lagged behind that in revenue.

For 2017 as a whole, the scheme's finances look likely to be in better shape than projected by the group of statutory health insurance estimators last autumn. In view of the sharp increase in contribution receipts, the health fund should post a significantly better result than the estimated deficit of €2 billion. As things stand, expenditure growth will probably also be markedly weaker than forecast last autumn (+5%). Consequently, instead of a balanced budget the health insurance institutions are set to record a distinct surplus again. At present, the statutory health insurance scheme as a whole is probably also benefiting on balance from the considerable increase of just over 1% in the number of insured persons. A sizeable portion of this rise is accounted for by immigrant workers, a group with a financially advantageous age structure. All in all, the health insurance institutions, at least, can be expected to continue building up their reserves. Even disregarding the special grant paid this year, this will allow the institutions more scope to reduce additional contribution rates. Rate cuts would not only lessen the burden on insured persons but would also make it easier for the health insurance institutions and legislators to refuse further demands from providers.

Favourable financial situation makes cuts to additional contribution rates more likely

therapeutic appliances (+6%) and outpatient treatment (+5%), among other items, was above average.

Strong contribution receipts improve health fund's finances

The health fund's total revenue and its contribution receipts both increased by 5% (with the average additional contribution rate remaining unchanged). This was because, on aggregate, the expansion in gross wages and salaries remained strong and the particularly large pension increase in mid-2016 continued to affect the rise. With growth of 3½%, the planned increase of €½ billion per year in the central government grant (to its new standard level of €14½ billion per year) also made an impact. At

Public long-term care insurance scheme

The public long-term care insurance scheme finished the second quarter of 2017 with a deficit of €½ billion in the core area.² This amounted to a deterioration of €½ billion on the year, due mainly to the benefit expansions brought in under the second Act to Strengthen Long-term Care (*Pflegestärkungsgesetz II*). As a

Significant benefit expansions continue to drive down result in Q2

² The developments outlined here and below exclude the long-term care provident fund. Since 2015, the core area has taken the receipts from 0.1 percentage point of the contribution rate (just under €½ billion in the second quarter of 2017) and transferred them to this fund.

result, the additional revenue generated by the contribution rate rise³ of 0.2 percentage point was not sufficient to offset the scheme's substantial cost increases.

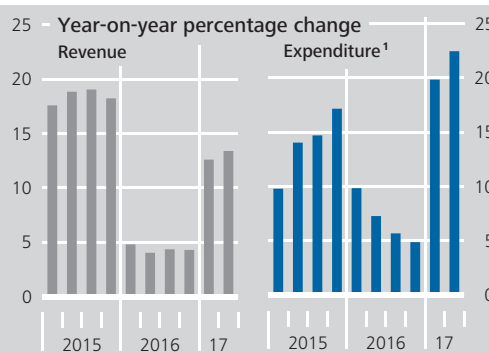
Substantial additional expenditure in all benefit areas

While revenue increased very sharply (by 131½%) in view of the contribution rate rise,⁴ expenditure growth was much stronger still (+221½%). The impact of the substantial spending increases triggered by the reformed range of benefits can be seen in all benefit areas. Outlays on benefits in kind, a particularly large expenditure item, rose by 15%, while the less significant item monetary benefits saw growth of 451½%.

Significant deficit likely for year as whole, with high expenditure growth continuing

The benefit expansions introduced under the second Act to Strengthen Long-term Care appear to be driving up spending without a substantial time lag. As things stand, the extremely strong expenditure growth can be expected to continue through to the end of the year, which means that a significant operational deficit is likely to be recorded for 2017 as a whole. Aside from the recent expansion of benefits, strong cost pressures are set to emerge as a result of demographic change. Consequently, further contribution rate rises are foreseeable once the freely available portion of the long-term care insurance institutions' operational reserves⁵ is fully depleted, if not before. Although the transfers to the long-term care provident fund are to be terminated in 2035 and its accumulated reserves subsequently run down, this will only moderately curb the necessary contribution rate rises.

Finances of the public long-term care insurance scheme*



Source: Federal Ministry of Health. * Preliminary quarterly results (PV45). ¹ Including the transfers to the long-term care provident fund.
 Deutsche Bundesbank

bonds declined by a net €17.3 billion after already having contracted by €1.1 billion in June. The outstanding volume of foreign debt securities in the German market, on the other hand, rose by €9.8 billion, which meant that the out-

Securities markets

Bond market

Net redemptions in the German bond market

At €86.0 billion, gross issuance in the German bond market in July 2017 was slightly up on the June figure (€77.3 billion). However, after taking account of increased redemptions and changes in issuers' holdings of their own debt securities, the outstanding volume of domestic

³ On 1 January 2017, the contribution rates were raised from 2.35% to 2.55% (plus an extra 0.25 percentage point in each case for childless persons). At the beginning of 2015, in parallel with an expansion of benefits, the contribution rate had already been increased by 0.3 percentage point.

⁴ After adjustment for the contribution rate rise, growth stood at around 4½%.

⁵ In total, these reserves amounted to €8½ billion and were thus far above the statutory minimum of 50% of regular monthly expenditure (currently just under €1½ billion).

Sales and purchases of debt securities

€ billion

Item	2016	2017	
	July	June	July
Sales			
Domestic debt securities ¹	- 26.6	- 1.1	- 17.3
<i>of which</i>			
Bank debt securities	- 16.3	2.9	- 7.2
Public debt securities	- 11.4	1.8	- 18.2
Foreign debt securities ²	- 3.9	4.7	9.8
Purchases			
Residents	- 1.2	10.9	11.0
Credit institutions ³	- 10.0	- 11.7	- 6.5
Deutsche Bundesbank	18.1	12.9	11.6
Other sectors ⁴	- 9.3	9.8	5.9
<i>of which</i>			
Domestic debt securities	- 14.4	3.4	- 5.2
Non-residents ²	- 29.3	- 7.3	- 18.4
Total sales/purchases	- 30.5	3.6	- 7.4

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

briefe (to the tune of €2.2 billion and €2.1 billion respectively). By contrast, public Pfandbriefe worth €0.2 billion net were issued.

In the month under review, domestic enterprises placed debt securities worth €8.2 billion net on the market. On balance, this was largely attributable to non-financial corporations. Other financial institutions also issued new bonds, however.

The Bundesbank was the main buyer of debt securities in July, acquiring a total net €11.6 billion worth of bonds, not least under the Eurosystem's asset purchase programmes. Domestic non-banks expanded their bond portfolios by €5.9 billion. The focus of buyer interest here was on foreign securities. By contrast, foreign investors sold bonds for €18.4 billion net. German credit institutions likewise offloaded debt securities worth €6.5 billion net. These were largely domestic securities.

Rise in enterprises' capital market debt

Purchases of debt securities

standing volume of domestic and foreign debt instruments in Germany decreased by €7.4 billion on balance.

The public sector redeemed own bonds totalling €18.2 billion net in the reporting month. It was mainly central government that reduced its capital market debt (€16.6 billion), redeeming primarily ten-year Federal bonds (Bunds) totalling €15.8 billion. This contrasted with net issuance of five-year Federal notes (Bobls) to the amount of €3.0 billion. State and local governments redeemed bonds with a net value of €1.6 billion.

German credit institutions reduced their capital market debt by €7.2 billion in July. In particular, the outstanding volume of other bank debt securities that can be structured flexibly fell by €3.0 billion. There were also net redemptions of debt securities issued by specialised credit institutions (which include public promotional banks, for example) as well as mortgage Pfand-

Decline in capital market debt of the public sector

Net redemptions by credit institutions

Equity market

In the month under review, shares totalling €0.5 billion net were issued in the German equity market. The majority of issues emanated from listed enterprises. Sales of foreign shares in Germany totalled €2.2 billion in the same period. Domestic non-banks in particular dominated the buyers' side of the market, adding shares worth €4.5 billion net to their portfolios. By contrast, non-resident investors and domestic credit institutions sold equities in the amount of €1.0 billion and €0.7 billion net respectively.

Negligible net issuance in the German equity market

Mutual funds

In July, domestic mutual funds recorded inflows of €9.7 billion, the lion's share of which was received by specialised funds reserved for institutional investors (€5.2 billion). Of the various asset classes, mixed securities funds (€3.4 billion) and equity funds (€3.3 billion) were the main beneficiaries, as were open-end real es-

German mutual funds record inflows

tate funds (€1.4 billion) and bond funds (€1.2 billion), albeit to a lesser extent. Foreign mutual funds sold shares totalling €3.9 billion net in the German market. On balance, domestic non-banks were virtually the only purchasers of mutual fund shares in the reporting month (€12.1 billion). Foreign investors and German credit institutions acquired mutual fund shares worth €0.9 billion and €0.7 billion net respectively.

■ Balance of payments

Current account surplus down

Germany's current account recorded a surplus of €19.4 billion in July 2017. The result was €5.6 billion down on the level of the previous month. This was caused in around equal measure by declines in both the goods account surplus and the invisible current transactions balance comprising services as well as primary and secondary income.

Reduced surplus in goods trade

The July surplus on the goods account was €2.8 billion down on the month at €22.2 billion. Exports of goods fell more strongly than imports of goods.

Invisible current transactions record deficit

The balance of invisible current transactions, which had been balanced in the previous month, fell by €2.8 billion in July to a deficit of the same. This was mainly due to the services account deficit growing by €2.4 billion to €3.8 billion. On the one hand, this was caused by the usual seasonal increase in travel expenditure; on the other hand, however, the high level of receipts from IT and other business services in the previous month could not be maintained. Net expenditure in secondary income also rose. In this case, the deficit widened by €0.8 billion to €4.4 billion, mainly due to lower general government revenue from current taxes on income and wealth of non-residents. The slight increase in the primary income surplus of €0.4 billion to €5.4 billion in the reporting month narrowed the deficit to a degree.

Major items of the balance of payments

€ billion

Item	2016	2017	
	July	June	JulyP
I Current account	+ 18.3	+ 25.0	+ 19.4
1 Goods ¹	+ 20.8	+ 25.0	+ 22.2
Exports (fob)	95.1	107.1	103.7
Imports (fob)	74.3	82.1	81.5
<i>Memo item</i>			
Foreign trade ²	+ 19.1	+ 22.3	+ 19.5
Exports (fob)	96.0	107.3	103.7
Imports (cif)	76.9	85.0	84.2
2 Services ³	- 3.5	- 1.4	- 3.8
Receipts	20.4	23.7	22.0
Expenditure	23.9	25.2	25.8
3 Primary income	+ 4.5	+ 5.1	+ 5.4
Receipts	15.1	16.3	15.2
Expenditure	10.6	11.3	9.8
4 Secondary income	- 3.4	- 3.6	- 4.4
II Capital account	- 0.1	+ 0.3	+ 0.6
III Financial account (increase: +)	+ 18.1	+ 38.9	+ 17.4
1 Direct investment	+ 7.1	+ 4.1	+ 0.3
Domestic investment abroad	+ 1.0	+ 12.7	+ 3.2
Foreign investment in the reporting country	- 6.1	+ 8.5	+ 2.9
2 Portfolio investment	+ 29.9	+ 20.9	+ 33.4
Domestic investment in foreign securities	- 0.6	+ 7.1	+ 14.8
Shares ⁴	+ 1.8	+ 2.3	+ 1.1
Investment fund shares ⁵	+ 1.5	+ 0.1	+ 3.9
Long-term debt securities ⁶	- 1.1	+ 4.8	+ 9.2
Short-term debt securities ⁷	- 2.8	- 0.1	+ 0.6
Foreign investment in domestic securities	- 30.5	- 13.8	- 18.6
Shares ⁴	+ 0.2	- 5.9	- 1.1
Investment fund shares	- 1.4	- 0.7	+ 0.9
Long-term debt securities ⁶	- 15.5	- 0.7	- 15.9
Short-term debt securities ⁷	- 13.8	- 6.6	- 2.5
3 Financial derivatives ⁸	+ 3.2	- 0.3	- 0.2
4 Other investment ⁹	- 22.4	+ 13.7	- 16.6
Monetary financial institutions ¹⁰	- 16.4	+ 33.2	- 16.9
<i>of which</i>			
Short-term Enterprises and households ¹¹	- 14.7	+ 35.9	- 19.3
General government	+ 12.3	+ 3.5	- 1.1
Bundesbank	+ 3.0	- 1.9	- 3.6
Reserve assets	- 21.3	- 21.0	+ 5.0
5 Reserve assets	+ 0.3	+ 0.4	+ 0.5
IV Errors and omissions ¹²	0.0	+ 13.6	- 2.6

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 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.

*Capital exports
in portfolio
investment*

In July, the international financial markets were characterised by robust global economic activity and the market expectations surrounding monetary policy in the euro area and the United States in particular. Against this backdrop, German cross-border portfolio investment generated net capital exports of €33.4 billion. More than half of these outflows were attributable to net sales and redemptions of domestic securities (€18.6 billion) held by non-resident investors. Much of this amount was accounted for by bonds (€15.9 billion), and by public sector bonds in particular. Furthermore, non-residents offloaded money market instruments (€2.5 billion) and shares (€1.1 billion), though they acquired a small volume of investment fund shares (€0.9 billion). Domestic investors topped up their portfolios of foreign securities (€14.8 billion). They mostly invested in bonds (€9.2 billion), but also took up investment fund shares (€3.9 billion), shares (€1.1 billion), and money market instruments (€0.6 billion).

Direct investment sees net capital exports

In direct investment, net capital exports of €0.3 billion were recorded in July. New investment abroad by domestic enterprises (€3.2 billion) was attributable to an increase in equity capital, with reinvested earnings also playing a role (€1.2 billion). Lending to affiliated enterprises,

on the other hand, turned negative in July (€1.2 billion) on account of a reduction in trade credits (€2.1 billion). Foreign direct investors supplied their affiliates in Germany with funds totalling €2.9 billion. This was done through the provision of additional equity capital (€1.9 billion) as well as credit facilities (€1.0 billion) – and only using loans, with reduced trade credits.

Other statistically recorded investment, which comprises loans and trade credits (where these do not constitute direct investment), bank deposits and other investments, saw net capital imports of €16.6 billion in July. In this context, German claims on non-residents (€23.4 billion) fell more sharply than liabilities (€6.9 billion). It was commercial banks above all that saw capital inflows (€16.9 billion net), while enterprises and individuals recorded €1.1 billion. General government likewise posted net capital imports (€3.6 billion). By contrast, net capital exports (€5.0 billion) were predominant at the Bundesbank. While TARGET2 claims fell slightly in July, by €4.3 billion, there was also a decline in the Bundesbank's liabilities, which more than made up for this.

Measured at transaction values, the Bundesbank's reserve assets rose by €0.5 billion in July.

*Capital imports
in other investment*

Reserve assets

Monetary policy indicators at the lower bound based on term structure models

Making appropriate monetary policy decisions is predicated on reliable information about the monetary policy stance. To this end, monetary policy indicators measure the extent to which monetary policy is expansionary or restrictive and form the basis for analyses examining the effect of monetary policy on the real economy and inflation. A short-term interest rate is typically used here as it serves as the starting point for policy rates.

However, in response to the financial and sovereign debt crisis, the Eurosystem set out to preserve price stability not only by cutting policy rates but also by adopting a set of expansionary non-standard measures. As increasing use was made of these unconventional measures, the informative value of the short-term interest rate as a monetary policy indicator diminished over time and led to a growing need for alternative indicators. This applies to the monetary policy asset purchase programmes, in particular, as they are aiming to lower longer-term interest rates now that the lower bound on short-term interest rates has been reached.

Monetary policy indicators that take into account such measures can, in principle, be calculated using term structure data in conjunction with appropriate theoretical models. Examples from the latest research are the “shadow short rate”, the “crossing time” and the “effective monetary stimulus”. They are presented in this article and discussed with respect to their information content and benefit to monetary policymakers. All in all, it is clear that deriving and estimating these indicators is fraught with a high degree of uncertainty. Nevertheless, all individual indicators suggest that the measures undertaken by the Eurosystem have enabled it to achieve an even more accommodative monetary policy stance.

Although monetary policy indicators are used to evaluate the monetary policy stance, it is impossible to establish by means of these indicators alone whether this monetary policy stance is appropriate. In view of this, the Eurosystem’s monetary policy strategy takes into account a number of economic, price, credit and financial indicators that can be interpreted in terms of their implications for the medium-term inflation outlook and that ultimately make it possible to gauge the appropriateness of the monetary policy stance.

Eurosystem responses to the financial and sovereign debt crisis

■ Introduction

In response to the financial and sovereign debt crisis, the Eurosystem has, since 2007, set out to preserve price stability not only by cutting policy rates but also by adopting a set of non-standard measures designed to counteract the negative impact on the financial system and macroeconomic developments. Prior to June 2014, the primary objective of these measures was to safeguard the functioning of the monetary policy transmission process; however, given the subdued medium-term inflation outlook and with market-based inflation expectations falling, the Eurosystem subsequently made further cuts to monetary policy rates and undertook a series of further non-standard measures with the explicit aim of achieving an even more accommodative monetary policy stance.¹

Targeted longer-term refinancing operations and asset purchase programmes since June 2014

These measures included the launch of two series of targeted longer-term refinancing operations (TLTROs), the asset-backed securities purchase programme (ABSPP) and the third covered bond purchase programme (CBPP3), as well as the launch of the expanded asset purchase programme (APP) in January 2015. The last of these includes not only the pre-existing ABSPP and CBPP3 but also the subsequently launched corporate sector purchase programme (CSPP) and the public sector purchase programme (PSPP), the most significant programme in terms of purchase volume. In December 2016, the ECB Governing Council decided to continue conducting asset purchases under the APP until December 2017, or beyond, if necessary, and in any case until the Governing Council saw a sustained adjustment in the path of inflation consistent with its inflation target. In doing so, its aim is to achieve inflation rates below, but close to, 2% over the medium term.

It is crucial for monetary policymakers to be able to assess the impact of their measures on an ongoing basis and thus gauge the appropriateness of the monetary policy stance. For this

purpose, they need to be able to measure the monetary policy stance in as close to real time as possible. Prior to the financial crisis, this was reflected fairly well in short-term interest rates. Furthermore, in order to assess appropriateness, changes in short-term interest rates were interpreted together with additional economic, price, credit and financial indicators with respect to their implications for the medium-term inflation outlook. However, a landscape in which non-standard monetary policy measures feature heavily makes measuring the monetary policy stance a far more challenging task. This is especially true if monetary policymakers find themselves at the lower bound and therefore move away from changing policy rates, focusing instead on employing unconventional measures in an attempt to shift the monetary policy stance.

Measuring monetary policy stance challenging in view of large number of non-standard measures

This article presents a selection of alternative indicators for measuring the monetary policy stance and discusses their respective strengths and weaknesses. Given the key role played by long-term interest rates in monetary policy transmission and the focus of significant non-standard monetary policy measures on longer-term interest rates, the indicators presented here are based on term structure information – in other words, on interest data at differing maturity dates. Building on this, this article reveals the extent to which, in the context of the measures adopted by the Eurosystem in the low-interest-rate environment, these indicators signal a change in the monetary policy stance over time.

■ Measuring the monetary policy stance at the lower bound

First, central banks with mandates to preserve price stability need indicators that provide in-

¹ See Deutsche Bundesbank, The macroeconomic impact of quantitative easing in the euro area, Monthly Report, June 2016, pp 29-53.

Eurosystem's monetary policy strategy based on broad analyses assessing medium-term inflation outlook

formation on the future path of the inflation rate if they are to assess the current monetary policy situation. Given the long and varying time lags in monetary policy and incomplete knowledge of potential changes in structural relationships in an economy, this information (and what it means for price developments) is particularly uncertain. The Eurosystem's monetary policy strategy therefore focuses on broad-based analyses of the inflation outlook and incorporates a number of economic, price, credit and financial indicators that can be interpreted in terms of their implications for the medium-term inflation outlook.

Short-term interest rate was a highly informative indicator before crisis erupted, ...

Second, central banks need indicators that enable them to directly assess the impact of their policies. It is typically assumed that there is a close link between the use of monetary policy instruments and general financing conditions, as well as a link between the latter and economic developments.² In simplified terms, monetary policymakers signal a change in the monetary policy stance by revising policy rates. In doing so, they steer current short-term interest rates and shape expectations about how they will move in future. This, in turn, has an impact on long-term interest rate developments and, as a result of changes in general financing conditions, the macroeconomic environment and loan dynamics, too. As a result, the short-term interest rate is usually considered a sufficiently informative indicator for measuring the monetary policy stance and therefore typically has broad theoretical and empirical applications in the analysis of monetary policy effects.³

... but informative content has diminished over time due to increasing use of non-standard measures

Against the backdrop of the financial and sovereign debt crisis, the informative value of the short-term interest rate as a monetary policy indicator has diminished. This was caused, in particular, by using non-standard monetary policy measures in an environment in which the scope for further policy rate cuts became increasingly constrained by the lower bound. For instance, some of the unconventional measures aim to shape the expected path of

short-term interest rates, reduce the maturity, credit risk or liquidity risk premiums priced into longer-term interest rates or even improve banks' financing situation by means of targeted long-term refinancing operations, thereby raising the credit supply.

The PSPP's specific objective is to reduce yields on long-term bonds by lowering the term premiums demanded by market participants for assuming interest rate risk ("duration channel").⁴ Going beyond that, the Eurosystem is announcing and conducting asset purchases with the expectation that market participants will regard these moves as an indication – in addition to forward guidance regarding the future policy rate path – that the Eurosystem plans to maintain its accommodative monetary policy stance and, in particular, low short-term interest rates for a prolonged period ("signaling channel").

Need for alternative monetary policy indicators

² For a comprehensive overview of monetary policy transmission, particularly via the exchange rate channel, see Deutsche Bundesbank (2016), op cit, p 35; Deutsche Bundesbank, The role of banks, non-banks and the central bank in the money creation process, Monthly Report, April 2017, p 24; and Deutsche Bundesbank, The Eurosystem's bond purchases and the exchange rate of the euro, Monthly Report, January 2017, pp 13-39.

³ See M Woodford (2003), Interest and prices, New York: Princeton University Press; F Smets and R Wouters (2003), An estimated dynamic stochastic general equilibrium model of the euro area, Journal of the European Economic Association 1, pp 1123-1175; L J Christiano, M Eichenbaum and CL Evans (2005), Nominal rigidities and the dynamic effects of a shock to monetary policy, Journal of Political Economy 113, pp 1-45. In addition, the short-term interest rate is often compared in its capacity as a monetary policy indicator to selected reference values in order to roughly assess the appropriateness of the monetary policy stance. See J Taylor (1993), Discretion versus policy rules in practice, Carnegie-Rochester Conference Series on Public Policy 39, pp 195-214; Deutsche Bundesbank, Taylor interest rate and Monetary Conditions Index, Monthly Report, April 1999, pp 47-63; T Laubach and J Williams (2003), Measuring the natural rate of interest, Review of Economics and Statistics 85, pp 1063-1070; and A A Weber, W Lemke and A Worms (2008), How useful is the concept of the natural real rate of interest for monetary policy?, Cambridge Journal of Economics 32, pp 49-63.

⁴ For a detailed discussion on the impact of quantitative easing and for further reading, see Deutsche Bundesbank (2016), op cit.

Term structure modelling at the lower bound

Analysing impact of monetary policy measures along entire yield curve ...

Analysing interest rate movements along the yield curve provides valuable information on the impact of monetary policy measures. Using term structure models, it is possible to investigate how policy rate changes and unconventional measures targeting the entire yield curve affect interest rates for different maturities. The models can provide information on the extent to which observed interest rates are shaped by market participants' actual interest rate expectations and what proportion of interest constitutes compensation for taking risk.⁵ In particular, it is possible to use term structure models to measure the monetary policy stance by condensing information derived from interest movements into individual indicators, thereby consolidating it.

... using term structure models

Even prior to moving into this phase of low interest rates, affine – ie linear – term structure models had been widely established as a standard model for yield curve analysis at many central banks.⁶ These models describe the dynamics of the yield curve under the condition of no arbitrage⁷ using several factors that, in principle, cannot be observed. These “latent factors” are not precisely set out in economic terms; in other words, it is not possible to exactly determine the economic context in which they are linked to the term structure. However, they must possess certain statistical properties (and it is often possible to draw conclusions about economic relationships in retrospect based on the pattern they follow over time).⁸ Using these latent factors, it is possible to describe the yield curve very precisely, with two to three such factors usually proving sufficient for this purpose. The variation of interest rates for different maturities is consolidated into several factors by means of statistical procedures and put to use in term structure model estimates. In this context, interest rates are affine functions of these factors – that is to say, they are assumed to be in a linear relationship

with them. Interest rate expectations can be generated by forecasting factors.

Given the assumption of linearity, affine term structure models implicitly assume that interest rates and interest rate expectations can, in principle, be negative to any possible extent. The lower bound therefore constitutes a problem for this type of term structure modelling since the actual course of interest rates calls this linearity assumption into question. In addition, due to the fact that interest expectations can adopt values below the lower bound, this has implications for the modelling of expectations regarding future interest rate movements. Furthermore, it is assumed in affine models that interest rate volatility is constant over time. At the lower bound, however, short-term interest rates, in particular, are likely to remain at that level and thus be less variable than in phases in which the interest rates are clearly above the lower bound.⁹

Against this background, the use of lower bound models to analyse interest rate dynamics along the maturity spectrum has become increasingly widespread in recent years. This model class takes account of the behaviour of

Affine term structure models can only describe course of short-term interest rate to a limited extent in a low-interest-rate environment

Explicit consideration of an effective lower bound

⁵ Depending on the type of security, risk premiums are demanded to cover, in particular, the risk of an unexpected change in future short-term interest rates and unexpected inflation developments, but also the risk of a payment default or inability to sell quickly in the event of declining market liquidity.

⁶ See Deutsche Bundesbank, Determinants of the term structure of interest rates – approaches to combining arbitrage-free models and monetary macroeconomics, Monthly Report, April 2006, pp 15-28; DH Kim and JH Wright (2005), An arbitrage-free three-factor term structure model and the recent behavior of long-term yields and distant-horizon forward rates, Federal Reserve System Finance and Economics Discussion Series 2005-33; and T Adrian, RK Crump and E Moench (2013), Pricing the term structure with linear regressions, Journal of Financial Economics 110, pp 110-138.

⁷ The condition of no arbitrage means that holding portfolios with identical cash outflows but different bond positions allows no room for risk-free profits.

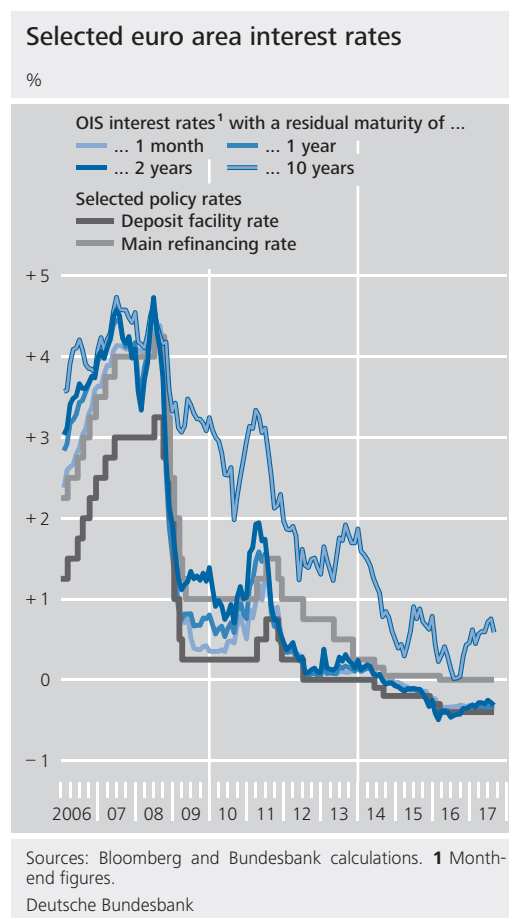
⁸ From a statistical point of view, these factors can be interpreted as level, steepness and curvature factors. See R Litterman and J Scheinkman (1991), Common factors affecting bond returns, Journal of Fixed Income, 1, pp 54-61.

⁹ See L Krippner (2015), Zero lower bound term structure modeling: a practitioner's guide, New York: Palgrave Macmillan US.

short-term interest rates in a low-interest-rate environment outlined above by introducing a shadow short rate and a lower bound (see the box on pages 18 to 22 and further information on page 24 ff).¹⁰ It is assumed that the shadow short rate corresponds to the short-term interest rate that is actually observed, provided the latter is above the lower bound.¹¹ If the short-term interest rate remains at the lower bound, the shadow short rate falls below it as per its linear relationship with the statistical factors. The expected path of short-term interest rates therefore also depends on the probability of the expected shadow rate lying above or below the lower bound. Accordingly, the distribution of possible realisations of the expected short-term interest rate is restricted to values above the lower bound, which is key to the plausible modelling of interest rate expectations at the lower bound. As a result, the lower bound affects the distribution of future potential interest rate realisations well before the lower bound is actually reached. This effect is amplified as interest rate expectations converge towards this lower bound.

OIS interest rates as risk-free benchmark rates in the euro area

The adjacent chart shows recent interest rate movements in the euro area based on the overnight index swap (OIS) yield curve.¹² OIS interest rates are based on swap contracts in which two parties agree to exchange a fixed interest rate for a series of floating rates. These floating rates are indexed to the EONIA rate.¹³ As only the interest payments linked to a nominal amount that is to be determined are exchanged at the end of the contract, OIS contracts usually bear very little or no counterparty risk. Due to this characteristic, the contracts are not used as a store of value, which means that their prices cannot even be driven by flight to quality in favour of very safe and liquid forms of investment in times of crisis – a move that can, for instance, be observed in the prices of government bonds, which are considered safe havens. Above all, however, one side of the contract, namely the variable interest rate, is closely linked to the Eurosystem's policy rates, as the EONIA closely tracks the main refinancing rate



in normal times and the deposit facility in times of high levels of excess liquidity.¹⁴ This means that the OIS yield curve contains largely unbiased information about expectations priced in along the term structure regarding future monetary policy measures.

¹⁰ The concept of the shadow rate dates back to F Black (1995), Interest rates as options, *Journal of Finance* 50, pp 1371-1376. To see how this concept is transposed into a term structure model, see DH Kim and KJ Singleton (2012), Term structure models and the zero bound, *Journal of Econometrics* 170, pp 32-49; JH Christensen and GD Rudebusch (2015), Estimating shadow-rate term structure models with near-zero yields, *Journal of Financial Econometrics* 13, pp 226-259; and L Krippner (2015), op cit.

¹¹ The (shadow) short rate considered here has a maturity of one month. Shadow rates can be derived for all maturities.

¹² Due to OIS rates not being available prior to July 2005, EURIBOR swap rates are used for the period from January 1999 to June 2005.

¹³ The EONIA is a reference rate for the euro interbank overnight market calculated on the basis of actual transactions.

¹⁴ See European Central Bank, Euro area risk-free interest rates: measurement issues, recent developments and relevance to monetary policy, *Monthly Bulletin*, July 2014, pp 63-77.

A lower bound model for the euro area including survey data

In order to model the term structure in an environment of remarkably low interest rates close to zero, lower bound models have become established as extensions of Gaussian affine multifactor models.¹ Lower bound models make it possible to model the path of the short-term interest rate in such a way that it does not fall below a prescribed lower bound.

Similarly to the various Gaussian models, lower bound models assume that, on condition of no arbitrage, the dynamics of the term structure can be described using several influencing variables (unobservable or observable), which are stacked as “factors” in the vector X_t and follow a linear vector autoregressive law of motion. Two different probability measures are assumed for this law of motion in the model: the risk-neutral probability measure Q and its counterpart, the historical probability measure P , which generates the actual variation in interest rates.²

When using the risk-neutral probability measure,

$$X_t = \mu^Q + \phi^Q X_{t-1} + \Sigma \epsilon_t, \quad (1)$$

applies, where ϵ_t is a standard normal distributed (Gaussian) error term, μ is a constant, ϕ is a matrix that describes the correlation of the factors with their own past values, and Σ is a parameter matrix which determines the dispersion of the error terms. Under the historical probability measure, the factors follow the law of motion

$$X_t = \mu^P + \phi^P X_{t-1} + \Sigma \epsilon_t. \quad (2)$$

The short-term one-period shadow short rate, si_t , is an affine – ie linear – function of these very factors, for which

$$si_t = \delta_0 + \delta_1' X_t. \quad (3)$$

applies. The observable short-term interest rate $i_{1,t}$ corresponds to this shadow interest rate, as long as the shadow short rate lies above the (potentially time-varying) lower bound lb_t . If it falls below this bound, the observable short-term interest rate is equal to the lower bound:

$$i_{1,t} = \max(si_t, lb_t). \quad (4)$$

The non-linear link between the short-term interest rate and the shadow short rate in equation (4) is used to ensure that the short-term interest rate is not able to fall below the lower bound. At the same time, the expected path of the short-term interest rate can be shown to remain at this lower bound for an extended period of time, provided that the shadow interest rate is expected to fall below this bound over a longer period of time (see the chart of the estimation results on page 21). The expected path of the observable short-term interest

¹ See DH Kim und KJ Singleton (2012), Term structure models and the zero bound, *Journal of Econometrics* 170, pp 32-49; L Krippner (2015), Zero lower bound term structure modeling: A practitioner’s guide, New York: Palgrave Macmillan US; JHE Christensen and GD Rudebusch (2015), Estimating shadow-rate term structure models with near-zero yields, *Journal of Financial Econometrics* 13, pp 226-259. For an overview of the class of Gaussian multifactor models, see the box in Deutsche Bundesbank, Gaussian affine multifactor term structure models, Monthly Report, July 2013, pp 43-44.

² When pricing securities, investors under or overweight certain future scenarios depending on their attitude towards risk, meaning that different dynamics of factors are assumed when determining securities prices (Q measure). The difference between the dynamics of the Q and P measures thus describes the dynamic of the forward premiums.

rates therefore depends on the probability of the expected shadow interest rate lying above or below the lower bound. The expected short-term interest rates follow a truncated distribution accordingly, restricted by the lower bound.³ Spot rates with maturity n result from a non-linear function depending on the factors X_t together with the function terms of the equations (1), (3) and (4)

$$i_{n,t} = g_n(X_t; \mu^Q, \phi^Q, \Sigma, \delta_0, \delta_1, lb_t). \quad (5)$$

Although this function does not have an analytical solution, interest rates can be determined using an approximation of the implied one-period forward rates.⁴ They then represent the average of the implied forward rates

$$i_{n,t} \approx \frac{1}{n} \sum_{h=0}^n f_{h,t}. \quad (6)$$

Term and forward premiums are the difference between the spot interest rates or forward rates derived from the model, calculated in each case using the coefficients estimated under the risk-neutral and historical probability measures.

This box presents the estimated results of such a lower bound model for the euro area.⁵ The model is specified using three latent factors and uses monthly OIS rates based on the EONIA rate, with a residual maturity of between one month and ten years, for the period from January 1999 to August 2017. The path of the lower bound is directly prescribed for the model in the form of the path of the Eurosystem's deposit facility rate.⁶

To be able to identify more precisely the model parameters under the historical probability measure used to determine the model-implied interest rate expectations and the long-term interest rate level, addi-

tional survey-based interest rate forecasts are taken into account in this specification.⁷ For this purpose, the model-implied interest rate forecasts are matched with survey data of concurring maturities and augmented with a measurement error between the two variables, which means that, although a certain convergence of interest rate forecasts from the model and the surveys is

3 The conditional expected value of the short-term interest rate in $t+n$ periods is defined as

$$E_t^P[i_{1,t+n}] = lb_t + \sigma_n^P d((E_t^P[s_{t+n}] - lb_t)/\sigma_n^P),$$

for which $d(x) = x\phi(x) + \Phi(x)$, $\phi(x)$ is the functional value of the distribution function of the standard normal distribution, and $\Phi(x)$ represents the functional value of the density function of the standard normal distribution. Here, $E_t^P[s_{t+n}]$ is the conditional expected value of the shadow interest rate and σ_n^P is the corresponding standard deviation.

4 The one-period forward rate in h periods can be approximated as $f_{h,t} \approx lb_t + \sigma_n^Q d((sf_{h,t} - lb_t)/\sigma_n^Q)$. The notations correspond to the remarks in footnote 3. $sf_{h,t}$ is the shadow forward rate, while σ_n^Q represents the corresponding standard deviation. See CJ Wu and FDN Xia (2016), Measuring the macroeconomic impact of monetary policy at the zero lower bound, Journal of Money, Credit and Banking 48, pp 253-291, and L Krippner (2015), op cit.

5 For detailed information, see F Geiger and F Schupp (2017), Euro area term structure decompositions and expected short rate paths – robustness and economic plausibility, mimeo. To this end, the model is converted to a non-linear state space model and estimated using the extended Kalman filter under a maximum likelihood approach.

6 For more information, see also W Lemke and AL Vladu (2016), Below the zero lower bound – a shadow-rate term structure model for the euro area, Deutsche Bundesbank Discussion Paper, No 32/2016. For alternative lower bound specifications for the euro area, see also T Kortela (2016), A shadow rate model with time-varying lower bound of interest rates, Bank of Finland Research Discussion Paper 19, and CJ Wu and FDN Xia (2017), Time-varying lower bound of interest rates in Europe, Chicago Booth Research Paper 17-06.

7 See DH Kim and A Orphanides (2012), Term structure estimation with survey data on interest rate forecasts, Journal of Financial Quantitative Analysis, 47, pp 241-272, and M Pribsch (2013), Computing arbitrage-free yields in multi-factor Gaussian shadow-rate term structure models, Finance and Economic Discussion Series, Board of Governors of the Federal Reserve System 2013-63.

guaranteed, this does not have to be complete:⁸

$$E_t^P [i_{n,t+j}] = i_{n,t+j}^{Survey} + v_t. \quad (7)$$

The motivation for incorporating survey data is the finding from the literature that the models are often estimated with data sets that cover too narrow an observation period to sufficiently determine the actual variation of interest rates, measured against the very high persistence of interest rates with few interest rate cycles. This can sometimes produce the estimated results for the medium and long maturities, according to which the change in interest rates can be almost exclusively attributed to changes in the term premiums, while the long-term interest rate expectations move only marginally.⁹ At the same time, very little information about the long-term level of the expected short-term interest rate is provided for a model estimated using a data set characterised by a persisting period of low interest rates close to the lower bound as well as low volatility, as is the case in the euro area.¹⁰ If, on the other hand, interest rate expectations are linked to the survey data, the model is able to use this additional information to describe the expected interest rate changes more precisely. With this in mind, the estimates incorporate both short and long-term survey-based interest rate forecasts.¹¹

The chart on page 21 depicts the model-generated path of the short-term interest rate in March 2016 and in August 2017. For the first of the two dates, it can be seen that the expected shadow short rate was markedly negative until July 2019 due to the (expected) persistence of factors, but the short-term interest rate path remained constrained by the lower bound due to the truncated distribution characteristic. Therefore the asymmetry of the distribution of the short-term interest rate also becomes apparent, as

its most likely path (modal path) has remained significantly below its expected path. As a result, market participants consider the most likely outcome to be that the short-term interest rate will remain at the lower bound for over 2.5 years before gradually increasing. The path of the short-term interest rate in August 2017 is compatible with an interest rate path scenario in which the December 2016 decision of the Governing Council of the ECB will be fully implemented, followed by a subsequent tapering phase, and in which, in line with forward guidance, the deposit facility rate will only subsequently be raised. The model estimations imply that the short-term interest rate will remain at the lower bound for just over another 1.7 years before experiencing a gradual increase.

⁸ Survey-based expectations are only an approximate reflection of market price expectations. On the one hand, this may be due to the low number of survey participants; on the other hand, though, it may be explained by the potential variations in the information available to participants and the point in time at which they submit their answers. Alternatively, therefore, it can be assumed that the subjective expectations of survey participants deviate from the objective statistical expectations held under the historical probability measure P . For more information, see also M Piazzesi, J Salamao and M Schneider (2015), Trend and cycles in bond premia, mimeo, and M Chernov and P Mueller (2012), The term structure of inflation expectations, *Journal of Financial Economics*, 106, pp 367-394.

⁹ See MD Bauer, GD Rudebusch and CJ Wu (2012), Correcting estimation bias in dynamic term structure models, *Journal of Business and Economic Statistics* 30, pp 454-467, and GR Duffee and RH Stanton (2012), Estimation of dynamic term structure models, *Quarterly Journal of Finance* 2, pp 1-51.

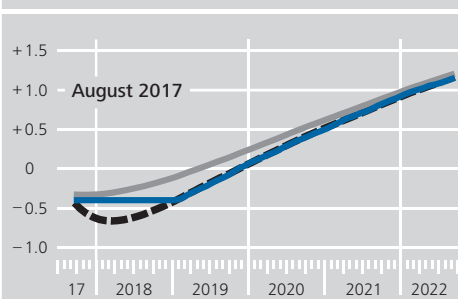
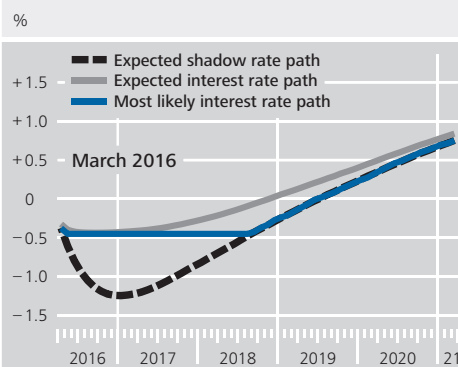
¹⁰ Monte Carlo analyses of simulated data sets show that the unconditional expected value of the short-term interest rate is estimated to be too low in the very data sets which are characterised by a protracted period of low interest rates, resulting in long-term interest rate expectations falling short and excessively high risk premiums. See also F Geiger and F Schupp (2017), op cit.

¹¹ The data pool comprises interest rate forecasts by Consensus Economics. Survey-based interest rate forecasts for term structure models applied to the euro area are used by J-P Renne (2017), A model of the euro area yield curve with discrete policy rates, *Studies in Nonlinear Dynamics & Econometrics*, 21, pp 99-116, and P Hördahl and O Tristani (2014), Inflation risk premia in the US and the euro area, *International Journal of Central Banking*, 10, pp 1-47.

With regard to the longer-term maturity segment, the chart on page 22 shows the model-generated decomposition of the five-year, five-year forward rate into the average path of the expected short-term interest rates and forward premium components. A high degree of the variability of the forward rate can be explained by the change in the forward premium,¹² which can be seen in particular to have declined markedly in the wake of the “Greenspan conundrum”¹³ between June 2004 and June 2006 and again in anticipation of widespread asset purchases since the beginning of 2014, and to have remained negative since then.

However, the longer-term model-implied interest rate expectations have also proven to be time-varying, and have tended to be lower since the height of the financial and

Model-implied paths of short-term interest rates



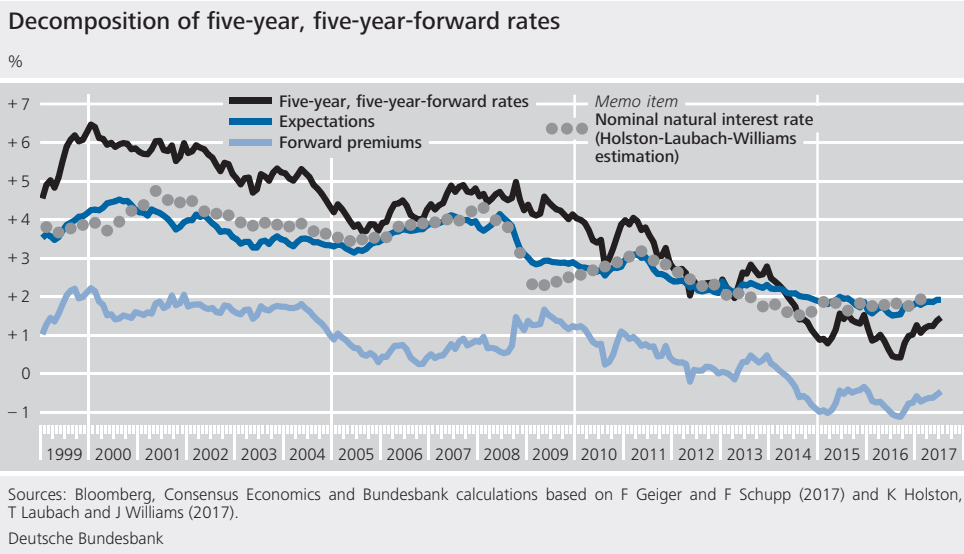
Sources: Bloomberg, Consensus Economics and Bundesbank calculations based on F Geiger and F Schupp (2017).
 Deutsche Bundesbank

12 See also RK Crump, S Eusepi and E Moench (2017), The term structure of expectations and bond yields, Federal Reserve Bank of New York Staff Reports, No 775. The authors use all available survey data for interest, inflation and economic developments in the United States, and come to the conclusion that most of the variation in interest rates is driven by changes in the term premiums. Macroeconomic demand shocks, in particular, may explain the development of term premiums.

13 This “conundrum” was referred to in a speech by former US Fed chairman Alan Greenspan, in order to illustrate the apparent breakdown of the conventional relationship between short-term and long-term interest rates in the United States during the period of increasing interest rates between 2004 and 2006. The increases in the federal funds rate were not initially transmitted to the long-term interest rates, which even declined slightly. For an account of this phenomenon, see Deutsche Bundesbank, Globalisation and monetary policy, Monthly Report, October 2007, p 29.

14 See K Holston, T Laubach and J Williams (2017), Measuring the natural rate of interest: International trends and determinants, Journal of International Economics, 108, Supplement 1, pp 59-75. The maturity perspective of the derived natural rate of interest in this model estimation is not explicitly defined, but refers to a longer-term perspective due to the modelling strategy and the definition of the latent variable and shock processes: “Our definition takes a ‘longer-run’ perspective, in that it refers to the level of real interest rates expected to prevail, say, five to 10 years in the future, after the economy has emerged from any cyclical fluctuations and is expanding at its trend rate”. See T Laubach and JC Williams (2016), Measuring the natural rate of interest redux, Business Economics, 41, pp 57-67.

economic crisis in 2008. In order to be able to pass judgment on the economic plausibility of the level and the variability of the expected short-term interest rates in the longer-term forward rates (and therefore also on the forward premiums, indirectly), it may be advisable to perform a comparison of the expectations component with an equilibrium nominal short-term interest rate in the medium to long term derived from a macroeconomic model. The interest rate expectations contained in the financial market prices at the long end of the term structure should position themselves at this level if it is assumed that the term structure reflects macroeconomic information, particularly with regard to long-term inflation expectations and the equilibrium real interest rate. The latter is determined by estimating a natural rate of interest which is consistent in the longer term with a permanently closed output gap and a stable inflation rate following the easing of all cyclical fluctuations.¹⁴



Indeed, the longer-term interest rate expectations derived from the lower bound model capture the level and path of the nominal natural interest rate rather well, the latter in the period under review being primarily driven by the real natural interest rate path amid simultaneously stable long-term inflation expectations. This observation is interesting in that the two models have no information directly in common in the estimates. While the term structure model solely contains term structure information, the macroeconomic model only takes the inflation rate, the level of gross domestic product and the *ex-ante* short-term real interest rate into consideration in its estimates.¹⁵ Long-term forward rates thus appear to reflect trends in key macroeconomic variables in both real and nominal terms, which play an important role in the formation of longer-term interest rate expectations.¹⁶

¹⁵ For more detailed information on the estimation of the natural interest rate in the euro area, see Holston et al (2017), op cit. As the natural rate of interest is estimated in real terms, this rate is extended in the chart to include long-term inflation expectations (Consensus Economics' average inflation expectations stand at six to ten years), making it possible to directly compare it with the nominal interest rate expectations of the term structure model.

¹⁶ For more on this topic, see also RK Crump, S Eusepi and E Moench (2017), op cit; MD Bauer and GD Rudebusch (2017), Interest rates under falling stars, Federal Reserve Bank of San Francisco Working Paper Series, No 2017-16; A Cieslak and P Povala (2015), Expected returns in Treasury bonds, Review of Financial Studies, 28, pp 2859-2901, and P van Dijk, SJ Koopman, van der Wel, M and JH Wright (2014), Forecasting interest rates with shifting endpoints, Journal of Applied Econometrics, 29, pp 693-712.

Yield curves of government bonds can also be used to derive monetary policy indicators

Yield curves in the government bond markets are less closely linked to the deposit facility rate, as the market participants active in these markets – most notably large institutional investors – do not have access to the Eurosystem’s deposit facility. This is especially true of large institutional investors that are non-banks. As a result, some safe haven government bonds with short and medium-term maturities have, in recent years, generated yields well below the OIS curve at times. This has been observed in periods of high risk aversion resulting from safe haven investment strategies and, in particular, since, in a move that was partly anticipated, the deposit facility was abandoned as the lower bound for PSPP purchases.¹⁵ The disparity between interest rates at the short end has led to the yield curve of safe haven bonds sometimes containing information that differs from the OIS curve. The indicators presented here are therefore also dependent on the choice of yield curve. For reasons of consistency, all indicators are estimated on the basis of the OIS yield curve in the following paragraphs, even though it would also be reasonable to estimate some of them based on government bonds considered safe.

Effective lower bound in the euro area time-varying and clearly negative

In the light of the lessons learned from interest rate developments in the United States and the widespread view that nominal short-term interest rates cannot fall far below zero due to the possibility of holding cash, a large number of model variants assume a fixed lower bound of (close) to zero.¹⁶ In actual fact, however, it has been shown not least by developments in the euro area that it was also possible for short-term money market rates to fall below zero in line with the gradual lowering of the deposit facility rate to -0.40%. Even more pronounced was the move into negative territory for short-term Bunds when, in February 2017, the yields on Bunds with a maturity of one year hit a low of -0.95%. These securities are obviously attractive despite negative interest rates. This is probably driven not only by the cost of holding cash (eg storage costs, insurance etc) but also by regulatory and institutional aspects.

If the deposit facility rate for the OIS market constitutes a *de facto* binding lower bound, this means that the central bank’s perceived willingness to further cut policy rates also plays a role. Consequently, the effective lower bound could then be reached as soon as the central bank – in the eyes of market participants – takes the view that it would not be expedient to make further interest rate cuts due to the undesirable side effects of such a move running counter to the actual expansionary intention of the policy rate cuts.¹⁷

Overall, it is evident that the effective lower bound perceived by market participants is influenced by a variety of factors and also may change with these over time.¹⁸ This does not call the existence of a *de facto* binding lower bound in question, however, as it is still assumed that this is reached either when the cost of holding cash is exceeded or there is an expectation that the central bank will consider the positive net effects of further interest rate cuts to have been exhausted.

¹⁵ In addition, regulatory requirements, eg in the insurance sector, as well as the investment behaviour of international, public sector entities, eg in the context of currency management, ensure that there is high structural demand for government bonds with a high credit rating.

¹⁶ See, for example, JH Christensen and GD Rudebusch (2015), *op cit*; JC Wu and FD Xia (2016), Measuring the macroeconomic impact of monetary policy at the zero lower bound, *Journal of Money, Credit and Banking* 48, pp 253-291; and M Bauer and GD Rudebusch (2016), Monetary policy expectations at the zero lower bound, *Journal of Money, Credit and Banking* 48, pp 1439-1465.

¹⁷ See B Cœuré, How binding is the zero lower bound?, speech held at the “Removing the zero lower bound on interest rates” conference, London, 18 May 2015.

¹⁸ See W Lemke and A Vladu (2016), Below the zero lower bound – a shadow-rate term structure model for the euro area, Deutsche Bundesbank Discussion Paper, No 32/2016; and T Kortela (2016), A shadow rate model with time-varying lower bound of interest rates, Bank of Finland Research Discussion Paper 19. For an estimation of the lower bound in the United States, see J Christensen and G Rudebusch (2016), Modelling yields at the zero lower bound: are shadow rates the solution? *Advances in Econometrics* 35, pp 75-125; for Japan, see H Ichiue and Y Ueno (2013), Estimating term premia at the zero bound: an analysis of Japanese, US, and UK yields, Bank of Japan Working Paper Series E-8.

Monetary policy indicators for the euro area derived from the yield curve

Lower bound models make it possible to derive plausible interest rate expectations in a low-interest-rate environment. In addition, various indicators that are especially suited to measuring the monetary policy stance in a low-interest-rate environment can be derived from these models. The following part of the article presents the “shadow short rate”, the “crossing time” and the “effective monetary stimulus” (EMS). They are all determined using information derived from the entire yield curve. As a result, each of these indicators incorporates not only term premiums but also expectations regarding the future path of short-term interest rates. In terms of the suitability of these indicators for measuring the monetary policy stance, however, one caveat to be noted is that yield curve developments can only be steered to a certain extent, and indirectly, through monetary policy – in other words, changes in the indicators do not only show changes in the monetary policy stance. Other major determinants are, in particular, real economic developments and international interest rate linkages.¹⁹

The shadow short rate

From an economic perspective, the shadow short rate can be interpreted as the short-term interest rate that would materialise in the market without a lower bound. Such an interpretation seems intuitive, especially as the shadow short rate corresponds to the short-term interest rate for as long as it is above the lower bound. This concept is based on the assumption that investors can, in principle, also store their funds in cash to avoid significantly negative interest rates (cash option). As it is not possible to borrow or invest at this rate, it cannot be observed and does not have a direct impact on the financing conditions of the private sector. The shadow short rate is, therefore, a hypothetical interest rate resulting from an esti-

mation of the yield curve, taking into account the value of the cash option. The cash option is, likewise, a theoretical concept which can only be estimated on the basis of theoretical assumptions. For this purpose, option pricing theory is used and combined with information from the yield curve.²⁰

As a rule, it is possible to estimate the shadow rate in lower bound models on this basis. In order to ensure that the shadow rate is plausible in economic terms and can be used as an indicator of the monetary policy stance at the lower bound on interest rates, an appropriate bar has to be set for the specification of the lower bound model. Choosing the specification involves a trade-off of sorts between two objectives. The first objective is for the estimation to provide a good explanation for the observed interest rate developments and to obtain plausible interest rate expectations. The second objective is to generate an – unobservable – shadow short rate derived from the model (in other words, one that truly cannot be explained by the empirical model) as an indicator of the monetary policy stance at the lower bound.²¹ The number of latent factors used in the model and the determination of the lower bound, in particular, affect the level and the dynamics of the shadow short rate.

... its path depends heavily on model specifications

The chart on page 26 illustrates this by comparing shadow short rates derived from different

Shadow short rate is the interest rate which would materialise without a lower bound, ...

¹⁹ See P Hördahl, J Sobrun and P Turner (2016), Low long-term interest rates as a global phenomenon, BIS Working Paper, No 574; M Abbritti, S Dell-Erba, A Moreno and S Sola (2013), Global factors in the term structure of interest rates, IMF Working Paper, No 13/233; and FX Diebold, C Li and Z Yue (2008), Global yield curve dynamics and interactions: a dynamic Nelson-Siegel approach, *Journal of Econometrics*, 146, pp 351-363.

²⁰ See F Black (1995), *op cit*. An option is a contract ensuring the buyer's right to buy or sell an underlying asset, which is to be determined, up to an agreed date and strike price. In this sense, the cash option guarantees the buyer's right to invest his financial resources in cash at an interest rate of 0%, thus circumventing negative interest rates. The cash option is a purely hypothetical contract.

²¹ See L Krippner (2016), Documentation for measures of monetary policy, available at: <http://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Research/Additional%20research/Leo%20Krippner/5892888.pdf?la=en>

model specifications. One of the model variants is based on a less flexible specification with only two factors. The derived shadow rates are determined both for a lower bound of -0.4% and one of 0%, which is relatively high compared with the actual movement of short-term interest rates. This, in turn, means that the part of the yield curve which runs below this lower bound does not need to be described by the model and the few factors in this lower bound mainly depict the long end of the yield curve. This means that the shadow short rate primarily reflects the dynamics of long-term interest rates in the form of a linear combination of factors. In other words, the more strongly the shadow short rate reflected observable short-term interest rates, the more difficult it would be to deviate downwards from the lower bound. The changes in the shadow rate are therefore linked to the points in time when non-standard measures were announced, and a change in the shadow rate indicates a change in the monetary policy stance.²² On the other hand, information on actual movements in the short and medium-term segments is not taken into account in some cases, especially when the short and medium-term interest rates derived from the model run along a comparatively high lower bound. Consequently, monetary policy measures, such as lowering the deposit facility rate, which mainly has an effect up until the medium-term segment, are only partially captured by the shadow short rate.

Lower bound models preferred class for modelling interest rate expectations at lower bound

By comparison, opting for a model with three factors and a lower (and more plausible) lower bound on interest rates of -40 basis points better describes the yield curve as a whole.²³ The high estimation quality ensures that the interest rates running above the assumed lower bound can be adequately described and the estimated interest rates do not fall below the lower bound. However, the model no longer allows the shadow rate to be noticeably below the lower bound. On the contrary, this has eliminated the sharp deviation of the shadow rate from the observed short-term interest rate (see the chart on page 26). As a result, the option of interpret-

ing the shadow short rate as an information variable for non-standard monetary policy measures geared towards the long end of the curve is largely lost. As with the analysis of the short-term interest rate, this would effectively not show any changes in the monetary policy stance since mid-2011 and the non-standard measures would, accordingly, not be adequately reflected in the shadow rate. In the context of a specification with only two factors, the shadow rate thus provides a better picture of the impact non-standard measures have on the capital market as the shadow rate is more closely inter-linked with the path of long-term interest rates. In addition, the shadow rate in these model classes is a great deal more robust to the choice of lower bound.²⁴

The higher estimation quality of a three-factor model is imperative, however, if plausible expectations regarding the path of short-term interest rates and certain characteristics of interest rate movements at the lower bound are to be determined. To be applied in this way, the greater ability to forecast interest rates of the model with three factors is more important, whereas the dependence of the actual shadow short rate on the specification and parameterization of the model used is less important.

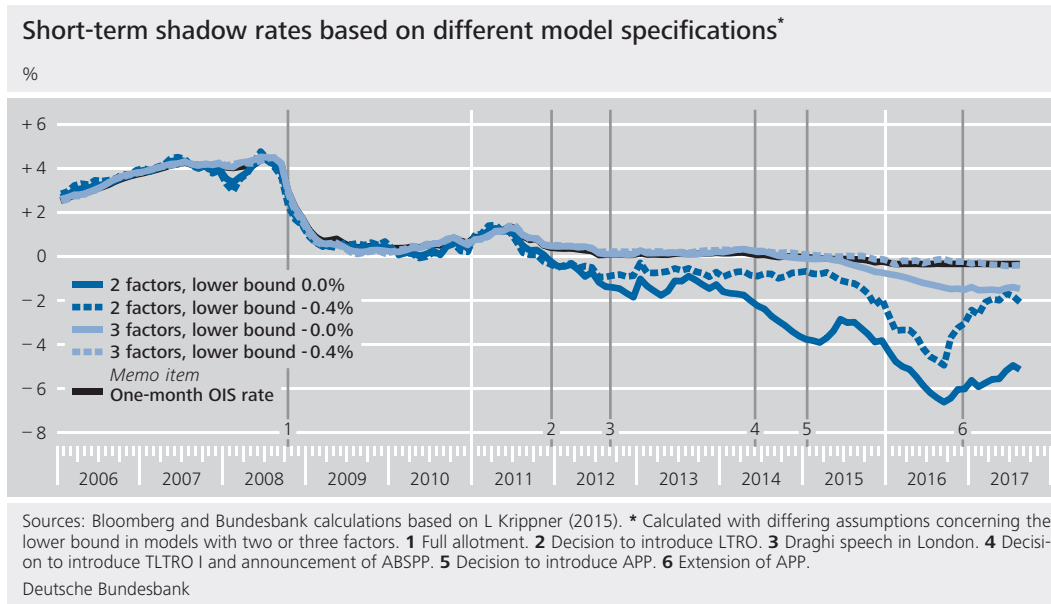
Overall, it is evident that the level and path of the shadow short rate react very sensitively to the respective model specifications. Against this background, the shadow short rate should ultimately only be interpreted as a qualitative indicator since its estimated level is difficult to

Shadow short rate very hard to interpret

²² See J Wu and F Xia (2016), op cit. The authors estimate a monetary policy VAR by replacing the federal funds rate with the shadow short rate as a monetary policy variable for the years during which the zero lower bound was binding in the United States.

²³ The lower bound is based here on the lowest level of the Eurosystem's deposit facility rate, which in the euro area is regarded as the floor for the unsecured interbank money market rate. For a more detailed explanation, see p 23 f.

²⁴ See L Krippner (2015b), A comment on Wu and Xia (2015), and the case for two-factor shadow short rates, CAMA Working Paper No 48/2015, Centre for Applied Macroeconomic Analysis.



interpret due to the high sensitivity of the model.

Crossing time and expected interest rate path

Crossing time indicates expected path of short-term interest rates

The non-standard monetary policy measures, including the asset purchase programmes, as well as the communication on future policy rate developments, which the Governing Council of the ECB has linked to the duration of the APP, aim, amongst other things, at lowering the long-term interest rate by tweaking the expected course of short-term interest rates.²⁵ Correspondingly, the monetary policy stance is also reflected in market expectations regarding the path of short-term interest rates. The duration for which the observable short-term interest rate remains at the lower bound and the point in time when it goes back above a certain threshold (crossing time), can, therefore, potentially also be used as a measure of the monetary policy stance. Taken in isolation, the further down the line crossing time occurs, the more accommodative the monetary policy stance becomes as it indicates the expectation that policy rates will remain at a lower level for an extended period of time.

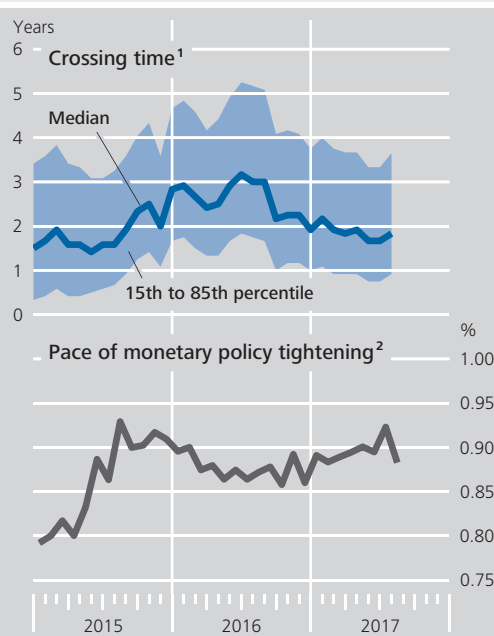
The crossing time can be defined as the median of a large number of short-term interest rate paths simulated on the basis of a term structure model, ie the time when the short-term interest rate goes back above the 0% threshold, indicating that short-term interest rates are returning to normal.²⁶ The chart on page 27 shows the evolution of the distribution of the crossing time since January 2015 based on a

²⁵ According to its forward guidance, the Governing Council expects the key ECB interest rates to remain at their present levels for an extended period of time, and well past the horizon of the net asset purchases (see M Draghi, introductory statement to the ECB's press conference on 20 July 2017 in Frankfurt am Main). Regarding the effects of monetary policy communication in the context of non-standard measures, see also G Coenen, M Ehrmann, G Gaballo, P Hoffmann, A Nakov, S Nardelli, E Persson and G Strasser (2017), Communication of monetary policy in unconventional times, ECB Working Paper No 2080.

²⁶ The crossing time is determined by means of a Monte Carlo simulation by simulating several thousand paths of the expected short-term interest rate based on an estimated term structure model. For each path, the point in time when it exceeds a specific pre-defined level (in this case 0%) is recorded. Often, the path is required to remain above this level for a certain amount of time (eg 12 months) before the time is recorded. The median of the distribution of crossing times (lift-off distribution) determined in this way corresponds to the optimal forecast, assuming that market participants wish to minimise their absolute forecast error. In the vast majority of cases, the median corresponds to the date when the modal path, ie the most likely path of the shadow rate, too, exceeds the determined threshold. Deviations are possible, but should be limited in each case. Alternatively, the crossing time presented here could therefore also be calculated in connection with determining the modal path. See M Bauer and G Rudebusch (2016), op cit, as well as W Lemke and A Vladu (2016), op cit.

lower bound model, which, due to its specifications, is capable of describing with the greatest possible precision the term structure and the associated interest rate expectations (details on the model specifications can be found on pages 18 to 22). After the markets, at the beginning of 2015, had expected interest rates to return to positive territory within a median period of two years, this period continuously grew larger as time passed following the decision to introduce the APP in January 2015 and to further cut the deposit facility rate. Evidently, the Eurosystem was able to credibly communicate a prolonged period of low short-term interest rates. At its peak in July 2016, the indicator showed an expected return of the interest rate to above 0% by July 2019, ie within a space of just over three years. As time progressed and against the backdrop of the yield curve steepening in the autumn of 2016, the crossing time moved closer again and is currently envisaged for mid-2019.

Crossing time and pace of monetary policy tightening



Sources: Bloomberg, Consensus Economics and Bundesbank calculations based on F Geiger and F Schupp (2017). **1** Time until the short-term interest rate goes back above zero. **2** Change in the modal path of short-term interest rates over a period of two years from when the 0% threshold was crossed. Deutsche Bundesbank

However, indicator only meaningful at lower bound ...

In contrast to the hypothetical concept of the shadow short rate, the crossing time, in its function as a monetary policy indicator, measures expectations about future observable developments. The crossing time can, therefore, also be verified empirically in retrospect. At the same time, however, the crossing time is defined only at the lower bound and becomes uninformative as soon as the short-term interest rate rises above the selected threshold value. Neither does it give any indication as to whether market participants expect a gradual or rapid increase in the short-term interest rate. It therefore makes sense to introduce an additional indicator to the analysis in order to measure the expected pace of monetary policy tightening.²⁷ The lower graph of the above chart thus shows the path of the short-term interest rate deemed the most likely by market participants over a period of two years once it has gone back above the 0% threshold. Since 2015, this figure has remained stable between 0.8 and 1.0 percentage point. This implies, *ceteris paribus*, that the rise in short-term interest rates expected by market participants has

been more subdued than, for example, between October 1999 and October 2000 or between December 2005 and June 2007, when the Governing Council of the ECB increased its policy rates by 2.25 and 2 percentage points respectively.

A further weakness of the crossing time defined here as an indicator of the expansiveness of monetary policy is that it is not able to show the impact of monetary policy measures which, besides the expected path of short-term interest rates, also have an effect through term premiums. However, these effects can be captured, amongst other things, by the conditional distribution of short-term interest rates, con-

... and does not take into account the impact of monetary policy measures on forward premiums

²⁷ See M Bauer and G Rudebusch (2016), op cit.

Distribution information on interest rate path expands scope of analysis

taining not only pure interest expectations but also an extra term premium.²⁸

The chart on page 29 shows this distribution at different points in time between May 2014 and January 2015, when the Governing Council adopted its first TLTRO series and asset purchase programmes, as well as in August 2017. The individual sub-graphs illustrate how the term premiums initially decreased steadily, which is reflected by narrowing distribution and a flattening OIS forward rate for one-month contracts (see also pages 18 to 22). In August 2017, distribution significantly expanded again, which went hand in hand with the forward rate becoming steeper and could be regarded as an indication of monetary policy rates being expected to normalise. Overall, it appears that, by introducing the APP and forward guidance, the Eurosystem has managed to reduce the uncertainty about future interest rate developments and the associated risk premiums. In particular, these measures have temporarily caused forward rates to drop considerably.²⁹

The effective monetary stimulus

Effective monetary stimulus derived from current yield curve and "neutral" interest rate

The effective monetary stimulus (EMS) aims to provide summarised information on the development of forward rates, bundled in the form of a single indicator for measuring the monetary policy stance. To this end, the EMS uses the "neutral" interest rate, which evens out in the long term, as a benchmark to put the path of the forward rate into perspective. The EMS is defined as the negative value of the integral between this neutral interest rate and the forward rate curve.³⁰ In other words, it compares two interest rate concepts, one of which aims to capture the current financing conditions on the capital markets and the other the long-term equilibrium level of interest rates for the economy as a whole. The farther the forward rate curve lies below the neutral interest rate, thus pushing down the EMS, the higher the

measured degree of monetary policy accommodation. This means that the EMS's direction of impact is defined in the same way as short-term interest rates. The EMS is defined both for normal times and for periods in which interest rates move along the lower bound.

Accordingly, the volume of the EMS depends largely on the level of the neutral interest rate, which can, in principle, be estimated using different modelling approaches as follows. The neutral interest rate could, say, be approximated directly from an estimated lower bound model as the interest rate towards which the forward rate (or the expected short-term interest rate) converges in the very long term.³¹ Alternatively, it could be derived from an estimated macroeconomic model as an equilibrium interest rate which is compatible with a permanently closed output gap and a stable inflation rate.³² Besides the associated model uncertainty, the neutral interest rate is difficult to determine from an empirical perspective, too, not least because it is necessary to define the output gap as precisely as possible to obtain an exact estimation. Accordingly, determining the EMS is, in many respects, contingent on estimation quality and the ability to identify unobserved indicators; it is, therefore, particularly fraught with uncertainty.

Indicator value depends on assumption regarding neutral interest rate

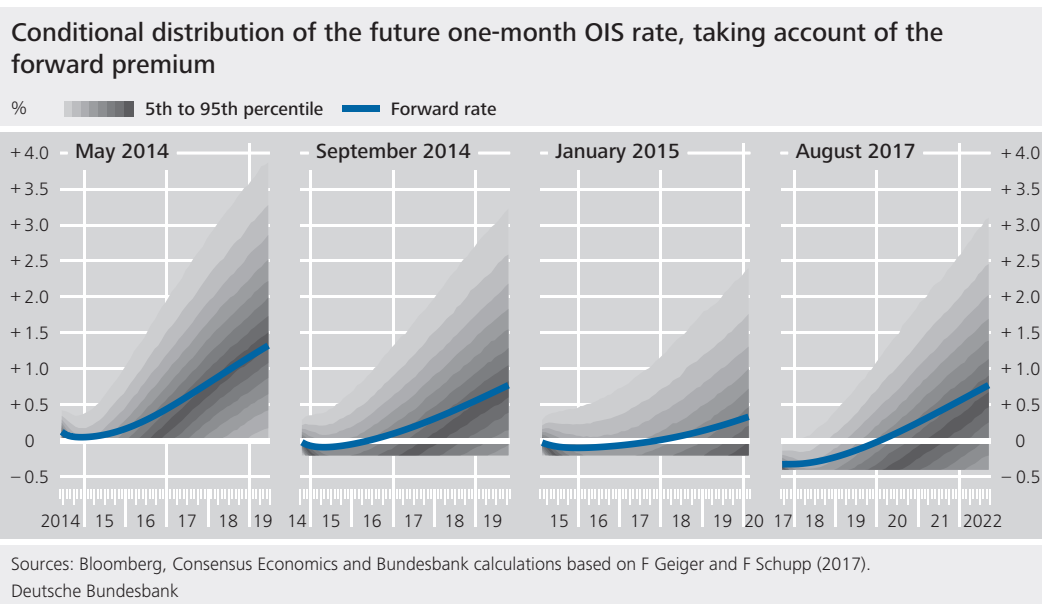
²⁸ This short-term interest rate is calculated as the expected value of the short-term interest rate below the probability measure that, in addition to actual expectations, also incorporates a yield spread relating to the uncertainty regarding the future interest rate path (term premium). If Jensen's inequality term is taken into account as well, the future average of this interest rate corresponds to the forward rate with the same maturity.

²⁹ For results based on US data, see also MD Bauer and GD Rudebusch (2014), The signaling channel for Federal Reserve bond purchases, *International Journal of Central Banking* 10(3), pp 233-289.

³⁰ See L Krippner (2015), op cit.

³¹ See L Krippner (2014), Measuring the stance of monetary policy in conventional and unconventional environments, CAMA Working Paper 6/2014, Centre for Applied Macroeconomic Analysis.

³² See T Laubach and J Williams (2003), op cit, or RA Bar-sky, A Justiniano and L Melosi (2014), The natural rate of interest and its usefulness for monetary policy, *American Economic Review*, Vol 104, No 5, pp 37-43.



Another approach is to use survey data. According to simple growth theory models, real interest rates are essentially determined by the rate of real economic growth.³³ What follows from this is that nominal growth expectations stemming from surveys could be used as a directly observable variable in determining a nominal EMS.³⁴ Although growth expectations from surveys, too, contain an element of forecasting uncertainty, they do not depend on the assumptions made as part of a specific lower bound or macroeconomic model and are, therefore, likely to be more robust to model variations.

neutral market participants can be determined.³⁷ Similarly, the EMS component resulting from the existence of term premiums, which risk-averse market participants demand for taking on maturity risks relating to long-dated bonds, can be determined as well.

Model-based calculation allows decomposition of indicator into expectation and forward components

EMS can either be estimated in term structure model or determined through model-free calculation

In such a model-free variant, the EMS is defined as the difference between a long-term interest rate and long-term nominal growth expectations from surveys and can thus be determined based on observable indicators without using a term structure model.³⁵ In the model-based variant, the EMS is the integral of the difference between a model-implied forward rate and long-term nominal growth expectations.³⁶

The model-based estimation of the EMS allows the indicator to be decomposed into its individual parts. Assuming the expectations hypothesis of the term structure, the EMS component which is attributable to expectations of risk-

³³ See, for example, R Barro and X Sala-i-Martin (2004), *Economic growth*, Second Edition, MIT Press. For information on how interest rates are determined in relation to the natural interest rate, see also K Wicksell (1898, translation published in 1936), *Interest and prices: a study of the causes regulating the value of money*, Macmillan and Co, Ltd, London

³⁴ See A Halberstadt and L Krippner (2016), *The effect of conventional and unconventional euro area monetary policy on macroeconomic variables*, Deutsche Bundesbank Discussion Paper, No 49/2016.

³⁵ The 30-year rate of return was used to compute the EMS here. The choice of maturity is not of critical importance when using the EMS as a monetary policy indicator in empirical analyses. In standardised values, the EMS is similar for yields of differing maturities; see A Halberstadt and L Krippner (2016), *op cit*.

³⁶ Given the high estimation quality of the term structure model, the interest rates and forward rates derived from the estimated model are almost identical with the observed interest rates and forward rates. Based on the same neutral interest rate, the model-free variant of the EMS is equivalent to the model-based variant, with the exception of the extent of the measurement bias regarding interest rates.

³⁷ In line with the expectations hypothesis of the yield curve, a risk-neutral investor assumes that the long-term interest rate corresponds with the average of short-term interest rates; he expects this if his funds are to be continuously reinvested for the investment horizon in question.

Analysis of the impact of monetary policy shocks on macroeconomic variables using the effective monetary stimulus indicator

Empirical studies on the impact of monetary policy measures conventionally use a short-term interest rate as a benchmark for the monetary policy stance as this forms the link with monetary policy rates. Such studies are often carried out using vector autoregressive models.

For instance, in a vector autoregressive model, the impact of monetary policy is generally estimated by analysing the response (eg in the form of impulse response functions) of variables that are of interest, such as the output gap and inflation, to a monetary policy shock (ie an unanticipated change in the monetary policy stance). The use of an exogenous shock makes it possible to separate the impact of the monetary policy measure from the endogenous effects caused by other factors.¹

Such model estimates can generally be used to demonstrate that an increase in short-term interest rates causes output and inflation to fall. In a period of persistently low interest rates close to the lower bound where unconventional measures are used, such estimates are no longer sufficient and more detailed monetary policy indicators, such as the effective monetary stimulus (EMS), are required.

The EMS is defined as the negative value of the integral between a neutral interest rate and the forward curve. It uses two interest rate concepts – one to capture the current financing conditions on the capital markets and the other to capture a long-term equilibrium level for the economy.² In this analysis of the impact of monetary policy on German industrial production and price devel-

opments³ using the framework of a small vector autoregressive model with time-varying parameters, we have thus opted to use the EMS as an indicator for the monetary policy stance as this reflects both conventional and unconventional monetary policy measures.⁴ A further major advantage of using the EMS as opposed to alternative indicators, eg a shadow interest rate, is that it can be determined based on observable indicators without having to use a term structure model.⁵ An unobservable indicator such as a shadow short rate would imply additional uncertainty for the analysis

¹ See, for example, C Sims (1992), Interpreting the macroeconomic time series facts: the effects of monetary policy, *European Economic Review* 36 (5), pp 975-1000; L Christiano, M Eichenbaum and C Evans (1999), Monetary policy shocks: what have we learned and to what end?, *Handbook of Macroeconomics* 1A, pp 65-148, Amsterdam: North-Holland; J Stock and M Watson (2001), Vector autoregressions, *Journal of Economic Perspectives* 15 (4), pp 101-115; as well as B Bernanke, J Boivin and P Eliasch (2005), Measuring the effects of monetary policy: a factor-augmented vector autoregressive (FAVAR) approach, *Quarterly Journal of Economics* 120 (1), pp 387-422.

² See L Krippner (2015), *Zero lower bound term structure modeling: a practitioner's guide*, New York: Palgrave Macmillan US.

³ The log level deviation of industrial production from its time-varying trend is used for industrial production, and the annualised growth rate of the producer price index is used for price developments. In addition, commodity price developments are included in the analysis as a control variable.

⁴ See A Halberstadt and L Krippner, The effect of conventional and unconventional euro area monetary policy on macroeconomic variables, Deutsche Bundesbank Discussion Paper, No 49/2016.

⁵ For more information on determining the EMS in a lower bound model or on the basis of observed indicators, see p 28f.

as it is already estimated with uncertainty itself.⁶

The observation period spans the years from 1999 to 2015 – and thus both a period of purely conventional monetary policy (1999-2008) as well as the subsequent period in which unconventional measures were taken. In a vector autoregressive model, the statistical properties of a monetary policy shock change if the EMS is used as the monetary policy variable instead of the short-term interest rate. If the short-term interest rate is used, shocks are much smaller in the unconventional phase because it remains at the lower bound, and the low volatility, too, yields only small non-deterministic movements. However, in the case of the EMS, the statistical properties of the derived shocks are very similar throughout the observation period. This applies to both the size of the shocks and their persistence. In recent years, when an EMS shock has occurred, the impact thereof has lasted for a similar length of time as at the beginning of the monetary union (see also the chart on page 32).

But a key criterion for the quality of a monetary indicator is, above all, whether it captures all the information needed. The EMS indicator includes, *inter alia*, information on term premiums and the market participants' expectations about the future development of short-term interest rates. The central bank can only control these two elements indirectly and to a limited extent. Thus, a change in the indicator value or in the monetary policy shock under analysis can, generally speaking, be attributable to factors other than just the central bank's intention to change the monetary policy stance.

However, the conventional practice of using a short-term interest rate as a monetary policy indicator in the application of a small

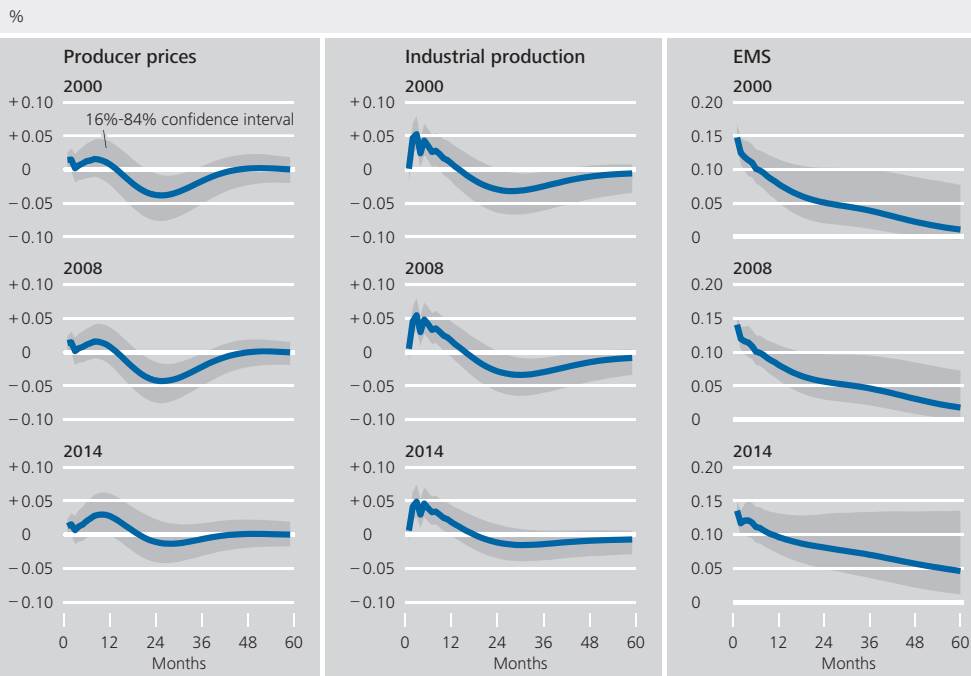
vector autoregressive model also has disadvantages. For instance, even in the case of conventional policy rate management, the long end of the yield curve and thus the long-term financing conditions that generally drive investment decisions within the economy are influenced not only by monetary policy but also, to a certain degree, by other factors, such as the national real economic setting or the international environment. Therefore, the more closely the short-term interest rate is linked to the development of long-term interest rates, the more complete a picture of monetary policy transmission it is likely to paint. Thus, it is not only the EMS but also the short-term interest rate that are merely proxies for a monetary policy indicator that must be examined in each case to determine whether it is fit for use in practice.

With the EMS as a monetary policy indicator, the model results for both the period before the financial crisis – when short-term yields were still well above zero – and the period of low interest rates are more plausible than when a short-term interest rate is used. This is particularly evident in the impulse responses of the macroeconomic variables to a monetary policy shock. If the EMS is used as a monetary policy indicator, prices and industrial production in Germany fall as expected in the medium term in response to an increase in the EMS (see the chart on page 34); however, if the short-term interest rate is used, this is not the case.⁷

⁶ The shadow short rate is an unobserved, hypothetical interest rate. The estimate thereof also hinges heavily on the modelling assumptions. The EMS indicator is more robust but is also dependent on the natural interest rate selected (see p 28f); see L Krippner (2015), *op cit*; as well as L Krippner (2015b), A comment on Wu and Xia (2015), and the case for two-factor shadow short rates, CAMA Working Paper No 48/2015, Centre for Applied Macroeconomic Analysis.

⁷ The EMS is defined in such a way that, as with the short-term interest rate, an increase can be interpreted as monetary policy tightening.

Impulse responses of macroeconomic variables to an unanticipated change* in the effective monetary stimulus (EMS)



For large stretches of the observation period, these falls are also statistically significant, but not for the period of low interest rates. In the latter's case, the estimated declines in both industrial production and prices are weaker and statistically insignificant.

The estimate shows, moreover, that the macroeconomic variables are significantly influenced only if unanticipated changes in the EMS indicator are considered as a whole – ie including the expectations and term premium components into which the model-based EMS indicator can be decomposed.⁸ In this aggregated view, both channels are required for the transmission of unconventional monetary policy measures to the overall economy.

The results of the analysis are similar for both the estimate with German macroeconomic data and that with corresponding

euro area aggregates. If alternative indicators for macroeconomic activity and inflation are used for the estimate, the model results are by and large similar, thus indicating that they are robust.

⁸ See A Halberstadt and L Krippner (2016), op cit.

EMS is a consistent indicator in phases of standard and non-standard monetary policy

The volatility of the EMS has changed only slightly since 1999 (see the chart on page 34).³⁸ The decline in the EMS since 2008 reflects an easing of the monetary policy stance through non-standard measures. These measures are not always announced exactly at the same time as changes in the indicator value occur. If the measures had previously been expected in the market, this would have already become evident through the development of the indicator value in the run-up to the announcement. Consequently, the significant decline in the EMS in the course of 2014 can also be explained by increased market expectations concerning a broad-based government bond purchase programme.

Not even EMS can provide information on adequacy of monetary policy stance

Similar to the other indicators discussed here, the EMS is not able to provide information on the adequacy of the monetary policy stance either, not least because the neutral interest rate used here does not take account of determinants which are key to economic developments and thus also to achieving the monetary policy objective of price stability. These determinants and, by extension, also the concept of the neutral interest rate are, however, hard to identify empirically.³⁹ The information content of the absolute level of the EMS and thus the difference between current and neutral interest rates is, therefore, at best, as reliable as an estimation of the neutral interest rate.

On the assumption that any potential estimation error in the neutral interest rate is largely constant over time, the change in the EMS can, however, serve as an indicator for measuring changes in the monetary policy stance and may be useful for monetary policy analysis (see the box on pages 30 to 32).

■ Concluding remarks

Data on term structure valuable for monetary policy analysis ...

On the basis of term structure data and models, it is possible to obtain meaningful indicators for measuring the monetary policy stance, even at the lower bound and when non-standard mon-

etary policy measures are deployed. However, conclusions regarding the expansiveness of monetary policy based on individual indicators are subject to a high degree of uncertainty. Furthermore, any interpretation of the development of the indicators must take into account that they are based on changes in financial market prices, which not only reflect monetary policy, but are also influenced by other factors.

However, the indicator dynamics provide a good description of the changes in the monetary policy stance in terms of its direction of impact. The estimations of such indicators presented in this article consistently suggest that the Eurosystem's non-standard measures have, in fact, increased the expansiveness of the monetary policy stance overall.

Even in a normalising interest rate environment where the short-term interest rates are becoming uncoupled from the negative lower bound, an analysis of the yield curve and its information content, bundled into the indicators presented here, provide important additional information for monetary policy analysis. For instance, the impact of policy rate changes and

... even in an environment of normalising interest rates

³⁸ As 30-year OIS rates are not available for the period prior to 2006, the EMS is calculated using government bond yields.

³⁹ While the EMS is similar to the common monetary models for analysing monetary policy in that it is based on an interest rate spread concept, the underlying neutral interest rate concept does not take into account the typically modelled shocks affecting the course of the natural rate, which a central bank in an environment of nominal rigidities responds to via its interest policy. In this model class, the output gap, which monetary policy makers use to influence inflation developments through interest policy, is determined by the difference between the expected path of short-term (forward) interest rates and the time-varying path of the natural (forward) interest rate. See Barsky et al (2014), *op cit*; M Del Negro, M Giannoni, M Cocci, S Shanaghgi and M Smith (2015), Safety, liquidity, and the natural rate of interest, Staff Report, No 812, Federal Reserve Bank of New York, May 2015; and J Gali and M Gertler (2007), Macroeconomic modeling for monetary policy evaluation, *Journal of Economic Perspectives*, American Economic Association, Vol 21 (4), pp 25-46. For the transfer of this theoretical interest rate spread concept to a semi-structural macro-econometric model for deriving a natural yield curve, see M Brzoza-Brzezina and J Kotlowski (2014), Measuring the natural yield curve, *Applied Economics*, Vol 46 (17), pp 2052-2065; and K Imakubo, H Kojima and J Nakajima (2017), The natural yield curve: its concept and measurement, *Empirical Economics*, forthcoming.

Effective monetary stimulus*

Indicator-specific scaling



Sources: Bloomberg, Consensus Economics and Bundesbank calculations. * Model-free version. **1** Full allotment. **2** Decision to introduce LTRO. **3** Draghi speech in London. **4** Decision to introduce TLTRO I and announcement of ABSPP. **5** Decision to introduce APP. **6** Extension of APP.

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the associated monetary policy communication on the expected path of short-term interest rates and on term premiums can be shown.

Continuous adjustment to changing monetary policy environment required

Finally, it should be borne in mind that, although monetary policy indicators are used to measure the monetary policy stance, they do not *per se* provide information as to whether this monetary policy stance is adequate. In view of this, the Eurosystem's monetary policy strategy takes into account a number of economic, price, credit and financial indicators that can be interpreted in terms of their implications

for the medium-term inflation outlook and that ultimately make it possible to reliably gauge the adequacy of the monetary policy stance, which is something indicators derived from the term structure are not capable of. However, methodological developments in the area of term structure modelling are advancing rapidly at present. It would, therefore, appear to make sense for central banks to follow these developments and to critically examine the ensuing monetary policy indicators in terms of their suitability for monetary policy analysis.

Distributed ledger technologies in payments and securities settlement: potential and risks

Distributed ledger technology (DLT) has made huge strides in recent years, and it has now become a major testing ground for financial service providers, financial market infrastructure operators, central banks and the like. The Bundesbank's interest in this topic centres around how DLT could be incorporated into the world of payments and settlement systems. The term "distributed ledger" (DL) is generally used to describe a database shared across a network which gives participants ("nodes") joint rights to write, read and store entries to the ledger. Potentially, DLT offers a number of benefits due to the distributed storage of data, which can simplify reconciliation processes associated with complex labour-sharing value added chains. DLT is seen as having disruptive potential since it generally allows transactions to be carried out directly – that is, without intermediaries. Developed originally for the virtual currency Bitcoin, DLT will nonetheless require extensive modification if it is to be adapted to the needs of the financial sector. For one thing, the legal framework as it stands requires participants to be identifiable, transactions to be kept secret from third parties, and transactions to be settled with absolute finality. For another, transaction throughput needs to be high. Given the current state of the art, it is rather unlikely that DLT will be put to use in large-value or retail payments. In the field of securities settlement, though, the shrinking processing times and reconciliation costs might prove to be a more important factor and suggest that DLT may have its uses in this area. The Deutsche Bundesbank is analysing the pros and cons of DLT in a project it is running with Deutsche Börse. While this project indicates that DLT does indeed have its functional merits, it is still unclear whether DLT also has the edge over today's technology in terms of security, efficiency, costs and speed. This article then goes on to discuss the possibility of providing central bank-issued digital currency. Probably the most pressing design question here is whether central bank-issued digital currency should be issued to non-banks as well. However, the implications of central bank-issued digital currency for monetary policy and financial stability and for the structure and business models of banks are hard to fathom, which is why there appears to be no realistic prospect of central bank-issued digital currency being rolled out for non-banks in the foreseeable future. In its capacity as an operator, supervisor and catalyst, the Bundesbank is continuing to analyse this technology so that it can actively shape the ongoing conversation about DLT by contributing insights of its own.

■ Introduction

DLT: a prominent testing ground in the financial sector

Distributed ledger technology (DLT) has made huge strides in recent years, and it has now become a major testing ground for financial service providers, financial market infrastructure operators, central banks and the like. Many regard DLT as a disruptive technology – one that could trigger fundamental change, or even structural breaks, in the industries in which it is applied. In the financial sector, for instance, it could make intermediaries obsolete or pave the way for new, more efficient processes in areas such as payments and securities settlement. This development was originally set in motion by mounting interest in “virtual currencies” – first and foremost in Bitcoin, which still ranks as the best-known field in which DLT has been put to use. But attention is now increasingly turning to the underlying technology itself.

DLT's role in payments and securities settlement an interesting topic for the Bundesbank

This article focuses on the role of DLT in payments and securities settlement – two areas which are highly important for the Bundesbank, given that section 3 of the Bundesbank Act (*Gesetz über die Deutsche Bundesbank*) requires the Bank to “arrange for the execution of domestic and cross-border payments and [...] contribute to the stability of payment and clearing systems.”

The Bundesbank fulfils this statutory mandate by performing three different roles. First, it develops and operates major payment and settlement systems, often in conjunction with other central banks, and in this context explores innovative technical capabilities which can contribute to their stability and efficiency. Second, the Bundesbank acts as a catalyst to forge improvements in payment operations and settlement structures. The better the Bundesbank grasps the practical implications of technologies or processes, the more forcefully it will be able to present its arguments, which always aim to preserve the stability and enhance the efficiency of payment and settlement systems. Third, in addition to its role as a banking supervisor, in which it oversees individual institutions

(market players), the Bundesbank also monitors the stability of systems and tools used in the field of payments and settlement. Being able to gauge the relative merits of state-of-the-art technology is a key skill in this regard. That is why the Bundesbank – much like other central banks worldwide – has been putting a great deal of thought into DLT, even though this technology is still very much in its infancy.

This article introduces readers to the topic of DLT, illuminates the opportunities and challenges it presents, shows its potential for driving market change and explores the possible repercussions for the Bundesbank's role in payments and securities settlement.

■ Functional analysis of DLT

Understanding how DLT works from a technical perspective and what sets it apart from the traditional payment and settlement system architecture is the first step in gauging the opportunities and risks it presents.

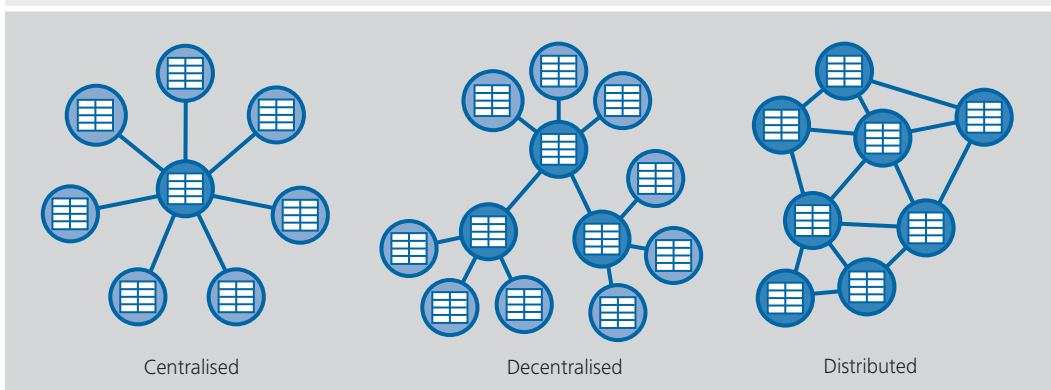
How DLT works

DLT is a special type of electronic data processing and storage system. The term “distributed ledger” (DL) is generally used to describe a database shared across a network which gives participants (“nodes”) joint rights to write, read and store entries to the ledger. While traditional distributed databases likewise distribute and store data across the entire network, entries there can only be created or updated by a central administrator.¹ DL networks differ from traditional databases in that no such central administrator is needed to manage the database or ledger. New information can be provided by nodes at any time and added to the database by means of a validation process. These new data entries are added to each

Distributed ledger with joint rights to write, read and store ledger entries

¹ See E Benos, R Garratt and P Gurrola-Perez (2017), The economics of distributed ledger technology for securities settlement, Bank of England Staff Working Paper No 670.

A comparison of network models*



* Based on Baran, 1964.

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node's copy of the DL so that each node will always have the latest version of the entire database.² The above chart shows different types of network model. The ability to write to the DL – that is, the power of control over ledger updates – dictates which of these three models a network is assigned to according to this definition: in a centralised set-up, control lies with a single administrator; in a decentralised model, with multiple nodes; and in a distributed model in the narrower sense, with every single node.

byzantine fault tolerance (PBFT). The consensus mechanism defines the condition which has to be met for new valid transactions to be added to the ledger. Conditions might include the demonstrative use of a node's computing power (proof of work), evidence of the node's share of units of value transferred within the network (proof of stake), or a minimum number of nodes agreeing on the validity of a given transaction (PBFT). These protocols serve two purposes. First, they help forge agreement on

Blockchain: a special form of DLT for recording transaction histories

The most common DLT applications are based on blockchain technology, which has proven to be particularly useful for recording transaction histories and will be used for illustrative purposes in the remainder of this article.³ In the case of the blockchain, the distributed ledger is made up of a chain of chronologically sequenced blocks containing one or more transactions.⁴ The ledger is updated by generating a new transaction block and adding it to the existing chain of transaction blocks.

Consensus mechanisms needed for validation

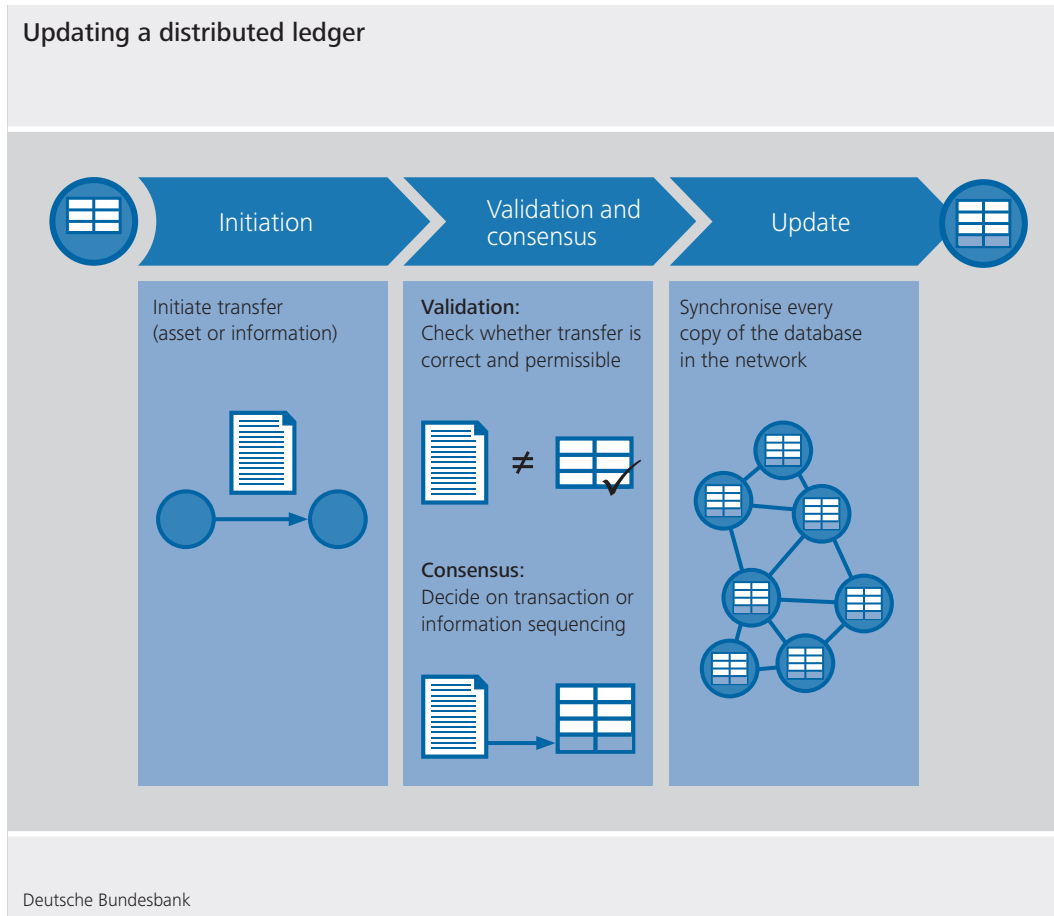
To synchronise additions to every node's copy of the distributed ledger, the nodes need to have a reconciliation and validation process in place.⁵ This is normally done using what are known as consensus mechanisms such as proof of work (PoW), proof of stake (PoS) or practical

² Further background reading on DLT and Blockchain can be found in Bank for International Settlements (BIS) (2017), Distributed ledger technology in payment, clearing and settlement – an analytical framework, report by the Committee on Payments and Market Infrastructures; P Roßbach (2016), Blockchain-Technologien und ihre Implikationen, Banking and Information Technology, 17(1), pp 54-69; V Brühl (2017), Bitcoins, Blockchain und Distributed Ledgers. Funktionsweise, Marktentwicklungen und Zukunftsperspektiven, Wirtschaftsdienst, 97(2), pp 135-142; and L Geiling (2016), Distributed Ledger: Die Technologie hinter den virtuellen Währungen am Beispiel der Blockchain, Bafin technical article.

³ As a rule, DLT applications can also be run without blockchain. In this case, the database can contain either the entire history (not in block format), the net state of assets or information distributed across the network, or a node's individual ledger updates applied to the preceding version of the ledger (see, for example, Deloitte (2016), Bitcoin, blockchain & distributed ledgers: caught between promise and reality).

⁴ Information contained in a transaction block are not stored directly in a blockchain but reduced to what are known as cryptographic hashes. Each new data block contains the preceding data block's hash, thus creating the chain structure by which the history of any transaction can be traced back immutably.

⁵ See the chart on p 38.



transactions to be added to the chain (consensus); second, they help validate transactions so as to prevent misuse or counterfeiting, eg due to the renewed use of previously used assets by the same payer (the double-spending problem).

contracts the transfers is often referred to as a smart contract. It is not, then, a special type of contractual agreement but a piece of programming code that is automatically executed whenever certain conditions are met and can play a role in contractual performance.

Cryptography guarantees authentication

Cryptographic tools are used to authenticate nodes and verify their rights. Nodes wishing to add new transactions to the DL, for instance, have to authenticate themselves by providing their digital signature. Cryptographic mechanisms can also be used to preserve the integrity of the DL.

Smart contracts allow contingent transfers

Since DLT generally allows any kind of digital information to be stored and distributed, it can also be used to record more complex contingent transactions. The nodes can choose to make a particular transfer of assets contingent on certain predefined criteria being met. The automated process by which an algorithm reviews those conditions and subsequently exe-

Generally speaking, the network of nodes in which the distributed ledger is used can be configured as a public ("permissionless") or private ("permissioned") network. A public network would be open to anyone satisfying the basic technical requirements, while a private configuration would restrict data access to certain individuals or institutions. Confining network access to a selected group of users can make sense on a number of counts, for instance if there is a restricted group of counterparties, or participants are expected to meet certain minimum standards. It also hides the ledger from unauthorised third parties. Where, for instance, DLT is used to settle trade finance transactions, a permissioned system could re-

Networks can be public or private

strict the group of authorised blockchain users to the business partners (exporter and importer) involved in the transaction as well as their respective principal banking partners.

Functional comparison with existing systems

DLT enables direct exchange without intermediaries

DLT mainly differs from traditional financial market infrastructures in that it is designed to facilitate a direct electronic transfer of assets between nodes without the need for any account-holding agent to be involved. Financial market infrastructures, on the other hand, act as intermediaries in the sense of a hub and spoke system – that is, users route transfers of assets via a central institution (the hub) to other users. That central institution operates accounts for each user and runs the system. Financial market infrastructures, ie payment systems, securities settlement systems, central securities depositories (CSDs) and central counterparties (CCPs), are core components of today's financial system and serve as conduits between different markets and participants.

Payments

Payments sometimes need more than one intermediary

In today's financial system, there are a multitude of intermediaries in the field of payments. Their number and variety depends on factors including the "institutional distance" between the parties sending and receiving payment.⁶ If both parties are customers with the same bank, that bank will be the sole intermediary. But if they bank with different credit institutions, there will be at least two intermediaries, plus a clearing house if the two banks do not have accounts with each other. Larger amounts are normally routed via a large-value payment system like TARGET2. Payments across currency areas will involve foreign payment systems or correspondent banks, and perhaps also the central infrastructure known as continuous linked settlement (CLS).

When DLT is used, payment is first initiated by the sender, followed by a consensus mechanism; when that is concluded, the payment is added to the DL. Adding the payment to the DL replaces, as it were, clearing (= the process of determining mutual claims or liabilities and netting), settlement (= the settlement of existing claims or liabilities), and potentially also internal accounting, provided the parties involved agree that the entry they have initiated in the distributed ledger entails a transfer of title.

DLT potentially replaces clearing, settlement and accounting

Securities settlement

Compared to payments, today's securities trading and post-trade operations involve a far greater number and variety of intermediaries. Securities traders, exchanges, clearing houses or CCPs, CSDs, registrars, custodians and potentially also sub-custodians all have a role to play in a security's life cycle. There will be cases where some of these functions have been pooled to a degree within a single institution. Complexity levels are high and processes are error-prone, making reconciliation a very laborious task. DLT has the technical capability to reduce securities settlement to just a few process steps. Thus, if two nodes make a matching declaration in the distributed ledger, the entry in the distributed ledger could be simultaneously interpreted as the trade, clearing, settlement and accounting.⁷ All the nodes can access the same data pool.

Greater number and variety of intermediaries needed for securities settlement

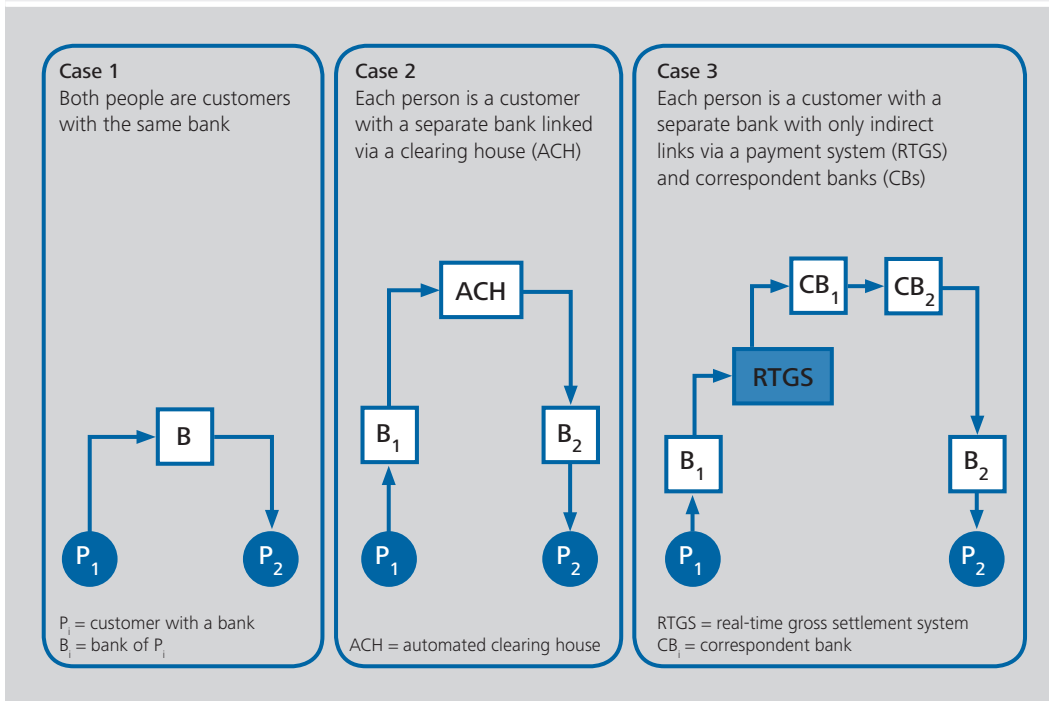
Prospective benefits

Due to its network structure and synchronised access to a common database, DLT promises to take transparency, operational efficiency, security and resilience, independence from intermediaries and automated contract performance to the next level.

⁶ See the chart on p 40.

⁷ See report by European Securities and Markets Authority (ESMA) (2017), The distributed ledger technology applied to securities markets.

Examples of how a payment can be settled: person 1 pays money to person 2



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Transparency and immutability

DLT generally offers a high level of transparency

ADL enables the nodes of a DLT network (unless defined otherwise) to view the entire data history.⁸ Transfers of assets and exchanges of information are thus visible to the entire network. Information can be stored in a way that prevents it from being manipulated. That allows a tamper-proof record of transactions to be stored without any need for the nodes to trust each other.

Operational efficiency

Reconciliation workload might decline

Another way in which DLT might have an edge over traditional financial market infrastructures is that it could reduce complexity in the settlement of financial market transactions requiring a great deal of reconciliation. Direct reconciliation between nodes and the accompanying documentation could automate multiple process-heavy intermediate steps and shorten transfer times, particularly for labour-sharing

processes such as trade finance. The use of DLT might also drive down settlement costs, not so much for transaction settlement itself but potentially for all the downstream post-trade processes. While nodes will all need to have greater storage capabilities to maintain the data, it will probably be far easier to view the data.

Security and resilience

A decentralised system could boost the security of assets or information transferred across the network. Unlike a centralised settlement platform, DLT has no single point of failure – that is, a point in a system that, if it failed to work correctly, would lead to a failure of the entire system. DLT’s ability to compensate for an inoperable or compromised node is often seen as

No single point of failure in the network

⁸ More recent developments, however, have begun to make a distinction between nodes, with the result that some of them are prevented from seeing the entire data history.

providing enhanced protection against failure. If one copy of the DL is subverted by a malicious actor, other copies of the DL containing the original data can be used to correct those changes. However, having multiple nodes with identical rights exposes a DLT to multiple possible points of attack, potentially driving up the cost of shielding the system from cyber risks.

Independence from intermediaries

Direct P2P transactions

DLT generally enables transactions or information to be exchanged between peers (P2P) without the need for any intermediaries, something which is otherwise only possible with cash payments. In theory, DLT could do away with the need for dedicated systems run by intermediaries. That would render the intermediate agents which traditionally validate financial transactions obsolete from a purely technical perspective.

Automated contract performance

Automated performance of complex processes

DLT promises huge potential for optimising processes through the automated execution of contractual rights using what are known as smart contracts. Particularly transactions which require counterparties to reconfirm or issue a guarantee stand to become more efficient as a result of being automated with smart contracts. DLT could, for example, be used to automate interest or dividend payouts in securities business. These benefits do, however, depend on the specific design of the DLT application in question.

Challenges

DLT from Bitcoin blockchain requires modification

The original blockchain for Bitcoin was created for a virtual currency. Its key characteristics are the intermediary-free, direct (P2P) transfer of Bitcoins, its accessibility for any participant who is not required to operate under their real name (and may operate under multiple pseudonyms), the complete transparency it provides across all transactions for all nodes, the use of the proof

of work protocol as a consensus mechanism, the designation of the longest blockchain as authoritative, regardless of when the blocks were created, and the fact that transfers are confined to Bitcoin. The Bitcoin blockchain would need a variety of adjustments in order to be migrated to the real financial system. Some advances in DLT have already resolved the real-world challenges to a degree,⁹ but this might also lessen the potential benefits. If DLT is to be a viable proposition in the financial sector, however, certain rules must be complied with.

Identifiability

Anonymous transfers of assets of the kind seen on public DLT platforms (public ledgers) do not allow participants to be identified. Anti-money laundering legislation, however, states that it must be possible to unambiguously identify natural and legal persons. This requirement to “know your customer” means ascertaining the identity of network participants, which is why an application like Bitcoin – where transactions take place anonymously – is ineligible. A transfer as a P2P transaction would then only be possible subject to rules which no longer guarantee anonymity. Thus, any application of DLT in the financial sector would only be possible with a private ledger, rather than a public one.

Anti-money laundering legislation requires participants to be identifiable

Confidentiality

DLT generally enables any participant to view the transaction history, which means that the confidentiality of financial transactions cannot

Participants want to settle transactions confidentially

⁹ See inter alia G Danezis and S Meiklejohn (2015), Centrally banked cryptocurrencies, <https://arxiv.org/pdf/1505.06895.pdf>; V Buterin (2016), Ethereum: platform review – opportunities and challenges for private and consortium blockchains, <http://www.r3cev.com/blog/2016/6/2/ethereum-platform-review>; J Poon and T Dryja (2016), The Bitcoin lightning network: scalable off-chain instant payments, <https://lightning.network/lightning-network-paper.pdf>; Hyperledger Fabric Model, https://hyperledger-fabric.readthedocs.io/en/latest/fabric_model.html; R Brown, J Carlyle, I Grigg and M Hearn (2016), Corda: an introduction, https://docs.corda.net/_static/corda-introductory-whitepaper.pdf. Owing to the multitude of advances made, just a few applications are mentioned here by way of example.

be assured without encryption. Even encrypted storage of data at every node would still not offer sufficient safety. If future improvements in hardware or software components enabled data to be decrypted, that would expose the transaction history again to all the nodes at which the data had been stored. This compromise of future confidentiality (“forward secrecy”) could be resolved by not having all the data stored at every node but exchanging them in sub-networks of a kind. This safeguard would, however, mark a significant departure from the fundamental principles of full transparency and comprehensibility of a distributed database, and make DLT less tamper-proof.

Scalability and performance

Scalability and performance – as measured, for instance, in terms of system latency periods – are crucially important criteria when applying DLT to infrastructures with high throughput rates and/or high transaction volumes during peak times. The scalability of DLT solutions depends on the choice of technical configuration and especially on the consensus mechanism. Depending on which consensus mechanism is used, DLT solutions require far more data storage capacity, data instructions and time to settle a single transaction than a centralised financial market infrastructure. If DLT systems fail to reach the transaction throughput rates achieved by today’s financial market infrastructures, it would only make sense to apply them to systems which are highly complex but run at relatively low transaction volumes. By way of comparison, the Bitcoin network settles a peak of roughly 350,000 transactions worldwide every day, and given its current configuration, it is thought to be running at almost full capacity. The German payment system alone, by contrast, processes more than 75 million transactions on average every business day.¹⁰

Resilience compromised

Some DLT developers keen to boost performance have introduced hierarchical role concepts

which assign different rights to different nodes. Some are given more extensive read, write and validation rights; others are only authorised to propose transactions, say. This could ultimately compromise the very operational resilience which the elimination of a single point of failure set out to achieve. If a node with extended rights came under attack, a malicious actor could potentially inflict greater damage and could furthermore focus its efforts on the least protected node (the weakest link). Under certain circumstances, then, it is far more difficult to guarantee data security than in the case of a centralised system. However, this weakest link dilemma would not be confined to read access rights. Depending on the consensus mechanism used, a malicious actor could feed faulty data into the network. Where the PBFT protocol, which is currently a popular consensus mechanism in hierarchical DLT networks, is used, that form of unauthorised write access would, however, require a successful attack on the majority of validating nodes.

Finality

Financial transactions require both clearly defined *de jure* and *de facto* finality, ie a specific point in time as from which a transaction may be considered valid. State-of-the-art RTGS systems immediately reuse incoming funds, while in the field of securities, financial institutions sometimes sell or lend securities or use them as collateral immediately after settlement finality. Some DLT consensus mechanisms, however, such as the proof of work protocol, only offer probabilistic finality. In this particular consensus mechanism, the longest chain of blocks is the valid one. There is a certain degree of probability, however, that various nodes will have added different blocks to the valid chain, creating bifurcations (forks) in the chain which make it difficult at first to be sure which chain is the valid one. Only when one chain of blocks grows more quickly will it prevail as the au-

New developments of hierarchical structures in DLT lower resilience

Current DLT too slow for high-volume applications

Some consensus mechanisms offer only probabilistic finality

¹⁰ See <https://blockchain.info> and Deutsche Bundesbank, payment statistics for 2016.

thoritative chain. Transactions in the shorter part of the chain from the bifurcation are cancelled retroactively. That is why these consensus mechanisms are said to offer only probabilistic finality.

How virtual assets relate to real assets

Trustless transfers by third parties only possible in cyberspace

Bitcoins, which circulate in the currently best-known DL network, are only ever a virtual currency; that is, they do not exist outside the blockchain. Bitcoins can only be transferred across the blockchain and cannot leave the blockchain. A security, by contrast, embodies a claim in the real world. While that security can be transferred via DLT, its migration onto the blockchain depends on the existence of a body, such as a central securities depository, to link real, off-ledger assets with the digital world. In other words, there needs to be a trusted body at least at the interface between the real world and DLT.¹¹ That is not the case in the Bitcoin blockchain. To put it more broadly, while the sale of a good can be documented in a distributed ledger, that is not enough to validate the very existence of that good, its specifications and possibly also its previous ownership status. DLT's assertion that it can make trustless transfers a reality, then, would be confined to the purely virtual realm and have no points of reference in the real world.

Possible changes in the market

Some sectors experimenting with DLT

DLT is a technical concept which is being tested simultaneously in a number of sectors and fields of application. The following section of this article will discuss how DLT might transform the markets for payments and securities settlement. Judging by the above description of DLT's functionalities, its actual use in the financial sector would generally appear to be beneficial whenever extensive reconciliation is required between multiple independent participants and/or repeated recourse to the database is necessary, and whenever a complex

value chain is involved. It goes without saying that it must be possible to digitalise assets for use in DLT.

Payments

Some believe that DLT has a high degree of disruptive potential in the field of payments. The P2P network architecture in particular is regarded by some market participants as being instrumental to an efficient, globally accessible asset transfer capability. Yet a nuanced analysis reveals that the special structural features of DLT will not *per se* revolutionise the world of payments.

Payments in the euro area

The trend in the European payments space is towards ever-faster systems which settle payments as close to real time as possible. In large-value payments business, it is customary for payments to be settled with finality in central bank money directly between two banks via RTGS systems. In future, the TARGET Instant Payment Settlement Service (TIPS) is expected to make the direct transfer of funds in real time a reality for retail payments as well. RTGS systems such as TARGET2 process payments efficiently, and are optimised for fast transfers, besides requiring a minimum of reconciliation. So far, there is nothing to suggest that the use of DLT for payments in a single currency area can achieve any efficiency gains over the established settlement systems. As it happens, payment settlement using DLT will probably even become slower and more costly, depending on how the consensus mechanism is designed and which database structure is selected. From the perspective of today's technical capabilities, there is little prospect of DLT being put to widespread use in large-value and retail payments in Europe.

Fairly unlikely that DLT will be used in European large-value or retail payments

¹¹ See G Neyer (2017), The future of blockchain, Journal of Digital Banking, 2 (1), pp 74-94.

Correspondent banking and trade finance seem more suited to DLT

Payments across currency areas/trade finance

The situation is different with regard to payments across currency areas. In order to become a participant in RTGS systems, a bank must generally have a registered office, a subsidiary or a branch office in the relevant currency area. If this is not the case, it has the possibility of maintaining what are known as correspondent banking relationships with a credit institution that belongs to the currency area in question. Correspondent banking is less standardised than centralised payment systems and often calls for extensive reconciliation processes between those involved. Settlement takes a long time (as a rule, more than one day) and causes relatively high transaction costs. DLT and the use of smart contracts could simplify some of the process stages in correspondent banking or even make them superfluous and allow quicker and cheaper settlement for end users. The development of a number of DLT-based pilot projects for correspondent banking relationships has led financial service providers currently operating in that field to review their own procedures in terms of boosting efficiency.

It is furthermore conceivable that DLT solutions could help to improve financial inclusion in some countries which have a poorly developed financial infrastructure.

In addition to this, the use of DLT in trade finance seems to offer advantages where several process stages have to be executed and confirmed step by step. DLT could, above all, make reconciliation between those involved easier and faster by automating processes that are settled manually at present.

Securities settlement

Many observers ascribe major potential to DLT in securities settlement and other post-trade areas. There, too, possibilities of deployment

are seen in those areas where there are complex transaction chains and there is a relatively large need for manual reconciliation between the parties involved in the transaction.

Reduced reconciliation workload

In the life cycle of a security, actual settlement of the trade is followed in many instances by a need to balance the amounts, say, in the case of capital measures such as interest payments. This matching process is known as reconciliation. DLT could offer advantages at this point. Owing to the distributed, but uniform database, no differences should occur at least within a DL. All those involved are using the same pool of data. Reconciliation between the CSDs and custodians as well as between custodians and account-keeping banks could be simplified by the use of DLT.¹²

Shortening process chains

The biggest potential advantage of DLT in securities settlement lies in the possibility of combining or greatly simplifying process stages.¹³ Smart contracts, which allow complex sequences of transactions to be conducted as a single transaction, are one major instrument for this purpose. In fact, more than two parties can be involved as well as more than one currency and several securities. This could save time and would be of particular benefit if risks are reduced by conducting different parts of a transaction simultaneously.

Corporate actions and custody

The distributed storage of data when using DLT promises to make it easier to determine the current and historic securities holders, since the relevant information is distributed automatically in the system and is directly available. This

Distributed but uniform database could lower reconciliation costs

Smart contracts could shorten process chains

Measures in the life cycle of a security could be executed more simply via DLT

¹² See BIS (2017), op cit; and D Mills et al (2016), Distributed ledger technology in payments, clearing and settlement, Federal Reserve Board, Finance and Economics Discussion Series 2016-095.

¹³ See ESMA report (2017), op cit.

would simplify the processing of corporate actions (eg interest payments, redemption upon maturity, stock splits). Above and beyond that, various corporate actions could be (partly) automated by using smart contracts by, for example, automatically generating and conducting the transactions for the coupon payment.¹⁴ In an extreme case, the complete life cycle of a security would be represented in a smart contract. After issuance, such a security would not need any kind of additional action in order to be settled.

Reference data and identification solutions

Decentralised maintenance of reference data using DLT

Many DL applications use the immutability of the data once they have been written and the distributed structure in order to store and administer unambiguous reference data and classifications on it using smart contracts. Even though such solutions are not designed for the transfer of money or securities, they do offer a number of applications which are indispensable for the settlement of financial transactions, such as identity management.¹⁵ This might relate to updating the master data of participants in a financial market infrastructure, for example. In such kinds of tasks, DLT is characterised by a large degree of automation in the processing of information. This is the case because the authorised participants in a network are able to enter changes to their data directly into the network for validation. Once they have been validated, the data are updated immediately at all nodes. Solutions of this kind could be an advantage precisely in correspondent banking, where it is vital to identify the participants in a transaction unambiguously in order to allow the implementation of the “know your customer” principle on a transnational and secure basis.¹⁶ For the majority of applications in the field of finance, making changes to reference data without externally authorised verification is unlikely to be acceptable, however.

Central bank-issued digital currency

In current payment systems, market participants insist on settlement in central bank money where large amounts are involved. When using DLT, the question might arise in future as to whether central bank-issued digital currency could be provided for the safe settlement of such larger transactions. Central bank-issued digital currency would rank alongside cash and credit balances with the central bank – the latter essentially being the preserve of commercial banks and general government – as another form of central bank money, and it would have to be posted in the same way as a central bank liability on the balance sheet. There are several technical options in terms of the form this could take. Transfers could be value-based (like cash) or account-based (like deposits), anonymous or registered, its use could be restricted – in terms of amount or payment purpose, say – and it could be remunerated or, like cash, earn no interest.

The actual way this is implemented would ultimately determine its macroeconomic impact, and it is precisely this which has to be taken into account when making any comprehensive assessment.

Arguably, the most important question here concerns who should be authorised to use central bank-issued digital currency, or, to be more precise, whether central bank-issued digital currency should be issued to non-banks as well. This is because, if that were the case, substitution effects between the different forms of money would have to be expected. In particular, non-banks could convert their sight deposits at banks into central bank-issued digital currency if storage as an entry on the distributed ledger appears more secure and more

Central bank-issued digital currency under discussion

Should non-banks also have central bank-issued digital currency at their disposal?

¹⁴ See report by Euroclear and Slaughter and May (2016), Blockchain settlement – regulation, innovation and application.

¹⁵ See BIS (2017), op cit.

¹⁶ See ESMA report (2017), op cit.

convenient than hoarding it as cash. Significant parts of non-banks' sight deposits being shifted onto a blockchain, however, and no longer being available to the credit institutions as virtually unremunerated funding might have considerable repercussions for the interest margin, the scale of lending as well as the business models in the banking system, and the banking system's structure. Furthermore, a simple expansion of the monetary base, accompanied by a shift from sight deposits into central bank-issued digital currency and thus an increase in central bank liabilities, would require a corresponding increase in balance sheet assets, say, in the form of additional refinancing operations that would have to be appropriately collateralised. The effects on the structure and the risk profile of central bank balance sheets would be considerable.

Implications currently hard to assess; central bank-issued digital currency therefore unrealistic at present

Seen in that light, the potential monetary policy and stability policy implications of introducing central bank-issued digital currency, say on the basis of DLT, are manifold and – even though they are currently being studied by some central banks – all but impossible to predict.¹⁷ Even leaving aside current uncertainty about the technological potential of DLT, which is a factor here, too, this makes its application to central bank-issued digital currency seem unrealistic at present.

■ Implications and outlook

Possible implications for the roles of the Bundesbank

Role as an operator

By operating payment and settlement systems, above all for settlement between banks, the Bundesbank supports – along with other central banks – the stable settlement of payments in the Eurosystem. In the case of DLT, the Bundesbank sees the use of permissioned systems as the sole option – in other words, private ledgers which allow the identification of par-

Bundesbank looking into suitability and efficiency of DLT in its own project

ticipants. The Bundesbank is currently conducting a conceptual study together with Deutsche Börse in order to make a more exact assessment of DLT's potential. This study explores whether DLT is suitable for use in the field of digitally transferable currency units and securities and how efficient and stable it is. Initial results confirm the general functional suitability of DLT. The technical performance and the scalability of such a system will have to be examined in further stages, however, in order to be able to tell whether DLT is fit for practical use.

Role as a catalyst

In its role as a catalyst, the Bundesbank supports ongoing development in payments and securities settlement with the aim of fostering stability and efficiency. New procedures and techniques have to hold out the promise of added value and fit into the existing regulatory system. In order to assess this, it is necessary to understand the procedures. One way to do this is to apply and analyse them oneself.

There is a need to bring together the various participants with diverging interests, as the industry has pronounced network features. At the same time, it is important not to distort market developments or competition between rival systems. Changes in the procedures and processes require acceptance by a majority of participants so that potential benefits are realised. Partial changes may even be economically harmful, especially without complete interoperability with existing systems. The generally high investment costs involved in system change coupled with low variable costs in production also promote technological path dependencies. Without the convincing prospect of significant efficiency gains, it is difficult to per-

Network externalities and path dependence necessitate the role as a catalyst in the public interest

¹⁷ See, inter alia, B Broadbent (2016), Central banks and digital currencies, speech at the London School of Economics, 2 March 2016; J Powell (2017), Innovation, technology, and the payments system, speech at Yale Law School Center for the Study of Corporate Law, 3 March 2017; C Skingsley (2016), Should the Riksbank issue e-krona?, speech at FinTech Stockholm, 16 November 2016.

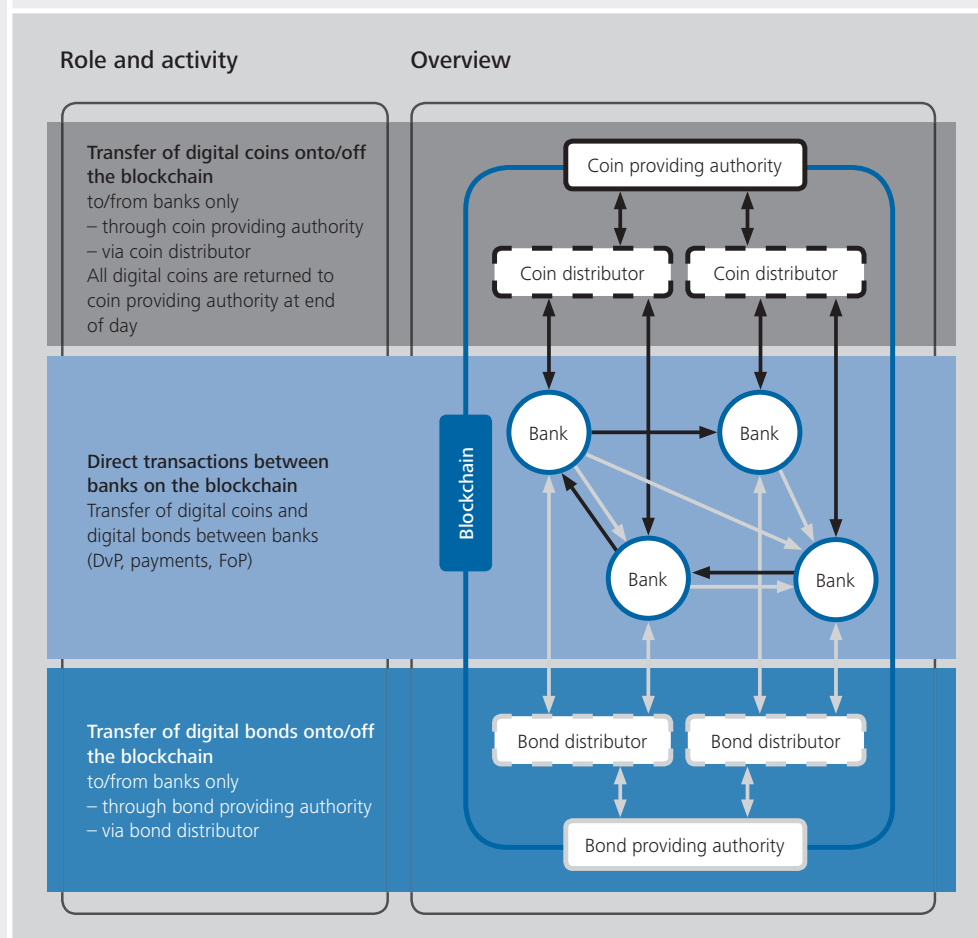
Blockchain research project

The Deutsche Bundesbank and Deutsche Börse are cooperating on a research project on the use of blockchain technology in payment and securities settlement between banks. The jointly developed prototype enables the settlement of security purchases on a delivery-versus-payment basis in exchange for centrally issued digital coins, as well as the pure transfer of digital securities. In addition, it is capable of executing basic corporate actions such as interest payments and the redemption of securities at matur-

ity. In technical terms, it uses a permissioned blockchain based on Hyperledger Fabric.¹ In principle, the prototype could also be based on other DLT versions.

¹ See Hyperledger Fabric Model at https://hyperledger-fabric.readthedocs.io/en/latest/fabric_model.html

Schematic illustration of the prototype for blockchain technology-based settlement presented by the Deutsche Bundesbank and Deutsche Börse



Sources: Deutsche Börse and Deutsche Bundesbank.

Deutsche Bundesbank

Prototype is neutral in terms of monetary policy

For the blockchain-based settlement processes, the coin providing authority transfers digital coins from an external cash cycle onto the blockchain at the start of each business day. They are available for network participants during the trading day. The coins are returned to the external cash cycle at the end of the day. Securities are made available for trading within the blockchain network by a bond providing authority. The securities remain on the blockchain throughout and do not leave the network until instruction has been received from the participant or upon maturity.

Prototype meets regulatory requirements in principle

The prototype ensures the confidentiality of transaction content using an adaptable rights framework. It takes into consideration the existing regulatory requirements and covers all business-related procedures for internal and external accounting and for regulatory reporting. This means that the prototype generally provides the basis for a practical application. However, it is a conceptual study and thus far from being market-ready. In a further stage of the project, the prototype will be further developed to allow technical performance and scalability to be analysed in more detail.

suade market participants of the merits of new procedures.

In order to contribute to the cross-application harmonisation of DLT, the Bundesbank is also taking part in an initiative for the standardisation of "Blockchain and Distributed Ledger Technologies" organised by the International Organization for Standardisation. The aim of the initiative is to apply a uniform framework of reference in order to promote interoperability and the exchange of data between users, applications and systems which use this technology.

Role as an overseer

In its role as overseer of payments and settlement systems, the Bundesbank analyses all relevant developments in terms of their impact on the security and efficiency of the financial sector. At the present time, oversight in the case of DLT is confined to monitoring the mar-

ket. If large DLT-based systems wished to start up operations in Germany, they would be assessed on the basis of the same criteria as those for the current systems.

Outlook

DLT continues to be the subject of in-depth research and development in the expectation that its use will be able to lower transaction costs. Transferring its original role as the technology behind the virtual currency Bitcoin to applications in payments and securities settlement is proving to be a veritable challenge. It is becoming apparent that a large number of adjustments to the original Bitcoin procedure will be necessary. A purely P2P implementation without intermediaries is unlikely to be practicable in the financial sector. Added to this are non-functional criteria: the scalability and performance of DLT are still too limited to be considered for use in high-volume applications.

At present, research is being undertaken both into the underlying principles – the technical design of DLT *per se* – as well as the application-related interfaces and the legal forms it could take. The fact that these developments are taking place simultaneously makes predictions especially difficult. The actual benefits of DLT are likely to be apparent not so much in its use in traditional structures and processes, but rather come to bear more strongly in modified structures and processes. This is countered, however, not only by the potential for persistence of the existing service providers but also by the technology-related inertia of developments in payments and securities settlement (path dependency/network effects). Certainly, there may be some isolated rapid applications of DLT that do not result immediately in system change. Nevertheless, introducing it on a broad front would call for a simultaneous cooperative

effort on the part of virtually all those involved. At all events, DLT has already led to further work being performed on some traditional procedures in order to improve their efficiency.

Depending on one's point of view, DLT is currently encountering a period of disillusionment in the face of its by no means trivial application in the financial system or receiving increasingly wide attention as a result of a growing number of feasibility studies, not least by central banks. The outcome of such experiments is uncertain. On the one hand, major challenges have not yet been mastered. On the other hand, it has often been the case that the real advantage of an innovation was not yet apparent at the early stages of its development. As the Bundesbank sees it, there are, for now, good grounds to go on exploring the practical applicability of DLT in payments and in securities settlement.

The performance of German credit institutions in 2016

In a challenging financial market setting of persistently low interest rates on the one hand and solid economic growth on the other, the profitability of German banks, as reported in the published annual reports prepared according to the German Commercial Code (Handelsgesetzbuch), has declined in their core business areas. With total assets also down, net interest income and net commission income were significantly reduced from the previous year by a total of €5.4 billion, dropping to €120.9 billion. By contrast, the significantly improved other operating result of €4.1 billion had a stabilising effect, which meant that operating income just exceeded the previous year's level, at €128.1 billion. On the back of somewhat lower administrative spending, the cost/income ratio of German banks improved slightly to 69.2%. Overall, the heterogeneity between and also within the various categories of banks was particularly pronounced in 2016 on account of one-off factors, some of which affected specific larger banks only.

The result from the valuation of assets fell from its historically favourable level, deteriorating by €5.3 billion to -€8.8 billion. This was mainly due to very high value adjustments, primarily in the credit portfolios of shipping loans at specific big banks and Landesbanken. The savings banks and credit cooperatives (primary institutions), on the other hand, benefited from the healthy economic climate and the concomitant low need for risk provisioning in households' credit portfolios. On balance, they released risk provisions built up in previous years, leading to positive results from the valuation of assets. The resultant higher annual results were mostly used to further bolster their balance sheet capital base.

The profit for the financial year before tax rose by 4.6% to €27.8 billion. Of this amount, €4.2 billion was used to offset net losses brought forward from previous years and €7.8 billion went towards taxes on earnings. The revenue reserves were stocked up by €0.6 billion net and the fund for general banking risks by €10.8 billion on balance. The primary institutions accounted for more than 80% of the net transfers to this fund. Altogether, the aggregate balance sheet capital (total equity) for all banks arising from the profit for the financial year thus increased by €11.4 billion, with gross capital injections of €16.7 billion standing against high withdrawals of €5.3 billion. The latter were mainly used for a distribution to the parent institution in the case of one big bank and to offset losses in the case of two Landesbanken hit especially hard by the shipping crisis. The aggregate balance sheet profit rose by almost two-thirds to €4.4 billion.

Sustained positive real economic setting

■ Banks' business environment

The German economy's solid growth continued in the 2016 reporting year. Once again, this was mainly driven by steeply rising private and government consumption. Households benefited from the increase in real disposable income brought about by the low inflation rate and favourable labour market situation. Government spending was stepped up largely because of expenditure on the provision of support for refugees, but also on pensions and healthcare. In addition, the upturn in the residential real estate market, which has persisted for some years now, continued. Building permits for housing construction, for instance, stood at a total of 375,388, which was 19.8% higher than their prior-year level.¹ The increase in exports was dampened by weak world trade, however. In particular, German enterprises' exports to non-euro area countries was subdued. Against this background, industrial investment also remained lacklustre.

The ECB's monetary policy measures

In order to counteract heightened downside risks to price stability in the euro area, the ECB Governing Council decided in March 2016 to decrease the interest rate on the deposit facility further to -0.40%, to raise the monthly purchase volume of the expanded asset purchase programme (APP) from €60 billion to €80 billion starting in April 2016, and to include corporate bonds in the purchase programme starting in June 2016. At the same time, four new targeted longer-term refinancing operations were announced, each with a maturity of four years, starting in June 2016. Against the backdrop of persistently weak inflation dynamics, the ECB Governing Council decided in December 2016 to maintain its expansionary monetary policy stance and, from April 2017, to continue the net asset purchases at the reduced pace of €60 billion until December 2017 at least. Moreover, it decided to decrease the minimum residual maturity period for the public sector purchase programme from two years to one year and to also permit purchases of securities with a yield (to maturity)

below the interest rate on the deposit facility, to the extent necessary, with both decisions effective as of January 2017.

On 11 March 2016, the Act Implementing the Mortgage Credit Directive and Amending Accounting Rules (*Gesetz zur Umsetzung der Wohnimmobilienkreditrichtlinie und zur Änderung handelsrechtlicher Vorschriften*) entered into force. Article 7 amended the measurement approach pursuant to the German Commercial Code for pension provisions with a residual maturity of more than one year. The revised version extended the reference period used to calculate the average discount rate. For most banks, the one-off effect stemming from the first application of the amended discounting rules led to reversals of provisions or to significantly lower transfer amounts and thus benefited the annual results considerably (further information on this topic can be found in the box on page 55). According to the information contained in the annual reports of 30 institutions belonging to different categories of banks,² in which nearly two-thirds of the aggregate total assets of the German banking system are concentrated, the cost savings of these institutions came to a total of €3.0 billion in the reporting year. According to the statement issued by the Institute of Public Auditors in Germany (IDW) on the accounting for pension obligations pursuant to the German Commercial Code (IDWRS HFA 30), reporting parties can choose whether to disclose effects on profit and loss stemming from a change in the discount rate together with changes in fair value and current income from plan assets either in staff costs or in the financial result (net

Change in accounting rules

¹ See also Federal Statistical Office, *Bautätigkeit und Wohnungen*, Fachserie 5, Reihe 1, 2016.

² In order to use the same reporting group for the special analysis of the one-off effect stemming from the first-time application of the amended discounting rules and of the transmission of negative interest rates on p 59, the 30 largest credit institutions were selected on the basis of total assets; the chosen institutions had disclosed in their annual reports information about the effects on profit and loss arising from the accounting for pension obligations pursuant to the German Commercial Code as well as information about positive and negative interest in 2015 and 2016.

Methodological notes

Data based on individual accounts in accordance with the German Commercial Code and on monthly balance sheet statistics

The results from the profit and loss accounts are based on the published annual reports of the individual institutions in accordance with the provisions set forth in the German Commercial Code (*Handelsgesetzbuch*, or HGB) and the Regulation on the Accounting of Credit Institutions (*Verordnung über die Rechnungslegung der Kreditinstitute*, or RechKredV). They differ in terms of their conception, structure and definitions from the internationally customary IFRS (International Financial Reporting Standards) accounting standards¹ for capital market-oriented banking groups, which means that – from a methodological viewpoint – the respective business results and certain balance sheet or individual profit and loss items are not comparable across the national and international accounting frameworks.

For reasons of comparability within Germany, it is advisable to consider the individual accounts when analysing financial performance. Using group accounts would make a meaningful analysis difficult as, first, many German banks are not part of a group, meaning that their individual accounts drawn up in accordance with the German Commercial Code would still have to be used; second, the accounts of capital market-oriented groups are prepared according to international accounting standards.

The figures for balance sheet capital (total equity), total assets and other stock variables are not obtained from the annual reports but are taken as annual average values on the basis of the monthly balance sheet statistics reported for the institution as a whole.

Reporting group

The reporting group for statistics on banks' profit and loss accounts (profit and loss statistics) includes all banks that are both monetary financial institutions and credit institutions as defined in the German Banking Act (*Kreditwesengesetz*, or KWG), as well as being domiciled in Germany. Branches of foreign banks

that are exempted from the provisions of section 53 of the Banking Act, banks in liquidation and banks with a financial year under 12 months (truncated financial year) are not included in this performance analysis.

Elimination of the category "regional institutions of credit cooperatives"

As in the monthly balance sheet statistics, the category "regional institutions of credit cooperatives" is no longer reported separately in the profit and loss statistics for data protection reasons. The earnings data of "DZ Bank AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main", which was created in July 2016 through the merger between "DZ Bank AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main" and "WGZ BANK AG Westdeutsche Genossenschafts-Zentralbank, Düsseldorf", are included in the category "Banks with special, development and other central support tasks" in the long-term internet time series from the reporting year 2016 onwards. However, in the tables and charts, as well as in the tables accompanying this *Monthly Report* article, they are assigned to this category for the entire period under observation (2007 to 2016).

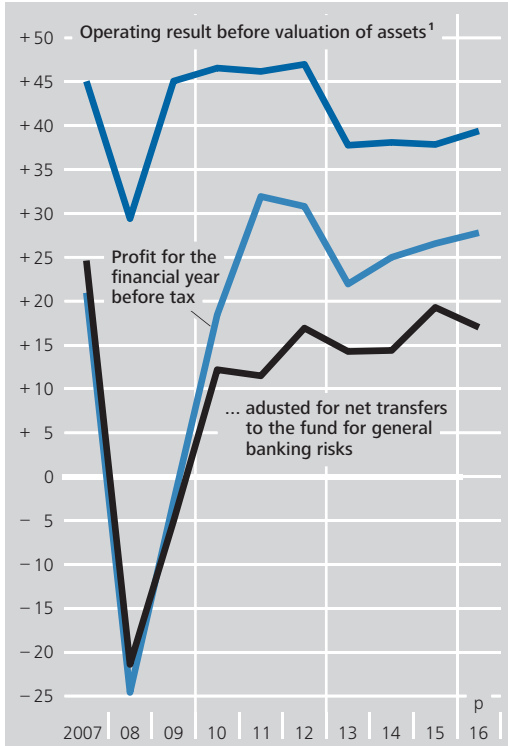
Calculation of the long-term average

At the launch of European monetary union in 1999, the reporting group relevant for calculating the money supply and for monetary analysis was uniformly defined by the ECB for the euro area as a whole and referred to as the monetary financial institutions (MFI) sector. Unlike the population of banks used for the Bundesbank analysis up to that time, building and loan associations are also included. Except where another time period is explicitly mentioned, the calculations with regard to the longer-term average cover the years since the launch of European monetary union, ie from 1999 to 2016.

¹ IFRS-based financial statements are of relevance, for instance, to matters of macroprudential analysis and oversight, concentrating on systemically important banks and their international business activities (including their foreign subsidiaries). For details, see Deutsche Bundesbank, Financial Stability Review 2013, November 2013.

The performance of credit institutions

€ billion



1 Operating income less general administrative spending. Deutsche Bundesbank

interest income or other operating income). The changes to the rules therefore affected different parts of the profit and loss account, depending on the reporting practice chosen by the banks. The majority of the 30 banks recognised the effects on profit and loss in other operating income, which thus saw savings of around €1.5 billion.

Opportunities and challenges of digitalisation

Alongside the ongoing low-interest-rate environment, banks are also facing challenges from advances in the digitalisation of financial services. Changing customer behaviour, growing competition from companies with innovative IT-based business models (fintechs), and the need for higher investment in IT security are compounding competitive and cost pressures. However, the expansion of digital distribution platforms with tailored new branch concepts as well as the combination of digital solutions with established brands and mature customer bases offer significant potential for future efficiency gains.

The process of consolidation in the German banking sector accelerated in the reporting year. In the course of the year, the total number of credit institutions covered by statistics on the profit and loss accounts fell by 68, of which 59 banks alone were attributable to the primary institutions. The following figures are therefore based on a reporting group comprising 1,611 institutions with aggregate total assets of €8.4 trillion.

Number of banks still falling

Net interest income down perceptibly

Net interest income accounts for 73.2% of operating income on a long-term average, making it by far the most important source of income for German banks. Aside from the contribution to earnings made by actual interest-bearing business,³ the sum of current income⁴ and income from profit transfers⁵ also forms part of net interest income. These comparatively volatile earnings components contribute roughly 20% to net interest income on a long-term average, but relate mainly to the big banks with international operations. In the reporting year, the aggregate net interest income for all banks declined by 4.9% to €91.1 billion (71.2% of operating income). This was largely due to the lower sum of current income and income from profit transfers, which was down by 17.3% to €14.7 billion. The contribution to earnings made by actual interest-bearing business – net interest income in the narrower sense – contracted by 2.1% to €76.4 billion. The stronger decline in interest paid⁶ relative to interest income and the positive one-off effect stemming from the adjustment to the measurement of pension obligations, which pushed

Significant drop in current income

3 Total income from lending and money market transactions as well as from debt securities and debt register claims less interest paid.

4 Income from shares and other variable-yield securities, from participating interests, and from shares in affiliated enterprises.

5 Profits transferred under profit pooling, profit transfer agreements or partial profit transfer agreements.

6 Interest paid decreased by around 14%, and interest received by around 9%.

New discounting methodology for calculating pension obligations

The Act Implementing the Mortgage Credit Directive and Amending Accounting Rules (*Gesetz zur Umsetzung der Wohnimmobilienkreditrichtlinie und zur Änderung handelsrechtlicher Vorschriften*) entered into force on 11 March 2016. Article 7 amended the measurement approach pursuant to the German Commercial Code (*Handelsgesetzbuch*) for pension provisions with a residual maturity of more than one year. Pension obligations are liabilities that are likely to be incurred in the future, and provisions need to be set aside for these – discounted to their present value. These provisions are recorded as debt in the balance sheet. Transfers to pension provisions can be recorded as staff costs, interest paid or other operating expenses, and thus diminish the annual result.

The reference period for calculating the discount rate was adjusted in the revised and extended German Commercial Code of 11 March 2016. The rate used to discount the amount required to settle the pension obligations over the residual maturity period is now no longer the average market interest rate over the last seven years, but over the last ten.

The new rule is to be applied for the first time to the annual accounts for the financial year ending after 31 December 2015.¹ The extension of the reference period means that the higher interest rates seen some years ago will again be taken into account when calculating the average rate – at least for the next few years. This will lead to an increase in the relevant discount rates and thus to a reduction in transfers to pension provisions.² In the short term, this has a favourable impact on the annual result and (assuming distributions remain stable) shifts the balance on the liabilities side from debt to equity. According to the explanatory memorandum, this should perceptibly

mitigate the negative impact of the protracted low-interest-rate environment on the attractiveness of occupational pensions. As this impact on profits stems solely from a change in the law and not from the business activity itself, and so as not to undermine the principle of prudence, legislators imposed a restriction on the distribution of the positive difference arising from the application of the old and new rule.³

The first-time application of the new measurement approach considerably improved the annual results for the 2016 reporting year. For example, if an enterprise opted to use the simplified rule pursuant to section 253 (2) sentence 2 of the German Commercial Code and assumed a residual maturity of 15 years for all pension provisions, the discount rate applicable on the reporting date of 31 December 2016 would be 3.24% based on an average of the previous seven years, and 4.01% based on an average of the previous ten years. Under the old system, a settlement amount of €100 with a residual maturity of 15 years would have required provisions of €62 in 2016, compared with just €55.40 under the new system. Pension provisions under the new rules are thus more than 10% lower.

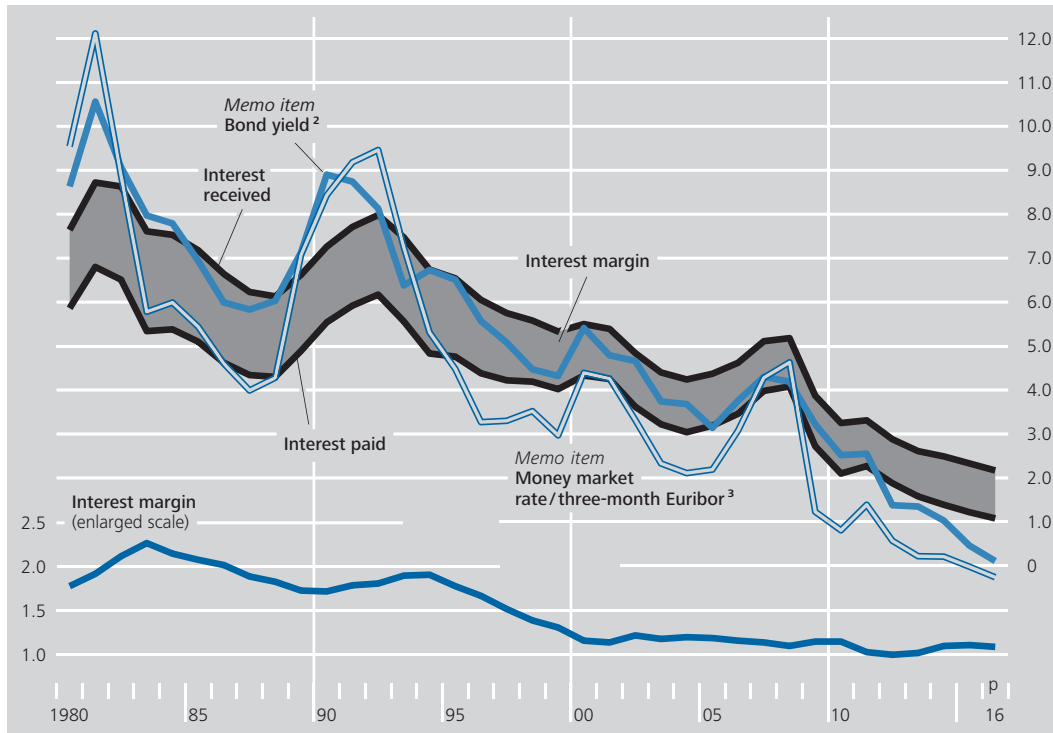
¹ However, there is an option to already apply the new rule to a financial year starting after 31 December 2014 and ending before 1 January 2016.

² For a comparison of the projected development of the discount rate according to the old and new method, assuming interest rates persist at their current low levels, see German Financial Stability Committee (2016), Dritter Bericht an den Deutschen Bundestag zur Finanzstabilität in Deutschland, p 43, available online at https://www.bundesbank.de/Redaktion/DE/Downloads/Aufgaben/Finanz_und_Waehrungssystem/2016_06_30_afs_bericht.pdf?__blob=publicationFile

³ For more information, see Bundestags-Drucksache 18/7584, Beschlussempfehlung und Bericht des Ausschusses für Recht und Verbraucherschutz (6. Ausschuss) zu dem Gesetzentwurf der Bundesregierung – Drucksachen 18/5922, 18/6286, 18/6410 Nr. 5 – Entwurf eines Gesetzes zur Umsetzung der Wohnimmobilienkreditrichtlinie, p 149, available online at <http://dip21.bundestag.de/dip21/btd/18/075/1807584.pdf>

Interest received and interest paid by credit institutions in the interest cycle

As a percentage of total assets¹



1 Up to end-1998, as a percentage of the average volume of business. **2** Average yield on domestic bearer debt securities. **3** Up to end-1998, money market rate for three-month funds in Frankfurt am Main.
 Deutsche Bundesbank

net interest income up by €0.7 billion at one big bank alone, countered a larger decrease. Overall, the low-interest-rate environment is thus still weighing on banks' results. In order to gain new insights into the profitability and resilience of German institutions (see the box on pages 57 and 58), the Federal Financial Supervisory Authority (BaFin) and the Bundesbank conducted a third low-interest-rate survey in 2017, following on from its 2013 and 2015 iterations.

Favourable funding situation

As in previous years, banks benefited from a favourable funding situation. This assessment was also confirmed by the institutions that regularly participate in the Bank Lending Survey (BLS) conducted by the Bundesbank. The interest rates on the main refinancing operations and on the marginal lending facility which, together with the rate on the deposit facility, constitute the Eurosystem's key interest rates, remained at their historically low levels in the reporting year, at 0.00% and 0.25% respect-

ively. Interest rates in the interbank market, already negative in the previous year, kept hitting new historic lows. For unsecured money market transactions between banks with a maturity of three months, EURIBOR (Euro Inter-Bank Offered Rate) stood at -0.32% on average in December, and Eonia (Euro OverNight Index Average), the unsecured interbank overnight rate, was -0.35%. Furthermore, the ongoing accumulation of overnight deposits benefited from the continued pronounced preference for liquidity among households, which saw their financial assets grow to €5.6 trillion by the end of the year. Aggregated across all banks, the share of total assets accounted for by overnight deposits held by domestic households has almost tripled since 2007 to 13%. This development played a major role in the considerable overall increase in the share of overnight deposits held by non-banks, which rose to almost one-quarter of total assets during this period.

Overview of the results of the 2017 low-interest-rate survey

Following two surveys in 2013 and 2015, the Bundesbank and the Federal Financial Supervisory Authority (BaFin) this year conducted a third survey among roughly 1,500 small and medium-sized German credit institutions that are directly overseen by national supervisors on their profitability and resilience in the low-interest-rate environment.

The aim of the survey was to gain a comprehensive insight into the profit outlook of German credit institutions and to identify at an early stage potential risks that might arise, above all, in a setting of persistently low interest rates. The survey results will be taken into account in future supervisory activities.

The first part of the survey was used to obtain the credit institutions' planning and forecast data as well as earnings simulations for five interest rate scenarios that were defined by the supervisors (constant interest rate level, positive interest rate shock, negative interest rate shock, inverse turn in the yield curve based on a static balance sheet assumption and negative interest rate shock based on a dynamic balance sheet assumption) over the period 2017 to 2021.

The evaluations show that the low-interest-rate environment continues to put German credit institutions under considerable strain, particularly those with business models that are predominantly reliant on interest income. All in all, the institutions expect to see a 9% drop in their profit for the financial year before tax by 2021. Based on planned balance sheet growth of around 10% over the same period, this corresponds to a 16% decline in their return on assets (profit for the financial year before tax as a share of total assets). In the previous survey, which was conducted in 2015, banks had anticipated a 25% decrease. The main

drivers of the banks' current assessment are expectations of higher burdens arising from value adjustments as well as a marked decline in net interest income. Faced with ever-narrower margins in interest business, the institutions plan to increasingly tap alternative sources of income. For instance, net commission income is expected to make a significant contribution to stabilising their results in future. In addition, transfers to the fund for general banking risks are expected to decline over the planning horizon. Under the planning scenario, passing on negative interest rates on deposits is currently an option for only around one in four banks.

On the expenditure side, action is to be taken to keep the increase in administrative spending significantly below the expansion in total assets. But despite these efforts, banks expect the cost/income ratio to rise considerably over the planning horizon to 2021, from an average of 63% of late to 72%.

The simulations for the five interest rate scenarios defined by the supervisors show that a significantly sharper drop in results would have to be expected assuming a continuing or increasingly worsening low-interest-rate environment and an inverse turn in the yield curve while assuming a static balance sheet. On the whole, the return on assets (based on a static balance sheet assumption in each case) would fall by around 40%, and by as much as around 60% assuming a negative interest rate shock, although as many as around two out of three institutions stated that the pass-through of negative interest on deposits had already been factored into this scenario. Under the assumption of a positive interest rate shock, a slump in profits due to value adjustments would have to be expected in the short term. However, the original level would be exceeded by as much

as 7% in the medium to long term because of the easing pressure on margins.

Once again, the survey was supplemented by a stress test covering not only interest rate risk but credit and market risk as well. The aim here was to test the credit institutions' resilience in a status quo scenario, taking into account additional stress factors such as an abrupt interest rate reversal, an increase in the number of defaults in the credit portfolio as well as a sudden rise in credit spreads or falling asset prices. Over a one-year stress horizon the aggregate Common Equity Tier 1 capital ratio would fall by just under 3 percentage points, from 16.24% at end-2016 to 13.29% at end-2017, the main drivers being value effects on interest-bearing positions as a result of rising interest rates and credit spreads. The European Central Bank will use the stress test results in Pillar 2 Guidance as part of the Supervisory Review and Evaluation Process (SREP) to determine the prudential tar-

get equity ratio. Institutions that are especially vulnerable are subjected to intensified supervision.

For the first time, the survey also gathered data on other side effects of the low-interest-rate environment. In this respect, the main focus was on residential mortgage lending and the development of credit standards.

In order to assess how a potential price correction in the housing market would affect banks' capital levels, a residential property stress test was conducted on the basis of the data collected.¹

¹ Further information on both the results of the low-interest-rate survey and the stress tests is available on the Bundesbank's website at http://www.bundesbank.de/Redaktion/EN/Pressemitteilungen/BBK/2017/2017_08_30_joint_press_release.html

Decline in market-based funding

The importance of market-based funding for German banks has been steadily declining over the past few years.⁷ The favourable liquidity position and the ongoing targeted balance sheet reductions at capital market-oriented Landesbanken and mortgage banks were key factors in this. The downward trend did not continue in the reporting year, however, with negotiable debt securities still accounting for around 15% of total assets, as in the previous year. At €19.8 billion on balance, more debt securities were actually issued than redeemed in the long-term maturity segment (maturity of more than four years) for the first time since 2006. The yields on short-dated debt securities, which were negative throughout the year, are likely to have supported demand for bonds with longer residual maturity periods, the yields on which rebounded from the zero interest mark into clearly more positive territory, especially in the final quarter.

The Eurosystem's extensive asset purchases as part of the APP were the chief cause of an increase in balances held with the central bank on the assets side of the banks' balance sheets. At the aggregate level, excess liquidity⁸ thus saw a further strong rise and made up around 5% of the cumulative total assets of German banks at the end of the reporting year, amounting to just under €400 billion in the German banking sector. The banks' excess balances held with the central bank are remunerated at the deposit facility rate. Altogether, German banks paid €1.05 billion in negative interest on their excess liquidity held with the Bundesbank, which was four times the amount in the previous year.⁹

Massive increase in excess liquidity

⁷ See also Deutsche Bundesbank, Structural developments in the German banking sector, Monthly Report, April 2015, pp 35-60.

⁸ Excess liquidity is the sum of the central bank balance exceeding the minimum reserves (excess reserves) and the deposit facility.

⁹ See also Deutsche Bundesbank, Annual Report 2016, p 77.

Major income and cost items for individual categories of banks in 2016^P

As a percentage of operating income

Item	All categories of banks	Big banks	Regional banks	Landesbanken	Savings banks	Credit co-operatives	Mortgage banks	Building and loan associations	Banks with special, development and other central support tasks
Net interest income	71.2	62.1	65.5	74.8	76.4	76.5	101.9	92.1	73.4
Net commission income	23.3	33.4	24.2	12.1	23.5	21.1	- 2.8	- 18.5	17.5
Result from the trading portfolio	2.4	3.3	1.5	10.2	0.0	0.0	0.0	0.0	7.6
Other operating result	3.2	1.2	8.7	2.9	0.1	2.3	0.9	26.4	1.5
Operating income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
General administrative spending	- 69.2	- 81.4	- 64.2	- 63.5	- 67.8	- 66.6	- 61.0	- 66.2	- 56.4
<i>of which</i>									
Staff costs	- 34.9	- 34.3	- 28.0	- 28.6	- 42.4	- 39.9	- 26.7	- 25.5	- 26.7
Other administrative spending	- 34.4	- 47.0	- 36.2	- 34.9	- 25.3	- 26.6	- 34.3	- 40.7	- 29.8
Result from the valuation of assets	- 6.9	- 12.4	- 4.5	- 37.0	3.5	0.4	- 7.4	0.8	- 12.9
Other and extraordinary result	- 2.2	3.5	- 15.4	- 5.0	- 1.3	1.7	2.5	- 1.9	- 0.4
<i>Memo item</i>									
Profit or loss (-) for the financial year before tax	21.7	9.7	15.9	- 5.5	34.4	35.5	34.2	32.8	30.3
Taxes on income and earnings	- 6.1	- 2.7	- 4.7	- 5.0	- 9.9	- 9.7	- 8.3	- 5.9	- 0.6
Profit or loss (-) for the financial year after tax	15.6	7.0	11.2	- 10.5	24.5	25.9	25.9	26.9	29.7

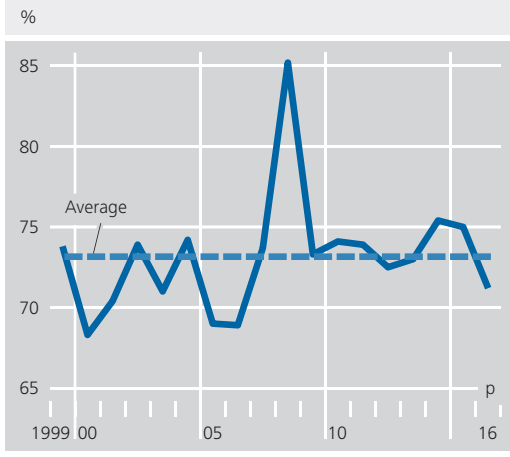
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Negative interest rates increasingly passed on

Negative interest rates on asset items are one aspect of the debate surrounding credit institutions' diminishing earnings potential. These are increasingly counterbalanced by interest received from liability items, however. Therefore, it only makes sense to perform an overall analysis. To this end, the annual reports of 30 banks, which were already examined to discern the impact of the adjustment to the measurement of pension obligations, were also reviewed for information on positive and negative interest. According to the reports, these credit institutions paid €1.55 billion in interest on asset-side items in the reporting year (after €0.61 billion in the previous year) and received €1.29 billion

in interest on liability-side items (after €0.42 billion in the previous year). These were mainly liabilities to banks and institutional depositors. Since the larger amounts affected the income and expenditure sides in nearly equal measure, the resulting net expense of €0.27 billion was only €0.09 billion higher than in the previous year. The result was unevenly distributed, however: 11 banks recorded net income of €0.13 billion in total, one bank reported equal amounts of positive and negative interest, and 18 banks posted a total net expense of €0.40 billion.

Net interest income of German banks as a share of operating income



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Further flattening of the yield curve

The Eurosystem's ongoing expansionary monetary policy stance and the high volume of asset purchases again drove down the low interest rate level in the money market and capital market. The very flat German yield curve¹⁰ thus shifted even more clearly into negative territory over the course of the year. Thus far, however, the zero lower bound necessitated by business policy and competition has prevented the negative interest rate level from being passed through on a broad scale – particularly for deposits held by the private non-financial sector. According to the harmonised MFI interest rate statistics, the interest rate on the overnight deposits of domestic households only fell by 0.05 percentage point to 0.07% over the course of the year, while the rate for new long-term loans to households for house purchase decreased more distinctly over the same period, dropping by 0.32 percentage point to 1.73%. This put increasing pressure on margins at the savings banks and credit co-operatives, in particular, which have business models geared towards traditional lending business and maturity transformation and where overnight deposits of domestic households as well as long-term loans for house purchase account for a much greater share of total assets than in most other categories of banks, at around 30% each.

The shortening of maturities on the liabilities side associated with the growing concentration on overnight deposit products meant that more and more loans with long interest rate lock-in periods were financed on a very short-term basis. Aggregated across all banks, the share of long-term loans to non-banks has grown only slightly since 2007, to 30% of total assets, while in the same period the share of overnight deposits held by non-banks has doubled to just under one-quarter of total assets. For the primary institutions, the share of long-term loans to non-banks has risen by 7 percentage points to 58% in the savings bank sector and by 6 percentage points to 55% in the cooperative bank sector since 2007. In contrast to this, the volume of overnight deposits held by non-banks doubled in the same period to account for almost half of total assets. All other things being equal, this balance sheet structure may give rise to heightened liquidity and interest rate risk, but also to higher earnings owing to the greater contribution of maturity transformation.¹¹

Increase in balance sheet maturity transformation

The declining trading portfolio volume in the big banks sector, the continued balance sheet reduction at the Landesbanken, and the winding-up of a major mortgage bank were the main factors behind the decrease in total assets in these three categories of banks. In the other categories, business expansions led to an increase. The aggregate total assets across all categories of banks contracted on balance by 2.9% to €8.4 trillion. The interest margin, calculated as the ratio of net interest income to total assets, shrank marginally to 1.09%.¹² The interest margin in the narrower sense, which is the ratio of net interest income from interest-

Interest margin virtually unchanged

¹⁰ Interest rates for (hypothetical) zero-coupon bonds with no default risk and with a residual maturity of between two and ten years, estimated on the basis of the prices of Federal bonds (Bunds), five-year Federal notes (Boblis) and Federal Treasury notes (Schätze).

¹¹ See also Deutsche Bundesbank, Increased risks in the banking sector, Financial Stability Review 2016, pp 31-48.

¹² The interest margin adjusted for low-margin interbank business was, at 1.39%, slightly lower than the prior-year level.

Structural data on German credit institutions

End of year

Category of banks	Number of institutions ¹			Number of branches ¹			Number of employees ²		
	2014	2015	2016P	2014	2015	2016P	2014	2015	2016P
All categories of banks	1,830	1,793	1,724	35,264	34,001	31,974	639,050	626,337	608,399
Commercial banks	295	287	280	9,954	9,697	9,406	³ 171,200	³ 169,250	³ 166,050
Big banks	4	4	4	7,443	7,240	7,005	.	.	.
Regional banks	176	171	166	2,363	2,312	2,245	.	.	.
Branches of foreign banks	115	112	110	148	145	156	.	.	.
Landesbanken	9	9	9	408	402	384	33,500	32,600	31,800
Savings banks	416	413	403	11,951	11,459	10,555	240,100	233,700	224,700
Credit cooperatives	1,050	1,025	975	11,269	10,822	10,156	⁴ 158,700	⁴ 155,300	⁴ 151,050
Mortgage banks	17	16	15	48	49	36	.	.	.
Building and loan associations	21	21	20	1,598	1,536	1,400	⁵ 14,000	⁵ 13,650	⁵ 13,550
Banks with special, development and other central support tasks ⁶	22	22	22	36	36	37	⁷ 21,550	⁷ 21,837	⁷ 21,249

¹ Source: Bank office statistics, in Deutsche Bundesbank, Banking statistics, Statistical Supplement 1 to the Monthly Report, p 104 (German edition). The term "credit institution" is used as in the Banking Act, resulting in divergences from data in "Balance sheet statistics" and "Statistics on the profit and loss account". ² Number of full-time and part-time employees excluding Deutsche Bundesbank. Sources: data provided by associations and Bundesbank calculations. ³ Employees in private banking, including mortgage banks established under private law. ⁴ Only employees whose primary occupation is in banking. ⁵ Only office-based employees. ⁶ The categories "Special purpose banks" and "Regional institutions of credit cooperatives" listed separately in previous publications have been merged under "Banks with special, development and other central support tasks". ⁷ Employees at public mortgage banks (mortgage banks established under public law) and banks with special, development and other central support tasks established under public law.

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related business to interest-bearing assets,¹³ also fell just slightly, to 1.52%. For the primary institutions, in particular, where traditional deposit and lending business play a major role, the development of interest margins can provide a key indication of their general profitability. In these categories of banks, interest-bearing assets account for around 80% of total assets, a much higher share than for most of the other categories. Because of their business model, which focuses on traditional lending business and maturity transformation, the primary institutions have the highest interest margins of all the categories of banks. As a result of the low-interest-rate environment and competition, margins in both categories of banks have been contracting for years. In the reporting year, they stood at 1.96% in the savings bank sector and 1.99% in the cooperative bank sector, falling short of the 2% threshold for the first time since the introduction of the profit and loss statistics, and also standing far below their prior-year levels of 2.06% and 2.14% re-

spectively. In the narrower sense, too, interest margins were distinctly down.

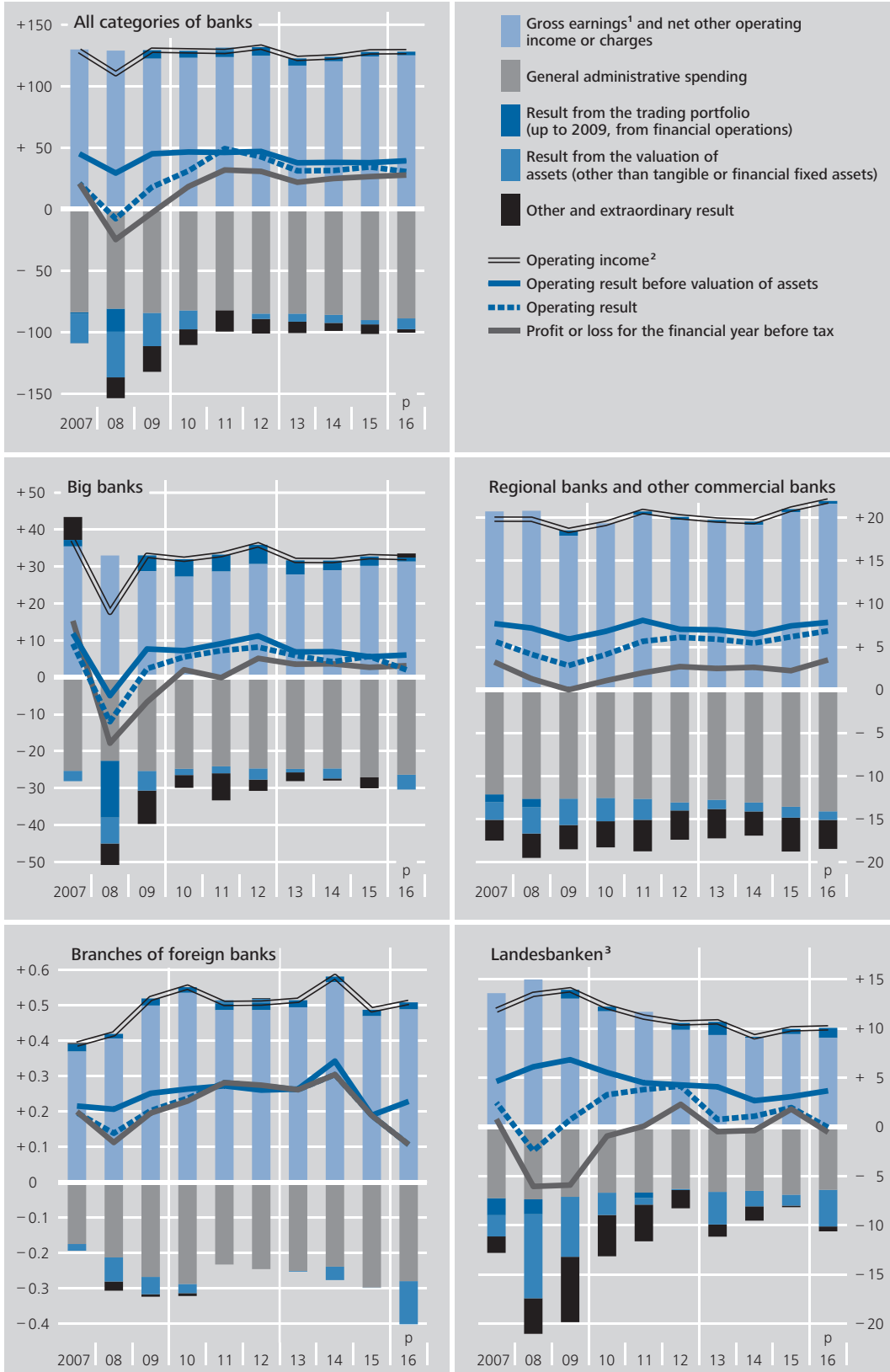
The structural decline in lending that was feared in the run-up to the transposition into national law of the Mortgage Credit Directive was not observed in the aggregate. Loans to households for house purchase, with an annual growth rate of 3.7%, were again the main driver of the marked increase in the volume of loans to households. This growth was supported by stable consumer confidence as well as by the extremely favourable funding costs. On the back of renewed price rises for residential properties, households' high stocks of financial assets are likely to have prevented an even larger increase in the volume of loans for house purchase.

Persistent upward trend in loans for house purchase

¹³ Interest-bearing assets equal the sum of loans to non-banks and of debt securities and other fixed-income securities. They make up around 60% of aggregate total assets across all banks.

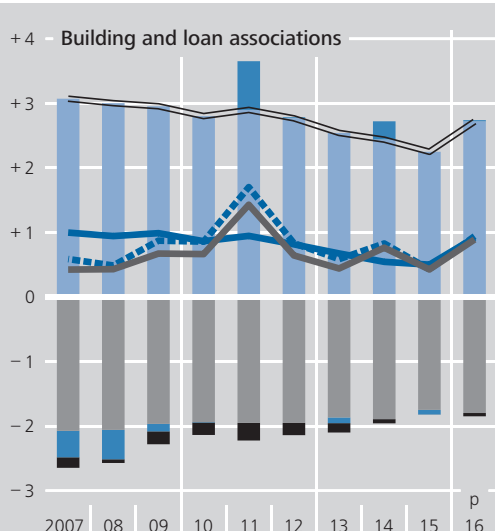
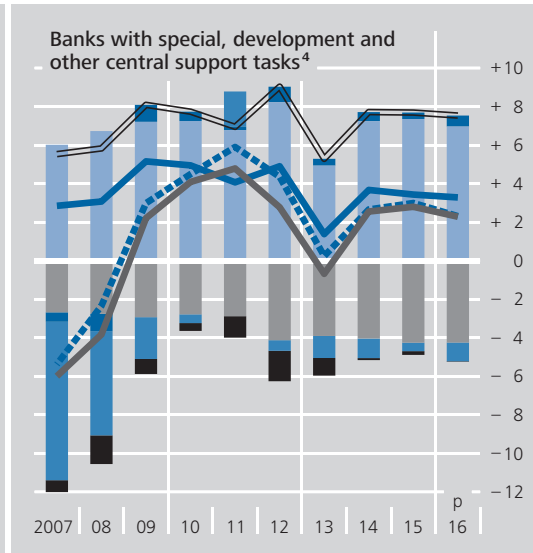
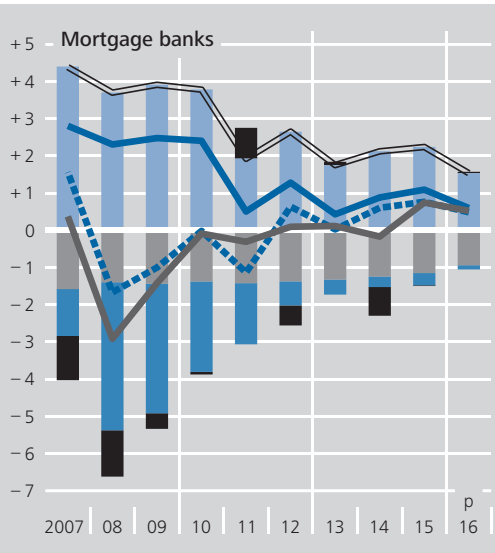
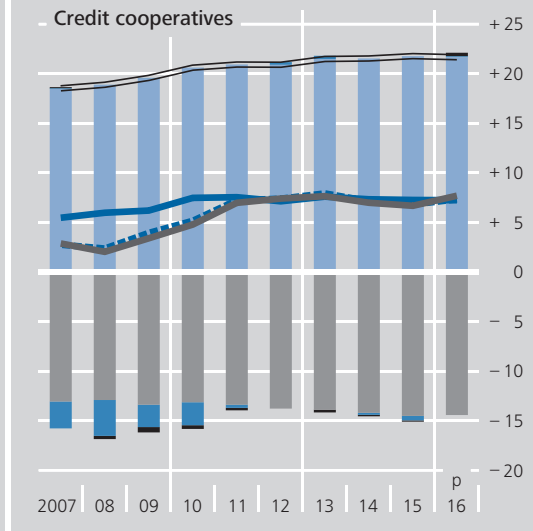
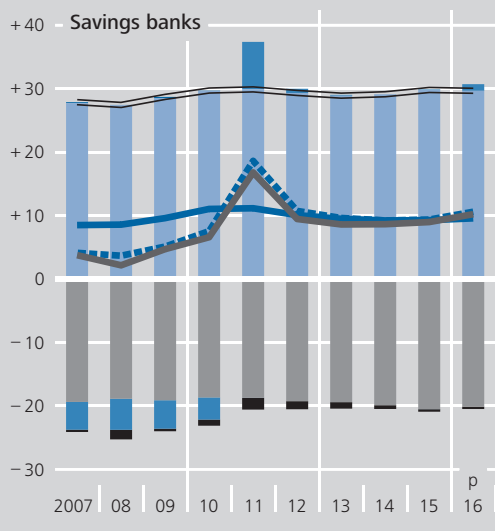
Major components of credit institutions' profit and loss accounts by category of banks

€ billion, the charts below use different scales



1 Sum of net interest income and net commission income. **2** Gross earnings plus result from the trading portfolio (up to 2009, from financial operations) and net other operating income or charges. **3** From 2012, Portigon AG (legal successor of WestLB) allocated to the category of "Banks with special, development and other central support tasks".

€ billion, the charts below use different scales



⁴ The categories "Special purpose banks" and "Regional institutions of credit cooperatives" listed separately in previous publications have been merged under "Banks with special, development and other central support tasks".
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Marked increase in loans to enterprises

Lending business with domestic non-financial corporations also saw a marked expansion, with an annual growth rate of 2.5%. The largest growth by far was recorded in the long-term maturity segment. Crucial factors in this are likely to have been the exceptionally low interest rates charged on these loans coupled with the underlying positive economic expectations. Nonetheless, the upward trend in loans to enterprises was dampened by industrial investment, which remains muted, and by the use of alternative sources of funding, particularly enterprises' own funds.

Net interest income, by category of banks

Net interest income declining in the big banks sector ...

In the globally active big banks sector, current income and income from profit transfers, which in total makes up almost half of net interest income on a long-term average, are traditionally more relevant to operating business than in the other categories of banks. As against the previous year, this contribution decreased by a little more than one-quarter to €7.4 billion. The net result from interest-bearing business, on the other hand, benefited from the positive one-off effect stemming from the adjustment to the measurement of pension obligations at one big bank, rising by 4.5% to €12.7 billion. Overall, the net interest income of big banks fell by 9.1% to €20.1 billion (62.1% of operating income).

... as well as in the Landesbank sector and at mortgage banks

In the Landesbank sector, which is affected by restructuring measures, the decline in net interest income by 8.4% to €7.5 billion (74.8% of operating income) was primarily due to the continued balance sheet reduction. At 0.77%, the interest margin was slightly higher than the previous year's level. At the mortgage banks, net interest income, which had benefited from one-off effects at one bank in the previous year, shrank by almost one-third to €1.6 billion. With total assets down by nearly one-quarter, the contraction of the interest margin to 0.54% was thus comparatively moderate. Since net

interest income is virtually the only source of income for mortgage banks owing to their specialised business model, its share in operating income slightly exceeded the 100% mark because of the negative net commission income.

The primary institutions, which have so far been able to stabilise their net interest income by increasing their lending volumes and maturities, recorded significant decreases. In the savings bank sector, net interest income shrank by 2.7% to €22.7 billion (76.4% of operating income) and in the cooperative bank sector it was down by 2.9% to €16.6 billion (76.5% of operating income). As previously mentioned, their interest margins were below 2% for the first time. Mainly as a result of an improved net result from current income and income from profit transfers, the regional banks and other commercial banks increased their net interest income by 3.9% to €14.4 billion (65.5% of operating income). On the back of significantly expanded total assets, the interest margin in this category of banks, which is also heavily dependent on deposit funding, dropped slightly to 1.52%. Given their specialised business model, the net interest income of building and loan associations fell by 11.9% to €2.5 billion (92.1% of operating income), reaching a new historic low. With total assets marginally higher, the interest margin narrowed distinctly to 1.16%.

Rising pressure on earnings for banks with deposit-based funding

Commission margin stable

Net commission income particularly comprises fees for giro transactions and payments as well as for securities and safe custody business, and remuneration for brokerage activities relating to loan contracts, savings agreements, savings and loan agreements, and insurance contracts. Accounting for 22.3% of operating income on a long-term average, it is the second most important source of income, after net interest income, in operating business, and has the effect of stabilising earnings in the low-interest-rate environment. More and more banks are down-

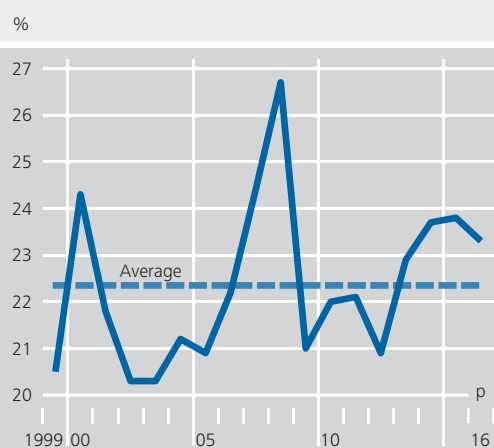
Ratio of commission income to total assets still stable

sizing their offering of free services, especially those concerning payments and account management, in pursuit of fair and proportional pricing. Depending on the business model, however, the areas of activity, the scale and the nature of commission-related business differ significantly. Driven by the marked decline in the big banks sector, net commission income aggregated across all banks decreased by 2.3% to €29.8 billion (23.3% of operating income). However, the commission margin, calculated as the ratio of net commission income to total assets, marginally exceeded the prior-year figure and, at 0.36%, matched the long-term average.

Net commission income, by category of banks

The relevance of net commission income to operating business has steadily increased over recent years, especially among primary institutions. In the reporting year, net commission income rose only slightly in the savings bank sector, however, to €7.0 billion (23.5% of operating income) and remained steady at the previous year's level in the cooperative bank sector, at €4.6 billion (21.1% of operating income). In the Landesbank sector, net commission income improved by almost one-quarter to €1.2 billion (12.1% of operating income). This was essentially due to the marked decline in expenses for the provision of government guarantees for one Landesbank. As for big banks which have a heavy business focus on the international capital markets and generated just over 36% of net commission income aggregated across all categories of banks, their net commission result fell by 8.0% to €10.8 billion (33.4% of operating income). This was mainly due to negative developments in lending and securities business and to a one-off factor at one big bank in connection with the remuneration of services within the bank's group. For building and loan associations, the lower levels of new business were a key factor in the drop in the structurally negative net commission income by 14.8% to €0.5 billion. Unlike most other categories of banks, building and loan associations hardly receive any commission income, but primarily book commissions paid for con-

Net commission income of German banks as a share of operating income



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tracts concluded and brokerage by distribution partners.

Trading result well below the previous year's level

The trading result, which declined by €0.7 billion in the reporting year to €3.0 billion, is a highly volatile income component with (in the long-term average) a relatively low share of operating income of just 2.7%. According to the published annual reports, the trading result does not stem from proprietary trading originating in the institutions but rather primarily from business on behalf of customers. It is predominantly big banks and Landesbank that generate profit contributions in this case. While the trading result in the Landesbank sector almost doubled to €1.0 billion, it dropped by more than half to €1.1 billion in the big banks sector.

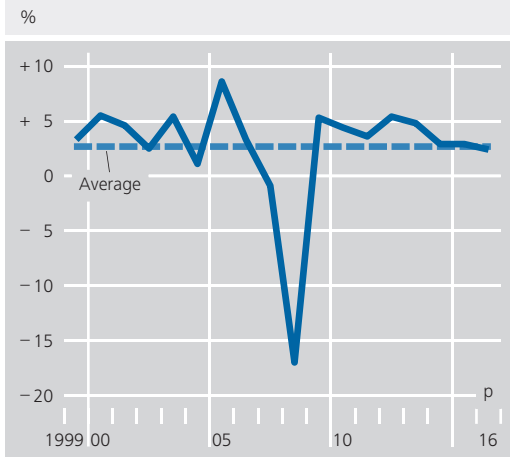
Volatile income component

Other operating result favoured by one-off factors

The other operating result is a summary item used to record income and charges from operating business that have no connection to the net interest, commission or trading result. In

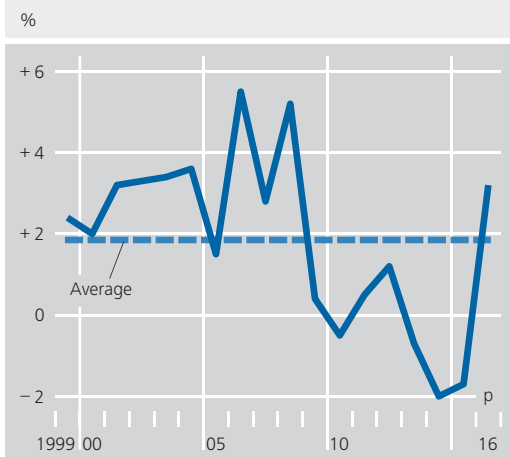
One-off factors bolster income

Net trading result of German banks as a share of operating income



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Net other operating result as a share of operating income



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past years, income had been strongly reduced mainly by provisions for litigation and recourse risks as well as the costs of allocation to pension obligations, which had steadily risen in the prevailing low-interest-rate environment. This changed in the reporting year. The other operating result improved significantly from -€2.2 billion to €4.1 billion and almost reached double its long-term average, with a 3.2% share of operating income. Key factors behind this were the €2.8 billion lower expenses in connection with one big bank's legal disputes and the positive one-off effect of the legislative amendment in the valuation of pension obligations, which benefited all categories of banks.

In addition, the reported withdrawals from the fund required by the building and loan association rules (*Fonds zur bauspartechnischen Absicherung, FbtA*) increased income by €0.6 billion. Building and loan associations took advantage of the greater flexibility regarding the use of this fund ushered in by the amended Building and Loan Associations Act (*Bausparkassengesetz*) and the Regulation concerning Building and Loan Associations (*Bausparkassen-Verordnung*) that came into force at the end of 2015.¹⁴ The original purpose of the FbtA was to ensure consistent waiting times, to be kept as short as possible, between the start of the home loan savings agreement and its allocation, even in times when liquidity is scarce for lack of new deposits with building and loan associations. The amendment to the legislation means that withdrawals can also be made from the FbtA to offset falling income in the current low-interest-rate environment. In the context of profit appropriation, these amounts were largely transferred to the fund for general banking risks to help strengthen the balance sheet capital base (total equity).

Big banks' other operating result, which had had a strongly negative balance for years, improved significantly by €4.1 billion, moving into positive territory at €0.4 billion. Building and loan associations stepped up their result from €0.0 billion to €0.7 billion, thereby reaching by far the highest value in the reporting year since 1999. The improvement for savings banks by €0.3 billion, edging just into positive territory, and for credit cooperatives by €0.4 billion to €0.5 billion are likely related chiefly to the one-off effect that arose from the valuation adjustment of pension obligations.

Other operating result, by category of banks

¹⁴ See also Deutsche Bundesbank, The effects of the low-interest-rate environment on building and loan associations, Monthly Report, September 2016, pp 64-66.

Administrative spending down slightly

Administrative spending declining

The banks' cost side is largely determined by administrative spending, which comprises staff costs and other administrative spending.¹⁵ Total administrative spending fell slightly by 1.5% to €88.7 billion only as a consequence of declining staff costs. The ratio to total assets was slightly above the long-term average, at 1.06%.

Decline in spending on pension obligations

Staff costs, which not only include wage and salary payments but also social security contributions and operating expenses for pensions, decreased by 3.1% to €44.6 billion. This mainly affected the cost item for pension obligations, which dropped by 27.7% to €2.7 billion as a result of the positive one-off effect stemming from the amended measurement approach. These expenses were down by around one-third for primary institutions, building and loan associations and for regional and other commercial banks, whereas in the Landesbank sector they even plummeted by almost 90% to just €0.1 billion. By contrast, big banks doubled their transfers by €0.5 billion to €1.0 billion while reducing their wage and salary payments by €0.8 billion to €8.9 billion.

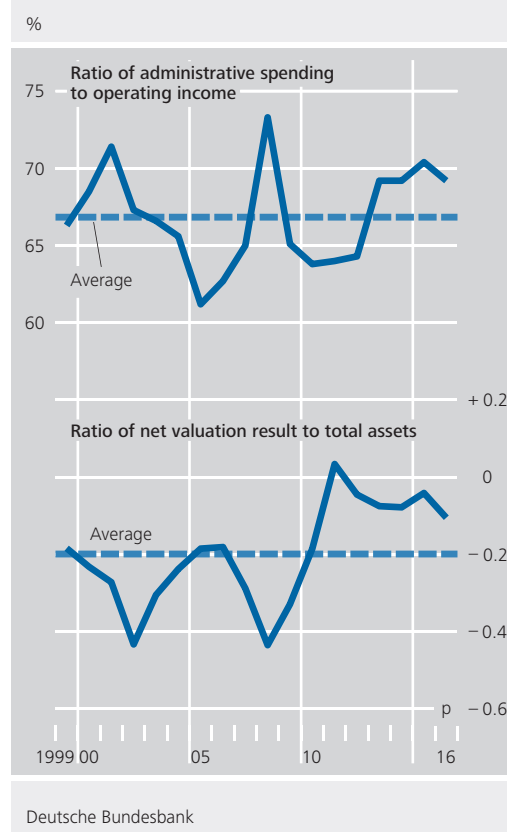
Wages and salaries down moderately

Concomitant with a renewed drop in the number of employees in the banking sector and moderate rises in pay agreements, wage and salary payments (including variable components) were down slightly by €0.4 billion to €36.1 billion. The significant decline in the big banks sector and for mortgage banks was by and large offset by the mostly small increases for other categories of banks.

Other administrative spending at previous year's level

Other administrative spending includes not only the costs of maintaining the branch network and the bank levy but also non-staff costs as well as expenditure on external services such as legal, auditing and consultancy costs and the costs of IT services. This spending stood at the previous year's level at €44 billion. The reduction in the number of branches that has been underway for years appears to have had

Administrative spending and net valuation result of German banks



only a limited cost-reducing effect for primary institutions in particular. The successes already achieved here from savings and synergy effects are likely to have been offset partly by increased investment needs for IT infrastructure and security in connection with the launch of new online banking services. In the savings bank sector, other administrative spending narrowed slightly to €7.5 billion, while there was a marginal increase in the cooperative bank sector to €5.8 billion. The ratio to total assets was somewhat more favourable than in the previous year for both categories of banks. The decrease in spending in the big banks sector, which was predominantly caused by the lower charges from the group accounts for one bank, contrasted with an increase in spending for Landesbanken as well as for regional and other commercial banks.

¹⁵ Including depreciation of and value adjustments to tangible and intangible assets, but excluding depreciation of and value adjustments to assets leased.

Cost/income ratios, by category of banks

%			
Category of banks	General administrative spending in relation to ...		
	2014	2015	2016P
	... gross earnings ¹		
All categories of banks	69.9	71.3	73.3
Commercial banks	74.4	76.4	79.9
Big banks	77.6	79.9	85.2
Regional banks and other commercial banks	69.7	70.3	71.6
Branches of foreign banks	49.4	73.6	74.7
Landesbanken	71.5	74.7	73.1
Savings banks	67.0	68.3	67.8
Credit cooperatives	66.4	67.0	68.2
Mortgage banks	61.4	51.3	61.6
Building and loan associations	76.0	77.7	89.9
Banks with special, development and other central support tasks ³	58.0	58.2	62.1
	... operating income ²		
All categories of banks	69.2	70.4	69.2
Commercial banks	73.4	75.6	74.3
Big banks	78.1	82.9	81.4
Regional banks and other commercial banks	66.9	64.6	64.2
Branches of foreign banks	41.1	61.2	55.1
Landesbanken	70.9	69.1	63.5
Savings banks	68.3	68.9	67.8
Credit cooperatives	65.9	66.6	66.6
Mortgage banks	58.4	51.2	61.0
Building and loan associations	77.7	77.8	66.2
Banks with special, development and other central support tasks ³	52.4	55.4	56.4

1 Sum of net interest income and net commission income.
 2 Gross earnings plus result from the trading portfolio and other operating result. 3 The categories "Special purpose banks" and "Regional institutions of credit cooperatives" listed separately in previous publications have been merged under "Banks with special, development and other central support tasks".
 Deutsche Bundesbank

Slight improvement in cost/income ratio

The cost/income ratio, calculated as the ratio of administrative spending to operating income, can provide an important indication of how cost effective a company is. The lower this ratio, the more operating income is left over after deducting administrative spending, ie the more efficiently the company has been operating. In the reporting year, the efficiency of the German banking sector measured in this manner improved by 1.2 percentage points to 69.2%. This reduced administrative spending used to generate €100 of operating income by €1.20. German banks continue to have a very high cost/income ratio compared to its long-

term average, and also by international standards, however.

For years, big banks have been among the categories of banks with the lowest cost efficiency. Since administrative spending fell more strongly than operating income, the cost/income ratio of 81.4% was somewhat lower than the previous year, though it did still exceed the long-term average for this category of banks. With lower operating income and administrative spending, savings banks and credit cooperatives hovered within the usual range at 67.8% and 66.6% respectively. The Landesbanken improved their cost efficiency on the back of a rise in operating income and a drop in administrative spending, reducing their cost/income ratio to 63.5%. They were still far off the much more favourable long-term average, however. As a result of negative one-off factors, the cost/income ratio increased significantly for mortgage banks to 61% compared both to the previous year and to the long-term average.

Cost/income ratio, by category of banks

Net transfers to risk provisions expanded considerably

The net valuation result comprises the effects of value adjustments, write-ups and write-downs on accounts receivable and securities in the liquidity reserve. In addition, income and charges in connection with transfers from and to loan-loss provisions¹⁶ are taken into account, as are transfers and releases relating to undisclosed reserves pursuant to section 340f of the German Commercial Code. The net valuation result makes use of the cross-offsetting option¹⁷ permissible under the German Commercial Code. Reallocations within the fund for

Definition of the result from the valuation of assets

¹⁶ This applies to risk provisioning for off-balance-sheet operations, such as loan commitments and contingent liabilities.

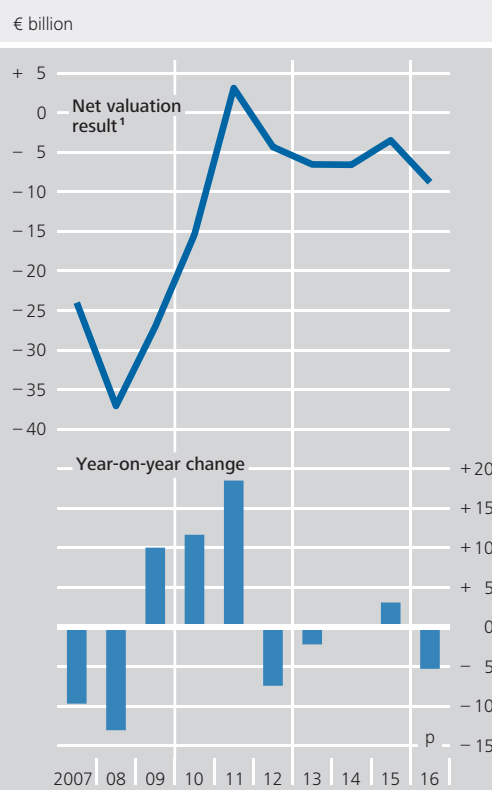
¹⁷ Pursuant to section 340f (3) of the German Commercial Code, under the cross-offsetting option, income received and expenses incurred in connection with credit operations and securities in the liquidity reserve that do not constitute interest received, interest paid or current income may be reported as a net figure.

general banking risks pursuant to section 340g of the German Commercial Code are not recorded in the profit and loss account, but are recognised only in the context of profit appropriation as part of the present profit and loss analysis.

Negative impact of the shipping crisis on credit reserves

The net valuation result departed from its historically favourable level, deteriorating by €5.3 billion to -€8.8 billion. In terms of the ratio to total assets, at -0.11% it was nevertheless still notably better than the long-term average. The level of heterogeneity between and even within bank categories was very large in some cases. The difficult market situation for shipping loans¹⁸ prompted very high write-downs, especially for certain big banks and Landesbanken. Following a marginal net income in the previous year, the big banks sector's net valuation result flipped to a net loss of -€4.0 billion. Its ratio to total assets fell to -0.16%, thereby once again reaching the long-term average for this category of banks. Landesbanken transferred €3.7 billion to their credit risk provisions, more than three times the previous year's amount. With a ratio to total assets of -0.38%, they occupied last place among all of the categories of banks and performed significantly worse than their long-term average. In the case of mortgage banks, the improvement in the net valuation result by €0.2 billion to -€0.1 billion was primarily linked to the exclusion of one liquidated bank. At -0.04%, the ratio to total assets was several times more favourable than the long-term average for this category of banks. The primary institutions that focus their business chiefly on lending to households benefited from the positive economic conditions and the low risk provisioning in the private banking business. Because the income from the liquidation of value adjustments was again higher than the depreciation charge, savings banks recorded a positive net valuation result for the sixth time in succession (€1.0 billion), which was also more than 11 times higher than the previous year. The net valuation result for credit cooperatives improved from -€0.5 billion to €0.1 billion. The marginal positive net

Risk provisioning of credit institutions



¹ Excluding investment in tangible and financial fixed assets.
 Deutsche Bundesbank

valuation result of €0.02 billion for building and loan associations largely resulted from one institution's valuation gains.

Declining operating result

Aggregated across all banks, the operating result after valuation of assets (operating result) narrowed by €3.8 billion to €30.6 billion. The ratio to total assets, which were likewise down, was nevertheless only slightly lower at 0.37%. Compared to other categories of banks, Landesbanken had the lowest operating result. Owing to the extremely high net valuation charges, its operating result even moved slightly into negative territory. The operating result in the big banks sector experienced a massive

Lower operating result

¹⁸ This is also mirrored in the receivables volume from corporate insolvencies in the shipping industry, which has skyrocketed. See also Federal Statistical Office, Unternehmen und Arbeitsstätten, Fachserie 2, Reihe 4.1, Insolvenzverfahren Dezember und Jahr 2013.

Breakdown of the extraordinary profit and loss

€ million

Item	2014	2015	2016P
Other and extraordinary result	- 6,510	- 7,791	- 2,803
Income (total)	2,905	3,549	8,345
Value adjustments in respect of participating interests, shares in affiliated enterprises, and securities treated as fixed assets	1,735	1,905	3,445
from loss transfers	374	1,101	39
Extraordinary income	796	543	4,861
Charges (total)	- 9,415	- 11,340	- 11,148
Write-offs and write-downs in respect of participating interests, shares in affiliated enterprises, and securities treated as fixed assets	- 3,464	- 3,579	- 3,716
from loss transfers	- 609	- 1,213	- 914
Extraordinary charges	- 1,478	- 2,471	- 1,798
Profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement	- 3,864	- 4,077	- 4,720

Deutsche Bundesbank

downturn at €2.0 billion, reaching just over one-third of the previous year's value. Measured in terms of their total assets, big banks achieved second-to-last place among the categories of banks, with 0.08%. Primary institutions benefited from the extremely favourable growth in the valuation result and significantly increased their operating result. The ratio of operating result to total assets was therefore once again substantially better for savings banks at 0.92% and credit cooperatives at 0.88% than for all other categories of banks.

Extraordinary account negative balance significantly reduced

The balance shown in the other and extraordinary account comprises not only the extraordinary profit or loss in the stricter sense¹⁹ but also the result from financial investment business²⁰ as well as loss transfers. Furthermore,

charges arising from profit transfers are recorded here,²¹ as they cannot be assigned to actual operating business. Overall, the structurally negative balance was reduced by €5.0 billion to €2.8 billion. This improvement was mainly due to the gain from the complete liquidation of a mortgage bank, recorded as extraordinary income, which strengthened the parent company in the big banks sector with €3.9 billion. Big banks thus reported a positive balance again for the first time since 2007. The

¹⁹ Only extraordinary events which interrupt the normal financial year are recorded in this item. This includes merger gains and losses, reorganisation gains and losses, debt forgiveness in restructurings as well as charges for redundancy programmes and restructuring.

²⁰ Financial investment business comprises the balance of income from value readjustments in respect of participating interests, shares in affiliated enterprises and securities treated as fixed assets as well as write-downs and value adjustments in respect of these items.

²¹ This relates to charges from profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement. By contrast, income from profit transfers is reported under net interest income; the assumption is that they are part of the business strategy and hence of operating business.

more than triple expansion of the Landesbanken deficit to €0.5 billion was primarily attributable to one large Landesbank write-down on a subsidiary also from the Landesbanken category. Both Landesbanken have been heavily affected by the negative effects of the ongoing shipping crisis.

Marked improvement in profit for the financial year before tax

Uneven developments across categories of banks

Largely shaped by positive one-off effects stemming from operating business and the extraordinary account, the aggregated profit for the financial year before tax was up by 4.6% to €27.8 billion despite a significant increase in risk provisioning. Developments were mixed across all categories of banks. The big banks sector experienced an improvement in profit for the financial year before tax by 16.1% to €3.1 billion. On account of the extremely favourable development in the net valuation result, profit for the financial year before tax also increased by 15.2% to €7.7 billion for credit cooperatives and by 13.8% to €10.2 billion for savings banks. Thus, both categories again exceeded their long-term averages considerably. In the case of building and loan associations, the one-off accounting factor in the other operating result was a key driver in more than doubling the profit for the financial year before tax to €0.9 billion. Mortgage banks recorded a profit for the financial year of €0.5 billion, a reduction of more than one-third. Of the nine Landesbanken, seven recorded profits for the financial year before tax totalling €2.1 billion. However, they were more than offset by the extremely high losses for the financial year before tax of €2.7 billion recorded by two of the Landesbanken particularly affected by the shipping crisis. Consequently, the result at the category level tumbled from €1.8 billion to -€0.5 billion.

Appropriation of profit for the financial year

After deducting €7.8 billion taxes on income and the net loss brought forward of €4.2 billion, which mainly focused on individual banks with special, development and other central support tasks, individual mortgage banks and regional and other commercial banks, this left on balance a profit for the financial year of €15.8 billion. In order to hedge against the special risks of banking business and to further increase regulatory equity capital, €10.8 billion net (compared with €7.3 billion in the previous year) was transferred to the fund for general banking risks. Primary institutions in particular strengthened their capital positions (total equity). As in previous years, the savings bank sector (€5.4 billion) and the cooperative bank sector (€3.6 billion) transferred most of their net profit for the financial year to this fund. Reserves were increased by €0.6 billion net. The balance sheet capital (total equity) from the profit for the financial year aggregated across all banks was therefore topped up by €11.4 billion net, with gross capital injections of €16.7 billion compared with high withdrawals of €5.3 billion.²² This mainly related to one big bank and two Landesbanken.

Large transfers to the fund for general banking risks once again

Equity and profitability

Since 2007, German banks have strengthened their balance sheet capital base (total equity) (including the fund for general banking risks) by around 46% to €466 billion. The equity ratio, calculated as the ratio of total equity to total assets, increased during this period from 3.8% to 5.6%.

Strengthened balance sheet capital base

²² When interpreting the information on total equity, it should be borne in mind that the amounts transferred from the profit for the respective financial year do not increase balance sheet capital until the year after the annual accounts are adopted, while withdrawals from equity items are to be deducted from balance sheet capital at the latest when the annual accounts are prepared.

Return on assets of individual categories of banks*

%

Category of banks	2012		2013		2014		2015		2016P	
All categories of banks	7.80	(5.58)	5.28	(3.51)	5.72	(3.98)	5.82	(3.97)	5.97	(4.29)
Commercial banks	6.55	(3.68)	4.96	(3.54)	4.80	(3.51)	3.54	(2.18)	4.52	(3.21)
<i>of which</i>										
Big banks	6.65	(2.91)	4.58	(3.24)	4.33	(3.16)	3.01	(1.81)	3.45	(2.50)
Regional banks and other commercial banks	6.08	(4.75)	5.27	(3.81)	5.22	(3.89)	4.22	(2.71)	6.30	(4.45)
Landesbanken	3.91	(2.77)	-0.80	(-1.58)	-0.63	(-1.50)	3.27	(1.89)	-1.02	(-1.95)
Savings banks	12.96	(9.32)	10.61	(7.33)	9.94	(6.72)	9.68	(6.54)	10.41	(7.41)
Credit cooperatives	15.71	(11.50)	14.75	(10.98)	12.22	(8.59)	10.74	(7.36)	11.53	(8.40)
Mortgage banks	0.58	(0.46)	0.73	(0.18)	-1.03	(-1.67)	4.94	(4.29)	5.54	(4.20)
Building and loan associations	7.65	(5.60)	4.97	(2.78)	8.43	(5.61)	4.49	(3.66)	8.87	(7.28)

* Profit for the financial year before tax (in brackets: after tax) as a percentage of the average equity as shown in the balance sheet (including the fund for general banking risks, but excluding participation rights capital).

Deutsche Bundesbank

Equity by category of banks

As a result of the exclusion of a liquidated bank from the category of mortgage banks, this category's capital base fell by almost 40% (€5.6 billion) to just €9.5 billion. The balance sheet equity ratio narrowed considerably to 3.3% as total assets declined at the same time. This ratio is the lowest among the categories of banks. At €54.0 billion, the balance sheet capital (total equity) for Landesbanken was somewhat lower than the previous year. However, the equity ratio improved noticeably to 5.5% due to decreasing total assets. All other categories of banks stepped up their balance sheet capital. Big banks improved their balance sheet equity ratio slightly to 3.5%, though compared with the other categories, their equity ratio is still low. Since the start of the financial crisis, big banks have thus barely reduced their level of debt. With an equity ratio of 8.5% for savings banks and 8.0% for credit cooperatives, primary institutions again had a better equity position compared with other categories.

The return on assets is the ratio of profit for the financial year before tax to average total assets, documenting profitability per €100 of assets. This measure improved for the entire German banking system for the third time in succession by 0.02 percentage point to 0.33%. The return on assets only fell for Landesbanken, banks with special, development and other central support tasks and mortgage banks. Savings banks and credit cooperatives recorded the highest profitability levels in the German banking sector with ratios of 0.89% and 0.92% respectively. Mortgage banks (0.18%), big banks (0.12%) and Landesbanken (-0.06%) had the lowest profitability among the categories of banks.

As one-off factors affect banks in isolated cases, it makes sense to look at the return on assets for individual banks separately within specific categories of banks. Excluding the return on assets of one big bank that has significantly benefited from one-off factors, for

Improved return on assets

Returns on assets compared at institution level

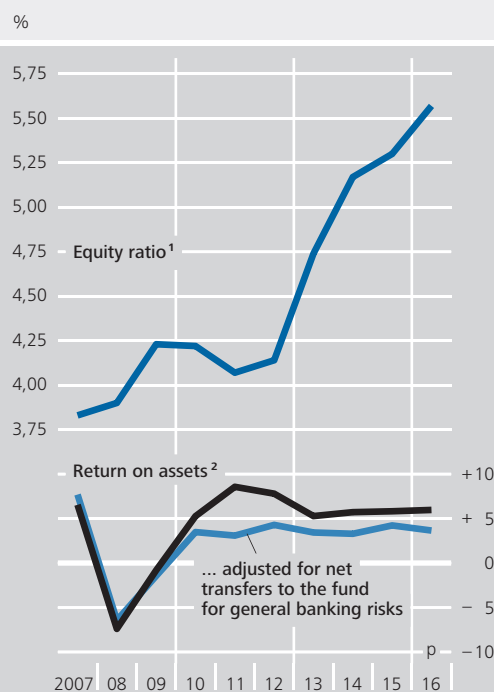
example, would considerably reduce the average value of the big banks sector. Omitting the two Landesbanken most affected by the shipping crisis would push the average return on assets of Landesbanken noticeably into positive territory. In the small mortgage bank category, the return on assets of individual banks differed markedly from the average in some cases, indicating an extremely heterogeneous profit situation within this category. On the other hand, returns on assets were all close to the average for primary institutions. In the case of savings banks, 80% of all returns on assets hovered between 0.4% and 1.3%, and between 0.6% and 1.4% for credit cooperatives, confirming the high level of homogeneity in both categories.

■ Balance sheet profit

Increased balance sheet profit

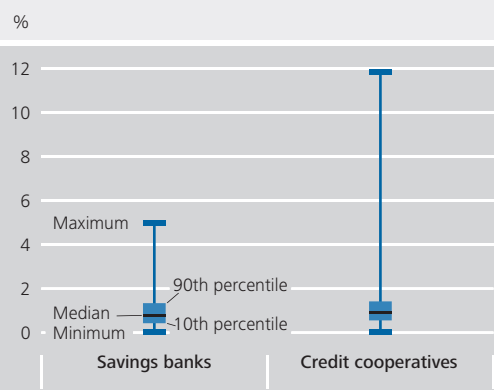
On balance, German banks increased their balance sheet profit by almost two-thirds to €4.4 billion. This was principally due to one major bank's withdrawals of €3 billion from its balance sheet capital (total equity) for transfer to the foreign parent company. The big banks sector's balance sheet profit therefore almost tripled to €4.2 billion. As the two Landesbanken that were severely affected by the shipping crisis only offset just over half their enormous losses for the financial year by withdrawing €1.4 billion from the fund for general banking risks and the other Landesbanken transferred most of their profits for the financial year (€1.3 billion) to their balance sheet capital (total equity), the balance sheet profit for the Landesbank sector declined substantially from €0.5 billion to -€0.9 billion. As for savings banks and credit cooperatives, their balance sheet profits changed little (€1.6 billion and €1.4 billion respectively). Mortgage banks remained at the previous year's level with a balance sheet loss of €0.7 billion.

Equity ratio and return on assets of credit institutions



1 Equity (including fund for general banking risks but not participation rights capital) as a percentage of total assets as an annual average. **2** Profit or loss for the financial year before tax as a percentage of averaged equity.
 Deutsche Bundesbank

Distribution of the returns on assets* of savings banks and credit cooperatives in 2016



* Profit or loss for the financial year before tax as a percentage of total assets at institution level.
 Deutsche Bundesbank

■ Outlook

Despite the good domestic economic situation, the financial market setting in the first half of 2017 remained challenging. Taken on its own, the low-interest-rate environment will likely

Financial market setting remains onerous

continue to strain the profitability of German banks focused on interest business. This is also confirmed by the findings of the latest low-interest-rate survey of the German banking sector, according to which the profitability of banks and savings banks in Germany would deteriorate considerably if the low-interest-rate environment continued or intensified. The decline in the return on assets would be primarily due to contracting margins in borrowing and deposit business, such as in the area of savings and overnight deposits.²³

Increase in balance sheet maturity transformation and lending to the private non-financial sector

The shortening of maturities on the liabilities side also continued in the first half of 2017, caused especially by the increase in the volume of overnight deposits of the private non-financial sector. Even though, viewed in isolation, interest rate and liquidity risks have risen, the higher maturity transformation is likely to have had a positive effect on profitability. Since the interest margin's maturity transformation contribution constitutes a significant source of income for German banks, especially primary institutions, the increasing steepening of the

yield curve is also likely to have had a favourable impact since the start of 2017. In July 2017, the monthly average of German bond yields with residual maturities of ten years was 0.5% compared to 0.3% in December 2016. The hike in interest rates was also reflected in banks' interest rates for new lending. The rate for housing loans with long interest rate fixation periods (1.9%) in July 2017, for instance, exceeded the 2016 year-end rate by 0.2 percentage point. In addition to the greater earnings potential from the increased maturity transformation, banks can also stabilise their interest margin by stepping up lending. Against the backdrop of the favourable interest rate level and generally positive expectations for the economy and business, loans to households (especially for house purchase) and loans to non-financial corporations recorded notable growth particularly in the long-term maturity category in the first half of 2017.

²³ See also Deutsche Bundesbank, Results of the 2017 low-interest-rate survey, press release, 30 August 2017.

Major components of credit institutions' profit and loss accounts, by category of banks*

As a percentage of the total assets

Financial year	All categories of banks	Commercial banks			Landesbanken ¹	Savings banks	Credit cooperatives	Mortgage banks	Building and loan associations	Banks with special, development and other central support tasks ^{1,2}
		Total	of which							
			Big banks	Regional banks and other commercial banks						
Interest received ³										
2010	3.25	2.60	2.19	3.74	3.21	4.02	4.03	4.47	4.05	2.81
2011	3.31	2.02	1.56	3.78	5.39	3.96	3.93	4.96	3.94	2.84
2012	2.88	1.77	1.37	3.35	4.87	3.72	3.68	4.25	3.83	2.45
2013	2.61	1.70	1.29	3.09	3.49	3.40	3.40	3.91	3.61	2.58
2014	2.49	1.74	1.38	2.91	3.20	3.15	3.15	3.86	3.39	2.38
2015	2.33	1.66	1.33	2.71	3.04	2.90	2.84	4.07	3.18	2.21
2016	2.17	1.58	1.30	2.38	2.81	2.64	2.54	4.01	2.89	2.15
Interest paid										
2010	2.10	1.45	1.24	2.05	2.52	1.82	1.69	4.02	2.36	2.30
2011	2.27	1.17	0.93	2.09	4.69	1.75	1.63	4.56	2.24	2.39
2012	1.88	0.92	0.69	1.84	4.24	1.59	1.47	3.83	2.21	1.99
2013	1.58	0.80	0.61	1.50	2.81	1.29	1.15	3.53	2.07	2.32
2014	1.39	0.77	0.60	1.30	2.47	1.06	0.94	3.38	1.95	1.95
2015	1.22	0.67	0.52	1.14	2.29	0.84	0.71	3.47	1.85	1.76
2016	1.08	0.61	0.52	0.85	2.04	0.68	0.55	3.47	1.73	1.73
Excess of interest received over interest paid = net interest income (interest margin)										
2010	1.15	1.14	0.95	1.69	0.68	2.20	2.33	0.44	1.68	0.51
2011	1.03	0.85	0.64	1.69	0.70	2.21	2.30	0.41	1.70	0.46
2012	1.00	0.85	0.68	1.51	0.63	2.12	2.21	0.43	1.62	0.46
2013	1.02	0.89	0.69	1.60	0.68	2.10	2.25	0.38	1.54	0.26
2014	1.10	0.97	0.77	1.62	0.72	2.09	2.21	0.48	1.45	0.43
2015	1.11	0.99	0.81	1.56	0.76	2.06	2.14	0.60	1.32	0.45
2016	1.09	0.97	0.78	1.52	0.77	1.96	1.99	0.54	1.16	0.42
Excess of commissions received over commissions paid = net commission income (commission margin)										
2010	0.34	0.56	0.50	0.72	0.08	0.57	0.59	0.02	-0.19	0.10
2011	0.31	0.42	0.35	0.70	0.07	0.57	0.58	0.02	-0.25	0.09
2012	0.29	0.37	0.32	0.61	0.06	0.56	0.56	0.02	-0.26	0.10
2013	0.32	0.43	0.38	0.62	0.06	0.57	0.56	0.01	-0.31	0.11
2014	0.35	0.47	0.43	0.63	0.07	0.58	0.56	0.00	-0.26	0.12
2015	0.35	0.47	0.43	0.62	0.09	0.60	0.57	0.00	-0.27	0.11
2016	0.36	0.45	0.42	0.56	0.12	0.60	0.55	-0.01	-0.23	0.10

* The figures for the most recent date should be regarded as provisional in all cases. ^o Excluding the total assets of the foreign branches of savings banks, excluding the total assets of the foreign branches of regional institutions of credit cooperatives until 2015 and, from 2016, excluding the total assets of the foreign branches of mortgage banks. For footnotes 1, 2 and 3, see p 76.

Major components of credit institutions' profit and loss accounts, by category of banks* (cont'd)

As a percentage of the total assets^o

Financial year	All categories of banks	Commercial banks			Landesbanken ¹	Savings banks	Credit cooperatives	Mortgage banks	Building and loan associations	Banks with special, development and other central support tasks ^{1,2}
		Total	of which							
			Big banks	Regional banks and other commercial banks						
General administrative spending										
2010	0.99	1.32	1.20	1.67	0.44	1.74	1.88	0.17	0.99	0.24
2011	0.89	0.97	0.80	1.62	0.44	1.74	1.88	0.22	0.98	0.24
2012	0.89	0.92	0.77	1.55	0.46	1.76	1.86	0.24	0.97	0.29
2013	0.97	1.03	0.89	1.55	0.54	1.77	1.85	0.27	0.91	0.30
2014	1.01	1.08	0.93	1.57	0.57	1.79	1.84	0.29	0.90	0.32
2015	1.05	1.11	0.99	1.53	0.63	1.81	1.82	0.30	0.81	0.32
2016	1.06	1.14	1.02	1.50	0.66	1.74	1.73	0.32	0.83	0.33
Result from the trading portfolio										
2010	0.07	0.17	0.23	0.00	0.03	0.00	0.00	0.00	0.00	0.04
2011	0.05	0.13	0.15	0.05	-0.04	0.00	0.00	0.00	0.00	0.01
2012	0.07	0.14	0.16	0.04	0.05	0.00	0.00	0.00	0.00	0.06
2013	0.07	0.11	0.14	0.04	0.11	0.00	0.00	0.00	0.00	0.03
2014	0.04	0.09	0.10	0.04	0.01	0.00	0.00	0.00	0.00	0.04
2015	0.04	0.08	0.09	0.04	0.05	0.00	0.00	0.00	0.00	0.03
2016	0.04	0.04	0.04	0.04	0.11	0.00	0.00	0.00	0.00	0.04
Operating result before the valuation of assets										
2010	0.56	0.50	0.35	0.91	0.37	1.03	1.07	0.30	0.44	0.42
2011	0.50	0.46	0.30	1.04	0.30	1.03	1.06	0.08	0.47	0.34
2012	0.49	0.45	0.35	0.84	0.31	0.92	0.97	0.23	0.41	0.34
2013	0.43	0.38	0.25	0.85	0.33	0.86	1.01	0.09	0.33	0.10
2014	0.45	0.39	0.26	0.78	0.23	0.83	0.95	0.21	0.26	0.29
2015	0.44	0.36	0.20	0.84	0.28	0.82	0.91	0.29	0.23	0.26
2016	0.47	0.39	0.23	0.83	0.38	0.83	0.87	0.21	0.43	0.25
Result from the valuation of assets										
2010	-0.19	-0.16	-0.08	-0.36	-0.15	-0.33	-0.33	-0.31	0.00	-0.04
2011	0.03	-0.11	-0.06	-0.31	-0.05	0.69	-0.04	-0.25	0.38	0.15
2012	-0.05	-0.10	-0.09	-0.11	-0.01	0.06	0.04	-0.11	0.01	-0.04
2013	-0.07	-0.06	-0.03	-0.13	-0.27	0.01	0.04	-0.08	-0.04	-0.09
2014	-0.08	-0.11	-0.10	-0.12	-0.14	0.00	-0.03	-0.07	0.14	-0.08
2015	-0.04	-0.03	0.00	-0.14	-0.10	0.01	-0.06	-0.09	-0.03	-0.03
2016	-0.11	-0.14	-0.16	-0.11	-0.38	0.09	0.01	-0.04	0.01	-0.07

For footnotes *, ^o, see p 75. ¹ From 2012, Portigon AG (legal successor of WestLB) allocated to the category of "Banks with special, development and other central support tasks". ² The categories "Special purpose banks" and "Regional institutions of credit cooperatives" listed separately in previous publications have been merged under "Banks with special, development and other central support tasks". ³ Interest received plus current income and profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement.

Major components of credit institutions' profit and loss accounts, by category of banks* (cont'd)

As a percentage of the total assets^o

Financial year	All categories of banks	Commercial banks			Landesbanken ¹	Savings banks	Credit cooperatives	Mortgage banks	Building and loan associations	Banks with special, development and other central support tasks ^{1,2}
		Total	of which							
			Big banks	Regional banks and other commercial banks						
Operating result										
2010	0.38	0.35	0.27	0.55	0.22	0.71	0.74	0.00	0.44	0.38
2011	0.54	0.34	0.24	0.73	0.25	1.73	1.02	-0.18	0.85	0.49
2012	0.45	0.35	0.25	0.73	0.30	0.98	1.00	0.11	0.41	0.30
2013	0.36	0.33	0.21	0.72	0.06	0.88	1.06	0.01	0.29	0.02
2014	0.37	0.28	0.16	0.65	0.10	0.83	0.93	0.14	0.39	0.21
2015	0.40	0.33	0.21	0.70	0.18	0.83	0.85	0.20	0.20	0.23
2016	0.37	0.25	0.08	0.73	-0.01	0.92	0.88	0.17	0.44	0.18
Other and extraordinary result										
2010	-0.15	-0.23	-0.17	-0.40	-0.28	-0.09	-0.05	-0.01	-0.10	-0.03
2011	-0.19	-0.29	-0.24	-0.47	-0.25	-0.17	-0.04	0.13	-0.14	-0.09
2012	-0.12	-0.16	-0.09	-0.40	-0.14	-0.12	0.00	-0.10	-0.09	-0.11
2013	-0.11	-0.16	-0.08	-0.41	-0.10	-0.09	-0.04	0.02	-0.07	-0.07
2014	-0.08	-0.10	-0.02	-0.34	-0.13	-0.05	-0.02	-0.18	-0.03	-0.01
2015	-0.09	-0.19	-0.11	-0.45	-0.01	-0.03	-0.02	-0.01	0.00	-0.01
2016	-0.03	-0.06	0.04	-0.36	-0.05	-0.03	0.04	0.01	-0.02	0.00
Profit or loss (-) for the financial year before tax										
2010	0.22	0.12	0.10	0.14	-0.06	0.62	0.69	-0.01	0.34	0.34
2011	0.35	0.06	0.00	0.26	0.00	1.56	0.98	-0.05	0.72	0.40
2012	0.32	0.20	0.16	0.32	0.17	0.86	1.00	0.02	0.32	0.19
2013	0.25	0.17	0.13	0.30	-0.04	0.78	1.02	0.02	0.22	-0.05
2014	0.30	0.19	0.14	0.32	-0.03	0.78	0.91	-0.04	0.36	0.20
2015	0.31	0.14	0.10	0.25	0.17	0.79	0.84	0.20	0.20	0.21
2016	0.33	0.19	0.12	0.37	-0.06	0.89	0.92	0.18	0.41	0.17
Profit or loss (-) for the financial year after tax										
2010	0.16	0.08	0.08	0.07	-0.05	0.38	0.45	-0.01	0.18	0.34
2011	0.27	0.02	-0.02	0.18	-0.04	1.30	0.71	-0.06	0.62	0.39
2012	0.23	0.11	0.07	0.25	0.12	0.62	0.73	0.01	0.23	0.21
2013	0.17	0.12	0.09	0.22	-0.08	0.54	0.76	0.01	0.12	-0.07
2014	0.21	0.14	0.10	0.23	-0.08	0.53	0.64	-0.06	0.24	0.19
2015	0.21	0.09	0.06	0.16	0.10	0.54	0.57	0.17	0.16	0.17
2016	0.24	0.13	0.09	0.26	-0.11	0.63	0.67	0.14	0.34	0.17

For footnotes *, °, see p 75. For footnotes 1 and 2, see p 76.

Credit institutions' profit and loss accounts*

Financial year	Number of reporting institutions	Memo item Total assets ¹	Interest business			Commissions business			Result from the trading portfolio ³	Other operating result	Operating income ⁴ (col 3 plus col 6 plus col 9 plus col 10)
			Net interest income (col 4 less col 5)	Total interest received ²	Interest paid	Net commission income (col 7 less col 8)	Commissions received	Commissions paid			
	1	2	3	4	5	6	7	8	9	10	11
		€ billion									
2009	1,843	8,212.0	94.7	317.8	223.0	27.1	40.7	13.6	6.9	0.5	129.3
2010	1,821	8,300.4	95.4	270.1	174.7	28.3	42.0	13.7	5.7	– 0.7	128.7
2011	1,801	9,167.9	94.7	303.0	208.3	28.3	41.1	12.8	4.6	0.6	128.2
2012	1,776	9,542.7	95.5	274.7	179.2	27.5	40.0	12.5	7.1	1.6	131.8
2013	1,748	8,755.4	89.5	228.2	138.7	28.0	40.6	12.6	5.9	– 0.8	122.6
2014	1,715	8,452.6	93.4	210.8	117.4	29.3	42.6	13.3	3.6	– 2.5	123.8
2015	1,679	8,605.6	95.9	200.9	105.0	30.5	44.5	14.1	3.7	– 2.2	127.9
2016	1,611	8,355.2	91.1	181.6	90.4	29.8	43.2	13.4	3.0	4.1	128.1
		Year-on-year percentage change									
2010	– 1.2	1.1	0.7	– 15.0	– 21.7	4.3	3.2	0.9	– 17.3	.	– 0.4
2011	– 1.1	10.5	– 0.7	12.2	19.3	0.1	– 2.3	– 7.1	– 19.4	.	– 0.4
2012	– 1.4	4.1	0.8	– 9.4	– 14.0	– 2.8	– 2.7	– 2.4	55.3	166.7	2.8
2013	– 1.6	– 8.2	– 6.3	– 16.9	– 22.6	2.0	1.7	1.0	– 18.0	.	– 7.0
2014	– 1.9	– 3.5	4.4	– 7.6	– 15.3	4.5	5.0	6.1	– 38.2	– 201.2	1.0
2015	– 2.1	1.8	2.7	– 4.7	– 10.6	4.0	4.5	5.5	3.0	11.1	3.3
2016	– 4.1	– 2.9	– 4.9	– 9.6	– 13.9	– 2.2	– 3.0	– 4.5	– 18.4	.	0.1
		As a percentage of the total assets									
2009	.	.	1.15	3.87	2.72	0.33	0.50	0.17	0.08	0.01	1.57
2010	.	.	1.15	3.25	2.10	0.34	0.51	0.17	0.07	– 0.01	1.55
2011	.	.	1.03	3.31	2.27	0.31	0.45	0.14	0.05	0.01	1.40
2012	.	.	1.00	2.88	1.88	0.29	0.42	0.13	0.07	0.02	1.38
2013	.	.	1.02	2.61	1.58	0.32	0.46	0.14	0.07	– 0.01	1.40
2014	.	.	1.10	2.49	1.39	0.35	0.50	0.16	0.04	– 0.03	1.47
2015	.	.	1.11	2.33	1.22	0.35	0.52	0.16	0.04	– 0.03	1.49
2016	.	.	1.09	2.17	1.08	0.36	0.52	0.16	0.04	0.05	1.53

* The figures for the most recent date should be regarded as provisional in all cases. **1** Excluding the total assets of the foreign branches of savings banks and of the foreign branches of regional institutions of credit cooperatives until 2015 and, Deutsche Bundesbank

from 2016, excluding the total assets of the foreign branches of mortgage banks. **2** Interest received plus current income and profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement. **3** Up to

General administrative spending			Operating result before the valuation of assets (col 11 less col 12)	Result from the valuation of assets (other than tangible or financial fixed assets)	Operating result (col 15 plus col 16)	Other and extra-ordinary result	Profit or loss (–) for the financial year before tax (col 17 plus col 18)	Taxes on income and earnings	Profit or loss (–) for the financial year after tax (col 19 less col 20)	Financial year
Total (col 13 plus col 14)	Staff costs	Total other administrative spending ⁵								
12	13	14	15	16	17	18	19	20	21	
€ billion										
84.2	45.8	38.3	45.1	– 27.0	18.0	– 20.8	– 2.8	4.2	– 7.0	2009
82.2	43.1	39.1	46.6	– 15.4	31.2	– 12.7	18.4	5.5	12.9	2010
82.0	42.5	39.6	46.2	3.1	49.3	– 17.4	31.9	7.0	24.9	2011
84.8	44.6	40.2	47.0	– 4.3	42.7	– 11.9	30.8	8.8	22.0	2012
84.8	43.8	41.0	37.8	– 6.5	31.2	– 9.3	22.0	7.4	14.6	2013
85.8	44.0	41.8	38.1	– 6.6	31.5	– 6.5	25.0	7.6	17.4	2014
90.0	46.0	44.0	37.9	– 3.5	34.4	– 7.8	26.6	8.4	18.1	2015
88.7	44.6	44.0	39.4	– 8.8	30.6	– 2.8	27.8	7.8	20.0	2016
Year-on-year percentage change										
– 2.4	– 6.1	2.0	3.3	43.1	72.8	39.0	.	31.5	.	2010
– 0.2	– 1.4	1.2	– 0.8	.	58.1	– 36.4	73.1	27.9	92.3	2011
3.3	5.0	1.5	1.8	.	– 13.4	31.7	– 3.5	24.6	– 11.5	2012
0.0	– 1.9	2.2	– 19.6	– 50.9	– 26.8	21.8	– 28.7	– 15.8	– 33.9	2013
1.1	0.5	1.8	0.9	– 0.6	0.9	29.8	13.9	3.0	19.4	2014
5.0	4.7	5.3	– 0.6	46.9	9.0	– 19.7	6.3	11.2	4.1	2015
– 1.5	– 3.1	0.1	4.1	– 151.4	– 10.9	64.0	4.6	– 7.3	10.2	2016
As a percentage of the total assets										
1.02	0.56	0.47	0.55	– 0.33	0.22	– 0.25	– 0.03	0.05	– 0.09	2009
0.99	0.52	0.47	0.56	– 0.19	0.38	– 0.15	0.22	0.07	0.16	2010
0.89	0.46	0.43	0.50	0.03	0.54	– 0.19	0.35	0.08	0.27	2011
0.89	0.47	0.42	0.49	– 0.05	0.45	– 0.12	0.32	0.09	0.23	2012
0.97	0.50	0.47	0.43	– 0.07	0.36	– 0.11	0.25	0.08	0.17	2013
1.01	0.52	0.49	0.45	– 0.08	0.37	– 0.08	0.30	0.09	0.21	2014
1.05	0.53	0.51	0.44	– 0.04	0.40	– 0.09	0.31	0.10	0.21	2015
1.06	0.53	0.53	0.47	– 0.11	0.37	– 0.03	0.33	0.09	0.24	2016

2009, result from financial operations. **4** Net interest and commission income plus result from the trading portfolio (up to 2009, from financial operations) and net other operating result. **5** Including depreciation of and value adjustments to

tangible and intangible assets, but excluding depreciation of and value adjustments to assets leased ("broad" definition).

Profit and loss accounts, by category of banks*

Financial year	Number of reporting institutions	€ million									
		Total assets ¹	Interest business			Commissions business			Result from the trading portfolio	Other operating result	Operating income ³ (col 3 plus col 6 plus col 9 plus col 10)
			Net interest income (col 4 less col 5)	Total interest received ²	Interest paid	Net commission income (col 7 less col 8)	Commissions received	Commissions paid			
1	2	3	4	5	6	7	8	9	10	11	
All categories of banks											
2011	1,801	9,167,921	94,725	303,045	208,320	28,281	41,050	12,769	4,602	606	128,214
2012	1,776	9,542,656	95,504	274,706	179,202	27,493	39,950	12,457	7,149	1,616	131,762
2013	1,748	8,755,419	89,485	228,193	138,708	28,039	40,618	12,579	5,861	– 820	122,565
2014	1,715	8,452,585	93,398	210,822	117,424	29,297	42,639	13,342	3,624	– 2,470	123,849
2015	1,679	8,605,560	95,887	200,861	104,974	30,461	44,542	14,081	3,734	– 2,196	127,886
2016	1,611	8,355,194	91,146	181,572	90,426	29,777	43,224	13,447	3,046	4,093	128,062
Commercial banks											
2011	183	3,825,768	32,580	77,223	44,643	16,136	22,744	6,608	4,987	760	54,463
2012	183	4,132,098	34,935	73,017	38,082	15,424	21,857	6,433	5,605	540	56,504
2013	183	3,669,592	32,689	62,225	29,536	15,946	22,387	6,441	4,136	– 861	51,910
2014	183	3,532,938	34,370	61,502	27,132	16,686	24,065	7,379	3,026	– 2,335	51,747
2015	177	3,678,042	36,282	60,993	24,711	17,337	25,183	7,846	2,867	– 2,320	54,166
2016	171	3,580,873	34,768	56,518	21,750	16,236	23,908	7,672	1,429	2,436	54,869
Big banks											
2011	4	3,010,173	19,121	47,102	27,981	10,591	13,399	2,808	4,576	– 1,057	33,231
2012	4	3,217,291	21,944	44,179	22,235	10,152	12,771	2,619	5,213	– 1,417	35,892
2013	4	2,798,461	19,235	36,200	16,965	10,698	13,043	2,345	3,821	– 2,086	31,668
2014	4	2,647,559	20,491	36,414	15,923	11,336	14,269	2,933	2,635	– 2,844	31,618
2015	4	2,736,876	22,151	36,394	14,243	11,762	14,569	2,807	2,496	– 3,732	32,677
2016	4	2,575,072	20,126	33,572	13,446	10,817	13,510	2,693	1,069	405	32,417
Regional banks and other commercial banks											
2011	161	778,662	13,160	29,469	16,309	5,416	9,199	3,783	392	1,759	20,727
2012	160	840,168	12,687	28,162	15,475	5,143	8,942	3,799	372	1,904	20,106
2013	160	822,706	13,161	25,462	12,301	5,119	9,200	4,081	295	1,153	19,728
2014	160	833,806	13,500	24,305	10,805	5,245	9,674	4,429	375	428	19,548
2015	154	884,457	13,832	23,939	10,107	5,469	10,492	5,023	353	1,348	21,002
2016	148	942,626	14,371	22,410	8,039	5,315	10,277	4,962	340	1,918	21,944
Branches of foreign banks											
2011	18	36,933	299	652	353	129	146	17	19	58	505
2012	19	74,639	304	676	372	129	144	15	20	53	506
2013	19	48,425	293	563	270	129	144	15	20	72	514
2014	19	51,573	379	783	404	105	122	17	16	81	581
2015	19	56,709	299	660	361	106	122	16	18	64	487
2016	19	63,175	271	536	265	104	121	17	20	113	508
Landesbanken ⁷											
2011	10	1,504,774	10,548	81,148	70,600	1,113	3,037	1,924	– 541	44	11,164
2012	9	1,371,385	8,702	66,849	58,147	876	2,612	1,736	708	286	10,572
2013	9	1,229,051	8,383	42,870	34,487	732	2,582	1,850	1,340	227	10,682
2014	9	1,139,438	8,243	36,437	28,194	847	2,632	1,785	112	– 37	9,165
2015	9	1,087,623	8,230	33,092	24,862	995	2,816	1,821	535	210	9,970
2016	9	975,957	7,537	27,430	19,893	1,219	2,803	1,584	1,026	290	10,072

For footnotes *, 1-7, see pp 82-83.

												Financial year
General administrative spending			Operating result before the valuation of assets (col 11 less col 12)	Result from the valuation of assets (other than tangible or financial fixed assets)	Operating result (col 15 plus col 16)	Other and extraordinary result	Profit or loss (–) for the financial year before tax (col 17 plus col 18)	Taxes on income and earnings ⁵	Profit or loss (–) for the financial year after tax (col 19 less col 20)	Withdrawals from or transfers to (–) reserves and participation rights capital ⁶	Balance sheet profit or loss (–) (col 21 plus col 22)	
Total (col 13 plus col 14)	Staff costs	Total other administrative spending ⁴										
12	13	14	15	16	17	18	19	20	21	22	23	
All categories of banks												
82,037	42,481	39,556	46,177	3,103	49,280	– 17,352	31,928	7,034	24,894	– 25,706	– 812	2011
84,774	44,607	40,167	46,988	– 4,334	42,654	– 11,852	30,802	8,762	22,040	– 22,237	– 197	2012
84,798	43,756	41,042	37,767	– 6,542	31,225	– 9,271	21,954	7,376	14,578	– 16,232	– 1,654	2013
85,756	43,979	41,777	38,093	– 6,583	31,510	– 6,510	25,000	7,596	17,404	– 15,454	1,950	2014
90,033	46,039	43,994	37,853	– 3,497	34,356	– 7,791	26,565	8,445	18,120	– 15,436	2,684	2015
88,668	44,634	44,034	39,394	– 8,792	30,602	– 2,803	27,799	7,826	19,973	– 15,555	4,418	2016
Commercial banks												
36,987	16,814	20,173	17,476	– 4,311	13,165	– 10,992	2,173	1,259	914	754	1,668	2011
37,987	17,711	20,276	18,517	– 3,962	14,555	– 6,430	8,125	3,563	4,562	– 1,568	2,994	2012
37,800	16,903	20,897	14,110	– 2,036	12,074	– 5,769	6,305	1,812	4,493	– 2,794	1,699	2013
37,990	16,216	21,774	13,757	– 3,797	9,960	– 3,367	6,593	1,776	4,817	– 2,812	2,005	2014
40,961	17,530	23,431	13,205	– 1,183	12,022	– 6,890	5,132	1,969	3,163	– 1,870	1,293	2015
40,755	17,402	23,353	14,114	– 5,135	8,979	– 2,242	6,737	1,955	4,782	47	4,829	2016
Big banks												
24,107	11,095	13,012	9,124	– 1,887	7,237	– 7,331	– 94	563	– 657	2,645	1,988	2011
24,682	11,814	12,868	11,210	– 3,034	8,176	– 3,038	5,138	2,885	2,253	1,001	3,254	2012
24,792	11,174	13,618	6,876	– 958	5,918	– 2,367	3,551	1,036	2,515	– 756	1,759	2013
24,683	10,450	14,233	6,935	– 2,717	4,218	– 559	3,659	993	2,666	– 729	1,937	2014
27,101	11,422	15,679	5,576	85	5,661	– 2,953	2,708	1,082	1,626	– 216	1,410	2015
26,378	11,134	15,244	6,039	– 4,021	2,018	1,127	3,145	864	2,281	1,918	4,199	2016
Regional banks and other commercial banks												
12,647	5,612	7,035	8,080	– 2,433	5,647	– 3,661	1,986	609	1,377	– 1,849	– 472	2011
13,059	5,786	7,273	7,047	– 940	6,107	– 3,394	2,713	593	2,120	– 2,547	– 427	2012
12,757	5,617	7,140	6,971	– 1,076	5,895	– 3,402	2,493	690	1,803	– 2,017	– 214	2013
13,068	5,655	7,413	6,480	– 1,042	5,438	– 2,808	2,630	672	1,958	– 2,066	– 108	2014
13,562	5,987	7,575	7,440	– 1,267	6,173	– 3,937	2,236	802	1,434	– 1,633	– 199	2015
14,097	6,144	7,953	7,847	– 992	6,855	– 3,369	3,486	1,024	2,462	– 1,847	615	2016
Branches of foreign banks												
233	107	126	272	9	281	0	281	87	194	– 42	152	2011
246	111	135	260	12	272	2	274	85	189	– 22	167	2012
251	112	139	263	– 2	261	0	261	86	175	– 21	154	2013
239	111	128	342	– 38	304	0	304	111	193	– 17	176	2014
298	121	177	189	– 1	188	0	188	85	103	– 21	82	2015
280	124	156	228	– 122	106	0	106	67	39	– 24	15	2016
Landesbanken ⁷												
6,681	3,202	3,479	4,483	– 684	3,799	– 3,727	72	697	– 625	267	– 358	2011
6,305	3,127	3,178	4,267	– 118	4,149	– 1,853	2,296	667	1,629	– 1,954	– 325	2012
6,605	3,200	3,405	4,077	– 3,321	756	– 1,235	– 479	469	– 948	973	25	2013
6,498	3,261	3,237	2,667	– 1,580	1,087	– 1,455	– 368	511	– 879	1,406	527	2014
6,893	3,488	3,405	3,077	– 1,114	1,963	– 158	1,805	764	1,041	– 580	461	2015
6,397	2,881	3,516	3,675	– 3,725	– 50	– 499	– 549	505	– 1,054	183	– 871	2016

Profit and loss accounts, by category of banks* (cont'd)

Financial year	Number of reporting institutions	€ million									
		Total assets ¹	Interest business			Commissions business			Result from the trading portfolio	Other operating result	Operating income ³ (col 3 plus col 6 plus col 9 plus col 10)
			Net interest income (col 4 less col 5)	Total interest received ²	Interest paid	Net commission income (col 7 less col 8)	Commissions received	Commissions paid			
1	2	3	4	5	6	7	8	9	10	11	
Savings banks											
2011	426	1,078,852	23,791	42,686	18,895	6,182	6,575	393	- 20	- 66	29,887
2012	423	1,096,261	23,280	40,731	17,451	6,137	6,516	379	17	- 106	29,328
2013	417	1,098,581	23,117	37,298	14,181	6,241	6,633	392	19	- 476	28,901
2014	416	1,110,362	23,237	35,028	11,791	6,441	6,854	413	8	- 563	29,123
2015	413	1,130,688	23,285	32,807	9,522	6,776	7,211	435	- 7	- 260	29,794
2016	403	1,154,475	22,667	30,523	7,856	6,970	7,418	448	10	22	29,669
Credit cooperatives											
2011	1,121	711,046	16,331	27,929	11,598	4,091	4,937	846	11	497	20,930
2012	1,101	739,066	16,354	27,223	10,869	4,107	4,969	862	16	432	20,909
2013	1,078	750,899	16,881	25,539	8,658	4,182	5,083	901	10	417	21,490
2014	1,047	771,932	17,063	24,305	7,242	4,324	5,266	942	10	143	21,540
2015	1,021	798,178	17,077	22,705	5,628	4,564	5,570	1,006	5	132	21,778
2016	972	832,394	16,581	21,180	4,599	4,578	5,601	1,023	10	498	21,667
Mortgage banks											
2011	18	645,145	2,616	32,016	29,400	138	373	235	- 4	- 825	1,925
2012	17	565,008	2,413	24,026	21,613	97	327	230	0	143	2,653
2013	17	482,524	1,828	18,864	17,036	58	267	209	2	- 134	1,754
2014	17	421,014	2,007	16,232	14,225	14	225	211	- 4	108	2,125
2015	16	376,908	2,245	15,323	13,078	- 11	212	223	- 2	9	2,241
2016	15	289,800	1,565	11,623	10,058	- 43	176	219	0	14	1,536
Building and loan associations											
2011	23	199,250	3,383	7,847	4,464	- 497	1,395	1,892	0	11	2,897
2012	22	200,782	3,252	7,681	4,429	- 531	1,403	1,934	0	46	2,767
2013	22	204,540	3,144	7,381	4,237	- 629	1,381	2,010	0	26	2,541
2014	21	210,066	3,037	7,126	4,089	- 547	1,339	1,886	0	- 53	2,437
2015	21	214,613	2,841	6,818	3,977	- 590	1,375	1,965	0	- 2	2,249
2016	20	215,668	2,503	6,233	3,730	- 503	1,260	1,763	0	717	2,717
Banks with special, development and other central support tasks^{7,8}											
2011	20	1,203,086	5,476	34,196	28,720	1,118	1,989	871	169	185	6,948
2012	21	1,438,056	6,568	35,179	28,611	1,383	2,266	883	803	275	9,029
2013	22	1,320,232	3,443	34,016	30,573	1,509	2,285	776	354	- 19	5,287
2014	22	1,266,835	5,441	30,192	24,751	1,532	2,258	726	472	267	7,712
2015	22	1,319,508	5,927	29,123	23,196	1,390	2,175	785	336	35	7,688
2016	21	1,306,027	5,525	28,065	22,540	1,320	2,058	738	571	116	7,532
Memo item: Banks majority-owned by foreign banks⁹											
2011	39	756,406	9,868	23,908	14,040	3,234	4,934	1,700	- 173	447	13,376
2012	37	803,313	8,502	20,365	11,863	2,885	4,501	1,616	1,215	415	13,017
2013	37	692,773	8,266	15,323	7,057	2,633	4,282	1,649	1,106	301	12,306
2014	35	680,177	8,347	14,546	6,199	3,025	4,966	1,941	343	- 45	11,670
2015	33	735,491	8,383	13,502	5,119	2,919	4,834	1,915	435	456	12,193
2016	34	762,637	8,952	13,164	4,212	3,185	5,089	1,904	718	402	13,257

* The figures for the most recent date should be regarded as provisional in all cases. **1** Excluding the total assets of the foreign branches of savings banks and of the foreign branches of regional institutions of credit cooperatives until 2015 and, from 2016, excluding the total assets of the foreign branches of mortgage banks. **2** Interest received plus current income and profits transferred under profit pool-Deutsche Bundesbank

ing, a profit transfer agreement or a partial profit transfer agreement. **3** Net interest and commission income plus result from the trading portfolio and other operating result. **4** Including depreciation of and value adjustments to tangible and intangible assets, but excluding depreciation of and value adjustments to assets leased ("broad" definition). **5** In part, including taxes paid by legally dependent

General administrative spending												Financial year
Total (col 13 plus col 14)	Staff costs	Total other administrative spending ⁴	Operating result before the valuation of assets (col 11 less col 12)	Result from the valuation of assets (other than tangible or financial fixed assets)	Operating result (col 15 plus col 16)	Other and extraordinary result	Profit or loss (-) for the financial year before tax (col 17 plus col 18)	Taxes on income and earnings ⁵	Profit or loss (-) for the financial year after tax (col 19 less col 20)	Withdrawals from or transfers to (-) reserves and participation rights capital ⁶	Balance sheet profit or loss (-) (col 21 plus col 22)	
12	13	14	15	16	17	18	19	20	21	22	23	
Savings banks												
18,735	11,562	7,173	11,152	7,468	18,620	- 1,824	16,796	2,747	14,049	- 12,437	1,612	2011
19,256	12,068	7,188	10,072	660	10,732	- 1,272	9,460	2,657	6,803	- 5,200	1,603	2012
19,410	12,085	7,325	9,491	130	9,621	- 1,020	8,601	2,664	5,937	- 4,401	1,536	2013
19,891	12,606	7,285	9,232	1	9,233	- 593	8,640	2,794	5,846	- 4,288	1,558	2014
20,517	12,946	7,571	9,277	92	9,369	- 392	8,977	2,913	6,064	- 4,491	1,573	2015
20,108	12,589	7,519	9,561	1,041	10,602	- 383	10,219	2,942	7,277	- 5,718	1,559	2016
Credit cooperatives												
13,382	7,983	5,399	7,548	- 317	7,231	- 250	6,981	1,924	5,057	- 3,674	1,383	2011
13,774	8,210	5,564	7,135	263	7,398	13	7,411	1,989	5,422	- 4,001	1,421	2012
13,886	8,303	5,583	7,604	322	7,926	- 276	7,650	1,956	5,694	- 4,285	1,409	2013
14,201	8,538	5,663	7,339	- 198	7,141	- 153	6,988	2,077	4,911	- 3,480	1,431	2014
14,509	8,754	5,755	7,269	- 453	6,816	- 134	6,682	2,103	4,579	- 3,226	1,353	2015
14,423	8,651	5,772	7,244	91	7,335	361	7,696	2,093	5,603	- 4,253	1,350	2016
Mortgage banks												
1,418	552	866	507	- 1,641	- 1,134	827	- 307	74	- 381	- 4,321	- 4,702	2011
1,371	559	812	1,282	- 645	637	- 540	97	21	76	- 4,669	- 4,593	2012
1,322	525	797	432	- 405	27	90	117	88	29	- 4,775	- 4,746	2013
1,241	529	712	884	- 278	606	- 772	- 166	103	- 269	- 1,714	- 1,983	2014
1,147	492	655	1,094	- 327	767	- 20	747	98	649	- 1,385	- 736	2015
937	410	527	599	- 113	486	39	525	127	398	- 1,138	- 740	2016
Building and loan associations												
1,951	807	1,144	946	755	1,701	- 273	1,428	191	1,237	- 914	323	2011
1,952	758	1,194	815	17	832	- 189	643	172	471	- 300	171	2012
1,867	701	1,166	674	- 88	586	- 145	441	194	247	- 104	143	2013
1,893	752	1,141	544	284	828	- 65	763	255	508	- 389	119	2014
1,749	721	1,028	500	- 72	428	- 2	426	78	348	- 4	344	2015
1,798	692	1,106	919	22	941	- 51	890	160	730	- 548	182	2016
Banks with special, development and other central support tasks ^{7,8}												
2,883	1,561	1,322	4,065	1,833	5,898	- 1,113	4,785	142	4,643	- 5,381	- 738	2011
4,129	2,174	1,955	4,900	- 549	4,351	- 1,581	2,770	- 307	3,077	- 4,545	- 1,468	2012
3,908	2,039	1,869	1,379	- 1,144	235	- 916	- 681	193	- 874	- 846	- 1,720	2013
4,042	2,077	1,965	3,670	- 1,015	2,655	- 105	2,550	80	2,470	- 4,177	- 1,707	2014
4,257	2,108	2,149	3,431	- 440	2,991	- 195	2,796	520	2,276	- 3,880	- 1,604	2015
4,250	2,009	2,241	3,282	- 973	2,309	- 28	2,281	44	2,237	- 4,128	- 1,891	2016
<i>Memo item: Banks majority-owned by foreign banks⁹</i>												
7,950	3,551	4,399	5,426	- 2,084	3,342	- 1,582	1,760	271	1,489	- 409	1,080	2011
8,097	3,643	4,454	4,920	- 285	4,635	- 1,339	3,296	735	2,561	- 32	2,529	2012
8,230	3,773	4,457	4,076	- 474	3,602	- 1,481	2,121	513	1,608	- 558	1,050	2013
7,920	3,516	4,404	3,750	- 439	3,311	- 1,308	2,003	320	1,683	- 725	958	2014
8,503	3,992	4,511	3,690	- 479	3,211	- 1,723	1,488	430	1,058	- 396	662	2015
9,103	4,352	4,751	4,154	- 1,012	3,142	- 1,600	1,542	637	905	2,654	3,559	2016

building and loan associations affiliated to Landesbanken. ⁶ Including profit or loss brought forward and withdrawals from or transfers to the fund for general banking risks. ⁷ From 2012, Portigon AG (legal successor of WestLB) allocated to the category of "Banks with special, development and other central support tasks". ⁸ The categories "Special purpose banks" and "Regional institutions of

credit cooperatives" listed separately in previous publications have been merged under "Banks with special, development and other central support tasks". ⁹ Separate presentation of the (legally independent) banks majority-owned by foreign banks and included in the categories "Big banks", "Regional banks and other commercial banks" and "Mortgage banks".

Credit institutions' charge and income items*

Financial year	Number of reporting institutions	Charges, € billion											
		Total	Interest paid	Commissions paid	Net loss from the trading portfolio ¹	Gross loss on transactions in goods and subsidiary transactions	General administrative spending						
							Total	Staff costs			Social security costs and costs relating to pensions and other benefits	Other administrative spending ²	
								Total	Wages and salaries	of which Pensions			
2008	1,889	532.5	347.1	13.2	19.8	0.0	77.1	43.0	33.5	9.5	4.2	34.1	
2009	1,843	388.2	223.0	13.6	1.2	0.0	80.6	45.8	35.2	10.7	4.9	34.7	
2010	1,821	329.1	174.7	13.7	0.7	0.0	78.7	43.1	35.2	7.9	2.3	35.6	
2011	1,801	367.1	208.3	12.8	1.2	0.0	78.6	42.5	34.7	7.8	2.4	36.1	
2012	1,776	329.0	179.2	12.5	0.2	0.0	80.9	44.6	35.5	9.1	3.4	36.3	
2013	1,748	285.8	138.7	12.6	0.3	0.0	81.1	43.8	35.2	8.6	2.9	37.4	
2014	1,715	262.8	117.4	13.3	0.4	0.0	82.0	44.0	35.3	8.7	3.2	38.0	
2015	1,679	256.6	105.0	14.1	0.5	0.0	86.0	46.0	36.4	9.6	3.7	39.9	
2016	1,611	240.8	90.4	13.4	0.2	0.0	84.4	44.6	36.1	8.6	2.7	39.8	

Financial year	Income, € billion										
	Total	Interest received			Current income					Profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement	Commissions received
		Total	from lending and money market transactions	from debt securities and Debt Register claims	Total	from shares and other variable yield securities	from participating interests ⁴	from shares in affiliated enterprises			
2008	506.3	416.6	337.0	79.6	19.3	12.7	1.5	5.1	5.1	42.6	
2009	381.2	303.0	247.7	55.3	11.7	7.2	0.9	3.5	3.1	40.7	
2010	342.0	255.5	212.0	43.5	12.4	7.2	1.0	4.3	2.1	42.0	
2011	392.0	288.8	246.1	42.7	11.2	6.7	1.2	3.3	3.0	41.1	
2012	351.0	256.3	220.3	36.0	12.2	7.5	1.0	3.8	6.2	40.0	
2013	300.4	213.6	184.9	28.7	10.0	6.0	1.0	3.0	4.6	40.6	
2014	280.2	196.4	170.2	26.1	11.3	6.3	1.1	4.0	3.1	42.6	
2015	274.7	183.1	160.1	22.9	15.0	6.7	1.8	6.5	2.8	44.5	
2016	260.8	166.8	147.2	19.7	10.0	5.8	1.3	2.9	4.7	43.2	

* The figures for the most recent date should be regarded as provisional in all cases. 1 Up to 2009, net loss on financial operations. 2 Spending item does not include depreciation of and value adjustments to tangible and intangible assets, shown net of depreciation of assets leased ("narrow" definition). All other tables Deutsche Bundesbank

Total	Value adjustments in respect of tangible and intangible assets		Other operating charges	Value adjustments in respect of loans and advances, and provisions for contingent liabilities and for commitments	Value adjustments in respect of participating interests, shares in affiliated enterprises and securities treated as fixed assets	Charges incurred from loss transfers	Transfers to special reserves	Extraordinary charges	Taxes on income and earnings ³	Other taxes	Profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement	Financial year
	of which Assets leased											
3.8	0.2		5.9	39.6	15.3	3.3	0.0	1.9	1.6	0.2	3.6	2008
3.9	0.3		8.4	29.0	9.6	3.8	0.0	7.4	4.2	0.2	3.4	2009
3.9	0.5		11.5	18.4	4.0	3.9	0.0	10.4	5.5	0.3	3.2	2010
5.4	2.0		17.2	11.9	11.2	6.6	0.0	2.7	7.0	0.6	3.6	2011
5.8	2.0		15.3	11.7	7.1	0.6	0.0	2.4	8.8	0.2	4.3	2012
5.5	1.9		16.8	10.6	3.6	0.7	0.0	3.4	7.4	0.2	4.9	2013
5.5	1.8		16.4	10.5	3.5	0.6	0.0	1.5	7.6	0.2	3.9	2014
5.9	1.8		17.9	7.2	3.6	1.2	0.0	2.5	8.4	0.3	4.1	2015
6.6	2.3		13.7	12.8	3.7	0.9	0.0	1.8	7.8	0.3	4.7	2016

Net profit from the trading portfolio ⁵	Gross profit on transactions in goods and subsidiary transactions	Value readjustments in respect of loans and advances, and provisions for contingent liabilities and for commitments	Value readjustments in respect of participating interests, shares in affiliated enterprises and securities treated as fixed assets	Other operating income		Income from the release of special reserves	Extraordinary income	Income from loss transfers	Financial year
				Total	of which from leasing business				
1.0	0.2	2.5	1.8	11.8	0.5	0.1	3.6	1.7	2008
8.1	0.2	1.9	1.1	9.2	0.8	0.0	1.3	0.9	2009
6.4	0.2	3.0	1.6	11.5	0.9	0.0	6.1	1.2	2010
5.8	0.2	15.0	0.7	20.2	6.3	0.0	0.8	5.2	2011
7.4	0.2	7.4	1.4	18.9	5.1	0.0	0.7	0.5	2012
6.2	0.2	4.0	1.5	17.9	4.7	0.0	0.9	0.9	2013
4.0	0.2	4.0	1.7	15.7	4.5	0.0	0.8	0.4	2014
4.2	0.2	3.8	1.9	17.6	4.7	0.0	0.5	1.1	2015
3.3	0.2	4.0	3.4	20.3	5.5	0.0	4.9	0.0	2016

are based on a broad definition of "other administrative spending". ³ In part, including taxes paid by legally dependent building and loan associations affiliated

to Landesbanken. ⁴ Including amounts paid up on cooperative society shares. ⁵ Up to 2009, net profit on financial operations.

Changes to the investment funds statistics: scope enhancements, results and outlook

The Bundesbank's investment funds statistics show the assets in which domestic funds are invested and the amounts of those investments, making it possible to identify structural changes over time, for example, and to analyse their impact. The data are also included in the national financial accounts. In addition, they form the German contribution to the investment fund statistics published by the European Central Bank (ECB) and are submitted to the analysis and data production system of the European System of Central Banks (ESCB) – the Securities Holdings Statistics Database – which records the securities holdings of financial and non-financial sectors on a security-by-security basis.

In July 2017, domestic investment companies managed assets worth €2,100 billion. Alongside monetary financial institutions and insurance corporations, with respective total assets of €7,800 billion and €2,000 billion at last count, they are therefore among the most significant financial intermediaries in Germany.

The assets of open-end investment funds amounted to more than €2,000 billion, with their share of the euro area aggregate standing at 18%. With holdings worth more than €1,500 billion, specialised funds reserved for institutional investors accounted for three-quarters of the assets of German open-end funds, while retail funds held the remaining €500 billion.

As a result of the changes to the Bundesbank's investment funds statistics, extensive data on domestic closed-end funds are now also available. These funds, which are particularly geared to the acquisition of commercial real estate, managed total assets to the tune of just under €80 billion, which corresponded to a 21% share of the value for the euro area.

Performance indices are now publicly available for the first time for securities-based retail funds; these funds have seen a 54% increase in value since the beginning of 2010. Broken down by category, equity funds grew by 100%, bond funds by 26% and mixed securities funds by 31%.

■ Investment funds statistics

Purpose of the investment funds statistics

The Bundesbank uses detailed information on investment funds for a variety of purposes. For example, the funds data are used for studies on the impact of monetary policy measures and for economic analyses¹ as well as for studies on the German shadow banking system in the context of the Bank's financial stability mandate². For instance, if liquidity and maturity transformation rates are high, the investment fund sector – being the largest player in this niche – may amplify potential shocks in the financial markets during a period of stress, especially if outflows of funds are unexpectedly high and liquidity buffers are low.³ Data on mutual fund industry trends additionally provide important information for capturing income and financial flows in the financial accounts and for determining cross-border capital liabilities for the international investment position. In addition, the data collected are passed on to the Federal Financial Supervisory Authority (BaFin) for the purpose of ongoing supervision and, in individual cases, forwarded to the Federal Ministry of Finance.

Statistical data collected also serve as the German contribution to the harmonised euro area investment fund statistics. Data on investment funds' holdings of securities are also included in the ESCB's Securities Holdings Statistics Database, which records the securities holdings of financial and non-financial sectors on a security-by-security basis.⁴

Legal basis

The reporting obligation for the investment funds statistics is based on the ECB Regulation concerning statistics on the assets and liabilities of investment funds (ECB/2013/38).⁵ By collecting these data, the euro area central banks are complying with their legal obligation to provide the ECB with data on domestic mutual funds for the calculation of the euro aggregates.

Data collected

For each fund established, investment management companies and externally managed investment companies within the meaning of the

German Investment Code (*Kapitalanlagegesetzbuch*) report large quantities of reference data. As a result, funds can be broken down according to different criteria, eg retail and specialised funds, or by type of investment, ie categories such as equity funds, bond funds, real estate funds, funds of funds, money market funds and hedge funds. Figures on the size and composition of each fund's assets, their share units outstanding and sold, issue and redemption prices, inflows and outflows of funds, and profit distributions are also to be reported on a monthly basis.⁶

Each month, the aggregated investment funds statistics are published on the Bundesbank's website.⁷ Besides data in a tabular form, 2,500 time series are currently available, as well as a factsheet with charts showing, for example, a breakdown of the securities held by investment funds. Moreover, anonymised micro data can be provided for academic research.⁸

Publication of data

¹ See Deutsche Bundesbank, Current developments in the mutual funds market: demand, structural changes and investor behaviour, Monthly Report, January 2013, pp 13-28.

² The German Financial Stability Act (Gesetz zur Überwachung der Finanzstabilität) can be found on the Bundesbank's website (www.bundesbank.de/en) under "Tasks, Financial and monetary system, Financial and monetary stability, Role of the Bundesbank".

³ See Deutsche Bundesbank, Risks in the German shadow banking system, Financial Stability Review 2015, pp 57-68.

⁴ See Deutsche Bundesbank, Securities holdings statistics for analysing holdings of securities in Germany and Europe: methodology and results, Monthly Report, March 2015, pp 95-107.

⁵ See Regulation (EU) No 1073/2013 of 18 October 2013 concerning statistics on the assets and liabilities of investment funds (ECB/2013/38) and Guideline ECB/2014/15 of 4 April 2014 on monetary and financial statistics (recast), including the amendments pursuant to Guideline (EU) 2017/148 of the European Central Bank of 16 December 2016 amending Guideline ECB/2014/15 on monetary and financial statistics (ECB/2016/45).

⁶ The reporting template for the specific data requested is available on the Bundesbank's website (www.bundesbank.de/en) under "Service, Reporting systems, Banking statistics, Investment funds statistics".

⁷ See the Bundesbank's website (www.bundesbank.de/en) under "Statistics, Banks and other financial institutions, Investment companies".

⁸ More details on the securities micro data for research purposes can be found on the Bundesbank's website (www.bundesbank.de/en) under "Bundesbank, Research and Research Data, Research Data and Service Centre, Research Data".

Collection of granular securities data

Until the end of 2008, reporting agents solely submitted aggregate reports. It was not until after the harmonised collection process for euro area investment fund data was introduced that important assets position data started being collected at the granular level. One example is the publication of securities holdings data reported on a security-by-security basis. The granular data collection allows for a comprehensive analysis of the portfolios of domestic mutual funds, broken down by type of security. The detailed data also make it possible to respond flexibly to new requirements as well as to perform individual *ad hoc* analyses, for example to determine the extent to which funds hold securities of particular issuers or how funds' investment behaviour changes over time in the wake of economic developments. The reporting procedure does not need to be adapted as often, which also means reporting agents save on costs. While reporting agents previously had to submit data on their securities positions for aggregate reporting broken down by type of underlying instrument, by maturity or by country of issuer, for example, they now normally only need to provide the international securities identification number and the notional value or number of securities held when reporting on a security-by-security basis. In addition, the prices used by the investment companies to determine their net asset values are to be reported. All other reference data on issuers and securities needed for conducting extensive analyses are provided via the Centralised Securities Database⁹ of the ESCB.

The open-end mutual fund sector

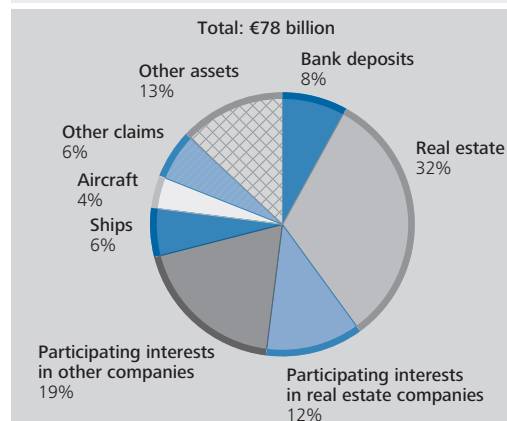
Major importance of open-end funds

Overall, open-end collective investment undertakings are dominating the domestic mutual fund market, with the 6,200 open-end mutual funds included in the investment funds statistics managing assets worth over €2,000 billion

⁹ See ECB, The Centralised Securities Database in Brief, February 2010.

Asset composition of domestic closed-end funds

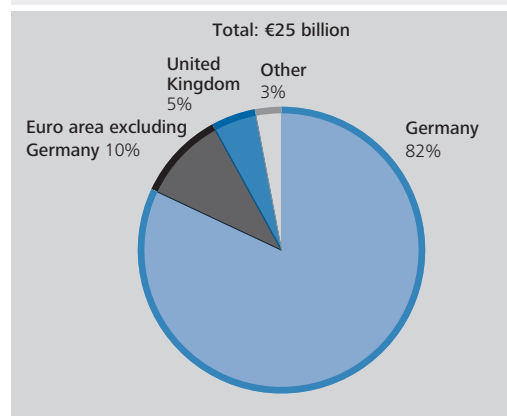
As at July 2017



Deutsche Bundesbank

Real estate assets of domestic closed-end funds, broken down by area

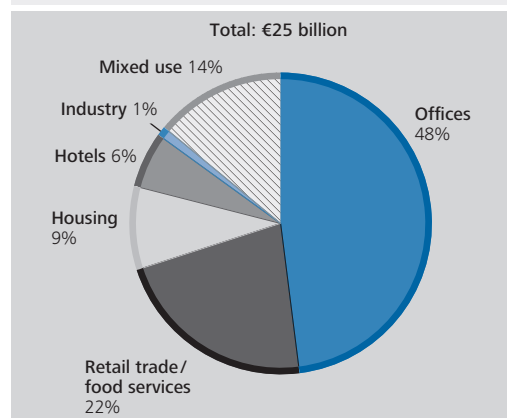
As at July 2017



Deutsche Bundesbank

Real estate assets of domestic closed-end funds, broken down by type of use

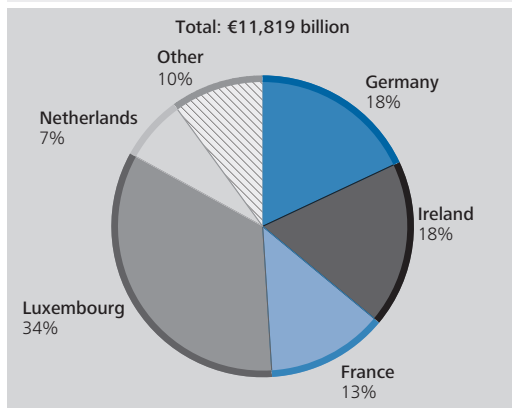
As at July 2017



Deutsche Bundesbank

Investment funds established in the euro area, broken down by country

As at 2017 Q2, quarter-end data



Sources: ECB and Bundesbank calculations.
 Deutsche Bundesbank

in July 2017. In principle, there is no limit to the number of share units an investment company can issue for open-end funds. Investors have the right to sell fund units back to the investment company at their current redemption price. The right of return can, however, be subject to certain conditions, such as a minimum holding period for share units in real estate investment funds.

Specialised funds dominating

With holdings worth more than €1,500 billion, specialised funds reserved for institutional investors accounted for three-quarters of the assets of open-end funds. This investor group includes, for example, credit institutions, insurance corporations, pension funds, churches and foundations. Funds open to the general public held the remaining €500 billion, the majority of which being attributable to retail investors.

Closing information gaps by enhancing scope of investment funds statistics

New statistics' scope from January 2015 onwards covers ...

Due to the increased importance of securities data for decisions relating to monetary policy, financial stability as well as microprudential and macroprudential issues, the scope of the statistics was revised at the beginning of 2015 in the context of the extended ECB Regulation

ECB/2013/38 and the introduction of the German Investment Code which also transposed the EU Directive on Alternative Investment Fund Managers (AIFM Directive¹⁰) into national law. With the inclusion of closed-end funds in the reporting, the amendments impacted the group of reporting agents covered, on the one hand, and the content of the reports, on the other. For example, the previous reporting scope was extended in respect of information concerning the purpose for which developed land was being used and also regarding securities lending and repurchase agreements.

The enhancements to the statistics' scope also included data on exchange-traded funds (ETFs).¹¹ These usually track the performance of stock market indices and thus do not involve active fund management. Considering their cost-effective fee structures and their ability to be traded simply and quickly, these kinds of products have high growth potential. In July 2017, the investment funds statistics included over 100 domestic ETFs. Almost three-quarters of these were established as equity funds, whereas the remaining share comprised predominantly bond funds. The bulk of domestic ETFs physically replicate the underlying index, while only a few synthetically reproduce it using swap transactions. Domestic ETFs managed assets worth a total of €53 billion in July 2017, compared with a figure of €580 billion for ETFs domiciled in the rest of the euro area.¹²

... exchange-traded funds ...

A significant change and challenge with respect to the extension of the investment funds statistics' scope was that closed-end funds, which were previously assigned to the "grey capital market", were regulated by the German

... and closed-end funds

¹⁰ See Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010.

¹¹ See Deutsche Bundesbank, Liquidity risk in exchange-traded funds, Financial Stability Review 2013, pp 42-43.

¹² Provisional value as at the end of June 2017. The shares of ETFs reported in the European investment fund statistics can be taken from the ECB's Statistical Data Warehouse (<http://sdw.ecb.europa.eu>).

Calculating performance indices for securities-based investment funds

Performance indices make it easier to compare the performance of investment funds.¹ It is assumed that distributions and other payments to the investor are reinvested in the fund. The model for this is based on Deutsche Börse AG's methodology for calculating corresponding indices for shares² and assumes that the development of redemption prices of open-end investment funds can be equated to that of share prices of public limited companies. Profit distributions and asset payouts of investment funds are treated like dividend and bonus payments of listed companies.

The performance index of an individual collective investment undertaking is therefore calculated as follows:

$$Index_{f,t} = \frac{RNP_{f,t} \times KF_{f,t}}{RNP_{f,t=0}} \times 100,$$

where *Index* represents the index value, *RNP* the redemption price, *KF* the correction factor for capturing distributions and asset payouts, *f* the investment fund, and *t* the time of reporting.

The correction factor *KF* is calculated recursively as follows:

$$KF_{f,t} = \frac{RNP_{f,t-1}}{RNP_{f,t-1} - (AK_{f,t} + SUBK_{f,t})} \times KF_{f,t-1}$$

$$AK_{f,t} = \frac{A_{f,t}}{ANZU_{f,t-1}}, \quad SUBK_{f,t} = \frac{SUB_{f,t}}{ANZU_{f,t-1}}, \quad KF_{f,0} = 1,$$

where *AK* represents the distributions per unit share, *A* the total distributions, *ANZU* the total number of share units issued, *SUBK* the asset payouts per share unit, and *SUB* the total asset payouts.

The index of a particular class of investment fund is calculated as the average of the index values weighted by net asset values:

$$Index\ Fonds\ kategorie_t = \frac{\sum Fondsverm\u00f6gen_{f,t} \times Index_{f,t}}{\sum Fondsverm\u00f6gen_{f,t}}$$

This means that the index of a particular class of investment fund can change if the structure of the net asset values or the underlying indices vary.

¹ Index numbers show the change compared with an initial or base value, which is set at 100.

² See Deutsche Börse AG, Guide to the Equity Indices of Deutsche Börse AG, version 8.2.1, May 2017, available on the Deutsche Börse AG website (www.dax-indices.com) under "Resources".

Investment Code to the same extent as open-end funds and subject to the Bundesbank's statistical reporting obligations for the first time. The reports include data on legacy mutual funds which were issued before the German Investment Code entered into force and are not supervised by BaFin.

The closed-end mutual fund sector

In July 2017, the 3,500 closed-end funds included in the investment funds statistics managed assets worth €78 billion in total. As a form of long-term collective investment, they primarily invest in tangible assets, such as real estate, land, aircraft, renewable energy plants and ships. In contrast to open-end mutual funds, share units in closed-end funds are not issued continuously. Instead, equity capital is collected during a placement phase, in which the investor often knows what assets are

planned to be purchased. However, blind pools, ie funds which raise money for non-specified investment goals, are also common in the market. It is generally not possible to return the closed-end fund share units until the assets are liquidated. Investors in closed-end mutual funds are predominantly retail investors.

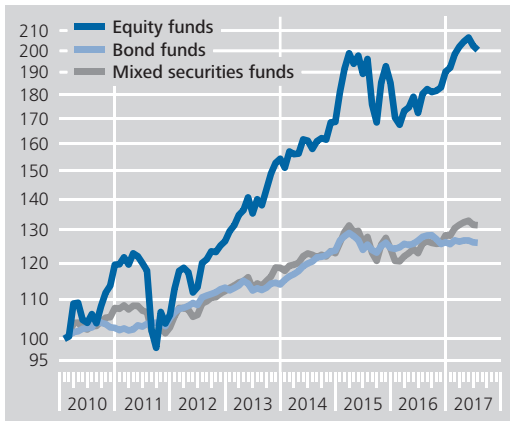
In July 2017, closed-end mutual funds held real estate worth €25 billion. With an investment amount of €20 billion, their focus was on domestic land and buildings. They invested €2 billion in real estate in other euro area countries. The participating interests and loans to real estate companies amounted to €11 billion, €8 billion of which was accounted for by domestic companies and €1 billion by the rest of the euro area, while their equity investment in other companies stood at €15 billion. The

Real estate proves most popular type of investment

Closed-end funds' investment focus on tangible assets

Performance indices of domestic retail securities funds

January 2010 = 100, month-end data, log scale



Deutsche Bundesbank

funds also owned ships and aircraft worth €8 billion.¹³

The investment funds statistics reporting also allows real estate data to be broken down by type of use. For example, a distinction can be made as to whether real estate is used mostly for office, residential or commercial purposes or for the sale and service of food. Ultimately, closed-end mutual funds mainly invested in office buildings, holding assets worth €12 billion. A further €5 billion was accounted for by buildings used for retail trade and food services, while €2 billion was invested in housing.

Significance of German mutual fund sector across Europe

Important role in the euro area as well

As at the end of the second quarter of 2017, euro area investment funds managed assets worth a total of €11,819 billion, with closed-end funds accounting for €367 billion. The respective shares in the euro area aggregate of domestic open-end and closed-end mutual funds were 18% and 21%, meaning that Germany makes up a significant proportion of the European investment fund sector.¹⁴

Outlook

This is the first report in which performance indices are published for selected retail investment funds (see the box on page 91 for calculation details). These indices illustrate the performance of funds over time assuming that interim distributions and other payments to investors are notionally reinvested in the funds. This facilitates the comparison of performance between the different mutual funds. In the period from January 2010 to July 2017, retail securities funds grew in value by a total of 54%, achieving an annual average return of 6%. Broken down by category, equity funds increased in value by 100% during this period, while bond funds appreciated by 26% and mixed securities funds by 31%. In terms of returns, this corresponds to average annual rates of 10%, 3% and 4% respectively. These indices are scheduled to be published regularly starting from the fourth quarter of 2017.¹⁵

Calculation of performance indices

Amongst other things, the aggregate data published on retail and specialised mutual funds are broken down by fund category according to their reported investment focus. The categories include equity funds, bond funds, real estate funds, funds of funds, money market funds and hedge funds. There are also plans to classify retail funds in future according to whether or not they comply with the UCITS Directive¹⁶. Undertakings are subject to

Introduction of an additional classification

¹³ Statistics on the assets of closed-end investment funds can be found in tabular form on the Bundesbank's website (www.bundesbank.de/en) under "Statistics, Banks and other financial institutions, Investment companies".

¹⁴ European investment fund statistics data are available on the Bundesbank's website (www.bundesbank.de/en) under "Statistics, ESCB statistics" and from the ECB's Statistical Data Warehouse (<http://sdw.ecb.europa.eu>).

¹⁵ The indices will be posted on the Bundesbank's website (www.bundesbank.de/en) under "Statistics, Banks and other financial institutions, Investment companies".

¹⁶ See Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS), and Directive 2014/91/EU of the European Parliament and of the Council of 23 July 2014 amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and sanctions.

the UCITS Directive if their sole purpose is to collectively invest capital raised from the public in transferable securities or in other liquid financial assets, according to the principle of risk-spreading, and to directly or indirectly debit the fund to repurchase or pay out their shares

at the request of unit holders. The new classification can be implemented using data which are already collected for the investment funds statistics. The first data in this format are expected in the fourth quarter of 2017.

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/surplus and debt level as defined in the Maastricht Treaty ..	58•
2 General government: revenue, expenditure and 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	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		MFI lending, total	MFI lending to enterprises and households	Monetary capital formation 4	Eonia 5,7	3-month Euribor 6,7	Yield on Euro- pean govern- ment bonds outstanding 8	
				3-month moving average (centred)							
	Annual percentage change							% Annual percentage as a monthly average			
2015 Nov	10.8	5.1	4.9	4.9	2.6	1.1	- 3.2	- 0.13	- 0.09	1.1	
Dec	10.5	5.2	4.6	4.9	2.3	0.6	- 3.0	- 0.20	- 0.13	1.2	
2016 Jan	10.5	5.5	5.1	5.0	2.8	1.1	- 3.2	- 0.24	- 0.15	1.1	
Feb	10.4	5.5	5.1	5.2	3.3	1.2	- 3.2	- 0.24	- 0.18	1.0	
Mar	10.3	5.6	5.2	5.0	3.2	1.1	- 3.1	- 0.29	- 0.23	0.9	
Apr	9.7	5.2	4.8	5.0	3.5	1.3	- 2.5	- 0.34	- 0.25	0.9	
May	9.1	5.1	4.9	4.9	3.7	1.4	- 2.2	- 0.34	- 0.26	0.8	
June	8.8	5.1	5.1	5.1	4.0	1.5	- 2.0	- 0.33	- 0.27	0.7	
July	8.6	5.1	5.1	5.1	3.9	1.3	- 2.3	- 0.33	- 0.29	0.6	
Aug	8.6	5.0	5.0	5.1	3.9	1.6	- 2.1	- 0.34	- 0.30	0.5	
Sep	8.4	5.0	5.1	4.8	4.0	1.9	- 2.1	- 0.34	- 0.30	0.6	
Oct	8.0	4.6	4.5	4.7	4.3	2.2	- 1.5	- 0.35	- 0.31	0.7	
Nov	8.5	4.8	4.7	4.7	4.4	2.2	- 1.5	- 0.35	- 0.31	1.0	
Dec	8.8	4.8	5.0	4.8	4.7	2.4	- 1.5	- 0.35	- 0.32	1.0	
2017 Jan	8.4	4.7	4.8	4.8	4.5	2.4	- 1.5	- 0.35	- 0.33	1.1	
Feb	8.4	4.7	4.6	4.9	4.3	2.3	- 1.1	- 0.35	- 0.33	1.2	
Mar	9.1	5.1	5.3	4.9	4.8	2.8	- 1.1	- 0.35	- 0.33	1.2	
Apr	9.3	5.1	4.8	5.0	4.5	2.6	- 1.5	- 0.36	- 0.33	1.1	
May	9.3	5.1	4.9	4.9	4.3	2.7	- 1.3	- 0.36	- 0.33	1.1	
June	9.7	5.3	5.0	4.8	4.2	2.9	- 1.2	- 0.36	- 0.33	1.0	
July	9.1	4.9	4.5	...	3.8	2.6	- 1.3	- 0.36	- 0.33	1.2	
Aug	...	...	...	...	...	...	...	- 0.36	- 0.33	1.0

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								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	
2015 Nov	+ 32,908	+ 32,338	- 15,745	- 53,574	+ 31,729	+ 21,227	- 17,589	+ 2,462	1.0736	90.5	86.3
Dec	+ 43,696	+ 31,440	+ 71,903	+ 50,450	+ 63,279	+ 22,109	- 72,062	+ 8,126	1.0877	91.9	87.5
2016 Jan	+ 12,677	+ 14,092	- 4,558	- 18,730	+ 76,162	+ 15,198	- 76,032	- 1,155	1.0860	93.0	88.4
Feb	+ 17,372	+ 27,934	+ 21,437	+ 51,803	+ 33,713	+ 13,598	- 78,738	+ 1,061	1.1093	94.2	89.2
Mar	+ 38,593	+ 39,332	+ 40,164	+ 22,709	- 10,005	+ 364	+ 26,034	+ 1,063	1.1100	93.6	88.8
Apr	+ 38,078	+ 36,110	+ 35,155	- 8,623	+ 135,565	- 21,749	- 68,421	- 1,617	1.1339	94.4	89.5
May	+ 21,293	+ 32,849	+ 17,859	+ 21,695	+ 4,954	- 14,064	+ 2,164	+ 3,110	1.1311	94.6	89.9
June	+ 41,490	+ 39,488	+ 33,384	- 40,683	+ 29,638	- 9,821	+ 53,558	+ 692	1.1229	94.4	89.7
July	+ 36,757	+ 33,631	+ 27,319	+ 26,559	+ 59,757	+ 13,337	- 71,456	- 878	1.1069	94.6	89.8
Aug	+ 27,438	+ 25,222	+ 44,998	+ 55,713	+ 48,555	+ 6,884	- 67,968	+ 1,813	1.1212	94.9	90.1
Sep	+ 38,742	+ 33,117	+ 58,692	+ 52,885	+ 4,414	+ 3,715	- 9,112	+ 6,789	1.1212	95.1	90.1
Oct	+ 27,016	+ 27,955	+ 7,799	+ 35,516	+ 52,876	+ 6,220	- 82,862	- 3,951	1.1026	95.1	90.3
Nov	+ 33,177	+ 33,457	+ 1,272	- 7,430	- 23,847	+ 2,868	+ 27,224	+ 2,458	1.0799	94.6	89.6
Dec	+ 40,300	+ 32,737	+ 74,673	- 10,826	+ 63,837	+ 6,080	+ 9,510	+ 6,073	1.0543	93.7	88.9
2017 Jan	- 80	+ 7,656	- 12,475	- 12,326	+ 11,539	+ 2,211	- 8,822	- 5,077	1.0614	93.9	89.1
Feb	+ 25,133	+ 26,221	+ 22,018	+ 32,437	+ 55,657	+ 8,057	- 76,114	+ 1,981	1.0643	93.4	88.8
Mar	+ 44,723	+ 37,941	+ 43,523	+ 16,588	+ 9,313	+ 5,214	+ 11,845	+ 563	1.0685	94.0	89.2
Apr	+ 22,280	+ 24,084	+ 14,932	+ 20,298	+ 49,771	+ 1,012	- 51,634	- 4,514	1.0723	93.7	89.0
May	+ 17,923	+ 28,634	+ 8,490	+ 7,694	- 15,422	+ 3,144	+ 11,672	+ 1,402	1.1058	95.6	90.5
June	+ 28,119	+ 32,296	+ 94,609	- 44,371	+ 39,361	- 8,545	+ 106,722	+ 1,443	1.1229	96.3	91.3
July	...	...	...	...	...	...	...	...	1.1511	97.6	p 92.4
Aug	...	...	...	...	...	...	...	...	1.1807	99.0	p 93.8

* 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}										
2014	1.3	1.6	1.9	2.9	- 0.6	0.9	0.4	8.3	0.1	2.1
2015	2.0	1.5	1.7	1.7	0.0	1.1	- 0.2	25.6	0.8	2.7
2016	1.8	1.2	1.9	2.1	1.9	1.2	0.0	5.1	0.9	1.9
2016 Q1	1.7	1.2	1.5	2.2	1.7	1.4	- 0.8	2.5	1.0	2.4
Q2	1.7	1.2	3.3	0.9	1.8	1.8	0.0	5.4	1.2	2.3
Q3	1.7	1.2	1.7	2.0	2.2	0.7	2.1	2.7	0.8	0.5
Q4	1.9	1.1	1.3	3.1	2.0	0.9	- 1.3	9.9	0.5	2.6
2017 Q1	2.0	1.7	3.2	4.6	3.9	1.5	0.5	6.1	2.1	4.0
Q2	2.3	1.4	0.8	5.7	2.3	1.0	0.7	...	1.2	4.0
Industrial production ^{1,3}										
2014	0.8	1.0	1.4	4.3	- 1.8	- 0.8	- 2.0	20.9	- 0.7	- 0.9
2015	2.1	0.0	0.8	0.1	- 1.2	1.7	1.0	36.9	1.1	3.6
2016	1.4	4.3	1.0	1.8	2.3	0.3	2.6	0.7	1.7	4.9
2016 Q1	1.4	4.6	1.5	- 2.0	- 0.7	0.7	- 0.9	- 0.2	1.6	3.8
Q2	1.1	3.4	0.6	- 1.2	3.7	0.5	5.3	0.7	0.1	4.4
Q3	1.0	4.8	0.6	3.0	2.6	- 0.6	2.0	- 0.8	1.6	1.4
Q4	2.2	4.5	1.4	7.6	3.2	0.4	4.0	3.2	3.6	9.8
2017 Q1	1.3	1.5	1.0	10.6	1.8	0.9	9.7	- 6.0	1.6	8.6
Q2	2.7	...	^p 3.0	12.6	3.4	1.8	3.2	- 1.1	3.0	9.3
Capacity utilisation in industry ⁴										
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
2016	81.8	80.0	85.0	73.6	78.0	83.2	67.6	-	76.3	72.6
2016 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	83.8	67.8	-	76.0	71.8
Q4	82.3	80.9	85.7	75.0	80.6	83.6	69.3	-	75.7	73.1
2017 Q1	82.5	80.7	85.9	74.4	81.0	84.6	68.6	-	76.5	74.5
Q2	82.6	81.4	86.0	76.4	82.1	84.3	68.1	-	76.0	74.8
Q3	83.2	82.0	86.7	73.9	82.6	84.4	72.0	-	77.0	74.5
Standardised unemployment rate ⁵										
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	10.0	7.8	4.1	6.8	8.8	10.1	23.6	7.9	11.7	9.6
2017 Mar	9.4	7.6	3.8	5.5	8.8	9.6	22.1	6.6	11.5	8.7
Apr	9.2	...	4.1	6.2	8.8	9.5	21.7	6.4	11.2	8.8
May	9.2	...	3.7	6.8	8.8	9.6	21.5	6.4	11.4	8.9
June	9.1	...	3.7	6.6	8.7	9.6	21.2	6.3	11.2	8.9
July	9.1	...	3.6	...	8.8	9.8	...	6.4	11.3	8.5
Aug	...	...	...	...	...	...	...	6.3	...	...
Harmonised Index of Consumer Prices ¹										
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	0.2	1.8	0.4	0.8	0.4	0.3	0.0	- 0.2	- 0.1	0.1
2017 Mar	1.5	2.5	1.5	3.0	0.9	1.4	1.7	0.6	1.4	3.3
Apr	1.9	2.7	2.0	3.6	1.0	1.4	1.6	0.7	2.0	3.3
May	1.4	1.9	1.4	3.5	0.9	0.9	1.5	0.0	1.6	2.7
June	1.3	1.5	1.5	3.1	0.9	0.8	0.9	- 0.6	1.2	3.1
July	1.3	1.8	1.5	3.9	0.6	0.8	0.9	- 0.2	1.2	2.6
Aug	^e 1.5	...	1.8	...	...	...	0.6	0.4	^e 1.4	3.2
General government financial balance ⁸										
2014	- 2.6	- 3.1	0.3	0.7	- 3.2	- 3.9	- 3.7	- 3.7	- 3.0	- 1.6
2015	- 2.1	- 2.5	0.6	0.1	- 2.7	- 3.6	- 5.9	- 2.0	- 2.7	- 1.3
2016	- 1.5	- 2.6	0.8	0.3	- 1.9	- 3.4	0.7	- 0.6	- 2.4	0.0
General government debt ⁸										
2014	92.0	106.7	74.7	10.7	60.2	94.9	179.7	105.3	131.8	40.9
2015	90.3	106.0	70.9	10.1	63.7	95.6	177.4	78.7	132.1	36.5
2016	89.2	105.9	68.1	9.5	63.6	96.0	179.0	75.4	132.6	40.1

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 calculated from seasonally adjusted data. ³ Manufacturing, mining and energy; adjusted for working-day variations.

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	5.6	8.2	1.4	0.6	0.9	2.6	3.0	1.4	- 1.5	2014
1.8	4.0	7.1	2.3	1.0	1.6	3.8	2.3	3.2	1.7	2015
2.3	4.2	5.5	2.2	1.5	1.4	3.3	3.1	3.2	2.8	2016
2.3	3.1	6.8	1.7	1.7	1.0	3.4	2.4	3.6	2.6	2016 Q1
1.8	4.6	4.9	2.3	1.5	1.1	3.8	3.2	3.5	2.8	Q2
1.6	5.0	4.6	2.4	1.3	1.5	3.0	3.4	3.2	2.9	Q3
3.4	4.1	5.9	2.4	1.6	1.9	3.0	3.5	2.6	3.0	Q4
4.1	4.0	6.2	3.2	2.5	3.1	3.1	5.1	2.8	3.6	2017 Q1
4.0	...	6.3	3.3	2.2	2.8	3.3	4.4	3.1	3.6	Q2
Industrial production ^{1,3}										
0.3	4.4	- 5.7	- 2.9	1.0	1.8	3.6	1.7	1.3	- 0.7	2014
4.6	0.9	6.3	- 3.4	2.2	1.7	7.3	5.1	3.4	3.4	2015
2.8	- 0.1	- 3.5	2.2	2.1	1.0	4.8	7.8	1.8	8.0	2016
5.5	1.9	- 5.0	- 2.7	1.8	0.9	4.6	7.2	2.9	10.3	2016 Q1
- 0.3	0.7	- 4.3	3.4	1.8	0.8	7.4	6.6	1.3	8.7	Q2
3.0	- 0.1	- 3.1	3.4	1.0	0.4	2.9	7.9	0.9	6.1	Q3
3.1	- 2.8	- 1.7	5.6	3.6	1.9	4.1	9.3	1.8	7.1	Q4
5.9	- 6.3	5.7	2.2	3.1	3.0	7.7	6.7	1.9	8.6	2017 Q1
6.3	...	1.6	1.5	...	0.7	1.7	7.8	2.2	...	Q2
Capacity utilisation in industry ⁴										
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
75.9	76.9	79.1	81.7	84.3	80.2	84.5	83.5	78.6	59.8	2016
76.1	76.1	78.9	81.7	84.0	80.8	83.0	83.1	77.8	63.9	2016 Q2
75.5	77.6	79.8	81.5	83.2	79.6	84.3	83.7	78.4	58.7	Q3
76.0	81.3	79.9	82.1	85.1	80.3	85.4	84.1	79.1	59.6	Q4
76.5	82.6	79.3	81.4	85.1	79.8	87.1	84.5	78.8	58.1	2017 Q1
77.4	82.1	79.1	82.5	86.6	79.1	86.5	85.4	78.1	57.6	Q2
77.6	80.1	80.0	83.1	86.9	80.9	84.4	85.1	78.7	61.5	Q3
Standardised unemployment rate ⁵										
10.7	6.0	5.8	7.4	5.6	14.1	13.2	9.7	24.5	16.1	2014
9.1	6.5	5.4	6.9	5.7	12.6	11.5	9.0	22.1	15.0	2015
7.9	6.3	4.7	6.0	6.0	11.2	9.7	8.0	19.6	13.0	2016
8.1	6.0	4.2	5.1	5.7	9.7	8.3	7.1	18.0	12.1	2017 Mar
7.4	6.0	4.1	5.1	5.6	9.5	8.2	7.1	17.6	11.3	Apr
7.0	5.9	4.1	5.1	5.4	9.2	8.0	7.1	17.3	11.0	May
7.0	5.9	4.0	4.9	5.3	9.1	7.6	7.1	17.1	10.8	June
7.6	6.0	4.1	4.8	5.4	9.1	7.3	7.0	17.1	10.8	July
...	...	...	...	...	...	...	...	...	...	Aug
Harmonised Index of Consumer Prices ¹										
- 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
0.7	0.0	0.9	0.1	1.0	0.6	- 0.5	- 0.2	- 0.3	- 1.2	2016
3.2	2.5	1.2	0.6	2.1	1.4	1.0	2.0	2.1	1.5	2017 Mar
3.5	2.6	1.1	1.4	2.3	2.4	0.8	1.7	2.6	2.1	Apr
3.2	1.9	1.1	0.7	2.1	1.7	1.1	1.5	2.0	0.9	May
3.5	1.5	1.0	1.0	2.0	1.0	1.0	0.9	1.6	0.9	June
4.1	1.8	1.2	1.5	2.0	1.0	1.5	1.2	1.7	- 0.1	July
4.6	2.3	...	1.5	...	...	...	1.4	2.0	0.5	Aug
General government financial balance ⁸										
- 0.7	1.4	- 2.0	- 2.3	- 2.7	- 7.2	- 2.7	- 5.4	- 6.0	- 8.8	2014
- 0.2	1.4	- 1.3	- 2.1	- 1.1	- 4.4	- 2.7	- 2.9	- 5.1	- 1.2	2015
0.3	1.6	1.0	0.4	- 1.6	- 2.0	- 1.7	- 1.8	- 4.5	0.4	2016
General government debt ⁸										
40.5	22.4	64.3	67.9	84.4	130.6	53.6	80.9	100.4	107.1	2014
42.7	21.6	60.6	65.2	85.5	129.0	52.5	83.1	99.8	107.5	2015
40.2	20.0	58.3	62.3	84.6	130.4	51.9	79.7	99.4	107.8	2016

6 Including Latvia from 2014 onwards. 7 Including Lithuania from 2015 onwards.
 8 As a percentage of GDP (Maastricht Treaty definition). Euro area: 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 Dec	- 108.7	- 70.7	- 2.0	- 38.0	- 32.9	- 3.4	- 190.9	- 187.4	- 7.4	4.1	- 0.6	- 27.1	16.1
2016 Jan	157.6	45.9	6.0	111.8	96.6	- 45.5	129.0	174.5	- 25.3	- 8.1	- 0.4	- 18.3	1.4
Feb	87.9	45.1	- 0.5	42.8	51.7	- 81.6	32.3	113.9	- 13.7	11.2	- 1.2	- 24.0	0.2
Mar	64.6	22.2	- 5.6	42.3	43.1	26.4	- 86.1	- 112.4	- 10.3	- 6.5	- 0.9	3.9	- 6.8
Apr	96.8	47.7	27.7	49.1	43.9	- 61.4	119.0	180.5	- 0.1	- 3.7	- 1.3	- 0.5	5.4
May	70.8	20.7	12.9	50.2	56.4	- 0.7	62.0	62.7	3.7	- 5.0	- 0.5	- 0.1	9.3
June	55.6	5.1	- 7.0	50.5	62.1	31.3	- 23.2	- 54.4	- 7.3	- 20.8	- 0.8	- 10.3	24.6
July	54.5	29.5	14.7	25.0	24.1	- 85.0	56.9	141.9	- 23.9	- 7.1	- 0.5	- 23.8	7.5
Aug	17.3	16.9	27.1	0.4	9.0	- 39.7	7.8	47.5	2.4	- 4.9	- 0.6	- 0.3	8.2
Sep	41.8	26.6	- 7.3	15.2	19.4	- 17.0	- 69.0	- 52.0	- 22.8	- 12.2	- 0.5	- 19.6	9.5
Oct	84.9	37.3	5.6	47.6	45.1	- 45.5	153.8	199.3	2.7	- 5.5	- 0.6	- 2.6	11.5
Nov	106.5	56.1	16.0	50.3	62.3	7.5	- 21.2	- 28.7	- 0.8	- 7.6	- 0.7	- 1.1	8.6
Dec	- 58.0	- 50.3	- 8.3	- 7.7	- 0.9	37.8	- 155.0	- 192.8	- 11.9	- 3.3	- 1.1	- 13.8	6.2
2017 Jan	132.3	44.7	31.3	87.6	69.7	- 9.9	234.4	244.3	- 20.9	- 9.9	- 0.2	- 4.3	- 6.5
Feb	46.0	30.8	4.0	15.2	35.3	- 47.4	52.7	100.1	15.6	- 6.1	- 0.5	- 3.1	25.2
Mar	151.6	92.8	25.4	58.8	62.6	- 5.4	- 51.5	- 46.1	- 12.7	1.8	- 0.5	- 22.4	8.3
Apr	52.3	24.6	20.0	27.7	25.1	- 42.6	77.1	119.7	- 26.9	- 12.2	- 0.3	- 0.6	- 13.8
May	50.6	26.2	16.3	24.5	35.1	- 1.6	- 5.7	- 4.2	18.3	- 5.9	- 2.4	16.8	9.7
June	24.4	29.3	1.2	- 4.8	- 5.0	57.5	- 110.0	- 167.5	- 3.1	- 12.3	- 0.1	- 6.9	16.2
July	3.8	- 3.9	11.5	7.8	10.0	15.8	102.6	86.8	- 26.9	- 8.9	- 0.9	- 0.1	- 16.9

(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 Dec	- 19.0	- 11.6	- 5.8	- 7.4	- 1.9	5.2	- 52.1	- 57.3	- 23.1	- 3.9	- 0.9	- 22.2	3.9
2016 Jan	21.1	5.7	- 3.0	15.4	11.8	- 21.3	24.7	45.8	0.3	- 1.5	- 1.3	2.6	0.5
Feb	17.2	10.9	- 4.2	6.3	6.3	- 29.3	7.2	36.5	- 10.4	- 1.8	- 1.3	- 8.0	0.8
Mar	14.0	4.4	0.6	9.6	9.9	7.3	- 22.6	- 29.8	2.7	- 0.0	- 1.1	2.3	1.5
Apr	25.7	12.3	0.7	13.4	8.8	- 40.1	13.6	53.7	0.6	- 3.3	- 1.1	1.6	3.3
May	24.8	16.2	4.9	8.6	11.9	1.5	1.1	- 0.4	7.5	0.8	- 1.0	4.7	3.0
June	4.7	1.7	0.5	2.9	8.6	- 2.9	23.9	26.8	- 3.5	- 1.5	- 0.7	- 7.5	6.2
July	30.2	13.3	1.6	16.9	13.8	- 18.4	7.1	25.5	- 6.0	- 0.8	- 0.9	- 5.4	1.1
Aug	11.1	8.9	1.5	2.2	4.0	- 16.5	2.5	19.0	2.0	- 1.8	- 0.8	3.9	0.6
Sep	24.6	13.2	3.4	11.4	12.6	- 37.2	- 11.1	26.1	- 7.2	- 1.1	- 0.7	- 6.2	0.9
Oct	21.5	11.8	2.6	9.6	6.5	- 3.2	42.4	45.7	7.1	2.2	- 0.8	5.8	- 0.2
Nov	28.1	18.4	4.4	9.7	14.4	- 22.4	- 25.7	- 3.3	9.2	- 0.6	- 0.5	9.6	0.8
Dec	- 10.1	- 8.1	0.4	- 2.1	8.4	19.6	- 9.5	- 29.1	- 2.6	- 2.0	- 0.4	- 2.9	2.7
2017 Jan	23.6	15.0	2.3	8.6	8.5	- 24.4	31.8	56.2	9.8	- 3.1	- 0.7	15.9	- 2.3
Feb	17.3	12.5	3.9	4.9	5.5	- 30.2	7.5	37.8	- 1.4	- 1.4	- 0.6	- 0.1	0.8
Mar	18.2	12.7	1.8	5.5	9.5	- 3.6	6.3	9.9	2.7	- 1.0	- 0.5	- 1.3	5.5
Apr	14.9	7.8	- 1.5	7.1	5.4	- 18.8	- 7.2	11.7	9.3	- 3.5	- 0.5	1.3	11.9
May	13.8	13.3	3.5	0.6	7.9	7.5	- 12.7	- 20.1	2.7	- 0.1	- 0.4	1.8	1.4
June	11.8	11.5	6.2	0.4	2.6	22.7	16.2	- 6.4	6.0	- 2.0	- 0.4	2.8	5.6
July	18.2	12.7	1.9	5.4	3.5	- 10.5	- 23.0	- 12.5	- 4.2	- 1.5	- 0.8	- 1.4	- 0.5

* 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							
- 71.4	- 38.0	-	4.8	54.1	44.2	14.4	29.7	9.0	0.9	- 28.3	- 22.2	-	10.8	2015 Dec
87.7	- 19.7	-	69.5	38.2	36.3	- 11.1	47.4	- 8.4	10.4	21.8	11.0	7.6	2016 Jan	
- 14.1	0.3	-	33.9	15.2	21.7	1.2	20.5	- 11.7	5.2	44.5	- 1.3	7.0	Feb	
31.8	31.7	-	37.7	55.9	42.6	3.7	38.9	11.0	2.3	- 6.2	- 13.0	1.7	Mar	
- 35.9	- 29.4	-	100.7	75.3	92.7	4.6	88.2	- 17.2	- 0.3	- 4.5	17.1	2.7	Apr	
20.1	12.5	-	33.8	35.2	47.5	2.3	45.3	- 20.2	7.9	- 9.5	- 0.1	- 2.0	May	
60.5	14.9	-	18.9	31.3	34.6	8.4	26.2	- 1.9	- 1.4	- 2.5	- 9.6	5.9	June	
- 29.0	- 74.1	-	96.6	73.6	67.1	10.1	57.0	6.1	0.5	- 22.7	15.6	5.0	July	
- 54.7	40.8	-	10.9	- 8.9	- 5.1	- 3.5	- 1.6	- 4.5	0.7	2.4	0.6	- 2.5	Aug	
2.7	42.5	-	2.4	18.3	23.7	2.2	21.5	1.4	- 6.7	- 4.8	- 1.8	- 5.9	Sep	
- 3.0	9.4	-	30.3	14.0	49.8	2.8	47.0	- 29.6	- 6.2	- 16.9	18.0	2.1	Oct	
5.1	21.4	-	88.2	83.5	95.7	1.7	94.0	- 10.2	- 1.9	- 1.8	7.0	1.2	Nov	
- 48.2	- 15.5	-	55.4	75.9	94.0	16.2	77.8	- 24.4	6.4	4.0	- 6.0	- 7.4	Dec	
62.7	52.7	-	27.8	6.2	- 6.6	- 11.9	5.3	2.8	9.9	- 17.5	11.5	- 0.9	2017 Jan	
- 18.4	- 28.3	-	29.7	30.8	30.8	3.0	27.8	- 2.1	2.1	- 8.6	- 4.1	6.5	Feb	
24.2	27.1	-	107.7	93.3	93.9	4.3	89.6	- 5.8	5.3	13.9	11.9	- 0.6	Mar	
- 5.3	- 12.9	-	54.8	74.2	102.9	6.8	96.1	- 31.2	2.5	- 5.0	- 4.3	- 16.9	Apr	
13.5	- 14.9	-	32.2	30.3	42.1	0.5	41.7	- 21.0	9.2	- 11.7	- 4.7	5.2	May	
20.6	17.4	-	47.0	74.3	82.2	9.5	72.8	- 10.5	2.6	- 16.6	- 20.9	2.0	June	
- 6.9	22.3	-	31.2	22.9	26.6	5.6	21.0	- 5.9	2.2	- 24.1	10.8	- 4.5	July	

(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			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
10.3	15.2	2.6	2.3	- 16.2	- 21.3	6.3	3.0	- 3.6	- 0.4	-	0.2	2015 Dec		
- 0.8	- 24.2	- 0.7	1.9	24.7	27.8	- 5.5	0.9	0.3	0.3	-	0.9	2016 Jan		
7.1	- 24.0	0.6	0.4	15.2	13.3	- 1.9	1.6	1.4	- 0.1	1.0	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	- 20.7	1.2	1.0	23.1	24.1	- 1.0	- 0.7	0.5	- 0.5	0.7	0.7	Apr		
18.7	- 19.8	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	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	7.6	July		
8.8	- 22.3	2.3	- 0.8	6.2	11.3	- 1.6	0.1	- 0.2	- 0.1	3.4	3.4	Aug		
8.6	- 21.2	4.7	- 0.6	7.2	3.0	5.5	- 0.6	- 0.3	0.0	0.5	0.5	Sep		
- 8.8	18.6	3.2	- 0.5	1.4	12.0	- 10.2	0.2	0.3	- 0.1	0.8	0.8	Oct		
6.9	- 48.2	1.9	0.3	37.8	36.2	3.3	0.1	- 0.2	0.0	1.7	1.7	Nov		
- 13.6	30.4	3.3	2.4	- 4.8	- 4.9	- 1.5	2.7	- 0.9	- 0.0	0.1	0.1	Dec		
- 12.6	- 27.2	1.1	- 2.7	29.2	16.9	8.9	0.7	2.6	- 0.1	0.2	0.2	2017 Jan		
- 4.2	- 18.9	1.7	1.2	11.6	13.6	- 2.4	0.7	- 0.3	- 0.0	0.0	0.0	Feb		
14.2	- 2.7	1.8	1.1	0.5	2.4	3.5	- 1.4	- 1.9	- 0.1	2.0	2.0	Mar		
- 6.7	- 8.8	3.3	1.6	2.3	10.3	- 7.1	- 0.0	0.9	- 0.0	1.8	1.8	Apr		
7.7	- 8.3	2.9	- 0.7	19.2	18.3	1.3	- 0.1	- 1.1	- 0.0	0.8	0.8	May		
7.1	0.7	4.7	0.9	20.7	20.6	0.7	- 0.7	- 0.6	0.1	0.6	0.6	June		
2.5	15.0	2.1	2.1	- 5.6	- 3.0	- 2.8	- 0.4	- 0.1	- 0.1	0.8	0.8	July		

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

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

End of year/month	Assets										
	Lending to non-banks (non-MFIs) in the euro area									Claims on non-euro-area residents	Other assets
	Total assets or liabilities	Total	Enterprises and households				General government				
Total			Loans	Debt securities ²	Shares and other equities	Total	Loans	Debt securities ³			
Euro area (€ billion) ¹											
2015 June	26,127.5	16,435.2	12,728.4	10,683.9	1,254.0	790.5	3,706.8	1,136.8	2,570.1	5,275.2	4,417.0
July	26,346.9	16,514.6	12,785.5	10,682.8	1,301.0	801.7	3,729.1	1,135.4	2,593.7	5,296.1	4,536.2
Aug	26,196.6	16,494.0	12,735.6	10,646.0	1,302.7	786.9	3,758.4	1,126.5	2,631.9	5,247.5	4,455.1
Sep	26,145.1	16,526.0	12,714.3	10,639.8	1,303.0	771.4	3,811.8	1,121.0	2,690.7	5,164.7	4,454.4
Oct	26,337.3	16,576.0	12,732.6	10,661.8	1,288.0	782.8	3,843.4	1,125.0	2,718.5	5,251.2	4,510.1
Nov	26,653.4	16,691.7	12,803.5	10,716.5	1,295.5	791.5	3,888.3	1,117.1	2,771.2	5,314.1	4,647.6
Dec	25,850.7	16,541.4	12,703.0	10,627.4	1,296.3	779.3	3,838.4	1,110.2	2,728.2	5,034.5	4,274.8
2016 Jan	26,414.5	16,689.5	12,731.2	10,656.8	1,306.9	767.5	3,958.2	1,127.1	2,831.2	5,149.6	4,575.4
Feb	26,749.2	16,774.6	12,771.5	10,700.6	1,313.1	757.8	4,003.1	1,118.6	2,884.5	5,228.2	4,746.4
Mar	26,406.8	16,825.5	12,776.3	10,709.9	1,312.0	754.4	4,049.1	1,117.9	2,931.3	5,030.7	4,550.7
Apr	26,557.6	16,909.0	12,815.8	10,721.4	1,325.7	768.7	4,093.2	1,127.9	2,965.3	5,173.9	4,474.7
May	26,807.0	16,993.9	12,842.5	10,733.4	1,341.3	767.8	4,151.4	1,121.7	3,029.6	5,270.0	4,543.1
June	27,072.9	17,041.3	12,829.2	10,732.4	1,344.2	752.7	4,212.1	1,110.6	3,101.4	5,278.2	4,753.4
July	27,135.0	17,093.6	12,852.6	10,737.6	1,359.6	755.3	4,241.1	1,111.6	3,129.5	5,326.7	4,714.7
Aug	27,037.8	17,105.6	12,866.5	10,723.2	1,365.0	778.2	4,239.1	1,102.9	3,136.2	5,321.4	4,610.7
Sep	26,973.2	17,147.5	12,892.5	10,756.7	1,359.3	776.5	4,255.0	1,098.8	3,156.2	5,266.4	4,559.3
Oct	27,050.4	17,202.5	12,923.2	10,785.2	1,363.1	775.0	4,279.4	1,101.0	3,178.4	5,422.4	4,425.4
Nov	27,162.0	17,295.7	12,983.7	10,830.5	1,383.2	770.0	4,312.0	1,088.9	3,223.1	5,452.3	4,414.0
Dec	26,678.3	17,234.9	12,925.7	10,772.3	1,372.1	781.2	4,309.2	1,079.4	3,229.7	5,208.1	4,235.3
2017 Jan	26,760.4	17,317.7	12,956.8	10,776.9	1,393.4	786.4	4,360.9	1,097.4	3,263.6	5,378.1	4,064.6
Feb	27,020.4	17,378.7	12,994.6	10,807.2	1,398.3	789.0	4,384.0	1,076.2	3,307.8	5,497.8	4,143.9
Mar	26,973.1	17,511.1	13,077.1	10,863.6	1,423.7	789.9	4,434.0	1,072.8	3,361.2	5,418.3	4,043.7
Apr	27,060.4	17,556.2	13,091.9	10,859.1	1,429.8	803.0	4,464.3	1,075.4	3,388.9	5,450.7	4,053.5
May	26,977.5	17,595.9	13,109.0	10,859.6	1,451.1	798.3	4,486.9	1,062.3	3,424.7	5,359.4	4,022.1
June	26,663.7	17,576.4	13,097.8	10,857.9	1,441.7	798.2	4,478.5	1,063.0	3,415.5	5,193.2	3,894.2
July	26,610.3	17,566.7	13,080.6	10,829.4	1,458.3	792.9	4,486.1	1,060.3	3,425.9	5,223.6	3,819.9
German contribution (€ billion)											
2015 June	5,995.9	3,767.4	2,967.3	2,557.3	133.3	276.7	800.1	367.0	433.1	1,279.1	949.4
July	6,058.5	3,803.2	2,993.0	2,561.0	153.8	278.2	810.2	368.0	442.2	1,274.1	981.2
Aug	6,026.9	3,813.3	2,996.1	2,567.6	155.4	273.1	817.2	364.9	452.3	1,260.5	953.1
Sep	6,042.0	3,824.3	2,996.1	2,572.5	157.2	266.4	828.1	364.5	463.6	1,257.0	960.7
Oct	6,041.8	3,832.3	2,994.6	2,578.6	150.5	265.6	837.7	368.4	469.2	1,257.1	952.5
Nov	6,104.8	3,865.0	3,019.5	2,594.8	153.5	271.2	845.5	363.9	481.6	1,236.6	1,003.2
Dec	5,925.1	3,840.1	3,003.6	2,586.5	155.7	261.3	836.5	358.3	478.2	1,166.4	918.6
2016 Jan	6,057.8	3,858.2	3,004.8	2,592.8	154.8	257.3	853.4	362.0	491.4	1,191.2	1,008.3
Feb	6,155.3	3,874.9	3,014.0	2,607.0	151.1	255.9	860.9	362.0	498.9	1,209.7	1,070.8
Mar	6,060.6	3,885.5	3,015.6	2,607.8	151.8	256.0	869.9	361.6	508.3	1,163.7	1,011.4
Apr	6,050.2	3,908.3	3,026.3	2,617.8	152.2	256.3	882.1	366.1	515.9	1,181.7	960.2
May	6,091.2	3,934.7	3,043.0	2,629.7	153.3	260.0	891.7	362.8	528.9	1,187.1	969.4
June	6,221.2	3,939.7	3,042.5	2,629.1	152.9	260.5	897.2	357.3	540.0	1,221.3	1,060.1
July	6,245.6	3,968.5	3,054.3	2,639.3	155.3	259.7	914.2	360.3	553.8	1,228.3	1,048.8
Aug	6,218.9	3,977.8	3,062.7	2,646.2	155.3	261.2	915.1	358.5	556.6	1,226.9	1,014.2
Sep	6,202.1	4,001.8	3,075.1	2,655.3	157.6	262.1	926.8	357.2	569.5	1,215.0	985.4
Oct	6,208.1	4,019.0	3,087.3	2,664.9	161.9	260.5	931.7	360.3	571.4	1,260.2	928.9
Nov	6,186.1	4,046.1	3,107.1	2,680.4	165.0	261.7	939.0	355.5	583.5	1,243.2	896.8
Dec	6,131.1	4,037.0	3,099.2	2,671.7	164.0	263.6	937.8	345.2	592.6	1,234.7	859.4
2017 Jan	6,131.6	4,054.1	3,112.0	2,682.7	165.0	264.3	942.1	345.2	596.8	1,260.2	817.4
Feb	6,196.5	4,075.7	3,124.9	2,691.3	168.1	265.5	950.8	344.6	606.2	1,281.9	839.0
Mar	6,176.3	4,089.6	3,136.8	2,701.2	169.6	266.0	952.8	340.6	612.3	1,281.0	805.7
Apr	6,174.4	4,103.1	3,143.3	2,709.1	170.4	263.9	959.8	342.3	617.5	1,264.2	807.1
May	6,160.2	4,114.5	3,157.3	2,719.6	172.6	265.0	957.2	332.2	624.9	1,234.6	811.2
June	6,106.3	4,120.6	3,165.9	2,722.5	173.2	270.2	954.7	330.8	623.9	1,238.6	747.1
July	6,069.1	4,136.0	3,176.8	2,731.5	175.2	270.0	959.2	332.6	626.7	1,201.4	731.6

* 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 Including money market paper of

enterprises. ³ Including Treasury bills and other money market paper issued by general government. ⁴ Euro currency in circulation (see also footnote 8 on p 12*) Excluding MFIs' cash in hand (in euro). The German contribution includes the volume

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					With agreed maturities of			At agreed notice of ⁶		End of year/month
			Total	Overnight				up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	
Euro area (€ billion) ¹													
1,017.1	11,390.8	10,645.9	10,747.1	5,096.4	976.4	361.0	2,110.1	2,122.0	81.2	2015 June			
1,031.3	11,391.9	10,681.7	10,796.9	5,135.0	983.0	358.9	2,119.8	2,119.7	80.4	July			
1,029.4	11,375.8	10,678.2	10,788.2	5,137.0	981.5	353.8	2,114.8	2,122.1	79.1	Aug			
1,026.5	11,410.5	10,694.5	10,796.3	5,162.5	977.4	350.6	2,110.9	2,116.6	78.3	Sep			
1,028.8	11,498.5	10,739.4	10,848.4	5,244.5	972.9	349.1	2,092.0	2,112.5	77.3	Oct			
1,034.5	11,524.1	10,774.1	10,869.8	5,288.4	970.8	343.9	2,081.4	2,109.6	75.7	Nov			
1,048.9	11,486.5	10,813.7	10,922.5	5,325.7	981.5	343.8	2,083.3	2,112.9	75.2	Dec			
1,037.7	11,611.6	10,852.2	10,953.0	5,365.0	973.3	344.1	2,074.6	2,121.8	74.3	2016 Jan			
1,038.9	11,620.9	10,871.7	10,975.9	5,385.0	967.8	340.6	2,085.3	2,124.1	73.1	Feb			
1,042.5	11,686.3	10,916.6	11,007.0	5,418.7	973.3	339.8	2,076.3	2,126.7	72.3	Mar			
1,047.1	11,715.5	10,978.0	11,072.8	5,504.2	963.0	337.5	2,071.0	2,126.5	70.5	Apr			
1,049.3	11,766.7	11,005.8	11,092.4	5,545.0	945.2	331.9	2,066.3	2,134.0	70.0	May			
1,057.7	11,829.0	11,001.2	11,089.1	5,565.0	944.9	330.2	2,046.5	2,133.1	69.3	June			
1,067.8	11,849.4	11,053.6	11,133.5	5,614.9	952.1	325.6	2,039.3	2,132.9	68.8	July			
1,064.3	11,783.3	11,037.6	11,120.7	5,611.2	952.6	320.7	2,034.0	2,134.1	68.1	Aug			
1,066.5	11,788.7	11,032.3	11,130.4	5,636.9	960.1	315.0	2,021.8	2,129.2	67.4	Sep			
1,069.3	11,797.2	11,047.7	11,134.5	5,680.4	936.8	307.6	2,018.8	2,123.8	67.2	Oct			
1,071.1	11,882.7	11,108.1	11,212.7	5,780.1	926.7	303.3	2,014.2	2,121.9	66.6	Nov			
1,087.3	11,890.7	11,172.6	11,282.5	5,869.9	910.5	294.0	2,014.0	2,128.5	65.6	Dec			
1,075.4	11,946.1	11,152.4	11,267.2	5,867.2	912.5	286.6	1,997.7	2,138.2	65.0	2017 Jan			
1,078.4	11,953.8	11,171.2	11,290.8	5,891.9	917.5	284.5	1,992.1	2,140.2	64.6	Feb			
1,082.7	12,064.4	11,241.7	11,384.3	5,988.8	908.7	285.3	1,992.4	2,145.1	64.1	Mar			
1,089.4	12,104.2	11,287.0	11,420.1	6,067.0	884.5	278.6	1,978.7	2,147.6	63.7	Apr			
1,089.9	12,116.6	11,305.2	11,409.7	6,089.3	858.6	272.9	1,970.1	2,156.7	62.0	May			
1,099.4	12,180.3	11,350.8	11,450.3	6,158.2	851.7	265.7	1,953.4	2,159.5	61.9	June			
1,105.0	12,172.6	11,355.3	11,439.2	6,164.6	847.5	262.2	1,941.9	2,164.5	58.4	July			
German contribution (€ billion)													
238.3	3,287.5	3,208.9	3,090.0	1,626.3	178.9	32.2	654.6	528.3	69.7	2015 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			
246.5	3,480.0	3,376.0	3,238.3	1,803.0	173.4	38.2	636.2	533.8	53.8	Aug			
245.9	3,494.5	3,380.7	3,247.0	1,807.9	179.4	38.3	635.0	533.3	53.1	Sep			
245.4	3,489.6	3,386.4	3,254.0	1,821.1	172.1	37.8	637.3	533.5	52.3	Oct			
245.7	3,536.5	3,424.0	3,288.1	1,857.7	171.0	37.4	636.6	533.7	51.7	Nov			
248.1	3,517.1	3,419.8	3,284.1	1,851.0	171.5	38.4	635.6	536.3	51.3	Dec			
245.4	3,526.3	3,439.3	3,306.3	1,873.8	174.0	38.7	632.1	537.1	50.6	2017 Jan			
246.6	3,532.6	3,448.3	3,313.4	1,881.5	175.3	38.8	630.0	537.9	50.0	Feb			
247.7	3,549.3	3,449.2	3,318.1	1,886.4	177.4	39.9	628.4	536.5	49.5	Mar			
249.3	3,540.9	3,447.5	3,317.0	1,895.9	170.7	40.0	624.7	536.6	49.0	Apr			
248.6	3,566.1	3,465.8	3,327.4	1,910.5	167.5	40.2	624.1	536.4	48.7	May			
249.5	3,590.5	3,482.0	3,339.9	1,928.7	165.5	40.3	621.4	535.7	48.3	June			
251.6	3,583.1	3,472.8	3,333.0	1,927.8	162.8	40.3	619.3	537.9	44.9	July			

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)													
General government													
End of year/month	Other general government							Repo transactions with non-banks in the euro area		Money market fund shares (net) ³	Debt securities		
	Central governments	Total	Overnight	With agreed maturities of			At agreed notice of ²		Total		of which Enterprises and households	Total	of which denominated in euro
				up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months					
Euro area (€ billion) ¹													
2015 June	309.5	334.2	157.2	97.6	13.1	40.9	20.5	4.9	312.2	308.7	443.0	2,438.7	1,708.9
July	266.4	328.6	149.2	100.3	13.3	38.8	22.3	4.9	301.3	298.1	465.7	2,410.6	1,685.1
Aug	251.6	335.9	155.2	100.4	13.3	38.8	23.4	4.8	305.4	300.3	464.3	2,379.6	1,675.5
Sep	280.6	333.7	153.5	101.4	13.2	39.4	21.5	4.8	304.5	296.9	459.3	2,344.0	1,660.4
Oct	315.5	334.6	157.4	98.6	13.2	39.6	20.9	4.7	297.6	288.1	481.2	2,337.6	1,640.5
Nov	298.5	355.7	168.0	108.4	13.0	39.7	21.9	4.7	301.4	296.2	497.1	2,367.2	1,646.3
Dec	227.4	336.6	154.4	104.6	13.7	39.7	19.5	4.7	272.8	270.9	475.1	2,318.6	1,633.5
2016 Jan	315.1	343.4	160.9	102.3	14.3	39.7	21.0	5.2	294.5	292.9	485.5	2,300.6	1,614.2
Feb	301.0	344.0	162.6	98.1	14.4	39.9	24.0	5.1	339.1	335.1	484.2	2,287.2	1,596.9
Mar	333.3	345.9	159.5	102.0	15.1	40.8	23.6	5.0	332.3	329.1	471.7	2,270.6	1,589.5
Apr	297.6	345.2	161.9	97.2	15.4	42.2	23.5	4.9	327.9	323.1	489.1	2,275.1	1,585.5
May	317.7	356.6	167.0	102.1	15.5	43.1	24.0	4.9	318.7	312.8	489.2	2,283.2	1,574.6
June	378.3	361.6	171.3	102.4	15.9	43.7	23.5	4.8	321.3	318.0	479.7	2,280.5	1,568.0
July	349.2	366.7	174.1	101.6	18.2	43.8	24.2	4.8	298.6	297.4	494.8	2,256.9	1,542.4
Aug	294.6	368.1	175.7	100.8	18.7	44.3	23.8	4.9	301.0	299.9	495.5	2,251.9	1,533.2
Sep	297.4	361.0	170.5	99.5	19.4	44.4	22.3	5.0	286.5	285.7	493.7	2,225.8	1,515.8
Oct	295.3	367.4	182.2	94.3	19.9	44.5	21.3	5.3	266.4	265.7	511.8	2,224.8	1,502.0
Nov	300.4	369.6	178.7	98.8	21.1	44.2	21.6	5.2	264.9	264.2	518.8	2,242.8	1,504.8
Dec	253.1	355.1	169.8	93.9	21.5	43.3	21.4	5.1	268.9	268.2	512.8	2,229.1	1,501.3
2017 Jan	316.8	362.0	170.7	99.5	21.3	43.4	21.7	5.5	250.1	249.5	524.2	2,208.1	1,485.9
Feb	299.0	364.1	176.2	96.2	20.2	44.1	21.9	5.4	241.7	241.0	520.1	2,219.8	1,492.1
Mar	323.1	357.0	166.6	96.5	21.5	44.6	22.3	5.4	255.6	254.9	532.0	2,192.4	1,478.9
Apr	317.8	366.2	177.7	92.4	23.7	44.7	22.2	5.5	250.4	249.7	527.7	2,163.2	1,464.5
May	331.3	375.5	182.9	94.5	25.3	45.2	22.9	4.7	238.4	237.7	522.9	2,170.2	1,488.5
June	352.0	378.0	182.5	95.7	26.6	45.8	22.7	4.7	221.7	221.0	501.8	2,152.8	1,476.5
July	345.1	388.3	192.2	95.3	26.7	46.2	23.1	4.8	197.4	196.8	512.6	2,133.0	1,471.7
German contribution (€ billion)													
2015 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	524.4	241.5
Sep	49.3	198.3	59.7	83.5	14.0	37.2	3.4	0.5	2.9	2.9	2.4	516.7	240.8
Oct	40.5	195.1	58.8	80.4	14.9	37.2	3.4	0.5	3.2	3.2	2.3	526.0	242.2
Nov	47.4	201.0	59.5	84.2	16.1	37.3	3.3	0.6	3.0	3.0	2.3	542.1	251.4
Dec	33.8	199.1	61.6	80.5	16.6	36.6	3.3	0.6	2.2	2.2	2.3	541.3	250.6
2017 Jan	21.2	198.8	55.1	86.6	16.4	36.9	3.2	0.6	4.8	4.8	2.2	553.4	261.4
Feb	17.5	201.8	61.5	83.2	15.7	37.7	3.1	0.6	4.5	4.5	2.2	556.7	262.6
Mar	31.6	199.5	58.7	82.5	16.5	38.2	3.1	0.6	2.6	2.6	2.1	551.8	263.6
Apr	25.0	198.9	59.0	79.4	18.8	38.2	3.0	0.6	3.5	3.5	2.1	546.7	264.9
May	32.7	206.1	61.6	81.6	20.6	38.7	3.1	0.6	2.4	2.4	2.1	542.6	263.2
June	39.8	210.9	63.4	82.6	22.0	39.3	3.0	0.6	1.8	1.8	2.1	542.7	266.0
July	42.3	207.8	60.3	81.5	22.6	39.8	3.0	0.7	3.3	3.3	2.1	534.3	264.9

* 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 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

issued (net) ³										Memo item					End of year/month
With maturities of			Liabilities to non-euro-area residents ⁵	Capital and reserves ⁶	Excess of inter-MFI liabilities	Other liability items		Monetary aggregates ⁷ (From 2002, German contribution excludes currency in circulation)			Monetary liabilities of central governments (Post Office, Treasury) ¹⁴				
up to 1 year ⁴	over 1 year and up to 2 years	over 2 years				Total ⁸	of which Intra-Eurosystem-liability/claim related to banknote issue ⁹	M1 ¹⁰	M2 ¹¹	M3 ¹²		Monetary capital formation ¹³			
Euro area (€ billion) ¹															
58.9	44.9	2,334.9	3,781.9	2,532.6	– 59.5	4,270.7	–	6,361.2	9,973.5	10,602.0	7,104.7	112.4	2015 June		
46.2	45.2	2,319.2	3,881.1	2,531.6	– 66.9	4,400.5	–	6,408.3	10,027.7	10,676.1	7,094.6	114.8	July		
35.8	47.5	2,296.3	3,875.9	2,530.1	– 65.8	4,301.9	–	6,416.1	10,032.4	10,672.4	7,063.8	116.3	Aug		
32.7	46.5	2,264.8	3,799.5	2,534.0	– 52.8	4,319.4	–	6,438.2	10,040.3	10,667.2	7,032.2	117.3	Sep		
32.6	47.2	2,257.9	3,852.5	2,560.1	– 75.9	4,356.8	–	6,525.2	10,113.8	10,775.7	7,031.7	115.7	Oct		
31.1	49.2	2,286.9	3,906.0	2,565.3	– 77.1	4,534.8	–	6,592.2	10,180.4	10,841.2	7,053.7	121.9	Nov		
22.9	47.8	2,247.9	3,652.9	2,549.2	– 49.3	4,095.9	–	6,631.5	10,228.1	10,840.6	6,999.9	123.0	Dec		
28.9	50.6	2,221.0	3,800.6	2,573.0	– 76.5	4,387.6	–	6,665.8	10,264.0	10,908.3	6,987.8	123.6	2016 Jan		
33.4	54.2	2,199.6	3,912.4	2,609.9	– 98.0	4,554.5	–	6,688.2	10,278.2	10,942.3	7,012.9	122.8	Feb		
37.2	51.9	2,181.5	3,725.0	2,592.4	– 93.9	4,379.8	–	6,721.4	10,322.5	10,968.2	6,968.3	121.3	Mar		
41.7	50.0	2,183.4	3,912.6	2,604.3	– 98.9	4,285.0	–	6,815.2	10,399.0	11,070.4	6,976.4	122.7	Apr		
39.9	49.2	2,194.1	4,018.6	2,600.8	– 82.8	4,363.2	–	6,867.4	10,440.7	11,110.5	6,979.2	126.6	May		
49.8	47.2	2,183.5	3,941.2	2,664.9	– 61.7	4,560.3	–	6,901.2	10,471.8	11,131.3	7,012.8	127.7	June		
54.6	47.8	2,154.5	4,072.1	2,678.7	– 104.2	4,521.0	–	6,967.5	10,542.8	11,225.3	6,989.9	131.5	July		
53.9	46.2	2,151.8	4,114.1	2,676.2	– 84.0	4,351.5	–	6,961.8	10,533.2	11,214.1	6,979.1	131.4	Aug		
48.7	46.1	2,131.0	4,069.2	2,698.3	– 44.0	4,388.4	–	6,984.4	10,550.7	11,216.1	6,967.9	131.3	Sep		
53.5	43.6	2,127.7	4,278.8	2,683.3	– 27.6	4,246.4	–	7,043.0	10,567.4	11,249.3	6,946.7	131.8	Oct		
54.7	42.8	2,145.3	4,318.1	2,662.6	– 54.3	4,255.3	–	7,145.6	10,659.5	11,345.6	6,938.1	136.4	Nov		
48.1	42.0	2,139.1	4,037.3	2,658.0	– 39.5	4,033.6	–	7,238.3	10,732.2	11,397.8	6,925.1	135.4	Dec		
44.1	45.8	2,118.1	4,241.1	2,645.8	– 11.6	3,881.1	–	7,228.0	10,732.2	11,419.8	6,875.5	139.1	2017 Jan		
49.4	47.2	2,123.2	4,373.0	2,697.0	– 16.9	3,953.5	–	7,262.2	10,767.1	11,454.1	6,926.4	140.1	Feb		
48.5	47.2	2,096.7	4,309.9	2,677.7	– 2.2	3,856.2	–	7,353.9	10,857.4	11,558.4	6,881.0	140.0	Mar		
35.1	43.8	2,084.3	4,396.0	2,663.7	– 1.1	3,864.7	–	7,452.3	10,925.5	11,606.9	6,840.5	142.1	Apr		
42.1	42.8	2,085.3	4,329.6	2,660.1	– 3.0	3,846.7	–	7,483.2	10,938.1	11,622.0	6,827.4	145.0	May		
42.3	42.1	2,068.4	4,129.7	2,637.9	– 9.6	3,730.3	–	7,561.6	11,007.4	11,661.0	6,772.1	145.5	June		
37.1	41.0	2,054.9	4,163.7	2,616.2	– 25.2	3,684.6	–	7,582.1	11,025.3	11,685.1	6,722.5	144.2	July		
German contribution (€ billion)															
18.5	5.4	531.7	718.1	555.8	– 670.9	1,543.2	280.2	1,679.6	2,512.5	2,543.1	1,846.8	–	2015 June		
18.2	5.2	535.1	742.1	552.4	– 692.2	1,577.2	284.9	1,693.1	2,529.7	2,561.0	1,857.9	–	July		
16.2	5.9	524.9	754.9	552.8	– 711.7	1,552.8	287.3	1,707.0	2,539.8	2,571.9	1,847.1	–	Aug		
21.9	8.0	517.2	736.7	553.5	– 709.5	1,572.5	290.1	1,721.4	2,551.4	2,592.3	1,836.0	–	Sep		
25.8	7.8	521.7	737.2	558.6	– 735.5	1,566.6	293.1	1,752.7	2,580.5	2,624.6	1,835.4	–	Oct		
26.4	9.6	526.5	724.9	553.7	– 754.5	1,621.4	295.2	1,788.4	2,624.1	2,670.0	1,830.6	–	Nov		
26.3	9.3	497.8	659.6	552.5	– 742.7	1,537.4	297.8	1,766.1	2,610.8	2,652.3	1,795.8	–	Dec		
25.2	11.2	498.4	702.8	560.8	– 766.0	1,620.7	297.1	1,793.6	2,633.8	2,676.6	1,801.7	–	2016 Jan		
25.5	11.8	490.7	739.6	574.8	– 790.7	1,683.0	297.7	1,807.0	2,644.8	2,689.9	1,804.6	–	Feb		
24.0	10.9	483.8	699.0	569.9	– 784.5	1,622.4	299.8	1,793.1	2,641.1	2,682.7	1,791.6	–	Mar		
23.9	11.7	486.1	753.1	575.6	– 803.0	1,566.8	300.9	1,817.3	2,663.6	2,705.9	1,795.3	–	Apr		
22.8	12.3	495.8	758.5	571.4	– 823.1	1,577.5	303.9	1,839.6	2,685.7	2,726.9	1,800.7	–	May		
23.8	11.8	487.5	783.3	592.6	– 834.3	1,670.0	308.0	1,841.3	2,686.4	2,727.1	1,811.5	–	June		
30.5	12.6	481.1	807.8	595.1	– 824.9	1,673.4	311.7	1,853.4	2,702.0	2,750.9	1,806.5	–	July		
27.4	12.5	484.5	826.1	589.2	– 846.9	1,640.6	314.1	1,864.6	2,711.7	2,757.1	1,801.3	–	Aug		
26.4	12.9	477.4	851.2	594.2	– 876.5	1,616.7	318.8	1,867.6	2,719.5	2,764.2	1,797.3	–	Sep		
25.3	13.4	487.3	899.9	585.7	– 863.2	1,564.6	322.0	1,879.9	2,721.9	2,766.1	1,800.2	–	Oct		
22.7	14.6	504.7	905.9	578.4	– 918.6	1,536.5	323.9	1,917.2	2,762.9	2,805.6	1,809.3	–	Nov		
23.1	14.2	504.0	878.8	580.3	– 897.1	1,506.3	327.3	1,912.6	2,759.2	2,801.0	1,808.4	–	Dec		
22.8	14.4	516.2	930.2	575.5	– 926.5	1,465.7	328.3	1,928.9	2,784.9	2,829.2	1,811.9	–	2017 Jan		
22.2	15.2	519.2	972.2	587.9	– 944.3	1,484.8	330.1	1,943.0	2,797.0	2,841.1	1,825.3	–	Feb		
19.5	15.9	516.4	979.6	586.5	– 957.7	1,462.2	331.9	1,945.1	2,801.0	2,841.1	1,819.5	–	Mar		
17.7	16.9	512.1	985.8	597.9	– 965.5	1,463.1	335.2	1,954.8	2,803.4	2,843.5	1,822.6	–	Apr		
18.4	16.8	507.4	957.7	595.0	– 967.6	1,461.9	338.1	1,972.1	2,821.5	2,861.2	1,814.4	–	May		
19.3	16.4	507.0	946.6	591.5	– 981.1	1,412.1	342.8	1,992.1	2,841.2	2,880.9	1,808.1	–	June		
18.6	16.1	499.5	926.3	589.1	– 975.5	1,406.5	345.0	1,988.1	2,836.1	2,876.2	1,793.3	–	July		

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). **10** Overnight deposits (excluding central governments' deposits), and (for the euro area) currency in circulation, central governments' overnight monetary liabilities, which are not included in the consolidated balance sheet. **11** M1 plus deposits with agreed maturities of up to 2

years and at agreed notice of up to 3 months (excluding central governments' deposits) and (for the euro area) central governments' monetary liabilities with such maturities. **12** M2 plus repo transactions, money market fund shares, money market paper and debt securities up to 2 years. **13** Deposits with agreed maturities of over 2 years and at agreed notice of over 3 months, debt securities with maturities of over 2 years, capital and reserves. **14** Non-existent in Germany.

II Overall monetary survey in the euro area

3 Banking system's liquidity position * Stocks

€ billion; period averages of daily positions

Reserve maintenance period ending in 1	Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current account balances (including minimum reserves) 7	Base money 8
	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												
2015 Apr	625.9	118.9	386.1	0.2	290.6	68.6	0.0	1 015.9	70.2	5.1	261.8	1 346.4
May	.	.	.	.	.	.	.	.	.	.	.	.
June	655.7	95.9	406.6	0.1	383.1	99.7	0.0	1 027.4	76.5	34.5	303.4	1 430.5
July	642.9	82.4	443.2	0.3	471.8	103.1	0.0	1 042.7	96.3	17.2	381.4	1 527.2
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Sep	627.4	72.4	462.2	0.6	550.8	148.0	0.0	1 055.3	63.4	18.1	428.4	1 631.8
Oct	619.1	70.2	462.1	0.1	643.2	152.8	0.0	1 052.4	95.2	28.9	465.3	1 670.5
Nov	612.2	66.1	459.3	0.0	730.7	173.1	0.0	1 056.5	93.5	51.5	493.8	1 723.4
Dec	612.2	66.1	459.3	0.0	730.7	173.1	0.0	1 056.5	93.5	51.5	493.8	1 723.4
2016 Jan	611.6	71.6	466.9	0.2	811.8	196.6	0.0	1 072.8	82.5	53.2	557.1	1 826.5
Feb	.	.	.	.	.	.	.	.	.	.	.	.
Mar	607.8	62.9	461.7	0.1	907.6	230.5	0.0	1 063.4	115.6	73.9	556.5	1 850.4
Apr	627.3	58.1	460.8	0.2	1 000.1	262.0	0.0	1 069.3	147.4	97.7	570.0	1 901.3
May	.	.	.	.	.	.	.	.	.	.	.	.
June	640.3	53.9	456.3	0.2	1 105.3	309.0	0.0	1 076.6	123.9	122.8	623.8	2 009.4
July	666.1	47.6	471.6	0.1	1 227.1	323.1	0.0	1 087.1	175.5	169.4	657.5	2 067.7
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Sep	685.0	43.5	483.7	0.0	1 339.7	355.1	0.0	1 096.2	137.8	214.0	748.8	2 200.2
Oct	687.8	37.4	503.5	0.1	1 447.0	387.3	0.0	1 094.7	168.3	248.0	777.4	2 259.4
Nov	.	.	.	.	.	.	.	.	.	.	.	.
Dec	687.4	34.0	511.8	0.2	1 570.2	439.4	0.0	1 103.1	159.7	277.6	823.9	2 366.3
2017 Jan	674.7	34.6	548.9	0.2	1 670.8	434.4	0.0	1 119.1	143.1	313.6	919.0	2 472.6
Feb	.	.	.	.	.	.	.	.	.	.	.	.
Mar	662.4	29.0	554.3	0.3	1 787.5	479.2	0.0	1 110.8	160.3	322.2	960.9	2 550.9
Apr	.	.	.	.	.	.	.	.	.	.	.	.
May	678.6	18.5	707.4	0.3	1 905.3	550.0	0.0	1 118.4	182.0	378.8	1 081.1	2 749.4
June	683.1	13.7	767.4	0.2	1 995.0	593.7	0.0	1 126.0	163.6	397.4	1 178.7	2 898.5
July	656.9	9.4	767.4	0.2	2 076.1	595.3	0.0	1 136.3	229.8	379.4	1 169.2	2 900.8
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Deutsche Bundesbank												
2015 Apr	151.5	5.6	29.5	0.1	64.8	21.2	0.0	239.9	1.1	- 100.3	89.4	350.5
May	.	.	.	.	.	.	.	.	.	.	.	.
June	159.2	3.6	28.8	0.0	83.9	28.6	0.0	242.5	2.0	- 100.4	102.8	373.9
July	155.4	2.1	36.4	0.0	102.5	25.5	0.0	246.2	3.4	- 101.4	122.8	394.4
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Sep	151.2	1.8	40.0	0.0	119.1	42.4	0.0	249.5	2.9	- 118.3	135.9	427.7
Oct	148.4	2.8	40.8	0.0	138.2	40.8	0.0	248.8	5.2	- 115.9	151.2	440.9
Nov	.	.	.	.	.	.	.	.	.	.	.	.
Dec	146.1	3.2	43.3	0.0	156.3	56.1	0.0	249.1	9.3	- 116.3	150.7	455.9
2016 Jan	144.8	3.6	48.4	0.1	174.0	50.0	0.0	252.4	18.0	- 124.0	174.4	476.8
Feb	.	.	.	.	.	.	.	.	.	.	.	.
Mar	143.7	1.9	46.3	0.0	193.9	59.8	0.0	250.4	26.1	- 113.3	162.9	473.1
Apr	152.2	3.1	45.0	0.0	214.1	67.6	0.0	252.1	37.3	- 105.1	162.4	482.1
May	.	.	.	.	.	.	.	.	.	.	.	.
June	156.4	3.3	45.3	0.0	237.2	87.3	0.0	254.7	41.1	- 127.2	186.5	528.4
July	163.3	2.7	44.7	0.0	263.4	89.8	0.0	257.4	47.2	- 117.0	196.6	543.9
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Sep	168.3	1.9	44.0	0.0	288.2	90.8	0.0	258.7	36.2	- 112.6	229.3	578.9
Oct	168.7	1.5	50.6	0.0	311.9	105.2	0.0	258.6	50.5	- 125.2	243.6	607.4
Nov	.	.	.	.	.	.	.	.	.	.	.	.
Dec	167.7	0.9	54.0	0.0	339.2	129.7	0.0	260.3	43.7	- 141.9	270.0	660.0
2017 Jan	163.8	0.9	62.0	0.0	361.5	132.7	0.0	264.2	35.4	- 146.1	302.0	698.9
Feb	.	.	.	.	.	.	.	.	.	.	.	.
Mar	159.4	0.8	63.5	0.0	386.6	153.7	0.0	262.3	23.1	- 169.8	341.0	757.0
Apr	.	.	.	.	.	.	.	.	.	.	.	.
May	164.4	1.0	86.0	0.1	412.4	181.4	0.0	264.1	29.7	- 185.3	374.0	819.5
June	165.8	0.3	95.0	0.0	431.8	181.2	0.0	266.2	32.4	- 204.9	418.0	865.4
July	159.6	0.5	95.0	0.0	447.9	170.1	0.0	269.0	52.7	- 201.6	412.7	851.9
Aug	.	.	.	.	.	.	.	.	.	.	.	.

Discrepancies may arise from rounding. * The banking system's liquidity position is defined as the current account holdings in euro of euro-area credit institutions with the Eurosystem. Amounts are derived from the consolidated financial statement of the Eurosystem and the financial statement of the Bundesbank. 1 Figures are daily averages for the reserve maintenance period ending in the month indicated. Following the changeover in the frequency of Governing Council monetary policy meetings to a six-week cycle, a reserve maintenance period no longer ends in every month. No

figures are available in such cases. 2 Source: ECB. 3 Includes liquidity provided under the Eurosystem's securities purchase programmes. 4 From Aug. 2009, includes liquidity absorbed as a result of the Eurosystem's foreign exchange swap operations. 5 From 2002, euro banknotes and other banknotes which have been issued by the national central banks of the Eurosystem and which are still in circulation. In accordance with the accounting procedure chosen by the Eurosystem for the issue of euro banknotes, 8% of the total value of the euro banknotes in circulation are

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												
+ 36.7	- 23.7	+ 11.1	- 0.2	+ 59.8	+ 26.2	± 0.0	+ 10.5	+ 8.1	+ 2.4	+ 36.5	+ 73.3	2015 Apr
+ 29.8	- 23.0	+ 20.5	- 0.1	+ 92.5	+ 31.1	± 0.0	+ 11.5	+ 6.3	+ 29.4	+ 41.6	+ 84.1	May
- 12.8	- 13.5	+ 36.6	+ 0.2	+ 88.7	+ 3.4	± 0.0	+ 15.3	+ 19.8	- 17.3	+ 78.0	+ 96.7	June
- 15.5	- 10.0	+ 19.0	+ 0.3	+ 79.0	+ 44.9	± 0.0	+ 12.6	- 32.9	+ 0.9	+ 47.0	+ 104.6	July
- 8.3	- 2.2	- 0.1	- 0.5	+ 92.4	+ 4.8	± 0.0	- 2.9	+ 31.8	+ 10.8	+ 36.9	+ 38.7	Aug
- 6.9	- 4.1	- 2.8	± 0.0	+ 87.5	+ 20.3	± 0.0	+ 4.1	- 1.7	+ 22.6	+ 28.5	+ 52.9	Sep
- 0.6	+ 5.5	+ 7.6	+ 0.1	+ 81.1	+ 23.5	± 0.0	+ 16.3	- 11.0	+ 1.7	+ 63.3	+ 103.1	Oct
- 3.8	- 8.7	- 5.2	- 0.1	+ 95.8	+ 33.9	± 0.0	- 9.4	+ 33.1	+ 20.7	- 0.6	+ 23.9	Nov
+ 19.5	- 4.8	- 0.9	+ 0.1	+ 92.5	+ 31.5	± 0.0	+ 5.9	+ 31.8	+ 23.8	+ 13.5	+ 50.9	Dec
+ 13.0	- 4.2	- 4.5	± 0.0	+ 105.2	+ 47.0	± 0.0	+ 7.3	- 23.5	+ 25.1	+ 53.8	+ 108.1	2016 Jan
+ 25.8	- 6.3	+ 15.3	- 0.1	+ 121.8	+ 14.1	± 0.0	+ 10.5	+ 51.6	+ 46.6	+ 33.7	+ 58.3	Feb
+ 18.9	- 4.1	+ 12.1	- 0.1	+ 112.6	+ 32.0	± 0.0	+ 9.1	- 37.7	+ 44.6	+ 91.3	+ 132.5	Mar
+ 2.8	- 6.1	+ 19.8	+ 0.1	+ 107.3	+ 32.2	± 0.0	- 1.5	+ 30.5	+ 34.0	+ 28.6	+ 59.2	Apr
- 0.4	- 3.4	+ 8.3	+ 0.1	+ 123.2	+ 52.1	± 0.0	+ 8.4	- 8.6	+ 29.6	+ 46.5	+ 106.9	May
- 12.7	+ 0.6	+ 37.1	± 0.0	+ 100.6	- 5.0	± 0.0	+ 16.0	- 16.6	+ 36.0	+ 95.1	+ 106.3	June
- 12.3	- 5.6	+ 5.4	+ 0.1	+ 116.7	+ 44.8	± 0.0	- 8.3	+ 17.2	+ 8.6	+ 41.9	+ 78.3	July
+ 16.2	- 10.5	+ 153.1	± 0.0	+ 117.8	+ 70.8	± 0.0	+ 7.6	+ 21.7	+ 56.6	+ 120.2	+ 198.5	Aug
+ 4.5	- 4.8	+ 60.0	- 0.1	+ 89.7	+ 43.7	± 0.0	+ 7.6	- 18.4	+ 18.6	+ 97.6	+ 149.1	2017 Jan
- 26.2	- 4.3	± 0.0	± 0.0	+ 81.1	+ 1.6	± 0.0	+ 10.3	+ 66.2	- 18.0	- 9.5	+ 2.3	Feb
Deutsche Bundesbank												
+ 8.3	- 1.1	- 1.4	+ 0.0	+ 12.4	+ 8.8	± 0.0	+ 3.0	- 0.4	- 7.8	+ 14.7	+ 26.4	2015 Apr
+ 7.7	- 2.0	- 0.7	- 0.0	+ 19.2	+ 7.4	± 0.0	+ 2.6	+ 0.8	- 0.0	+ 13.5	+ 23.4	May
- 3.8	- 1.5	+ 7.6	- 0.0	+ 18.6	- 3.1	± 0.0	+ 3.7	+ 1.4	- 1.0	+ 19.9	+ 20.5	June
- 4.1	- 0.3	+ 3.7	+ 0.0	+ 16.6	+ 16.9	± 0.0	+ 3.2	- 0.4	- 17.0	+ 13.1	+ 33.2	July
- 2.9	+ 0.9	+ 0.8	- 0.0	+ 19.1	- 1.5	± 0.0	- 0.6	+ 2.3	+ 2.4	+ 15.4	+ 13.2	Aug
- 2.3	+ 0.4	+ 2.5	- 0.0	+ 18.1	+ 15.2	± 0.0	+ 0.3	+ 4.1	- 0.4	- 0.6	+ 15.0	Sep
- 1.3	+ 0.5	+ 5.1	+ 0.1	+ 17.7	- 6.0	± 0.0	+ 3.3	+ 8.7	- 7.6	+ 23.7	+ 21.0	Oct
- 1.0	- 1.7	- 2.1	- 0.0	+ 19.9	+ 9.8	± 0.0	- 2.1	+ 8.1	+ 10.7	- 11.5	- 3.8	Nov
+ 8.4	+ 1.1	- 1.3	+ 0.0	+ 20.3	+ 7.8	± 0.0	+ 1.7	+ 11.3	+ 8.2	- 0.4	+ 9.0	Dec
+ 4.3	+ 0.3	+ 0.4	- 0.0	+ 23.1	+ 19.7	± 0.0	+ 2.6	+ 3.8	- 22.1	+ 24.1	+ 46.3	2016 Jan
+ 6.9	- 0.6	- 0.6	- 0.0	+ 26.2	+ 2.6	± 0.0	+ 2.8	+ 6.1	+ 10.2	+ 10.1	+ 15.4	Feb
+ 5.1	- 0.8	- 0.7	- 0.0	+ 24.8	+ 1.0	± 0.0	+ 1.3	- 11.0	+ 4.4	+ 32.7	+ 35.0	Mar
+ 0.4	- 0.5	+ 6.6	+ 0.0	+ 23.7	+ 14.4	± 0.0	- 0.1	+ 14.3	- 12.6	+ 14.2	+ 28.5	Apr
- 0.9	- 0.5	+ 3.3	+ 0.0	+ 27.3	+ 24.4	± 0.0	+ 1.7	- 6.8	- 16.7	+ 26.5	+ 52.6	May
- 4.0	- 0.1	+ 8.1	- 0.0	+ 22.3	+ 3.0	± 0.0	+ 3.9	- 8.3	- 4.3	+ 31.9	+ 38.8	June
- 4.4	- 0.0	+ 1.4	+ 0.0	+ 25.1	+ 21.0	± 0.0	- 1.9	- 12.2	- 23.6	+ 39.0	+ 58.1	July
+ 4.9	+ 0.1	+ 22.6	+ 0.0	+ 25.9	+ 27.7	± 0.0	+ 1.8	+ 6.6	- 15.6	+ 33.0	+ 62.5	Aug
+ 1.5	- 0.7	+ 9.0	- 0.1	+ 19.4	- 0.2	± 0.0	+ 2.1	+ 2.6	- 19.6	+ 44.0	+ 45.9	2017 Jan
- 6.2	+ 0.2	+ 0.0	+ 0.0	+ 16.1	- 11.1	± 0.0	+ 2.8	+ 20.3	+ 3.3	- 5.3	- 13.6	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 Dec 30	3,662.9	382.1	327.9	78.8	249.1	30.7	19.1	19.1	–
2017 Jan 6	3,672.6	382.1	326.6	78.7	247.8	31.9	18.5	18.5	–
13	3,697.3	382.1	326.9	78.7	248.2	34.7	17.5	17.5	–
20	3,719.6	382.1	325.7	78.7	247.0	31.4	19.0	19.0	–
27	3,740.8	382.1	323.6	78.7	245.0	35.8	18.8	18.8	–
Feb 3	3,749.5	382.1	323.4	78.7	244.8	34.7	19.8	19.8	–
10	3,770.9	382.1	323.2	78.4	244.7	36.4	18.9	18.9	–
17	3,787.9	382.1	324.7	77.8	246.9	34.7	19.0	19.0	–
24	3,808.2	382.1	324.4	77.8	246.6	35.6	19.1	19.1	–
Mar 3	3,820.3	382.1	323.8	77.8	246.1	34.1	19.4	19.4	–
10	3,839.9	382.1	325.3	77.8	247.6	34.6	19.7	19.7	–
17	3,856.9	382.1	324.6	77.9	246.8	33.0	18.7	18.7	–
24	3,877.0	382.1	326.4	77.8	248.5	32.8	19.5	19.5	–
31	4,100.7	404.2	323.4	77.6	245.8	33.9	20.2	20.2	–
Apr 7	4,116.4	404.2	323.1	77.7	245.4	31.6	18.6	18.6	–
14	4,130.0	404.2	321.8	77.7	244.2	31.6	19.8	19.8	–
21	4,139.4	404.2	321.6	77.7	243.9	31.4	19.0	19.0	–
28	4,148.0	404.2	319.6	77.5	242.1	34.6	17.2	17.2	–
May 5	4,156.8	404.1	319.7	77.4	242.4	34.6	16.8	16.8	–
12	4,170.6	404.1	320.9	77.4	243.5	32.3	17.0	17.0	–
19	4,185.7	404.1	320.6	77.4	243.2	32.7	17.4	17.4	–
26	4,195.7	404.1	321.2	77.4	243.7	30.3	15.9	15.9	–
2017 June 2	4,204.5	404.1	321.2	77.4	243.8	30.2	16.3	16.3	–
9	4,218.1	404.1	321.5	77.4	244.1	29.9	16.7	16.7	–
16	4,232.9	404.1	322.9	77.6	245.3	28.7	18.3	18.3	–
23	4,246.2	404.1	321.6	77.6	244.0	30.7	18.5	18.5	–
30	4,209.5	379.1	304.8	74.4	230.4	31.2	18.0	18.0	–
July 7	4,214.7	379.1	303.5	74.6	228.9	30.5	17.2	17.2	–
14	4,229.3	379.1	302.9	74.2	228.7	31.6	17.2	17.2	–
21	4,235.8	379.1	300.7	74.3	226.4	33.4	15.9	15.9	–
28	4,248.3	379.1	302.0	74.3	227.7	33.9	16.7	16.7	–
Aug 4	4,246.5	379.1	299.2	74.4	224.8	36.9	16.4	16.4	–
11	4,256.0	379.1	301.2	74.5	226.8	35.3	15.9	15.9	–
18	4,265.7	379.1	300.1	74.5	225.6	35.2	16.5	16.5	–
25	4,278.9	379.1	299.2	74.5	224.7	35.6	16.2	16.2	–
Sep 1	4,283.7	379.1	298.8	74.5	224.3	34.2	16.4	16.4	–
Deutsche Bundesbank									
2015 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	–
Oct	1 312.2	128.8	54.9	21.3	33.6	– 0.0	0.3	0.3	–
Nov	1 376.5	128.8	55.0	21.1	33.9	0.1	0.4	0.4	–
Dec	1 392.7	119.3	56.5	21.5	35.0	1.8	0.4	0.4	–
2017 Jan	1 449.7	119.3	56.4	21.5	34.9	0.1	1.8	1.8	–
Feb	1 484.8	119.3	56.2	21.2	35.0	0.1	1.5	1.5	–
Mar	1 558.0	126.2	55.7	21.1	34.7	2.7	1.7	1.7	–
Apr	1 582.8	126.1	55.7	21.0	34.7	0.0	2.4	2.4	–
May	1 608.2	126.1	55.7	21.0	34.7	0.0	2.0	2.0	–
June	1 616.4	118.2	53.1	20.0	33.0	1.3	2.1	2.1	–
July	1 621.0	118.2	53.5	20.0	33.6	0.0	2.8	2.8	–
Aug	1 625.1	118.2	52.6	19.9	32.7	0.0	2.8	2.8	–

* 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

Lending to euro area credit institutions related to monetary policy operations denominated in euro							Other claims on euro area credit institutions denominated in euro	Securities of euro area residents in euro			General government debt denominated in euro	Other assets	On reporting date/ End of month ¹	
Total	Main re-financing operations	Longer-term re-financing operations	Fine-tuning reverse operations	Structural reverse operations	Marginal lending facility	Credits related to margin calls		Total	Securities held for monetary policy purposes	Other securities				
Eurosystem ²														
595.9	39.1	556.6	–	–	0.2	–	69.1	1 974.9	1 654.0	320.9	26.5	236.8	2016 Dec	30
590.8	34.0	556.6	–	–	0.2	–	70.9	1 987.0	1 666.1	320.9	26.5	238.5	2017 Jan	6
589.1	32.3	556.6	–	–	0.2	–	74.8	2 010.4	1 690.2	320.1	26.5	235.4		13
589.0	32.3	556.6	–	–	0.1	–	78.1	2 030.4	1 710.9	319.5	26.5	237.5		20
588.7	34.0	554.5	–	–	0.2	–	80.4	2 049.8	1 730.3	319.4	26.5	235.2		27
586.3	31.6	554.5	–	–	0.2	–	79.7	2 064.0	1 748.6	315.4	26.4	233.1	Feb	3
584.7	29.6	554.5	–	–	0.6	–	81.4	2 083.9	1 768.7	315.2	26.4	234.0		10
583.1	28.0	554.5	–	–	0.6	–	81.0	2 101.8	1 787.9	313.8	26.4	235.1		17
584.7	30.8	553.8	–	–	0.1	–	81.1	2 119.6	1 807.1	312.5	26.4	235.2		24
579.3	25.3	553.8	–	–	0.2	–	83.5	2 136.5	1 825.9	310.6	26.4	235.2	Mar	3
578.1	23.9	553.8	–	–	0.5	–	82.7	2 153.8	1 844.2	309.6	26.4	237.1		10
580.5	26.5	553.8	–	–	0.2	–	86.3	2 172.9	1 862.9	309.9	26.4	232.4		17
586.8	32.7	553.8	–	–	0.3	–	82.5	2 188.5	1 878.7	309.8	26.4	232.0		24
784.2	14.8	769.2	–	–	0.3	–	69.8	2 192.8	1 887.1	305.7	26.4	245.9		31
782.5	13.2	769.2	–	–	0.1	–	81.4	2 211.3	1 906.3	305.0	26.4	237.4	Apr	7
783.1	13.2	769.2	–	–	0.7	–	80.7	2 225.9	1 921.4	304.5	26.4	236.5		14
784.2	14.8	769.2	–	–	0.2	–	82.0	2 236.2	1 933.0	303.2	26.4	234.5		21
782.1	14.4	767.3	–	–	0.4	–	78.2	2 247.4	1 946.9	300.5	26.4	238.4		28
782.0	14.4	767.3	–	–	0.3	–	78.6	2 257.5	1 959.9	297.6	26.4	237.1	May	5
781.2	13.7	767.3	–	–	0.2	–	79.6	2 271.4	1 974.7	296.8	26.4	237.6		12
781.5	14.0	767.3	–	–	0.2	–	78.6	2 285.2	1 989.0	296.2	26.4	239.3		19
783.5	15.9	767.3	–	–	0.2	–	75.9	2 299.1	2 002.4	296.7	26.4	239.3		26
780.1	12.1	767.8	–	–	0.3	–	74.5	2 311.0	2 015.2	295.8	26.4	240.7	2017 June	2
780.0	12.1	767.8	–	–	0.1	–	73.7	2 325.6	2 029.8	295.9	26.4	240.3		9
779.1	11.0	767.8	–	–	0.3	–	75.5	2 338.7	2 045.0	293.7	26.4	239.2		16
779.6	11.5	767.8	–	–	0.3	–	73.1	2 352.1	2 058.4	293.7	26.4	240.1		23
779.3	11.6	767.3	–	–	0.3	–	70.9	2 358.6	2 064.4	294.2	25.8	241.9		30
775.7	8.3	767.3	–	–	0.1	–	69.5	2 374.4	2 081.3	293.1	25.7	239.0	July	7
774.6	7.1	767.3	–	–	0.2	–	69.0	2 390.4	2 097.5	292.9	25.7	238.8		14
774.3	6.8	767.3	–	–	0.2	–	67.7	2 400.0	2 108.3	291.7	25.7	239.0		21
776.3	7.4	768.7	–	–	0.2	–	63.3	2 411.3	2 119.2	292.1	25.7	240.0		28
773.1	4.3	768.7	–	–	0.2	–	63.6	2 414.8	2 128.2	286.6	25.7	237.5	Aug	4
773.5	4.6	768.7	–	–	0.2	–	61.4	2 426.0	2 139.7	286.3	25.7	237.8		11
773.7	4.8	768.7	–	–	0.2	–	62.2	2 435.4	2 149.3	286.1	25.7	237.7		18
776.3	7.3	768.7	–	–	0.3	–	60.4	2 446.2	2 160.1	286.1	25.7	240.2		25
774.7	5.9	768.6	–	–	0.2	–	59.2	2 456.1	2 170.4	285.8	25.7	239.4	Sep	1
Deutsche Bundesbank														
45.8	4.1	41.7	–	–	0.0	–	3.8	149.1	149.1	–	4.4	591.2	2015 Oct	
50.2	3.1	47.1	–	–	0.0	–	3.5	161.7	161.7	–	4.4	621.2	Nov	
58.1	9.1	48.6	–	–	0.3	–	3.5	172.3	172.3	–	4.4	613.7	Dec	
51.2	2.6	48.5	–	–	0.0	–	2.8	185.0	185.0	–	4.4	615.7	2016 Jan	
44.9	1.9	43.0	–	–	0.0	–	2.3	197.6	197.6	–	4.4	633.6	Feb	
49.7	3.7	46.0	–	–	0.0	–	3.4	210.4	210.4	–	4.4	638.4	Mar	
49.7	4.2	45.5	–	–	0.0	–	4.3	227.3	227.3	–	4.4	655.0	Apr	
48.8	3.8	45.0	–	–	0.0	–	4.3	244.8	244.8	–	4.4	684.4	May	
47.3	2.8	44.5	–	–	0.0	–	5.2	261.8	261.8	–	4.4	710.0	June	
46.4	2.3	44.1	–	–	0.0	–	5.5	279.9	279.9	–	4.4	688.0	July	
46.3	2.3	44.1	–	–	0.0	–	5.5	292.6	292.6	–	4.4	705.0	Aug	
55.3	1.3	54.0	–	–	–	–	5.7	309.3	309.3	–	4.4	744.1	Sep	
55.5	0.9	53.9	–	–	0.7	–	5.4	326.7	326.7	–	4.4	736.2	Oct	
55.2	1.0	53.9	–	–	0.3	–	4.8	345.4	345.4	–	4.4	782.3	Nov	
65.5	1.8	63.5	–	–	0.1	–	3.0	357.7	357.7	–	4.4	784.1	Dec	
64.0	0.6	63.4	–	–	0.0	–	4.1	375.7	375.7	–	4.4	823.9	2017 Jan	
63.9	0.7	63.2	–	–	0.0	–	4.5	392.6	392.6	–	4.4	842.4	Feb	
95.6	0.4	95.0	–	–	0.2	–	3.9	408.8	408.8	–	4.4	859.0	Mar	
95.7	0.6	95.0	–	–	0.1	–	4.2	421.4	421.4	–	4.4	872.8	Apr	
95.3	0.3	95.0	–	–	0.0	–	4.0	434.3	434.3	–	4.4	886.4	May	
96.4	1.2	95.0	–	–	0.1	–	3.9	445.8	445.8	–	4.4	891.3	June	
95.5	0.5	94.9	–	–	0.1	–	4.4	457.2	457.2	–	4.4	884.8	July	
95.2	0.2	94.9	–	–	0.1	–	4.4	467.1	467.1	–	4.4	880.4	Aug	

end of the quarter. ¹ For the Eurosystem: financial statements for specific weekly dates; for the Bundesbank: end of month financial statement. ² Source: ECB.

III Consolidated financial statement of the Eurosystem

2 Liabilities *

€ billion

On reporting date/ End of month 1	Total liabilities	Banknotes in circulation 2	Liabilities to euro area credit institutions related to monetary policy operations denominated in euro						Other liabilities to euro-area credit institutions denominated in euro	Debt certificates issued	Liabilities to other euro area residents denominated in euro		
			Total	Current accounts (covering the minimum reserve system)	Deposit facility	Fixed-term deposits	Fine-tuning reverse operations	Deposits related to margin calls			Total	General government	Other liabilities
Eurosystem 4													
2016 Dec 30	3,662.9	1,126.2	1,313.3	889.0	424.2	–	–	0.1	9.4	–	220.8	114.9	105.9
2017 Jan 6	3,672.6	1,122.2	1,369.2	928.6	440.5	–	–	0.0	8.9	–	213.8	110.2	103.6
13	3,697.3	1,115.5	1,396.8	935.3	461.4	–	–	0.1	9.6	–	240.2	137.9	102.4
20	3,719.6	1,110.7	1,386.8	952.4	434.3	–	–	0.2	9.7	–	281.8	177.7	104.0
27	3,740.8	1,109.0	1,385.7	978.9	406.7	–	–	0.0	7.7	–	305.2	201.3	103.9
Feb 3	3,749.5	1,111.4	1,438.1	963.9	474.2	–	–	0.0	10.0	–	237.5	130.5	107.0
10	3,770.9	1,110.9	1,451.1	955.3	495.8	–	–	0.0	8.5	–	252.0	144.2	107.8
17	3,787.9	1,110.1	1,422.6	953.6	469.0	–	–	0.0	9.5	–	293.9	185.6	108.3
24	3,808.2	1,110.8	1,434.8	957.4	477.4	–	–	0.0	10.0	–	289.7	177.5	112.3
Mar 3	3,820.3	1,113.5	1,468.1	966.3	501.8	–	–	0.0	11.5	–	254.5	140.4	114.0
10	3,839.9	1,113.8	1,491.9	966.3	525.5	–	–	0.0	15.4	–	257.1	142.5	114.6
17	3,856.9	1,112.9	1,475.6	984.4	491.3	–	–	0.0	15.3	–	297.9	178.4	119.4
24	3,877.0	1,111.2	1,455.1	946.2	508.9	–	–	0.0	14.1	–	340.9	221.5	119.4
31	4,100.7	1,114.5	1,632.5	1,048.5	584.0	–	–	0.0	15.1	–	304.8	178.9	125.9
Apr 7	4,116.4	1,119.2	1,721.1	1,132.9	588.2	–	–	0.0	13.7	–	279.2	153.9	125.3
14	4,130.0	1,127.5	1,708.3	1,144.5	563.8	–	–	0.0	13.2	–	298.1	164.7	133.4
21	4,139.4	1,121.6	1,682.0	1,123.0	559.0	–	–	0.0	10.7	–	344.2	209.5	134.7
28	4,148.0	1,125.3	1,709.1	1,132.6	576.4	–	–	0.0	12.9	–	306.2	172.0	134.3
May 5	4,156.8	1,125.1	1,773.1	1,172.7	600.4	–	–	0.0	12.4	–	256.0	114.2	141.8
12	4,170.6	1,124.7	1,766.3	1,165.6	600.7	–	–	0.0	10.8	–	283.1	140.8	142.2
19	4,185.7	1,123.2	1,760.3	1,169.5	590.7	–	–	0.0	9.6	–	314.5	177.1	137.4
26	4,195.7	1,124.1	1,748.4	1,159.5	588.9	–	–	0.1	10.3	–	353.1	209.3	143.9
2017 June 2	4,204.5	1,131.3	1,796.2	1,194.2	602.0	–	–	0.0	11.3	–	299.9	157.7	142.2
9	4,218.1	1,130.5	1,800.6	1,199.2	601.3	–	–	0.1	9.1	–	310.2	172.5	137.7
16	4,232.9	1,131.7	1,776.2	1,168.4	607.8	–	–	0.0	7.4	–	351.7	209.7	142.1
23	4,246.2	1,131.3	1,735.3	1,158.1	577.2	–	–	0.0	7.7	–	400.8	259.1	141.7
30	4,209.5	1,136.9	1,723.1	1,106.1	617.0	–	–	0.1	9.2	–	347.6	210.1	137.5
July 7	4,214.7	1,140.0	1,787.3	1,166.6	620.7	–	–	0.0	9.8	–	340.1	209.1	131.0
14	4,229.3	1,141.2	1,792.1	1,197.8	594.2	–	–	0.1	9.8	–	360.2	230.7	129.6
21	4,235.8	1,140.4	1,764.1	1,186.9	577.2	–	–	0.2	9.2	–	380.8	254.1	126.7
28	4,248.3	1,142.3	1,784.2	1,200.7	583.5	–	–	0.1	9.6	–	369.8	239.3	130.5
Aug 4	4,246.5	1,144.7	1,867.3	1,245.9	621.3	–	–	0.0	10.4	–	273.7	147.1	126.6
11	4,256.0	1,145.9	1,870.4	1,240.9	629.4	–	–	0.0	9.7	–	285.5	158.3	127.2
18	4,265.7	1,144.1	1,836.3	1,238.6	597.7	–	–	0.0	9.0	–	321.6	194.8	126.8
25	4,278.9	1,139.9	1,824.0	1,230.8	593.2	–	–	0.0	8.0	–	352.3	225.4	126.9
Sep 1	4,283.7	1,142.1	1,891.7	1,263.4	628.3	–	–	0.0	8.4	–	286.7	158.8	128.0
Deutsche Bundesbank													
2015 Oct	956.3	247.9	184.3	140.9	43.3	–	–	0.0	–	–	65.5	2.8	62.7
Nov	1 002.6	249.0	212.4	154.3	58.0	–	–	0.0	–	–	79.3	2.9	76.4
Dec	1 011.5	254.8	208.7	155.1	53.6	–	–	0.0	–	–	71.9	11.6	60.2
2016 Jan	1 018.5	249.9	228.7	172.7	56.0	–	–	–	–	–	75.6	10.7	64.8
Feb	1 043.7	250.1	231.5	165.9	65.6	–	–	–	–	–	88.2	18.7	69.5
Mar	1 077.6	251.9	227.3	167.8	59.6	–	–	–	–	–	108.8	39.9	69.0
Apr	1 112.7	252.5	272.4	180.8	91.6	–	–	–	–	–	96.3	24.2	72.1
May	1 159.5	253.4	293.2	200.0	93.2	–	–	–	–	–	121.2	41.8	79.4
June	1 214.0	255.6	299.7	214.4	85.3	–	–	0.0	–	–	130.6	56.5	74.1
July	1 209.4	258.0	320.7	235.4	85.4	–	–	0.0	–	–	101.4	25.3	76.1
Aug	1 239.2	257.1	334.5	242.3	92.2	–	–	0.0	0.0	–	110.4	33.5	76.9
Sep	1 305.3	257.9	362.6	244.7	117.9	–	–	–	0.1	–	122.4	43.9	78.6
Oct	1 312.2	259.2	380.0	260.5	119.5	–	–	–	0.3	–	110.8	35.6	75.3
Nov	1 376.5	259.5	428.0	293.1	134.9	–	–	–	0.3	–	116.6	40.0	76.6
Dec	1 392.7	264.9	411.4	284.9	126.4	–	–	–	0.5	–	105.8	32.5	73.4
2017 Jan	1 449.7	260.9	499.0	348.3	150.7	–	–	–	2.2	–	92.9	17.1	75.8
Feb	1 484.8	261.3	507.1	347.0	160.1	–	–	–	1.7	–	97.3	12.4	84.9
Mar	1 558.0	262.1	543.2	353.8	189.3	–	–	–	1.7	–	115.4	26.8	88.6
Apr	1 582.8	264.7	591.2	402.7	188.5	–	–	–	4.1	–	88.9	20.0	68.9
May	1 608.2	264.9	607.1	433.6	173.5	–	–	–	2.5	–	102.9	27.8	75.1
June	1 616.4	267.4	586.1	418.6	167.5	–	–	–	3.4	–	112.9	40.0	72.9
July	1 621.0	268.8	597.0	422.3	174.7	–	–	0.0	3.8	–	112.2	40.8	71.4
Aug	1 625.1	268.4	585.6	422.9	162.7	–	–	0.0	4.1	–	114.7	47.0	67.7

* 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 market rates at the end of the quarter. 1 For Eurosystem: financial statements for

specific weekly dates; for the Bundesbank: end-of-month financial statements. 2 According to the accounting regime chosen by the Eurosystem on the issue of euro banknotes, a share of 8% of the total value of the euro banknotes in circulation is allocated to the ECB on a monthly basis. The counterpart of this adjustment is disclosed as an "Intra-Eurosystem liability related to euro banknote issue". 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										
205.7	3.6	9.3	9.3	–	59.3	221.4	–	394.4	99.5	2016 Dec 30
167.4	5.7	10.7	10.7	–	59.3	221.3	–	394.4	99.8	2017 Jan 6
138.8	7.7	13.4	13.4	–	59.3	221.7	–	394.4	99.8	13
133.8	7.3	9.7	9.7	–	59.3	226.4	–	394.4	99.8	20
133.0	9.2	10.5	10.5	–	59.3	227.0	–	394.4	99.8	27
151.5	9.2	9.4	9.4	–	59.3	228.7	–	394.4	100.1	Feb 3
144.8	8.5	11.9	11.9	–	59.3	229.6	–	394.4	100.0	10
147.7	8.6	12.2	12.2	–	59.3	229.6	–	394.4	100.0	17
159.9	9.5	11.0	11.0	–	59.3	228.2	–	394.4	100.6	24
168.4	7.7	10.6	10.6	–	59.3	231.8	–	394.4	100.6	Mar 3
157.0	6.0	12.8	12.8	–	59.3	231.7	–	394.4	100.6	10
152.9	3.5	12.4	12.4	–	59.3	232.1	–	394.4	100.6	17
153.5	5.0	12.0	12.0	–	59.3	231.0	–	394.4	100.6	24
218.8	3.0	10.4	10.4	–	59.0	229.4	–	412.0	101.1	31
168.5	3.9	11.6	11.6	–	59.0	226.6	–	412.0	101.4	Apr 7
170.5	2.9	11.2	11.2	–	59.0	225.8	–	412.0	101.4	14
169.1	3.0	10.5	10.5	–	59.0	225.7	–	412.0	101.4	21
180.7	5.0	10.1	10.1	–	59.0	225.5	–	412.0	102.3	28
175.2	4.1	11.4	11.4	–	59.0	226.3	–	412.0	102.3	May 5
170.5	3.7	11.1	11.1	–	59.0	227.2	–	412.0	102.2	12
162.0	3.7	11.6	11.6	–	59.0	227.4	–	412.0	102.3	19
145.5	2.9	11.1	11.1	–	59.0	226.9	–	412.0	102.3	26
150.7	2.8	10.7	10.7	–	59.0	228.3	–	412.0	102.3	2017 June 2
152.7	2.8	10.8	10.8	–	59.0	228.1	–	412.0	102.3	9
149.0	3.0	11.0	11.0	–	59.0	229.5	–	412.0	102.3	16
152.1	3.0	12.5	12.5	–	59.0	230.1	–	412.0	102.3	23
222.5	4.1	10.8	10.8	–	56.7	224.4	–	371.9	102.3	30
168.8	5.0	10.3	10.3	–	56.7	222.5	–	371.9	102.3	July 7
156.4	5.0	11.2	11.2	–	56.7	222.5	–	371.9	102.3	14
170.7	5.5	10.8	10.8	–	56.7	223.5	–	371.9	102.3	21
169.3	6.2	12.7	12.7	–	56.7	223.2	–	371.9	102.3	28
175.8	8.9	10.5	10.5	–	56.7	224.2	–	371.9	102.3	Aug 4
171.3	8.7	10.8	10.8	–	56.7	222.7	–	371.9	102.3	11
182.2	7.5	10.9	10.9	–	56.7	223.3	–	371.9	102.3	18
181.3	7.4	10.9	10.9	–	56.7	224.2	–	371.9	102.3	25
182.1	6.8	10.1	10.1	–	56.7	224.8	–	371.9	102.3	Sep 1
Deutsche Bundesbank										
12.4	0.0	0.8	0.8	–	15.1	24.1	293.1	108.2	5.0	2015 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
66.5	0.0	1.0	1.0	–	15.1	24.3	322.0	128.0	5.0	Oct
74.7	0.0	1.0	1.0	–	15.1	24.4	323.9	128.0	5.0	Nov
117.0	0.0	1.2	1.2	–	15.4	24.7	327.3	119.7	5.0	Dec
100.5	0.0	0.6	0.6	–	15.4	25.2	328.3	119.7	5.0	2017 Jan
121.3	0.0	0.9	0.9	–	15.4	24.5	330.1	119.7	5.6	Feb
131.3	0.0	0.5	0.5	–	15.3	25.1	331.9	126.0	5.6	Mar
125.9	0.0	0.7	0.7	–	15.3	25.3	335.2	126.0	5.6	Apr
119.4	0.0	0.7	0.7	–	15.3	25.8	338.1	126.0	5.6	May
140.4	0.0	1.1	1.1	–	14.7	26.2	342.8	115.8	5.6	June
130.0	0.0	1.7	1.7	–	14.7	26.4	345.0	115.8	5.6	July
139.9	0.0	1.1	1.1	–	14.7	26.6	348.6	115.8	5.6	Aug

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

euro area										Claims on non-euro-area residents			Period
										to non-banks in other member states		Other assets ¹	
General government				Enterprises and households			General government			Total	of which Loans		
Secur-ities	Total	Loans	Secur-ities ²	Total	Total	of which Loans	Total	Loans	Secur-ities				
End of year or month													
329.6	476.1	342.8	133.4	475.1	348.1	172.1	127.0	27.6	99.4	1,279.2	1,008.6	275.7	2008
335.4	495.0	335.1	160.0	450.4	322.2	162.9	128.2	23.5	104.7	1,062.6	821.1	237.5	2009
314.5	633.8	418.4	215.3	421.6	289.2	164.2	132.4	24.8	107.6	1,021.0	792.7	1,181.1	2010
294.3	561.1	359.8	201.2	403.1	276.9	161.2	126.2	32.6	93.6	995.1	770.9	1,313.8	2011
259.8	594.0	350.3	243.7	399.2	275.1	158.1	124.1	30.4	93.7	970.3	745.0	1,239.4	2012
262.3	585.8	339.2	246.6	392.3	267.6	144.6	124.6	27.8	96.9	921.2	690.5	849.7	2013
276.4	578.2	327.9	250.4	415.0	270.0	142.7	145.0	31.9	113.2	1,050.1	805.0	1,055.8	2014
287.4	575.1	324.5	250.6	417.5	276.0	146.4	141.5	29.4	112.1	1,006.5	746.3	905.6	2015
293.6	538.9	312.2	226.7	418.4	281.7	159.5	136.7	28.5	108.2	1,058.2	802.3	844.1	2016
284.3	586.1	333.2	252.9	425.2	278.4	146.7	146.8	30.8	116.1	1,090.1	833.3	940.4	2015 Oct
287.8	585.4	329.5	255.9	432.0	285.5	148.6	146.6	30.0	116.6	1,075.0	813.3	991.0	Nov
287.4	575.1	324.5	250.6	417.5	276.0	146.4	141.5	29.4	112.1	1,006.5	746.3	905.6	Dec
286.1	578.4	328.4	250.1	419.8	275.5	149.5	144.3	29.2	115.2	1,026.3	765.1	996.1	2016 Jan
285.4	578.0	328.0	249.9	417.4	274.6	153.0	142.8	29.5	113.4	1,031.4	767.7	1,058.7	Feb
283.6	574.7	327.8	246.9	419.2	273.3	149.1	145.9	29.3	116.6	992.1	727.7	998.5	Mar
286.2	576.5	331.6	244.8	417.6	272.8	150.4	144.8	30.0	114.8	1,005.6	741.1	947.2	Apr
286.6	571.3	329.5	241.9	425.1	280.0	153.3	145.1	28.9	116.2	1,012.9	750.5	956.2	May
286.0	561.8	323.9	237.9	424.4	281.2	155.2	143.2	28.9	114.3	1,036.4	774.7	1,046.2	June
286.8	567.0	327.0	240.0	425.2	284.2	159.3	141.0	28.9	112.1	1,041.7	785.1	1,036.0	July
288.0	561.0	324.9	236.1	423.1	283.3	159.7	139.8	29.1	110.7	1,042.6	786.2	1,001.7	Aug
288.3	557.5	323.0	234.5	422.9	282.2	157.8	140.7	29.8	110.9	1,030.5	774.4	971.9	Sep
291.0	556.4	326.3	230.0	423.0	284.6	162.1	138.5	29.5	108.9	1,077.9	823.1	915.5	Oct
291.6	551.6	321.9	229.7	424.1	285.9	161.9	138.3	29.2	109.1	1,065.1	811.1	883.2	Nov
293.6	538.9	312.2	226.7	418.4	281.7	159.5	136.7	28.5	108.2	1,058.2	802.3	844.1	Dec
294.2	534.1	312.2	221.9	422.4	284.6	163.1	137.7	28.6	109.2	1,080.8	826.0	803.9	2017 Jan
294.0	528.0	311.6	216.5	427.0	289.4	165.6	137.6	28.6	109.0	1,095.4	843.6	825.5	Feb
294.3	523.2	307.1	216.1	425.5	290.8	167.2	134.7	29.0	105.7	1,097.1	847.5	791.1	Mar
295.5	520.5	307.9	212.6	423.0	287.1	167.8	135.8	29.9	105.9	1,080.7	832.2	792.5	Apr
294.6	513.4	298.9	214.6	421.4	288.5	166.8	132.9	28.9	103.9	1,056.3	808.0	796.5	May
299.7	505.4	296.4	208.9	416.0	283.4	162.6	132.6	29.9	102.6	1,064.9	817.0	731.1	June
299.9	503.4	298.3	205.1	416.6	285.0	164.1	131.7	29.9	101.8	1,028.5	780.9	717.9	July
Changes ³													
10.5	21.3	- 5.1	26.4	- 20.9	- 20.9	- 7.1	0.0	- 3.9	3.9	- 182.5	- 162.3	- 99.8	2009
- 14.3	139.7	- 83.4	56.3	- 29.6	- 36.4	- 0.2	6.8	3.1	3.7	- 74.1	- 61.9	- 46.3	2010
- 18.0	- 74.0	- 59.1	- 14.9	- 16.6	- 13.8	- 5.5	- 2.7	8.0	- 10.7	- 39.5	- 34.9	- 112.9	2011
- 11.8	10.7	- 10.5	21.2	- 0.2	- 0.7	- 1.5	0.5	- 2.2	2.7	- 15.5	- 17.7	- 62.2	2012
2.0	- 7.0	- 10.9	3.9	- 3.0	- 3.4	- 9.3	0.5	- 2.6	3.1	- 38.8	- 47.2	- 420.8	2013
15.5	- 12.3	- 15.1	2.9	15.1	0.4	- 4.0	14.6	0.9	13.8	83.6	72.0	194.0	2014
11.5	- 3.9	- 4.2	0.3	0.7	4.4	1.8	- 3.7	- 1.0	- 2.8	- 88.3	- 101.0	- 150.1	2015
7.8	- 35.4	- 12.1	- 23.3	4.0	8.2	14.6	- 4.2	- 0.9	- 3.3	51.4	55.0	- 51.4	2016
3.0	- 0.9	- 3.8	2.9	5.3	5.7	0.9	- 0.4	- 0.8	0.4	- 31.7	- 35.4	50.6	2015 Nov
0.9	- 10.1	- 4.9	- 5.2	- 12.8	- 8.0	- 1.3	- 4.8	- 0.6	- 4.2	- 55.6	- 55.3	- 85.4	Dec
- 0.1	3.4	3.8	- 0.4	4.3	1.4	4.3	2.9	- 0.2	3.1	24.8	22.7	90.5	2016 Jan
- 0.3	- 0.7	- 0.4	- 0.2	- 1.6	- 0.2	3.7	- 1.4	0.3	- 1.8	5.8	3.1	63.5	Feb
- 1.9	- 3.0	- 0.2	- 2.9	2.8	- 0.3	- 2.8	3.1	- 0.2	3.3	- 23.5	- 25.4	- 60.2	Mar
2.7	1.8	3.9	- 2.1	- 1.4	- 0.3	1.7	- 1.1	0.7	- 1.8	12.9	13.1	- 44.4	Apr
0.6	- 5.2	- 2.3	- 2.9	6.1	5.7	1.4	0.4	- 1.0	1.4	0.9	3.7	13.0	May
- 0.5	- 9.7	- 5.7	- 4.0	1.0	2.0	2.4	- 1.0	0.0	- 1.0	24.7	25.5	89.5	June
0.8	5.3	3.1	2.2	1.0	3.2	4.4	- 2.2	- 0.0	- 2.1	6.7	11.9	- 11.1	July
1.2	- 5.9	- 2.0	- 3.9	- 1.9	- 0.6	0.6	- 1.3	0.2	- 1.5	2.3	2.4	- 34.3	Aug
0.3	- 3.4	- 1.8	- 1.6	0.0	- 0.8	- 1.7	0.8	0.6	0.1	- 10.8	- 10.5	- 30.3	Sep
2.8	- 0.9	3.5	- 4.3	- 0.6	1.9	4.0	- 2.5	- 0.3	- 2.2	42.7	44.1	- 56.4	Oct
0.6	- 4.5	- 4.3	- 0.2	0.4	0.6	- 1.2	- 0.2	- 0.4	0.1	- 25.7	- 24.1	- 32.3	Nov
1.7	- 12.6	- 9.7	- 2.9	- 6.0	- 4.4	- 2.3	- 1.6	- 0.7	- 0.9	- 9.4	- 11.4	- 38.8	Dec
0.8	- 4.7	0.0	- 4.8	4.9	3.7	4.2	1.2	0.1	1.1	30.4	31.0	- 40.2	2017 Jan
- 0.2	- 6.1	- 0.6	- 5.4	4.0	4.2	2.1	- 0.2	0.0	- 0.2	8.2	11.7	21.6	Feb
0.2	- 4.7	- 4.4	- 0.3	- 1.2	1.7	2.1	- 2.9	0.4	- 3.3	5.5	7.5	- 34.5	Mar
1.2	- 2.6	0.8	- 3.4	- 2.1	- 3.3	1.1	1.2	0.9	0.3	- 8.0	- 7.3	1.4	Apr
- 0.8	- 4.4	- 6.4	2.0	- 0.6	2.4	- 0.0	- 3.0	- 1.0	- 2.0	- 12.4	- 12.8	4.0	May
5.2	- 7.9	- 2.3	- 5.6	- 4.8	- 3.5	- 2.7	- 1.3	0.1	- 1.3	15.6	15.3	- 65.2	June
0.4	- 1.8	2.0	- 3.7	0.7	1.6	1.6	- 0.9	- 0.1	- 0.8	- 36.3	- 35.9	- 12.4	July

exchange of equalisation claims. ³ Statistical breaks have been eliminated from the flow figures (see also footnote * in Table II.1).

IV Banks

in other member states ²				Deposits of central governments		Liabilities arising from repos with non-banks in the euro area	Money market fund shares issued ³	Debt securities issued ³		Liabilities to non-euro-area residents	Capital and reserves	Other Liabilities ¹	Period
With agreed maturities		At agreed notice		Total	of which domestic central governments			Total	of which with maturities of up to 2 years ³				
	of which up to 2 years	Total	of which up to 3 months										
Total													
End of year or month													
49.5	24.9	2.4	1.8	36.6	34.8	61.1	16.4	1,609.9	233.3	666.3	461.7	451.5	2008
43.7	17.0	2.5	2.0	22.8	22.2	80.5	11.4	1,500.5	146.3	565.6	454.8	415.6	2009
46.4	16.1	2.8	2.2	39.8	38.7	86.7	9.8	1,407.8	82.3	636.0	452.6	1,290.2	2010
49.6	18.4	3.3	2.5	39.5	37.9	97.1	6.2	1,345.7	75.7	561.5	468.1	1,436.6	2011
42.3	14.7	3.8	2.8	28.9	25.9	80.4	7.3	1,233.1	56.9	611.4	487.3	1,344.7	2012
44.0	16.9	3.5	2.7	17.6	16.0	6.7	4.1	1,115.2	39.0	479.5	503.0	944.5	2013
42.0	15.9	3.3	2.7	10.6	10.5	3.4	3.5	1,077.6	39.6	535.3	535.4	1,125.6	2014
42.2	16.0	3.3	2.8	11.3	9.6	2.5	3.5	1,017.7	48.3	526.2	569.3	971.1	2015
43.9	15.8	3.1	2.6	8.6	7.9	2.2	2.4	1,030.3	47.2	643.4	591.5	906.3	2016
42.2	15.5	3.4	2.8	10.8	8.7	6.6	4.1	1,069.9	48.1	609.1	578.5	1,009.4	2015 Oct
40.0	14.3	3.4	2.8	9.3	7.8	6.1	3.9	1,075.9	50.6	599.6	574.7	1,060.4	Nov
42.2	16.0	3.3	2.8	11.3	9.6	2.5	3.5	1,017.7	48.3	526.2	569.3	971.1	Dec
40.4	15.0	3.3	2.7	11.8	8.4	2.8	3.8	1,021.1	49.5	583.5	566.5	1,056.5	2016 Jan
40.1	14.9	3.3	2.7	11.2	8.5	4.2	3.7	1,020.2	51.2	595.3	579.5	1,120.8	Feb
43.5	18.6	3.3	2.7	11.0	8.3	3.2	3.5	1,014.7	49.0	557.1	576.3	1,056.7	Mar
40.7	17.0	3.2	2.7	9.6	7.9	3.7	3.1	1,019.3	50.3	606.6	583.6	998.9	Apr
40.0	15.9	3.2	2.7	10.0	8.1	3.5	2.7	1,029.8	49.8	611.6	583.9	1,007.0	May
41.3	17.1	3.2	2.7	11.3	8.8	2.5	2.7	1,023.9	50.0	618.1	587.3	1,093.4	June
41.6	16.2	3.2	2.7	10.1	8.1	3.4	2.5	1,021.8	56.6	656.1	578.1	1,090.9	July
42.0	17.0	3.2	2.7	10.0	7.9	3.2	2.4	1,020.1	52.7	663.4	581.9	1,056.4	Aug
43.4	17.9	3.1	2.7	9.2	8.1	2.9	2.5	1,011.1	51.9	655.7	596.9	1,028.0	Sep
43.6	16.6	3.1	2.6	8.5	7.6	3.2	2.4	1,019.6	50.7	710.2	594.9	972.9	Oct
43.4	16.0	3.1	2.6	9.7	8.2	3.0	2.4	1,035.2	48.4	711.7	591.2	942.6	Nov
43.9	15.8	3.1	2.6	8.6	7.9	2.2	2.4	1,030.3	47.2	643.4	591.5	906.3	Dec
43.2	15.6	3.0	2.6	7.5	6.9	4.8	2.3	1,043.2	47.5	716.8	585.0	866.9	2017 Jan
44.8	18.0	3.0	2.6	8.8	7.7	4.5	2.3	1,050.8	48.0	734.1	588.5	883.7	Feb
48.6	19.9	3.0	2.6	8.3	7.9	2.6	2.2	1,045.7	45.9	730.2	594.1	857.6	Mar
46.6	18.3	3.0	2.6	8.5	7.6	3.5	2.2	1,042.1	43.9	749.0	598.3	853.4	Apr
46.4	17.2	3.0	2.6	9.1	7.8	2.4	2.1	1,042.5	44.6	724.9	603.2	849.4	May
59.3	20.1	3.0	2.6	8.6	7.9	1.8	2.2	1,039.2	44.8	689.8	610.2	793.5	June
58.8	19.3	3.0	2.6	10.0	7.9	3.3	2.2	1,029.0	43.7	684.2	606.4	783.0	July
Changes ⁴													
- 5.7	- 7.7	0.1	0.2	- 2.4	- 0.8	19.4	- 5.0	- 104.6	- 87.1	- 95.3	- 0.3	- 65.0	2009
- 6.8	- 5.8	0.3	0.3	- 17.0	- 16.5	6.2	- 1.6	- 106.7	- 63.2	- 54.4	- 7.1	- 78.6	2010
- 2.2	- 1.7	0.5	0.3	- 0.1	- 0.7	10.0	- 3.7	- 76.9	- 6.6	- 80.5	13.7	137.8	2011
- 7.2	- 3.6	0.5	0.3	- 7.9	- 9.2	- 19.6	- 1.2	- 107.0	- 18.6	- 54.2	21.0	- 68.5	2012
- 0.5	- 2.2	- 0.3	- 0.1	- 11.3	- 10.0	4.1	- 3.2	- 104.9	- 17.6	- 134.1	18.9	- 417.1	2013
- 2.3	- 1.2	- 0.2	- 0.1	- 6.4	- 4.8	- 3.4	- 0.6	- 63.7	- 0.2	- 35.9	26.1	178.3	2014
- 0.1	0.0	0.0	0.1	- 0.4	- 1.9	- 1.0	- 0.0	- 86.8	7.7	- 30.3	28.0	- 143.2	2015
1.1	0.0	- 0.3	- 0.1	- 2.2	- 1.2	- 0.3	- 1.1	8.6	- 1.3	116.1	26.4	- 39.5	2016
- 2.4	- 1.2	- 0.0	- 0.0	- 1.5	- 0.9	- 0.5	- 0.1	- 3.9	2.3	- 16.9	- 6.7	51.1	2015 Nov
2.3	1.8	- 0.0	0.0	2.0	1.8	- 3.6	- 0.5	- 50.1	- 2.1	- 67.8	- 2.8	- 86.4	Dec
- 1.7	- 1.0	- 0.0	- 0.0	0.5	- 1.3	0.3	0.3	5.8	1.3	59.2	- 2.2	90.4	2016 Jan
- 0.3	- 0.1	- 0.0	- 0.0	- 0.6	0.1	1.4	- 0.1	- 1.2	1.6	11.7	13.1	65.8	Feb
3.5	4.0	- 0.0	- 0.0	0.3	0.4	- 0.9	- 0.2	4.8	- 1.8	- 30.7	- 0.2	- 66.4	Mar
- 2.8	- 1.6	- 0.0	- 0.0	- 1.3	- 0.5	0.5	- 0.4	3.9	1.2	49.3	7.2	- 48.8	Apr
- 0.8	- 1.1	- 0.0	- 0.0	0.4	0.3	- 0.2	- 0.4	4.8	- 0.7	1.0	4.3	12.3	May
0.7	0.8	- 0.0	- 0.0	1.3	0.7	- 1.0	0.0	- 5.0	0.3	8.4	3.9	86.7	June
0.3	- 0.3	- 0.0	- 0.0	- 1.3	- 0.7	0.9	- 0.2	- 1.2	6.6	38.6	- 8.9	- 2.7	July
0.4	0.8	- 0.0	- 0.0	- 0.1	- 0.2	- 0.2	- 0.1	- 1.1	- 3.8	7.9	6.6	- 36.6	Aug
1.5	0.8	- 0.0	- 0.0	- 0.8	0.1	- 0.3	0.0	- 8.1	- 0.8	- 7.0	12.0	- 25.5	Sep
0.1	- 1.3	- 0.1	- 0.0	- 0.7	- 0.5	0.3	- 0.1	5.3	- 1.3	52.6	- 2.9	- 53.5	Oct
- 0.3	- 0.7	- 0.0	- 0.0	1.2	0.6	- 0.2	0.1	7.3	- 2.6	- 5.1	- 6.2	- 27.0	Nov
0.5	- 0.2	- 0.0	0.0	- 1.1	- 0.3	- 0.8	- 0.0	- 6.8	- 1.3	- 69.7	- 0.2	- 34.3	Dec
- 0.6	- 0.1	- 0.0	- 0.0	- 1.1	- 1.0	2.6	- 0.1	17.9	0.5	76.7	- 5.1	- 38.9	2017 Jan
1.6	2.3	0.0	0.0	0.8	0.3	- 0.3	- 0.1	3.4	0.3	14.4	2.4	18.7	Feb
3.7	2.0	- 0.0	- 0.0	- 0.6	0.3	- 1.9	- 0.1	- 2.8	- 2.0	- 2.2	6.2	- 26.2	Mar
- 1.9	- 1.6	- 0.0	0.0	0.2	- 0.3	0.9	- 0.0	1.4	- 1.8	22.7	5.6	- 5.1	Apr
- 0.1	- 1.0	0.0	0.0	0.6	0.2	- 1.1	- 0.0	7.7	0.9	- 18.5	7.0	- 5.3	May
4.0	2.9	- 0.0	- 0.0	- 0.5	0.1	- 0.6	0.1	1.0	0.3	- 31.9	8.9	- 56.0	June
- 0.6	- 0.8	- 0.0	- 0.0	1.4	- 0.0	1.4	- 0.0	- 12.3	- 3.2	- 5.6	- 1.7	- 9.0	July

governments. ³ In Germany, debt securities with maturities of up to one year are classed as money market paper; up to the January 2002 Monthly Report they were

published together with money market fund shares. ⁴ Statistical breaks have been eliminated from the flow figures (see also footnote * in Table II.1).

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			Bills			Securities issued by non-banks
					Balances and loans	Securities issued by banks		Loans						
								for up to and including 1 year	for more than 1 year					
All categories of banks														
2017 Feb	1,699	7,989.3	387.7	2,502.2	2,004.8	495.0	4,061.0	362.0	2,948.9	0.6	742.5	114.4	924.0	
Mar	1,698	7,970.5	396.2	2,510.0	2,015.1	491.6	4,060.6	361.8	2,954.1	0.7	738.9	114.1	889.7	
Apr	1,696	7,999.0	442.7	2,488.5	1,995.4	490.0	4,063.3	366.4	2,959.3	0.7	731.1	113.7	890.8	
May	1,692	7,993.3	466.1	2,452.9	1,956.5	493.1	4,064.6	359.2	2,967.5	0.6	730.4	113.6	896.0	
June	1,689	7,897.2	465.0	2,434.6	1,942.6	488.4	4,053.0	351.9	2,965.4	0.6	727.7	113.1	831.6	
July	1,673	7,865.6	464.7	2,416.5	1,927.6	485.2	4,054.0	350.4	2,972.5	0.6	723.5	113.2	817.2	
Commercial banks ⁶														
2017 June	266	3,208.8	296.5	1,055.9	973.5	81.5	1,203.7	187.4	785.4	0.4	226.9	50.9	601.7	
July	266	3,194.2	307.3	1,043.5	961.1	81.5	1,201.1	187.8	787.0	0.4	222.4	51.0	591.2	
Big banks ⁷														
2017 June	4	1,813.0	142.6	570.0	535.6	34.2	491.4	104.3	281.8	0.1	103.6	45.8	563.2	
July	4	1,793.1	156.8	548.9	513.7	35.1	489.1	105.1	282.5	0.1	99.8	45.7	552.5	
Regional banks and other commercial banks														
2017 June	155	978.7	66.6	246.3	202.1	43.5	632.0	59.5	458.3	0.3	112.2	4.4	29.4	
July	155	991.7	81.3	244.8	201.0	43.0	631.7	59.4	458.7	0.2	111.8	4.5	29.4	
Branches of foreign banks														
2017 June	107	417.1	87.3	239.6	235.8	3.8	80.3	23.6	45.3	0.1	11.1	0.8	9.1	
July	107	409.4	69.2	249.9	246.4	3.4	80.3	23.3	45.8	0.1	10.8	0.8	9.3	
Landesbanken														
2017 June	9	912.9	55.3	263.4	195.7	66.7	484.1	52.4	353.7	0.1	76.0	10.4	99.6	
July	9	906.9	53.3	263.3	196.4	65.8	482.6	53.3	352.0	0.1	75.7	10.5	97.2	
Savings banks														
2017 June	397	1,174.4	30.9	179.1	62.1	116.9	933.9	47.9	731.1	0.0	154.7	14.2	16.3	
July	393	1,176.8	31.3	177.2	60.8	116.3	938.0	47.8	734.4	0.0	155.6	14.2	16.1	
Credit cooperatives														
2017 June	963	864.4	15.8	165.2	57.4	107.3	648.4	32.9	509.7	0.0	105.8	16.2	18.8	
July	951	866.3	15.6	164.2	56.8	106.9	651.7	31.5	513.6	0.0	106.4	16.3	18.6	
Mortgage banks														
2017 June	14	257.8	3.0	42.7	30.8	11.9	204.5	2.8	167.7	-	34.1	0.1	7.5	
July	14	255.4	2.4	41.3	29.8	11.5	204.5	2.7	168.3	-	33.5	0.1	7.1	
Building and loan associations														
2017 June	20	228.7	0.8	58.7	41.6	17.1	163.9	1.3	137.8	.	24.8	0.3	4.8	
July	20	229.3	1.0	59.0	41.9	17.1	164.2	1.3	138.0	.	24.9	0.3	4.7	
Banks with special, development and other central support tasks														
2017 June	20	1,250.3	62.6	669.5	581.4	87.0	414.4	27.2	280.0	0.0	105.5	20.9	82.8	
July	20	1,236.6	53.8	667.9	580.7	86.2	411.9	26.0	279.2	0.0	105.0	20.8	82.2	
Memo item: Foreign banks ⁸														
2017 June	142	1,119.8	127.0	422.5	380.9	40.7	478.4	67.3	301.4	0.4	106.9	4.2	87.7	
July	142	1,117.6	117.3	428.7	386.9	40.9	478.2	68.1	302.6	0.3	104.7	4.1	89.2	
of which: Banks majority-owned by foreign banks ⁹														
2017 June	35	702.7	39.7	182.8	145.0	36.9	398.1	43.7	256.1	0.3	95.8	3.4	78.6	
July	35	708.2	48.2	178.9	140.5	37.5	398.0	44.8	256.8	0.3	93.8	3.4	79.9	

* 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)								Bearer debt securities outstanding 5	Capital including published reserves, participation rights capital, funds for general banking risks	Other liabilities 1	End of month
Total	of which		Total	Sight deposits	Time deposits 2		Memo item Liabilities arising from repos 3	Savings deposits 4						
	Sight deposits	Time deposits			for up to and including 1 year	for more than 1 year 2		Total	of which At three months' notice	Bank savings bonds				
All categories of banks														
1,819.8	622.1	1,197.6	3,599.6	1,946.2	305.1	694.2	76.4	596.5	545.3	57.6	1,151.0	488.0	930.9	2017 Feb
1,845.9	625.5	1,220.4	3,580.4	1,930.7	303.1	695.3	57.8	594.6	543.8	56.8	1,147.8	491.8	904.7	Mar
1,826.3	570.1	1,256.1	3,632.2	1,976.6	311.4	693.7	84.6	594.0	543.8	56.5	1,137.0	503.1	900.4	Apr
1,811.9	606.0	1,205.9	3,637.8	1,986.3	307.4	694.9	83.3	593.5	543.7	55.6	1,140.2	505.2	898.2	May
1,774.3	588.8	1,185.5	3,630.1	1,992.9	295.3	694.3	54.7	592.4	542.9	55.1	1,139.6	509.6	843.7	June
1,754.1	566.0	1,188.0	3,644.0	2,003.7	301.0	693.8	79.8	591.2	545.0	54.3	1,124.7	510.5	832.5	July
Commercial banks 6														
882.3	438.3	444.0	1,429.5	883.6	169.6	249.2	37.2	102.7	93.4	24.4	166.8	175.8	554.4	2017 June
863.2	416.1	447.0	1,448.5	893.5	179.3	249.1	60.2	102.4	93.3	24.1	164.9	175.8	541.8	July
Big banks 7														
453.5	204.8	248.7	621.3	360.6	103.4	89.1	37.2	62.1	60.7	6.1	134.6	104.0	499.6	2017 June
436.6	188.1	248.5	632.2	362.3	113.0	89.1	60.2	61.9	60.5	5.9	133.0	103.9	487.4	July
Regional banks and other commercial banks														
188.3	57.5	130.8	650.9	416.1	43.4	134.6	0.0	40.1	32.4	16.7	31.9	63.6	44.0	2017 June
196.1	61.5	134.6	656.0	422.0	42.2	135.2	0.0	40.0	32.4	16.6	31.5	63.7	44.4	July
Branches of foreign banks														
240.5	176.0	64.5	157.2	106.9	22.8	25.5	–	0.5	0.3	1.6	0.4	8.2	10.8	2017 June
230.5	166.5	64.0	160.3	109.2	24.2	24.8	–	0.5	0.3	1.6	0.4	8.2	10.0	July
Landesbanken														
251.0	56.5	194.6	298.8	125.6	62.6	97.5	14.2	12.6	9.8	0.6	208.3	52.3	102.5	2017 June
254.9	59.9	195.1	294.4	122.4	60.8	98.1	16.8	12.6	12.2	0.6	204.1	52.2	101.2	July
Savings banks														
131.3	7.0	124.3	881.8	539.0	14.6	14.8	–	291.2	265.1	22.2	14.1	107.3	39.8	2017 June
131.8	7.0	124.9	883.0	541.1	14.5	14.9	–	290.8	265.0	21.7	14.1	108.2	39.7	July
Credit cooperatives														
111.8	2.6	109.2	641.5	402.4	32.6	14.8	–	185.4	174.3	6.3	7.7	73.9	29.5	2017 June
112.7	2.6	110.1	642.4	404.9	31.7	14.7	–	184.9	174.0	6.1	7.8	74.0	29.6	July
Mortgage banks														
50.4	4.4	46.0	99.0	4.3	6.1	88.6	–	–	–	–	90.2	9.7	8.6	2017 June
50.0	4.5	45.5	97.8	4.2	5.8	87.9	–	–	–	–	89.6	9.6	8.4	July
Building and loan associations														
26.5	4.5	22.0	175.4	3.5	1.5	169.8	–	0.4	0.4	0.1	2.9	11.0	12.9	2017 June
27.5	4.9	22.6	175.1	3.6	1.4	169.5	–	0.4	0.4	0.1	2.9	11.0	12.8	July
Banks with special, development and other central support tasks														
320.9	75.5	245.4	104.1	34.4	8.4	59.7	3.3	–	–	–	649.5	79.8	96.0	2017 June
314.0	71.1	242.8	102.7	34.1	7.4	59.7	2.7	–	–	–	641.3	79.7	98.9	July
Memo item: Foreign banks 8														
416.1	249.2	166.8	540.0	374.5	57.9	77.4	8.1	21.2	20.7	9.0	22.8	49.4	91.6	2017 June
411.7	242.0	169.6	541.9	374.4	60.8	76.6	7.8	21.1	20.6	9.0	22.6	49.6	91.9	July
of which: Banks majority-owned by foreign banks 9														
175.5	73.2	102.3	382.7	267.6	35.1	51.9	8.1	20.6	20.4	7.5	22.4	41.2	80.7	2017 June
181.2	75.5	105.6	381.5	265.2	36.6	51.7	7.8	20.6	20.3	7.4	22.3	41.4	81.8	July

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

3 Assets and liabilities of banks (MFIs) in Germany vis-à-vis residents *

€ billion

Period	Cash in hand (euro-area banknotes and coins)	Credit balances with the Bundesbank	Lending to domestic banks (MFIs)					Lending to domestic non-banks (non-MFIs)					
			Total	Credit balances and loans	Bills	Negotiable money market paper issued by banks	Securities issued by banks	Memo item Fiduciary loans	Total	Loans	Bills	Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks ¹
End of year or month *													
2007	17.5	64.6	1,751.8	1,222.5	0.0	25.3	504.0	2.3	2,975.7	2,647.9	1.6	1.5	324.7
2008	17.4	102.6	1,861.7	1,298.1	0.0	55.7	507.8	2.0	3,071.1	2,698.9	1.2	3.1	367.9
2009	16.9	78.9	1,711.5	1,138.0	–	31.6	541.9	2.2	3,100.1	2,691.8	0.8	4.0	403.5
2010	16.0	79.6	1,686.3	1,195.4	–	7.5	483.5	1.8	3,220.9	2,770.4	0.8	27.9	421.8
2011	15.8	93.8	1,725.6	1,267.9	–	7.1	450.7	2.1	3,197.8	2,774.6	0.8	6.4	415.9
2012	18.5	134.3	1,655.0	1,229.1	–	2.4	423.5	2.4	3,220.4	2,785.5	0.6	2.2	432.1
2013	18.5	85.6	1,545.6	1,153.1	0.0	1.7	390.8	2.2	3,131.6	2,692.6	0.5	1.2	437.2
2014	18.9	81.3	1,425.9	1,065.6	0.0	2.1	358.2	1.7	3,167.3	2,712.2	0.4	0.7	454.0
2015	19.2	155.0	1,346.6	1,062.6	0.0	1.7	282.2	1.7	3,233.9	2,764.0	0.4	0.4	469.0
2016	25.8	284.0	1,364.9	1,099.8	0.0	0.8	264.3	2.0	3,274.3	2,823.8	0.3	0.4	449.8
2016 Feb	15.9	164.3	1,379.8	1,098.3	0.0	1.8	279.7	1.6	3,248.0	2,781.4	0.4	1.5	464.7
Mar	17.2	166.6	1,358.5	1,076.3	0.0	2.0	280.2	1.6	3,247.2	2,785.9	0.3	1.2	459.7
Apr	16.9	179.8	1,392.1	1,110.3	0.0	2.1	279.7	1.6	3,260.6	2,798.3	0.4	1.3	460.6
May	18.4	197.2	1,367.7	1,086.7	0.0	1.8	279.2	1.5	3,264.8	2,805.3	0.3	1.4	457.8
June	19.1	213.5	1,356.7	1,078.8	0.0	1.6	276.2	1.7	3,252.1	2,797.2	0.3	1.8	452.9
July	19.4	233.0	1,349.1	1,074.3	0.0	1.3	273.4	1.7	3,264.5	2,806.4	0.3	1.7	456.1
Aug	19.4	240.9	1,348.1	1,075.2	0.0	1.2	271.7	1.7	3,265.9	2,810.9	0.3	1.3	453.5
Sep	20.7	246.0	1,368.1	1,097.3	0.0	1.2	269.5	1.7	3,274.2	2,819.9	0.3	1.6	452.4
Oct	22.6	258.7	1,360.3	1,090.2	0.0	1.4	268.7	1.7	3,281.0	2,828.6	0.2	1.6	450.6
Nov	22.6	291.7	1,397.6	1,128.8	0.0	1.1	267.6	1.7	3,293.1	2,840.0	0.2	1.3	451.6
Dec	25.8	284.0	1,364.9	1,099.8	0.0	0.8	264.3	2.0	3,274.3	2,823.8	0.3	0.4	449.8
2017 Jan	24.3	346.9	1,407.0	1,142.5	0.0	1.0	263.5	1.7	3,277.7	2,831.2	0.3	0.8	445.4
Feb	23.6	346.6	1,413.8	1,150.2	0.0	1.1	262.5	1.8	3,279.0	2,836.8	0.3	0.8	441.1
Mar	23.4	352.1	1,423.3	1,160.4	0.0	1.3	261.6	1.7	3,283.0	2,840.6	0.3	1.0	441.1
Apr	24.4	400.2	1,424.8	1,161.7	0.0	1.1	262.0	1.7	3,288.9	2,848.6	0.3	1.1	438.9
May	25.4	426.0	1,415.5	1,152.3	0.0	1.1	262.1	1.7	3,292.9	2,851.3	0.2	1.8	439.6
June	27.0	417.8	1,391.1	1,130.4	0.0	1.2	259.4	1.7	3,296.8	2,855.9	0.2	1.1	439.6
July	26.4	420.0	1,398.0	1,139.4	0.0	1.4	257.2	1.7	3,302.5	2,865.2	0.3	1.0	436.1
Changes *													
2008	– 0.1	+ 39.4	+ 125.9	+ 90.1	± 0.0	+ 30.6	+ 5.2	– 0.8	+ 92.0	+ 47.3	– 0.4	+ 1.8	+ 43.3
2009	– 0.5	– 23.6	– 147.2	– 157.3	– 0.0	– 24.1	+ 34.3	+ 0.2	+ 25.7	– 11.2	– 0.4	+ 1.4	+ 35.9
2010	– 0.9	+ 0.6	– 19.3	+ 61.5	± 0.0	– 24.0	– 56.8	– 0.3	+ 130.5	+ 78.7	+ 0.0	+ 23.8	+ 28.0
2011	– 0.2	+ 14.2	+ 47.3	+ 80.5	–	– 0.4	– 32.8	– 0.1	– 30.6	– 3.2	+ 0.0	– 21.5	– 5.9
2012	+ 2.7	+ 40.5	– 68.6	– 37.5	–	– 4.6	– 26.5	+ 0.1	+ 21.0	+ 9.8	– 0.2	– 4.3	+ 15.7
2013	+ 0.0	– 48.8	– 204.1	– 170.6	+ 0.0	– 0.7	– 32.7	– 0.2	+ 4.4	+ 0.3	– 0.1	– 0.6	+ 4.8
2014	+ 0.4	– 4.3	– 119.3	– 87.1	+ 0.0	+ 0.4	– 32.6	+ 0.1	+ 36.7	+ 20.6	– 0.1	– 0.6	+ 16.8
2015	+ 0.3	+ 73.7	– 80.7	– 4.3	– 0.0	– 0.4	– 75.9	– 0.1	+ 68.9	+ 54.1	– 0.0	– 0.3	+ 15.1
2016	+ 6.5	+129.1	+ 48.1	+ 66.9	–	– 0.9	– 17.9	+ 0.4	+ 43.7	+ 62.8	– 0.1	– 0.1	– 18.9
2016 Feb	– 0.3	– 6.5	+ 11.9	+ 13.1	–	– 0.2	– 1.0	– 0.0	+ 9.6	+ 10.6	– 0.1	+ 0.8	– 1.7
Mar	+ 1.3	+ 2.3	– 21.3	– 22.1	–	+ 0.2	+ 0.5	+ 0.0	– 0.8	+ 4.5	– 0.0	– 0.3	– 5.0
Apr	– 0.3	+ 13.2	+ 33.6	+ 34.0	–	+ 0.1	– 0.6	– 0.1	+ 13.3	+ 12.3	+ 0.0	+ 0.1	+ 0.8
May	+ 1.5	+ 17.4	+ 3.9	+ 4.8	–	– 0.4	– 0.5	– 0.0	+ 5.7	+ 8.4	– 0.1	+ 0.1	– 2.7
June	+ 0.7	+ 16.4	– 10.9	– 7.8	–	– 0.1	– 3.0	+ 0.2	– 11.9	– 7.3	– 0.0	+ 0.4	– 5.0
July	+ 0.4	+ 19.4	– 7.6	– 4.5	–	– 0.3	– 2.8	– 0.1	+ 13.3	+ 10.2	– 0.0	– 0.0	+ 3.2
Aug	– 0.0	+ 7.9	– 1.0	+ 0.9	–	– 0.1	– 1.8	+ 0.0	+ 1.5	+ 4.6	+ 0.0	– 0.4	– 2.6
Sep	+ 1.3	+ 5.1	+ 20.0	+ 22.1	–	+ 0.0	– 2.1	– 0.0	+ 8.2	+ 9.1	– 0.0	+ 0.3	– 1.1
Oct	+ 1.8	+ 12.7	– 7.3	– 6.6	–	+ 0.1	– 0.8	– 0.0	+ 7.0	+ 8.6	– 0.0	+ 0.0	– 1.7
Nov	+ 0.1	+ 33.0	+ 37.3	+ 38.7	–	– 0.3	– 1.1	+ 0.0	+ 12.1	+ 11.4	– 0.0	– 0.3	+ 1.0
Dec	+ 3.1	– 7.7	– 32.7	– 29.0	–	– 0.3	– 3.3	+ 0.3	– 19.0	– 16.4	+ 0.1	– 0.9	– 1.8
2017 Jan	– 1.4	+ 62.9	+ 42.1	+ 42.6	–	+ 0.2	– 0.8	– 0.3	+ 3.3	+ 7.3	– 0.0	+ 0.5	– 4.4
Feb	– 0.7	– 0.3	+ 6.8	+ 7.7	–	+ 0.1	– 1.0	+ 0.1	+ 1.4	+ 5.7	– 0.0	– 0.0	– 4.2
Mar	– 0.3	+ 5.5	+ 9.5	+ 10.2	–	+ 0.2	– 0.9	– 0.0	+ 3.9	+ 3.7	+ 0.0	+ 0.2	– 0.0
Apr	+ 1.1	+ 48.1	+ 1.7	+ 1.3	–	–	+ 0.4	– 0.0	+ 5.9	+ 8.1	+ 0.0	+ 0.1	– 2.3
May	+ 0.9	+ 25.8	– 9.4	– 9.5	–	– 0.0	+ 0.1	– 0.0	+ 3.9	+ 2.6	– 0.1	+ 0.7	+ 0.7
June	+ 1.7	– 8.2	– 23.5	– 20.9	–	+ 0.1	– 2.7	– 0.0	+ 4.0	+ 4.6	+ 0.0	– 0.6	– 0.0
July	– 0.7	+ 2.2	+ 6.9	+ 9.0	–	+ 0.2	– 2.2	–	+ 5.7	+ 9.4	+ 0.0	– 0.2	– 3.5

* 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 debt securities arising from the exchange of equalisation claims

(see also footnote 2). **2** Including debt securities arising from the exchange of equalisation claims. **3** Including liabilities arising from registered debt securities, registered money market paper and non-negotiable bearer debt securities; including subordinated liabilities. **4** Including liabilities arising from monetary policy operations

IV Banks

Equalisation claims 2	Memo item Fiduciary loans	Participating interests in domestic banks and enterprises	Deposits of domestic banks (MFIs) 3					Deposits of domestic non-banks (non-MFIs)					Memo item Fiduciary loans	Period
			Total	Sight deposits 4	Time deposits 4	Redis-counted bills 5	Memo item Fiduciary loans	Total	Sight deposits 6	Time deposits 6	Savings deposits 7	Bank savings bonds 8		
End of year or month *														
-	51.1	109.4	1,478.6	122.1	1,356.5	0.0	20.0	2,579.1	779.9	1,125.4	555.4	118.4	36.4	2007
-	47.2	111.2	1,582.5	138.5	1,444.0	0.0	41.6	2,781.4	834.6	1,276.1	535.2	135.4	32.3	2008
-	43.9	106.1	1,355.1	128.9	1,226.2	0.0	35.7	2,829.7	1,029.5	1,102.6	594.5	103.2	43.4	2009
-	33.7	96.8	1,238.3	135.3	1,102.6	0.0	13.8	2,935.2	1,104.4	1,117.1	618.2	95.4	37.5	2010
-	36.3	94.6	1,210.5	114.8	1,095.3	0.0	36.1	3,045.5	1,168.3	1,156.2	616.1	104.8	36.5	2011
-	34.8	90.0	1,135.5	132.9	1,002.6	0.0	36.3	3,090.2	1,306.5	1,072.5	617.6	93.6	34.9	2012
-	31.6	92.3	1,140.3	125.6	1,014.7	0.0	33.2	3,048.7	1,409.9	952.0	610.1	76.6	32.9	2013
-	26.5	94.3	1,111.9	127.8	984.0	0.0	11.7	3,118.2	1,517.8	926.7	607.8	66.0	30.9	2014
-	20.4	89.6	1,065.6	131.1	934.5	0.0	6.1	3,224.7	1,673.7	898.4	596.5	56.1	29.3	2015
-	19.1	91.0	1,032.9	129.5	903.3	0.1	5.6	3,326.7	1,798.2	889.6	588.5	50.4	28.8	2016
-	20.2	89.8	1,061.7	151.8	909.9	0.0	5.9	3,236.2	1,697.4	887.8	596.4	54.6	29.3	2016 Feb
-	19.9	90.3	1,058.6	147.9	910.7	0.0	5.9	3,231.2	1,687.4	894.9	594.5	54.4	29.1	2016 Mar
-	19.8	89.8	1,060.2	149.7	910.4	0.0	5.9	3,249.8	1,709.6	893.5	592.7	54.0	29.0	2016 Apr
-	19.7	89.9	1,026.8	142.0	884.7	0.0	5.8	3,262.7	1,721.8	896.1	591.2	53.7	29.0	2016 May
-	19.6	89.9	1,038.6	152.5	886.0	0.0	6.0	3,259.9	1,722.6	894.1	590.0	53.1	28.7	2016 June
-	19.5	90.1	1,022.8	140.0	882.7	0.0	5.9	3,275.7	1,737.1	896.8	589.1	52.7	28.6	2016 July
-	19.4	90.3	1,015.7	137.3	878.3	0.0	5.9	3,282.1	1,748.5	893.1	588.4	52.2	28.7	2016 Aug
-	19.3	89.8	1,028.7	132.1	896.6	0.0	5.8	3,283.7	1,748.1	896.6	587.2	51.8	28.6	2016 Sep
-	19.1	89.7	1,025.1	137.1	887.9	0.0	5.7	3,294.7	1,768.0	888.8	586.6	51.3	28.6	2016 Oct
-	19.1	89.3	1,041.1	145.9	895.1	0.0	5.6	3,328.9	1,799.3	892.5	586.2	50.9	28.6	2016 Nov
-	19.1	91.0	1,032.9	129.5	903.3	0.1	5.6	3,326.7	1,798.2	889.6	588.5	50.4	28.8	2016 Dec
-	20.3	90.8	1,052.6	136.9	915.6	0.1	5.5	3,346.3	1,812.5	895.8	588.5	49.5	30.6	2017 Jan
-	20.3	89.4	1,054.6	141.4	913.1	0.0	5.6	3,345.5	1,816.6	891.4	588.5	49.0	30.5	2017 Feb
-	20.1	89.1	1,077.0	137.4	939.6	0.0	5.5	3,342.8	1,817.0	890.9	586.7	48.2	30.4	2017 Mar
-	20.1	88.8	1,074.8	140.7	934.2	0.0	5.5	3,360.3	1,844.4	881.9	586.2	47.8	30.3	2017 Apr
-	20.0	88.7	1,079.5	142.0	937.5	-	5.5	3,368.4	1,852.2	883.4	585.7	47.0	30.4	2017 May
-	19.7	88.4	1,053.9	125.6	928.3	0.0	5.5	3,370.3	1,869.2	869.8	584.7	46.6	29.8	2017 June
-	19.6	88.5	1,061.7	125.0	936.6	0.0	5.4	3,361.5	1,866.0	866.0	583.5	46.0	29.9	2017 July
Changes *														
-	- 5.4	+ 7.8	+ 124.3	+ 23.0	+ 101.3	- 0.0	- 3.6	+ 207.6	+ 54.3	+ 156.6	- 20.2	+ 17.0	- 1.3	2008
-	- 4.2	+ 0.7	- 225.4	- 9.7	- 215.7	- 0.0	- 5.7	+ 59.7	+ 211.4	- 179.3	+ 59.3	- 31.6	- 0.9	2009
-	- 2.1	- 9.2	- 96.5	+ 22.3	- 119.1	- 0.0	- 0.2	+ 77.8	+ 76.0	- 18.9	+ 24.0	- 3.3	- 1.7	2010
-	- 1.1	- 2.2	- 25.0	- 20.0	- 5.1	- 0.0	+ 0.1	+ 111.2	+ 63.7	+ 40.9	- 2.6	+ 9.3	- 1.1	2011
-	- 1.3	- 4.1	- 70.8	+ 21.5	- 91.9	- 0.0	+ 0.2	+ 42.2	+ 138.7	- 86.7	+ 1.5	- 11.2	- 1.6	2012
-	- 3.3	+ 2.4	- 79.4	- 24.1	- 55.3	+ 0.0	- 3.4	+ 40.2	+ 118.4	- 53.9	- 7.4	- 17.0	- 1.7	2013
-	- 1.9	+ 2.0	- 29.0	+ 2.2	- 31.2	- 0.0	- 0.6	+ 69.7	+ 107.9	- 25.3	- 2.4	- 10.6	- 2.0	2014
-	- 2.1	- 4.3	- 46.6	+ 3.3	- 50.0	+ 0.0	- 1.3	+ 106.5	+ 156.2	- 28.3	- 11.3	- 10.1	- 1.6	2015
-	- 1.3	+ 1.5	- 1.7	+ 0.3	- 2.0	+ 0.0	- 0.5	+ 104.7	+ 124.5	- 6.9	- 7.9	- 5.0	- 0.5	2016
-	- 0.1	- 0.2	- 3.1	+ 7.0	- 10.1	+ 0.0	- 0.0	+ 4.8	+ 7.9	- 3.1	+ 0.3	- 0.2	- 0.0	2016 Feb
-	- 0.3	+ 0.5	- 3.2	- 4.0	+ 0.8	- 0.0	- 0.1	- 5.0	- 10.0	+ 7.0	- 1.9	- 0.2	- 0.2	2016 Mar
-	- 0.1	- 0.3	+ 1.6	+ 1.9	- 0.3	- 0.0	+ 0.0	+ 18.6	+ 22.2	- 1.3	- 1.8	- 0.5	- 0.1	2016 Apr
-	- 0.1	+ 0.1	- 5.1	- 2.9	- 2.2	+ 0.0	- 0.0	+ 12.9	+ 12.2	+ 2.5	- 1.5	- 0.3	- 0.0	2016 May
-	- 0.1	+ 0.0	+ 12.8	+ 10.8	+ 2.0	-	+ 0.2	- 2.5	+ 0.9	- 1.7	- 1.1	- 0.5	- 0.3	2016 June
-	- 0.1	- 0.0	- 15.8	- 12.5	- 3.3	-	- 0.1	+ 15.8	+ 14.5	+ 2.7	- 0.9	- 0.5	- 0.0	2016 July
-	- 0.1	+ 0.2	- 7.1	- 2.7	- 4.4	-	- 0.0	+ 6.4	+ 11.4	- 3.8	- 0.7	- 0.5	+ 0.0	2016 Aug
-	- 0.1	- 0.5	+ 13.0	- 5.3	+ 18.3	-	- 0.1	+ 1.6	- 0.4	+ 3.6	- 1.2	- 0.3	- 0.0	2016 Sep
-	- 0.2	+ 0.1	- 3.2	+ 1.5	- 4.7	+ 0.0	- 0.1	+ 11.0	+ 20.0	- 7.9	- 0.6	- 0.5	- 0.0	2016 Oct
-	- 0.0	- 0.4	+ 16.0	+ 8.8	+ 7.3	- 0.0	- 0.0	+ 34.2	+ 31.3	+ 3.7	- 0.4	- 0.4	-	2016 Nov
-	+ 0.0	+ 1.6	- 8.2	- 16.4	+ 8.2	+ 0.0	- 0.0	- 2.2	- 1.2	- 2.8	+ 2.3	- 0.5	+ 0.2	2016 Dec
-	+ 1.2	- 0.2	+ 19.7	+ 7.4	+ 12.3	-	- 0.1	+ 19.6	+ 14.4	+ 6.2	- 0.1	- 0.9	+ 1.0	2017 Jan
-	- 0.1	- 1.4	+ 2.0	+ 4.6	- 2.5	- 0.0	+ 0.1	- 0.8	+ 4.1	- 4.5	+ 0.1	- 0.5	- 0.1	2017 Feb
-	- 0.1	- 0.3	+ 22.4	- 4.1	+ 26.5	- 0.0	- 0.1	- 2.7	+ 0.4	- 0.5	- 1.9	- 0.7	- 0.1	2017 Mar
-	- 0.1	- 0.3	- 2.2	+ 3.3	- 5.5	- 0.0	- 0.0	+ 17.5	+ 27.3	- 9.0	- 0.5	- 0.4	- 0.1	2017 Apr
-	- 0.0	- 0.0	+ 4.6	+ 1.3	+ 3.3	- 0.0	+ 0.0	+ 8.1	+ 7.8	+ 1.6	- 0.5	- 0.8	+ 0.0	2017 May
-	- 0.4	+ 0.0	- 24.6	- 16.1	- 8.5	+ 0.0	- 0.0	+ 10.9	+ 17.0	- 4.6	- 1.0	- 0.4	- 0.6	2017 June
-	- 0.0	+ 0.1	+ 7.8	- 0.5	+ 8.3	-	- 0.0	- 8.8	- 3.1	- 3.8	- 1.2	- 0.7	+ 0.2	2017 July

with the Bundesbank. 5 Own acceptances and promissory notes outstanding. 6 Since the inclusion of building and loan associations in January 1999, including deposits under savings and loan contracts (see Table IV.12). 7 Excluding deposits under

savings and loan contracts (see also footnote 8). 8 Including liabilities arising from non-negotiable bearer debt securities.

IV Banks

4 Assets and liabilities of banks (MFIs) in Germany vis-à-vis non-residents *

€ billion

Period	Cash in hand (non-euro-area banknotes and coins)	Lending to foreign banks (MFIs)							Lending to foreign non-banks (non-MFIs)					
		Total	Credit balances and loans, bills			Negotiable money market paper issued by banks	Securities issued by banks	Memo item Fiduciary loans	Total	Loans and bills			Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks
			Total	Short-term	Medium and long-term					Total	Short-term	Medium and long-term		
End of year or month *														
2007	0.3	1,433.5	1,105.9	803.6	302.4	13.4	314.2	0.5	908.3	492.9	197.5	295.4	27.5	387.9
2008	0.3	1,446.6	1,131.6	767.2	364.3	15.6	299.5	1.9	908.4	528.9	151.4	377.5	12.9	366.6
2009	0.3	1,277.4	986.1	643.5	342.6	6.2	285.0	2.9	815.7	469.6	116.9	352.7	9.8	336.3
2010	0.5	1,154.1	892.7	607.7	285.1	2.1	259.3	1.8	773.8	461.4	112.6	348.8	10.1	302.3
2011	0.6	1,117.6	871.0	566.3	304.8	4.6	241.9	2.6	744.4	455.8	102.0	353.8	8.5	280.1
2012	0.8	1,046.0	813.5	545.5	268.1	5.4	227.0	2.6	729.0	442.2	105.1	337.1	9.0	277.8
2013	0.2	1,019.7	782.4	546.6	235.8	7.2	230.1	2.5	701.0	404.9	100.3	304.6	8.2	287.8
2014	0.2	1,125.2	884.8	618.7	266.1	7.9	232.5	1.1	735.1	415.2	94.4	320.8	6.5	313.5
2015	0.3	1,066.9	830.7	555.9	274.7	1.2	235.0	1.0	751.5	424.3	83.8	340.5	7.5	319.7
2016	0.3	1,055.9	820.6	519.8	300.7	0.5	234.9	1.0	756.2	451.6	90.1	361.4	5.0	299.6
2016 Feb	0.3	1,095.3	854.5	580.2	274.3	3.1	237.8	1.0	765.9	445.3	102.6	342.7	10.2	310.3
Mar	0.3	1,057.4	816.6	551.7	264.9	3.0	237.8	1.0	754.4	427.1	87.9	339.2	9.1	318.2
Apr	0.3	1,064.5	824.2	559.7	264.5	3.3	237.1	1.0	762.5	440.0	99.9	340.0	9.4	313.1
May	0.3	1,063.5	825.4	554.4	271.0	3.5	234.6	1.0	766.3	439.7	94.3	345.4	8.9	317.7
June	0.3	1,091.2	851.1	580.7	270.4	3.6	236.4	1.0	758.7	435.5	89.4	346.1	6.4	316.8
July	0.3	1,089.1	854.6	586.5	268.0	2.7	231.9	1.0	766.0	448.5	100.1	348.4	4.1	313.4
Aug	0.3	1,081.5	848.6	577.9	270.7	2.5	230.4	1.0	765.4	450.3	99.9	350.4	5.1	310.0
Sep	0.3	1,046.8	806.0	535.5	270.5	2.5	238.4	1.0	751.0	444.0	93.6	350.4	4.7	302.3
Oct	0.3	1,089.3	850.4	571.3	279.0	2.1	236.8	1.0	758.1	454.5	102.9	351.6	4.2	299.3
Nov	0.3	1,074.3	837.9	541.7	296.2	1.7	234.7	1.0	765.2	459.4	103.6	355.9	5.5	300.3
Dec	0.3	1,055.9	820.6	519.8	300.7	0.5	234.9	1.0	756.2	451.6	90.1	361.4	5.0	299.6
2017 Jan	0.3	1,069.4	836.4	537.3	299.0	0.8	232.2	1.7	772.9	468.4	109.0	359.4	5.3	299.1
Feb	0.3	1,088.4	854.7	552.1	302.6	1.3	232.5	1.7	782.0	474.4	110.6	363.8	6.2	301.3
Mar	0.3	1,086.7	854.7	548.7	306.0	1.9	230.0	1.7	777.5	475.7	110.9	364.9	4.1	297.7
Apr	0.3	1,063.7	833.7	529.7	304.0	1.9	228.0	1.7	774.4	477.4	114.5	362.9	4.8	292.2
May	0.3	1,037.5	804.3	506.9	297.4	2.2	231.0	1.9	771.7	475.9	112.3	363.6	5.1	290.8
June	0.3	1,043.5	812.2	515.4	296.8	2.3	229.0	1.9	756.2	461.8	102.5	359.3	6.3	288.1
July	0.3	1,018.5	788.2	493.2	295.0	2.2	228.0	2.1	751.5	458.0	102.6	355.4	6.1	287.4
Changes *														
2008	+ 0.0	+ 8.5	+ 20.2	- 43.0	+ 63.2	+ 2.1	- 13.7	- 0.0	+ 4.3	+ 45.1	- 31.9	+ 77.0	- 14.5	- 26.3
2009	- 0.0	- 170.0	- 141.3	- 122.5	- 18.8	- 10.3	- 18.4	- 0.2	- 72.8	- 43.8	- 31.7	- 12.1	- 3.3	- 25.7
2010	+ 0.1	- 141.5	- 116.2	- 47.3	- 68.9	- 4.8	- 20.4	- 0.2	- 62.0	- 24.5	- 12.6	- 11.9	+ 0.4	- 38.0
2011	+ 0.1	- 48.4	- 32.6	- 45.3	+ 12.7	+ 2.5	- 18.4	+ 0.0	- 38.9	- 13.6	- 12.8	- 0.9	- 1.6	- 23.6
2012	+ 0.1	- 70.1	- 56.8	- 23.1	- 33.7	+ 0.9	- 14.1	- 0.1	- 9.4	- 7.5	+ 8.3	- 15.9	+ 0.6	- 2.5
2013	- 0.5	- 22.7	- 26.9	- 1.3	- 25.6	+ 1.8	+ 2.4	- 0.0	- 21.2	- 33.1	- 5.8	- 27.2	- 0.7	+ 12.6
2014	- 0.0	+ 86.1	+ 80.1	+ 63.2	+ 16.8	+ 0.7	+ 5.3	- 0.6	+ 5.7	- 10.2	- 12.8	+ 2.7	- 1.8	+ 17.7
2015	+ 0.1	- 91.8	- 86.0	- 82.2	- 3.8	- 6.7	+ 0.8	- 0.1	- 6.1	- 9.2	- 6.5	- 2.7	+ 1.1	+ 2.0
2016	+ 0.0	- 25.5	- 14.5	- 38.2	+ 23.7	- 0.7	- 10.3	- 0.0	+ 17.4	+ 28.9	+ 10.1	+ 18.8	- 3.0	- 8.5
2016 Feb	+ 0.0	+ 14.9	+ 9.6	+ 10.3	- 0.7	+ 1.1	+ 4.2	+ 0.0	- 0.2	+ 5.8	+ 2.1	+ 3.7	+ 1.1	- 7.1
Mar	- 0.0	- 26.3	- 26.5	- 22.8	- 3.7	- 0.1	+ 0.3	+ 0.0	- 3.8	- 12.2	- 13.6	+ 1.3	- 0.9	+ 9.3
Apr	- 0.0	+ 6.6	+ 7.0	+ 7.6	- 0.5	+ 0.3	- 0.8	+ 0.0	+ 7.5	+ 12.7	+ 11.9	+ 0.7	+ 0.1	- 5.3
May	+ 0.0	- 5.7	- 3.3	- 7.9	+ 4.6	+ 0.2	- 2.6	+ 0.0	+ 0.8	- 2.7	- 4.6	+ 1.9	- 0.4	+ 3.9
June	+ 0.0	+ 28.8	+ 26.7	+ 26.9	- 0.3	+ 0.1	+ 2.0	- 0.0	- 5.5	- 2.8	- 4.3	+ 1.4	- 2.8	+ 0.1
July	- 0.0	- 1.0	+ 4.4	+ 6.2	- 1.9	- 1.0	- 4.5	+ 0.0	+ 8.0	+ 13.6	+ 10.9	+ 2.7	- 2.3	- 3.3
Aug	+ 0.0	- 6.7	- 5.0	- 8.1	+ 3.0	- 0.2	- 1.5	+ 0.0	- 0.2	+ 2.2	- 0.1	+ 2.3	+ 1.0	- 3.3
Sep	- 0.0	- 44.3	- 42.2	- 42.1	- 0.1	- 0.0	- 2.1	+ 0.0	- 3.2	- 5.3	- 6.1	+ 0.8	- 0.4	+ 2.5
Oct	- 0.0	+ 38.4	+ 40.6	+ 34.1	+ 6.5	- 0.3	- 1.8	- 0.0	+ 5.4	+ 9.0	+ 9.1	- 0.1	- 0.5	- 3.1
Nov	+ 0.0	- 25.6	- 22.6	- 35.0	+ 12.3	- 0.5	- 2.5	+ 0.0	+ 0.9	- 0.4	- 0.5	+ 0.1	+ 1.2	+ 0.1
Dec	+ 0.0	- 20.7	- 19.9	- 23.1	+ 3.2	- 1.2	+ 0.4	- 0.0	- 10.7	- 9.1	- 13.4	+ 4.3	- 0.5	- 1.2
2017 Jan	+ 0.0	+ 18.9	+ 21.1	+ 19.8	+ 1.3	+ 0.3	- 2.5	+ 0.0	+ 19.9	+ 19.5	+ 19.3	+ 0.2	+ 0.3	+ 0.1
Feb	- 0.0	+ 14.0	+ 13.5	+ 12.3	+ 1.2	+ 0.4	+ 0.1	+ 0.0	+ 6.2	+ 3.5	+ 1.0	+ 2.5	+ 0.9	+ 1.8
Mar	- 0.0	+ 1.3	+ 3.0	- 1.8	+ 4.8	+ 0.4	- 2.1	- 0.0	- 2.7	+ 2.7	+ 0.6	+ 2.1	- 0.7	- 4.7
Apr	+ 0.0	- 16.1	- 14.2	- 15.4	+ 1.2	+ 0.0	- 1.9	+ 0.0	- 0.1	+ 4.2	+ 3.8	+ 0.4	+ 0.6	- 4.9
May	- 0.0	- 17.3	- 20.9	- 18.6	- 2.3	+ 0.3	+ 3.3	+ 0.2	+ 2.8	+ 3.0	- 0.3	+ 3.4	+ 0.4	- 0.6
June	- 0.0	+ 11.0	+ 12.7	+ 10.9	+ 1.9	+ 0.1	- 1.9	+ 0.0	- 12.8	- 11.8	- 9.3	- 2.5	+ 1.2	- 2.2
July	- 0.0	- 16.8	- 16.1	- 18.2	+ 2.1	- 0.0	- 0.7	+ 0.1	+ 0.1	+ 0.2	+ 0.7	- 0.6	- 0.2	+ 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.

IV Banks

Memo item Fiduciary loans	Participating interests in foreign banks and enter- prises	Deposits of foreign banks (MFIs)						Deposits of foreign non-banks (non-MFIs)						Memo item Fiduciary loans	Period
		Total	Sight deposits	Time deposits (including bank savings bonds)			Memo item Fiduciary loans	Total	Sight deposits	Time deposits (including savings deposits and bank savings bonds)					
				Total	Short- term	Medium and long- term				Total	Short- term	Medium and long- term			
End of year or month *															
5.7	48.3	738.9	164.7	574.1	461.2	113.0	0.2	303.1	76.0	227.1	122.3	104.8	3.1	2007	
25.5	45.1	703.3	218.1	485.1	362.3	122.9	0.3	286.1	92.2	193.9	95.1	98.8	2.5	2008	
32.1	45.4	652.6	213.6	439.0	307.4	131.6	0.2	216.3	78.1	138.2	73.7	64.5	1.9	2009	
15.6	48.8	741.7	258.7	483.0	349.3	133.6	0.1	227.6	84.8	142.7	76.7	66.0	1.5	2010	
32.9	45.0	655.7	242.6	413.1	289.4	123.7	0.1	225.9	92.3	133.6	66.9	66.6	1.3	2011	
32.6	46.4	691.1	289.4	401.7	284.6	117.0	0.1	237.6	107.2	130.3	69.1	61.2	1.2	2012	
30.8	39.0	515.7	222.6	293.2	196.0	97.2	0.1	257.8	118.1	139.7	76.8	62.9	1.0	2013	
14.0	35.6	609.2	277.1	332.1	242.7	89.4	0.1	221.0	113.0	107.9	47.8	60.1	0.7	2014	
13.1	30.5	611.9	323.4	288.5	203.8	84.7	0.1	201.1	102.6	98.5	49.3	49.2	0.7	2015	
13.1	28.7	696.1	374.4	321.6	234.2	87.5	0.0	206.2	100.3	105.9	55.2	50.8	0.7	2016	
13.2	29.0	644.4	357.8	286.6	201.8	84.8	0.1	246.4	137.2	109.2	61.8	47.5	0.8	2016 Feb	
13.3	28.9	623.4	349.6	273.8	192.0	81.8	0.0	218.8	119.8	99.0	52.9	46.1	0.8	Mar	
13.3	28.9	658.0	344.2	313.8	234.1	79.6	0.0	233.6	126.9	106.7	62.0	44.8	0.8	Apr	
13.3	28.9	664.6	389.5	275.1	195.6	79.5	0.0	239.7	130.6	109.0	64.2	44.8	0.7	May	
13.1	29.2	679.1	397.7	281.4	203.4	77.9	0.0	235.5	132.8	102.7	57.2	45.5	0.7	June	
13.1	29.4	706.1	408.3	297.8	217.9	80.0	0.0	244.0	129.1	114.9	68.2	46.6	0.7	July	
13.1	29.4	701.3	398.5	302.8	220.1	82.7	0.0	248.3	127.3	121.0	74.9	46.1	0.7	Aug	
13.1	29.4	679.5	366.0	313.5	231.3	82.2	0.0	233.3	124.6	108.7	62.0	46.7	0.7	Sep	
13.2	28.8	692.7	398.6	294.1	211.9	82.2	0.0	266.3	146.2	120.1	72.0	48.1	0.7	Oct	
13.2	28.9	703.9	416.7	287.2	203.2	84.0	0.0	266.2	138.3	128.0	79.1	48.9	0.7	Nov	
13.1	28.7	696.1	374.4	321.6	234.2	87.5	0.0	206.2	100.3	105.9	55.2	50.8	0.7	Dec	
13.0	28.4	746.1	452.6	293.5	206.4	87.1	0.0	246.7	125.6	121.1	71.1	50.0	0.7	2017 Jan	
13.0	24.8	765.2	480.7	284.5	197.4	87.1	0.0	254.0	129.5	124.5	74.8	49.7	0.7	Feb	
12.9	24.7	768.8	488.1	280.7	192.1	88.6	0.0	237.6	113.7	124.0	72.2	51.8	0.7	Mar	
12.9	24.8	751.4	429.4	322.0	234.2	87.7	0.0	271.9	132.3	139.7	89.0	50.6	0.7	Apr	
12.8	24.6	732.4	464.0	268.4	181.8	86.5	0.0	269.4	134.1	135.3	85.0	50.3	0.6	May	
12.5	24.4	720.3	463.2	257.1	170.1	87.0	0.0	259.9	123.7	136.1	75.7	60.4	0.6	June	
12.5	24.4	692.4	441.0	251.4	165.5	85.9	0.0	282.5	137.7	144.8	84.6	60.3	0.6	July	
Changes *															
+ 0.7	- 3.1	- 50.1	+ 52.2	- 102.3	- 120.7	+ 18.5	+ 0.1	- 12.4	+ 16.1	- 28.5	- 19.4	- 9.1	- 0.6	2008	
- 3.2	+ 0.1	- 81.4	- 2.1	- 79.3	- 57.5	- 21.7	- 0.2	- 33.5	- 13.3	- 20.1	- 17.0	- 3.1	- 0.6	2009	
+ 0.2	+ 1.4	+ 895.4	+ 42.0	+ 542.4	+ 38.1	+ 136.8	- 0.1	- 1.6	+ 6.0	- 7.6	- 3.3	- 4.4	- 0.4	2010	
- 0.1	- 3.9	- 88.8	- 13.8	- 75.0	- 61.8	- 13.1	- 0.0	- 9.3	+ 6.4	- 15.7	- 10.4	- 5.3	- 0.2	2011	
- 0.3	+ 1.5	+ 38.2	+ 51.7	- 13.5	- 7.5	- 6.0	- 0.0	+ 12.6	+ 15.2	- 2.6	+ 2.5	- 5.1	- 0.1	2012	
- 1.8	- 7.2	- 174.0	- 75.6	- 98.4	- 83.1	- 15.4	- 0.0	+ 13.5	+ 9.6	+ 3.9	+ 6.9	- 3.0	- 0.2	2013	
+ 0.1	- 3.8	+ 76.3	+ 47.8	+ 28.5	+ 39.0	- 10.5	- 0.0	- 43.6	- 8.3	- 35.3	- 30.7	- 4.6	+ 0.2	2014	
- 0.6	- 6.1	- 15.4	+ 40.6	- 56.0	- 48.6	- 7.4	- 0.0	- 26.5	- 13.9	- 12.6	+ 0.3	- 13.0	- 0.0	2015	
- 0.1	- 1.5	+ 82.7	+ 51.0	+ 31.7	+ 27.0	+ 4.7	- 0.0	+ 3.5	- 3.1	+ 6.7	+ 5.9	+ 0.8	- 0.0	2016	
+ 0.0	- 0.4	+ 6.2	+ 5.1	+ 1.1	+ 0.8	+ 0.3	-	+ 8.9	+ 8.3	+ 0.6	+ 1.3	- 0.7	- 0.0	2016 Feb	
+ 0.0	- 0.0	- 14.0	- 5.4	- 8.6	- 6.7	- 2.0	- 0.0	- 25.6	- 16.5	- 9.1	- 7.9	- 1.2	+ 0.0	Mar	
+ 0.0	- 0.0	+ 34.2	- 5.7	+ 39.9	+ 40.6	- 0.7	-	+ 14.7	+ 7.1	+ 7.6	+ 9.1	- 1.4	- 0.0	Apr	
+ 0.0	+ 0.0	+ 2.8	+ 44.1	- 41.3	- 40.6	- 0.7	+ 0.0	+ 5.0	+ 3.3	+ 1.7	+ 1.9	- 0.2	- 0.1	May	
- 0.2	+ 0.3	+ 16.8	+ 9.4	+ 7.4	+ 7.8	- 0.4	- 0.0	- 4.5	+ 2.2	- 6.8	- 7.3	+ 0.5	+ 0.0	June	
+ 0.0	+ 0.4	+ 27.8	+ 11.0	+ 16.8	+ 14.7	+ 2.1	- 0.0	+ 8.5	- 3.8	+ 12.3	+ 11.5	+ 0.8	- 0.0	July	
+ 0.0	+ 0.0	- 4.3	- 9.5	+ 5.2	+ 2.4	+ 2.8	-	+ 4.5	- 1.7	+ 6.2	+ 6.7	- 0.5	- 0.1	Aug	
+ 0.0	- 0.0	- 21.2	- 32.3	+ 11.1	+ 11.6	- 0.5	- 0.0	- 14.8	- 2.7	- 12.1	- 12.7	+ 0.7	- 0.0	Sep	
+ 0.1	- 0.6	+ 11.1	+ 31.7	- 20.5	- 20.1	- 0.4	- 0.0	+ 32.5	+ 21.4	+ 11.2	+ 9.8	+ 1.3	+ 0.1	Oct	
+ 0.0	+ 0.0	+ 4.9	+ 15.8	- 10.9	- 12.0	+ 1.1	- 0.0	- 2.2	- 9.0	+ 6.9	+ 6.4	+ 0.4	+ 0.0	Nov	
- 0.1	- 0.3	- 9.2	- 42.7	+ 33.5	+ 30.2	+ 3.3	- 0.0	- 60.5	- 38.2	- 22.3	- 24.1	+ 1.8	+ 0.0	Dec	
- 0.0	- 0.2	+ 52.9	+ 79.0	- 26.1	- 26.2	+ 0.1	-	+ 41.2	+ 25.6	+ 15.6	+ 16.2	- 0.6	- 0.0	2017 Jan	
- 0.1	- 3.6	+ 15.9	+ 26.6	- 10.7	- 10.3	- 0.4	-	+ 6.6	+ 3.7	+ 2.9	+ 3.4	- 0.4	+ 0.0	Feb	
- 0.0	- 0.0	+ 5.5	+ 8.3	- 2.8	- 4.5	+ 1.7	-	- 15.9	- 15.7	- 0.2	- 2.4	+ 2.2	- 0.0	Mar	
- 0.0	+ 0.1	- 12.8	- 56.2	+ 43.4	+ 43.7	- 0.4	-	+ 34.4	+ 18.2	+ 16.2	+ 17.1	- 0.9	-	Apr	
- 0.1	- 0.1	- 13.8	+ 36.5	- 50.3	- 49.8	- 0.5	-	- 0.9	+ 2.4	- 3.3	- 3.3	- 0.0	- 0.0	May	
- 0.3	- 0.2	- 9.0	+ 0.6	- 9.6	- 10.5	+ 0.9	-	- 17.8	- 10.0	- 7.8	- 9.0	+ 1.2	- 0.0	June	
- 0.0	+ 0.0	- 23.9	- 19.7	- 4.2	- 3.7	- 0.5	-	+ 24.0	+ 14.4	+ 9.6	+ 9.5	+ 0.1	- 0.0	July	

IV Banks

5 Lending by banks (MFIs) in Germany to domestic non-banks (non-MFIs) *

€ billion

Period	Lending to domestic non-banks, total		Short-term lending						Medium and long-term			
	including negotiable money market paper, securities, equalisation claims	excluding negotiable money market paper, securities, equalisation claims	Total	to enterprises and households			to general government			Total	to enter-	
				Total	Loans and bills	Negotiable money market paper	Total	Loans	Treasury bills			
												End of year or month *
2007	2,975.7	2,649.5	331.2	301.8	301.5	0.3	29.4	28.2	1.2	2,644.6	2,168.3	
2008	3,071.1	2,700.1	373.0	337.5	335.3	2.2	35.5	34.5	1.0	2,698.1	2,257.8	
2009	3,100.1	2,692.6	347.3	306.3	306.2	0.1	41.0	37.1	3.9	2,752.8	2,299.7	
2010	3,220.9	2,771.3	428.0	283.0	282.8	0.2	145.0	117.2	27.7	2,793.0	2,305.6	
2011	3,197.8	2,775.4	383.3	316.5	316.1	0.4	66.8	60.7	6.0	2,814.5	2,321.9	
2012	3,220.4	2,786.1	376.1	316.8	316.3	0.5	59.3	57.6	1.7	2,844.3	2,310.9	
2013	3,131.6	2,693.2	269.1	217.7	217.0	0.6	51.4	50.8	0.6	2,862.6	2,328.6	
2014	3,167.3	2,712.6	257.5	212.7	212.1	0.6	44.8	44.7	0.1	2,909.8	2,376.8	
2015	3,233.9	2,764.4	255.5	207.8	207.6	0.2	47.8	47.5	0.2	2,978.3	2,451.4	
2016	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0	
2016 Feb	3,248.0	2,781.8	266.3	214.3	213.6	0.7	52.0	51.2	0.8	2,981.7	2,456.1	
Mar	3,247.2	2,786.3	271.4	218.7	217.9	0.8	52.6	52.2	0.4	2,975.9	2,454.1	
Apr	3,260.6	2,798.7	273.9	217.9	217.2	0.8	56.0	55.5	0.5	2,986.6	2,466.5	
May	3,264.8	2,805.6	276.1	221.2	220.4	0.8	55.0	54.4	0.6	2,988.7	2,472.7	
June	3,252.1	2,797.5	268.8	217.8	216.8	1.1	51.0	50.3	0.7	2,983.3	2,472.8	
July	3,264.5	2,806.6	268.8	213.8	212.9	1.0	55.0	54.2	0.7	2,995.6	2,483.9	
Aug	3,265.9	2,811.2	262.2	208.1	207.5	0.6	54.1	53.4	0.7	3,003.8	2,497.1	
Sep	3,274.2	2,820.2	268.7	214.2	213.7	0.5	54.5	53.4	1.1	3,005.4	2,502.7	
Oct	3,281.0	2,828.8	269.7	212.6	212.0	0.6	57.1	56.1	1.0	3,011.3	2,512.3	
Nov	3,293.1	2,840.2	268.0	216.3	215.8	0.5	51.7	51.0	0.8	3,025.0	2,525.5	
Dec	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0	
2017 Jan	3,277.7	2,831.5	252.1	208.6	208.0	0.6	43.5	43.3	0.2	3,025.6	2,535.3	
Feb	3,279.0	2,837.1	252.8	209.7	209.1	0.7	43.1	42.9	0.1	3,026.2	2,541.5	
Mar	3,283.0	2,840.9	252.7	212.6	211.8	0.8	40.0	39.8	0.2	3,030.4	2,547.5	
Apr	3,288.9	2,849.0	253.7	210.6	209.8	0.8	43.1	42.8	0.3	3,035.2	2,558.1	
May	3,292.9	2,851.5	249.3	211.0	210.0	0.9	38.4	37.5	0.8	3,043.5	2,568.8	
June	3,296.8	2,856.1	251.1	214.1	213.5	0.6	37.0	36.5	0.5	3,045.7	2,577.7	
July	3,302.5	2,865.5	249.4	210.2	209.5	0.7	39.2	38.8	0.3	3,053.2	2,589.3	
												Changes *
2008	+ 92.0	+ 46.9	+ 43.1	+ 36.8	+ 34.9	+ 1.8	+ 6.3	+ 6.3	- 0.0	+ 48.9	+ 83.4	
2009	+ 25.7	- 11.6	- 26.1	- 31.5	- 30.0	- 1.5	+ 5.5	+ 2.5	+ 2.9	+ 51.8	+ 36.6	
2010	+ 130.5	+ 78.7	+ 80.4	- 23.4	- 23.5	+ 0.1	+ 103.8	+ 80.1	+ 23.7	+ 50.1	+ 14.9	
2011	- 30.6	- 3.2	- 45.2	+ 33.6	+ 33.3	+ 0.2	- 78.7	- 57.0	- 21.7	+ 14.6	+ 9.4	
2012	+ 21.0	+ 9.6	- 9.7	- 1.6	- 1.7	+ 0.1	- 8.2	- 3.8	- 4.3	+ 30.7	+ 10.9	
2013	+ 4.4	+ 0.1	- 13.8	- 5.8	- 6.3	+ 0.5	- 8.0	- 7.0	- 1.1	+ 18.2	+ 17.6	
2014	+ 36.7	+ 20.5	- 11.6	- 4.5	- 4.5	- 0.0	- 7.1	- 6.5	- 0.6	+ 48.3	+ 52.5	
2015	+ 68.9	+ 54.1	+ 1.6	- 1.3	- 0.9	- 0.4	+ 2.9	+ 2.8	+ 0.1	+ 67.2	+ 73.9	
2016	+ 43.7	+ 62.7	- 5.2	- 0.3	- 0.4	+ 0.1	- 4.9	- 4.8	- 0.2	+ 48.9	+ 79.8	
2016 Feb	+ 9.6	+ 10.5	+ 7.6	+ 6.4	+ 6.1	+ 0.3	+ 1.2	+ 0.7	+ 0.4	+ 2.0	+ 3.6	
Mar	- 0.8	+ 4.5	+ 5.3	+ 4.7	+ 4.6	+ 0.1	+ 0.6	+ 1.0	- 0.4	- 6.0	- 2.2	
Apr	+ 13.3	+ 12.4	+ 2.6	- 0.8	- 0.8	- 0.0	+ 3.4	+ 3.3	+ 0.1	+ 10.7	+ 12.3	
May	+ 5.7	+ 8.3	+ 2.2	+ 3.2	+ 3.2	+ 0.0	- 1.0	- 1.1	+ 0.1	+ 3.5	+ 7.7	
June	- 11.9	- 7.3	- 6.5	- 2.5	- 2.8	+ 0.3	- 4.0	- 4.1	+ 0.1	- 5.4	+ 0.2	
July	+ 13.3	+ 10.2	+ 0.1	- 3.9	- 3.8	- 0.1	+ 4.0	+ 3.9	+ 0.1	+ 13.3	+ 12.0	
Aug	+ 1.5	+ 4.6	- 6.7	- 5.8	- 5.4	- 0.4	- 0.9	- 0.8	- 0.1	+ 8.2	+ 13.2	
Sep	+ 8.2	+ 9.0	+ 6.6	+ 6.2	+ 6.3	- 0.1	+ 0.4	- 0.0	+ 0.4	+ 1.6	+ 5.5	
Oct	+ 7.0	+ 8.6	+ 1.1	- 1.5	- 1.6	+ 0.1	+ 2.6	+ 2.7	- 0.1	+ 5.8	+ 9.4	
Nov	+ 12.1	+ 11.4	- 1.7	+ 3.7	+ 3.8	- 0.1	- 5.4	- 5.2	- 0.2	+ 13.7	+ 13.0	
Dec	- 19.0	- 16.2	- 19.0	- 10.1	- 9.9	- 0.2	- 8.9	- 8.2	- 0.7	+ 0.0	+ 3.8	
2017 Jan	+ 3.3	+ 7.3	+ 3.5	+ 2.9	+ 2.5	+ 0.3	+ 0.6	+ 0.5	+ 0.1	- 0.2	+ 5.3	
Feb	+ 1.4	+ 5.6	+ 0.7	+ 1.2	+ 1.1	+ 0.1	- 0.4	- 0.3	- 0.1	+ 0.6	+ 6.2	
Mar	+ 3.9	+ 3.7	- 0.2	+ 2.8	+ 2.7	+ 0.1	- 3.0	- 3.1	+ 0.1	+ 4.1	+ 5.9	
Apr	+ 5.9	+ 8.1	+ 1.0	- 2.0	- 2.0	- 0.0	+ 3.0	+ 2.9	+ 0.1	+ 4.9	+ 10.6	
May	+ 3.9	+ 2.5	- 4.0	+ 0.7	+ 0.5	+ 0.1	- 4.7	- 5.2	+ 0.5	+ 8.0	+ 7.8	
June	+ 4.0	+ 4.6	+ 1.9	+ 3.3	+ 3.6	- 0.3	- 1.4	- 1.1	- 0.3	+ 2.1	+ 8.8	
July	+ 5.7	+ 9.4	- 1.8	- 3.9	- 4.0	+ 0.1	+ 2.2	+ 2.4	- 0.2	+ 7.5	+ 11.5	

* 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 debt securities arising from the exchange of equalisation claims (see also footnote 2). **2** Including debt securities arising from the exchange of equalisation claims.

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 *													
1,987.3	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	
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	2016	
2,240.2	257.4	1,982.8	215.9	18.0	525.6	276.8	27.7	249.1	248.8	–	2.1	2016 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	
2,283.5	261.0	2,022.5	219.3	17.5	502.7	269.6	25.4	244.2	233.1	–	1.8	Sep	
2,290.5	261.5	2,029.0	221.8	17.3	498.9	270.2	24.4	245.7	228.8	–	1.8	Oct	
2,302.5	264.0	2,038.5	223.0	17.3	499.5	270.9	24.3	246.6	228.6	–	1.8	Nov	
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	Dec	
2,311.3	264.5	2,046.8	224.0	18.6	490.3	268.9	24.2	244.7	221.4	–	1.7	2017 Jan	
2,316.5	263.2	2,053.3	225.1	18.5	484.7	268.6	25.0	243.7	216.1	–	1.7	Feb	
2,322.0	264.4	2,057.6	225.5	18.4	482.9	267.3	24.6	242.7	215.6	–	1.7	Mar	
2,331.2	265.4	2,065.9	226.8	18.4	477.2	265.1	23.6	241.5	212.0	–	1.7	Apr	
2,342.6	266.2	2,076.4	226.2	18.3	474.8	261.3	23.4	238.0	213.4	–	1.7	May	
2,346.1	267.4	2,078.7	231.6	18.0	468.0	260.0	23.0	237.0	208.1	–	1.6	June	
2,357.7	268.3	2,089.4	231.6	18.0	463.9	259.4	23.1	236.3	204.5	–	1.6	July	
Changes *													
+ 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	
+ 75.1	+ 9.7	+ 65.4	+ 4.7	– 0.9	– 30.9	– 7.3	– 4.0	– 3.3	– 23.6	–	– 0.4	2016	
+ 4.8	+ 1.0	+ 3.7	– 1.1	– 0.1	– 1.7	– 1.1	– 0.0	– 1.0	– 0.6	–	+ 0.0	2016 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	
+ 4.6	+ 0.3	+ 4.2	+ 0.9	– 0.1	– 3.8	– 1.8	– 0.5	– 1.3	– 2.0	–	– 0.0	Sep	
+ 6.8	+ 0.5	+ 6.2	+ 2.7	– 0.2	– 3.6	+ 0.7	– 0.9	+ 1.7	– 4.3	–	– 0.0	Oct	
+ 11.9	+ 2.4	+ 9.4	+ 1.1	– 0.1	+ 0.7	+ 0.9	– 0.1	+ 1.0	– 0.1	–	+ 0.0	Nov	
+ 3.4	– 0.5	+ 3.9	+ 0.5	+ 0.0	– 3.8	– 1.5	– 0.4	– 1.1	– 2.3	–	– 0.0	Dec	
+ 4.8	+ 0.3	+ 4.5	+ 0.5	+ 1.3	– 5.5	– 0.5	+ 0.3	– 0.8	– 5.0	–	– 0.0	2017 Jan	
+ 5.1	– 1.3	+ 6.4	+ 1.1	– 0.1	– 5.6	– 0.2	+ 0.8	– 1.0	– 5.3	–	– 0.0	Feb	
+ 5.5	+ 1.2	+ 4.3	+ 0.4	– 0.1	– 1.8	– 1.4	– 0.3	– 1.0	– 0.4	–	– 0.0	Mar	
+ 9.3	+ 1.0	+ 8.3	+ 1.3	– 0.1	– 5.7	– 2.2	– 1.0	– 1.1	– 3.6	–	– 0.0	Apr	
+ 8.5	+ 0.8	+ 7.7	– 0.7	– 0.0	+ 0.1	– 1.3	– 0.2	– 1.1	+ 1.4	–	– 0.0	May	
+ 3.4	+ 1.2	+ 2.2	+ 5.4	– 0.3	– 6.7	– 1.3	– 0.3	– 1.0	– 5.4	–	– 0.1	June	
+ 11.4	+ 1.0	+ 10.4	+ 0.1	– 0.0	– 4.0	– 0.4	+ 0.1	– 0.5	– 3.6	–	+ 0.0	July	

IV Banks

6 Lending by banks (MFIs) in Germany to domestic enterprises and households, housing loans, sectors of economic activity *

€ billion

Lending to domestic enterprises and households (excluding holdings of negotiable money market paper and excluding securities portfolios) ¹														
Period	of which													
	Total	Housing loans			Lending to enterprises and self-employed persons									
		Mortgage loans, total	Total	Mortgage loans secured by residential real estate	Other housing loans	Total	of which Housing loans	Manufacturing	Electricity, gas and water supply; refuse disposal, mining and quarrying	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Agriculture, forestry, fishing and aquaculture	Transportation and storage; post and telecommunications	Financial intermediation (excluding MFIs) and insurance companies
Lending, total														
2015	2,440.0	1,253.3	1,230.2	1,010.4	219.8	1,314.2	339.6	127.4	100.9	60.5	125.2	50.0	65.3	130.5
2016 June	2,473.6	1,235.1	1,248.0	996.2	251.8	1,332.0	345.8	131.5	101.7	62.7	125.4	50.9	59.0	133.7
Sep	2,497.2	1,248.2	1,264.5	1,007.6	256.9	1,341.1	350.5	130.3	103.0	63.2	126.9	51.2	57.4	136.4
Dec	2,512.0	1,259.7	1,276.6	1,016.5	260.1	1,347.5	354.1	125.1	104.7	62.2	128.2	50.6	57.0	139.7
2017 Mar	2,533.8	1,267.0	1,283.2	1,022.4	260.8	1,364.4	356.6	129.4	105.2	66.9	131.5	50.5	55.9	141.0
June	2,559.7	1,280.1	1,297.8	1,033.7	264.1	1,377.8	360.9	131.5	108.3	65.7	130.8	51.0	54.7	141.5
Short-term lending														
2015	207.6	–	8.5	–	8.5	173.8	4.3	33.7	4.7	11.5	42.0	3.9	5.3	24.1
2016 June	216.8	–	7.9	–	7.9	184.7	4.3	37.0	4.7	13.1	42.1	4.2	5.1	27.2
Sep	213.8	–	7.6	–	7.6	181.6	4.1	34.3	4.6	13.0	42.6	4.1	4.7	28.5
Dec	205.5	–	6.9	–	6.9	174.3	3.7	29.7	4.4	11.8	43.2	3.6	4.4	29.3
2017 Mar	211.8	–	6.9	–	6.9	181.3	3.7	33.6	4.5	13.6	44.8	3.8	4.2	28.6
June	213.6	–	6.7	–	6.7	183.3	3.5	34.7	4.7	13.7	43.3	4.0	4.6	28.1
Medium-term lending														
2015	256.0	–	35.2	–	35.2	181.3	13.3	23.8	5.1	10.4	16.4	4.4	11.7	41.1
2016 June	258.7	–	34.7	–	34.7	182.1	13.2	23.7	5.1	10.5	16.6	4.5	11.1	40.4
Sep	261.0	–	34.8	–	34.8	183.4	13.4	24.3	5.7	10.5	16.5	4.6	11.0	41.1
Dec	264.1	–	34.5	–	34.5	186.4	13.5	23.6	5.5	10.5	17.2	4.5	11.2	41.8
2017 Mar	264.4	–	34.0	–	34.0	186.8	13.4	23.3	4.9	11.4	17.9	4.4	10.8	43.0
June	267.4	–	33.8	–	33.8	188.7	13.3	23.3	5.0	10.9	18.2	4.4	10.7	44.3
Long-term lending														
2015	1,976.3	1,253.3	1,186.4	1,010.4	176.0	959.1	322.0	70.0	91.2	38.5	66.9	41.7	48.3	65.3
2016 June	1,998.2	1,235.1	1,205.5	996.2	209.3	965.3	328.3	70.7	91.9	39.1	66.8	42.1	42.8	66.0
Sep	2,022.5	1,248.2	1,222.1	1,007.6	214.5	976.1	332.9	71.7	92.7	39.7	67.8	42.4	41.6	66.9
Dec	2,042.4	1,259.7	1,235.1	1,016.5	218.6	986.8	336.9	71.8	94.8	39.9	67.7	42.5	41.4	68.6
2017 Mar	2,057.6	1,267.0	1,242.4	1,022.4	220.0	996.2	339.6	72.5	95.8	41.9	68.7	42.3	40.9	69.4
June	2,078.7	1,280.1	1,257.3	1,033.7	223.6	1,005.8	344.0	73.5	98.6	41.1	69.3	42.6	39.4	69.2
Lending, total														
Change during quarter *														
2016 Q2	+ 17.4	+ 7.0	+ 12.9	+ 8.9	+ 4.0	+ 5.7	+ 3.4	– 1.1	– 0.1	+ 0.5	– 1.0	+ 0.6	– 3.7	+ 3.3
Q3	+ 24.5	+ 12.4	+ 16.0	+ 10.9	+ 5.1	+ 10.2	+ 4.2	– 1.1	+ 1.2	+ 0.6	+ 1.6	+ 0.3	– 1.6	+ 2.7
Q4	+ 14.4	+ 9.1	+ 12.4	+ 8.4	+ 4.0	+ 6.0	+ 3.8	– 5.2	+ 1.4	– 1.0	+ 1.3	– 0.6	– 0.3	+ 3.2
2017 Q1	+ 21.7	+ 7.3	+ 6.6	+ 5.8	+ 0.7	+ 16.8	+ 2.6	+ 4.3	+ 0.5	+ 2.0	+ 3.3	– 0.1	– 1.1	+ 1.2
Q2	+ 23.3	+ 12.7	+ 13.8	+ 11.2	+ 2.6	+ 11.1	+ 4.1	+ 2.1	+ 0.4	– 1.1	– 0.6	+ 0.7	– 1.3	+ 0.4
Short-term lending														
2016 Q2	– 0.4	–	+ 0.1	–	+ 0.1	+ 0.3	+ 0.2	– 1.8	– 0.2	+ 0.1	– 1.3	+ 0.3	– 0.3	+ 2.6
Q3	– 2.9	–	– 0.3	–	– 0.3	– 2.9	– 0.2	– 2.8	– 0.1	– 0.1	+ 0.6	– 0.1	– 0.3	+ 1.3
Q4	– 7.6	–	– 0.7	–	– 0.7	– 6.6	– 0.5	– 4.6	– 0.2	– 1.2	+ 1.7	– 0.5	– 0.3	+ 0.9
2017 Q1	+ 6.3	–	– 0.0	–	– 0.0	+ 7.0	+ 0.0	+ 4.0	+ 0.1	+ 1.0	+ 1.6	+ 0.2	– 0.2	– 0.7
Q2	+ 2.1	–	– 0.1	–	– 0.1	+ 2.3	– 0.1	+ 1.1	+ 0.2	+ 0.1	– 1.4	+ 0.3	+ 0.3	– 0.4
Medium-term lending														
2016 Q2	+ 2.7	–	– 0.2	–	– 0.2	+ 1.7	– 0.1	– 0.0	+ 0.0	+ 0.1	+ 0.4	– 0.0	– 0.3	+ 0.3
Q3	+ 3.2	–	+ 0.1	–	+ 0.1	+ 2.4	+ 0.2	+ 0.7	+ 0.6	+ 0.1	+ 0.0	+ 0.1	– 0.1	+ 0.6
Q4	+ 2.4	–	– 0.3	–	– 0.3	+ 2.3	+ 0.0	– 0.6	– 0.3	– 0.0	+ 0.7	– 0.0	+ 0.2	+ 0.7
2017 Q1	+ 0.2	–	– 0.6	–	– 0.6	+ 0.4	– 0.1	– 0.4	– 0.5	+ 0.5	+ 0.7	– 0.1	– 0.4	+ 1.1
Q2	+ 3.0	–	– 0.1	–	– 0.1	+ 1.9	– 0.0	–	+ 0.0	– 0.4	+ 0.2	– 0.1	– 0.1	+ 1.3
Long-term lending														
2016 Q2	+ 15.1	+ 7.0	+ 12.9	+ 8.9	+ 4.1	+ 3.7	+ 3.2	+ 0.7	+ 0.0	+ 0.2	– 0.1	+ 0.4	– 3.1	+ 0.4
Q3	+ 24.2	+ 12.4	+ 16.2	+ 10.9	+ 5.3	+ 10.7	+ 4.2	+ 1.0	+ 0.7	+ 0.6	+ 1.0	+ 0.3	– 1.2	+ 0.8
Q4	+ 19.6	+ 9.1	+ 13.3	+ 8.4	+ 4.9	+ 10.4	+ 4.3	+ 0.1	+ 1.8	+ 0.2	– 0.1	+ 0.0	– 0.2	+ 1.6
2017 Q1	+ 15.1	+ 7.3	+ 7.2	+ 5.8	+ 1.4	+ 9.4	+ 2.6	+ 0.7	+ 0.9	+ 0.5	+ 0.9	– 0.2	– 0.5	+ 0.8
Q2	+ 18.2	+ 12.7	+ 14.0	+ 11.2	+ 2.9	+ 6.9	+ 4.2	+ 1.0	+ 0.2	– 0.8	+ 0.6	+ 0.5	– 1.5	– 0.5

* Excluding lending by foreign branches. Breakdown of lending by building and loan associations by areas and sectors estimated. Statistical alterations have been eliminated

from the changes. The figures for the latest date are always to be regarded as provisional; subsequent alterations, which will appear in the following Monthly Report,

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					Debit balances on wage, salary and pension accounts
	Housing enterprises	Holding companies	Other real estate activities			Instalment loans ³								
End of year or quarter *													Lending, total	
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	2015	
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	2016 June	
672.7	201.4	34.8	180.8	401.1	46.8	1,142.0	910.5	231.5	162.3	9.8	14.2	3.5	Sep	
680.0	204.7	36.3	181.6	401.3	46.0	1,150.1	919.0	231.2	163.3	9.2	14.4	3.6	Dec	
684.0	206.2	38.8	179.7	403.8	46.3	1,154.8	922.9	231.9	165.5	9.2	14.6	3.7	2017 Mar	
694.3	209.8	39.6	183.6	408.2	48.5	1,167.3	933.2	234.2	168.0	8.9	14.5	3.8	June	
													Short-term lending	
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	2015	
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	2016 June	
49.9	8.5	5.9	11.1	24.7	5.7	31.6	3.4	28.2	1.7	9.8	0.5	0.0	Sep	
47.9	8.4	5.7	10.2	23.9	5.1	30.6	3.2	27.4	1.8	9.2	0.6	0.0	Dec	
48.2	8.4	6.6	9.1	24.5	5.7	29.8	3.2	26.7	1.8	9.2	0.6	0.0	2017 Mar	
50.1	9.0	6.5	9.7	24.5	5.7	29.7	3.1	26.6	1.8	8.9	0.5	0.0	June	
													Medium-term lending	
68.4	10.1	7.3	19.3	32.4	3.5	74.2	21.9	52.3	47.4	-	0.6	0.0	2015	
70.1	10.6	7.3	19.0	33.0	3.6	76.0	21.4	54.6	49.3	-	0.6	0.0	2016 June	
69.7	10.7	7.3	18.9	33.0	3.7	77.1	21.4	55.7	50.3	-	0.5	0.0	Sep	
72.1	11.1	8.2	19.3	32.9	3.6	77.3	21.1	56.2	51.0	-	0.5	0.0	Dec	
71.1	11.3	8.6	17.8	32.7	3.6	77.1	20.6	56.5	51.7	-	0.5	0.0	2017 Mar	
72.1	11.5	8.8	18.6	32.8	3.6	78.1	20.5	57.7	52.9	-	0.5	0.0	June	
													Long-term lending	
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	2015	
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	2016 June	
553.1	182.1	21.6	150.8	343.4	37.4	1,033.3	885.7	147.6	110.2	-	13.1	3.5	Sep	
560.0	185.2	22.4	152.2	344.5	37.3	1,042.3	894.7	147.6	110.5	-	13.3	3.5	Dec	
564.7	186.5	23.6	152.7	346.5	37.1	1,047.9	899.2	148.8	112.1	-	13.4	3.7	2017 Mar	
572.2	189.2	24.3	155.3	350.8	39.2	1,059.4	909.6	149.9	113.3	-	13.5	3.7	June	
Change during quarter *													Lending, total	
+ 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	2016 Q2	
+ 6.4	+ 2.7	+ 0.3	+ 3.1	+ 1.7	- 0.1	+ 14.1	+ 11.8	+ 2.3	+ 2.4	+ 0.0	+ 0.2	+ 0.1	Q3	
+ 7.1	+ 3.3	+ 1.5	+ 0.8	+ 0.2	- 0.8	+ 8.2	+ 8.5	- 0.4	+ 1.1	- 0.6	+ 0.2	+ 0.0	Q4	
+ 6.8	+ 1.4	+ 2.3	+ 0.8	+ 2.3	+ 0.3	+ 4.9	+ 4.1	+ 0.8	+ 2.3	- 0.0	+ 0.1	- 0.0	2017 Q1	
+ 10.5	+ 3.5	+ 0.8	+ 4.0	+ 3.4	+ 0.1	+ 12.2	+ 9.7	+ 2.6	+ 2.8	- 0.3	- 0.1	+ 0.1	Q2	
													Short-term lending	
+ 1.0	+ 0.5	- 0.4	+ 0.3	- 0.2	- 0.3	- 0.7	- 0.1	- 0.6	- 0.1	- 0.5	- 0.0	-	2016 Q2	
- 1.4	- 0.1	- 0.1	+ 0.3	- 0.8	- 0.2	- 0.0	- 0.1	+ 0.1	- 0.1	+ 0.0	+ 0.1	+ 0.0	Q3	
- 1.4	+ 0.1	- 0.3	- 0.5	- 0.8	- 0.6	- 1.1	- 0.2	- 0.9	+ 0.1	- 0.6	+ 0.0	+ 0.0	Q4	
+ 1.0	+ 0.0	+ 0.9	- 0.2	+ 0.7	+ 0.6	- 0.7	- 0.0	- 0.7	+ 0.0	- 0.0	+ 0.1	- 0.0	2017 Q1	
+ 2.2	+ 0.6	- 0.0	+ 0.8	-	- 0.0	- 0.1	- 0.1	- 0.0	- 0.0	- 0.3	- 0.1	+ 0.0	Q2	
													Medium-term lending	
+ 1.2	+ 0.5	+ 0.0	- 0.2	+ 0.4	+ 0.1	+ 1.1	- 0.1	+ 1.2	+ 1.2	-	- 0.0	+ 0.0	2016 Q2	
+ 0.4	+ 0.2	+ 0.1	- 0.1	+ 0.0	+ 0.0	+ 0.8	- 0.1	+ 0.9	+ 0.9	-	- 0.1	+ 0.0	Q3	
+ 1.7	+ 0.2	+ 1.0	- 0.0	- 0.1	- 0.1	+ 0.2	- 0.3	+ 0.5	+ 0.6	-	- 0.0	- 0.0	Q4	
- 0.5	+ 0.2	+ 0.2	- 0.9	- 0.1	- 0.0	- 0.2	- 0.5	+ 0.3	+ 0.7	-	+ 0.0	- 0.0	2017 Q1	
+ 1.0	+ 0.2	+ 0.1	+ 0.8	+ 0.1	+ 0.0	+ 1.1	- 0.1	+ 1.2	+ 1.3	-	+ 0.0	+ 0.0	Q2	
													Long-term lending	
+ 5.2	+ 2.1	+ 0.5	+ 1.3	+ 1.9	+ 0.1	+ 11.4	+ 9.7	+ 1.7	+ 1.7	-	- 0.0	+ 0.0	2016 Q2	
+ 7.4	+ 2.5	+ 0.4	+ 2.8	+ 2.5	+ 0.1	+ 13.3	+ 12.0	+ 1.3	+ 1.6	-	+ 0.2	+ 0.1	Q3	
+ 6.8	+ 3.1	+ 0.8	+ 1.3	+ 1.1	- 0.1	+ 9.1	+ 9.0	+ 0.0	+ 0.4	-	+ 0.1	+ 0.0	Q4	
+ 6.2	+ 1.2	+ 1.1	+ 2.0	+ 1.8	- 0.2	+ 5.8	+ 4.6	+ 1.2	+ 1.6	-	- 0.0	- 0.0	2017 Q1	
+ 7.4	+ 2.7	+ 0.7	+ 2.4	+ 3.3	+ 0.0	+ 11.3	+ 9.8	+ 1.4	+ 1.6	-	+ 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

7 Deposits of domestic non-banks (non-MFIs) at banks (MFIs) in Germany*

€ billion

Period	Deposits, total	Sight deposits	Time deposits 1,2					Savings deposits 3	Bank savings bonds 4	Memo item				
			Total	for up to and including 1 year	for more than 1 year 2					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos		
					Total	for up to and including 2 years	for more than 2 years							
Domestic non-banks, total													End of year or month*	
2014	3,118.2	1,517.8	926.7	257.0	669.7	29.4	640.3	607.8	66.0	30.9	26.2	1.7		
2015	3,224.7	1,673.7	898.4	243.0	655.4	37.3	618.1	596.5	56.1	29.3	20.5	0.5		
2016	3,326.7	1,798.2	889.6	232.4	657.3	47.2	610.1	588.5	50.4	28.8	18.3	0.9		
2016 Aug	3,282.1	1,748.5	893.1	234.7	658.3	45.0	613.3	588.4	52.2	28.7	19.0	0.7		
Sep	3,283.7	1,748.1	896.6	239.5	657.2	45.5	611.7	587.2	51.8	28.6	18.8	1.3		
Oct	3,294.7	1,768.0	888.8	229.9	658.8	45.8	613.1	586.6	51.3	28.6	18.7	1.1		
Nov	3,328.9	1,799.3	892.5	233.6	658.8	46.5	612.4	586.2	50.9	28.6	18.6	0.8		
Dec	3,326.7	1,798.2	889.6	232.4	657.3	47.2	610.1	588.5	50.4	28.8	18.3	0.9		
2017 Jan	3,346.3	1,812.5	895.8	241.0	654.9	46.8	608.0	588.5	49.5	30.6	18.1	2.5		
Feb	3,345.5	1,816.6	891.4	237.3	654.1	46.5	607.6	588.5	49.0	30.5	17.6	1.5		
Mar	3,342.8	1,817.0	890.9	237.8	653.1	47.8	605.3	586.7	48.2	30.4	17.2	0.9		
Apr	3,360.3	1,844.4	881.9	229.2	652.6	50.3	602.3	586.2	47.8	30.3	17.3	0.8		
May	3,368.4	1,852.2	883.4	229.3	654.1	52.3	601.8	585.7	47.0	30.4	17.1	0.4		
June	3,370.3	1,869.2	869.8	226.4	643.4	53.5	589.9	584.7	46.6	29.8	16.9	0.9		
July	3,361.5	1,866.0	866.0	223.2	642.8	54.1	588.6	583.5	46.0	29.9	16.7	0.7		
													Changes*	
2015	+ 106.5	+ 156.2	- 28.3	- 13.6	- 14.7	+ 7.6	- 22.3	- 11.3	- 10.1	- 1.6	- 5.7	- 1.2		
2016	+ 104.7	+ 124.5	- 6.9	- 8.9	+ 2.0	+ 10.2	- 8.2	- 7.9	- 5.0	- 0.5	- 2.1	+ 0.3		
2016 Aug	+ 6.4	+ 11.4	- 3.8	- 3.3	- 0.5	+ 0.5	- 1.0	- 0.7	- 0.5	+ 0.0	- 0.3	- 0.3		
Sep	+ 1.6	- 0.4	+ 3.6	+ 4.7	- 1.2	+ 0.5	- 1.6	- 1.2	- 0.3	- 0.0	- 0.2	+ 0.7		
Oct	+ 11.0	+ 20.0	- 7.9	- 9.5	+ 1.7	+ 0.2	+ 1.4	- 0.6	- 0.5	- 0.0	- 0.1	- 0.2		
Nov	+ 34.2	+ 31.3	+ 3.7	+ 3.7	+ 0.0	+ 0.7	- 0.7	- 0.4	- 0.4	-	- 0.2	- 0.3		
Dec	- 2.2	- 1.2	+ 2.8	+ 0.8	- 2.0	+ 0.5	- 2.5	+ 2.3	- 0.5	+ 0.2	- 0.2	+ 0.1		
2017 Jan	+ 19.6	+ 14.4	+ 6.2	+ 8.6	- 2.4	- 0.4	- 2.1	- 0.1	- 0.9	+ 1.0	- 0.2	+ 1.7		
Feb	- 0.8	+ 4.1	- 4.5	- 3.7	- 0.8	- 0.4	- 0.4	+ 0.1	- 0.5	- 0.1	- 0.5	- 1.1		
Mar	- 2.7	+ 0.4	- 0.5	+ 0.5	- 1.0	+ 1.3	- 2.3	- 1.9	- 0.7	- 0.1	- 0.4	- 0.6		
Apr	+ 17.5	+ 27.3	- 9.0	- 8.5	- 0.5	+ 2.5	- 3.0	- 0.5	- 0.4	- 0.1	+ 0.0	- 0.1		
May	+ 8.1	+ 7.8	+ 1.6	+ 0.1	+ 1.5	+ 2.0	- 0.5	- 0.5	- 0.8	+ 0.0	- 0.2	- 0.4		
June	+ 10.9	+ 17.0	- 4.6	- 2.9	- 1.7	+ 1.2	- 2.9	- 1.0	- 0.4	- 0.6	- 0.1	+ 0.4		
July	- 8.8	- 3.1	- 3.8	- 3.2	- 0.6	+ 0.7	- 1.3	- 1.2	- 0.7	+ 0.2	- 0.2	- 0.1		
Domestic government													End of year or month*	
2014	186.7	52.4	128.2	84.5	43.7	7.5	36.2	3.8	2.3	29.1	4.8	0.5		
2015	197.4	57.6	132.6	87.7	44.9	10.2	34.7	3.7	3.5	27.9	2.7	0.5		
2016	199.8	57.9	133.5	79.5	54.0	16.6	37.4	3.9	4.5	27.1	2.5	-		
2016 Aug	206.1	62.4	135.6	83.6	52.1	13.7	38.4	4.0	4.1	27.3	2.6	0.0		
Sep	202.6	59.6	134.8	82.4	52.4	14.1	38.3	3.9	4.3	27.2	2.7	0.2		
Oct	199.1	58.8	132.1	78.9	53.2	14.9	38.3	3.9	4.3	27.2	2.7	-		
Nov	207.0	61.7	137.0	82.6	54.4	16.2	38.3	3.9	4.4	27.2	2.6	-		
Dec	199.8	57.9	133.5	79.5	54.0	16.6	37.4	3.9	4.5	27.1	2.5	-		
2017 Jan	202.2	55.1	138.7	84.7	54.1	16.4	37.7	3.8	4.5	26.7	2.5	-		
Feb	205.7	61.4	136.0	81.8	54.2	15.8	38.4	3.7	4.6	26.8	2.5	-		
Mar	204.0	58.9	136.8	81.4	55.4	16.5	38.9	3.7	4.7	26.7	2.5	-		
Apr	203.1	59.1	135.6	77.9	57.7	18.7	39.0	3.6	4.7	26.7	2.5	-		
May	209.7	61.1	140.3	80.4	59.9	20.4	39.5	3.7	4.6	26.4	2.5	-		
June	209.9	58.1	143.5	81.8	61.8	21.8	40.0	3.7	4.7	25.8	2.4	-		
July	207.2	55.6	143.2	80.4	62.8	22.4	40.4	3.7	4.7	25.8	2.4	-		
													Changes*	
2015	+ 10.1	+ 5.2	+ 3.7	+ 2.9	+ 0.8	+ 2.5	- 1.7	- 0.0	+ 1.2	- 1.2	- 2.1	+ 0.1		
2016	+ 3.1	+ 0.3	+ 2.0	- 6.7	+ 8.7	+ 6.4	+ 2.3	+ 0.1	+ 0.7	- 0.8	- 0.2	- 0.5		
2016 Aug	+ 2.1	+ 2.3	- 0.3	- 0.9	+ 0.6	+ 0.3	+ 0.3	+ 0.1	+ 0.0	+ 0.0	+ 0.0	- 0.1		
Sep	- 3.8	- 2.7	- 1.0	- 1.2	+ 0.2	+ 0.4	- 0.2	- 0.0	- 0.0	- 0.1	+ 0.0	+ 0.1		
Oct	- 3.5	- 0.8	- 2.7	- 3.6	+ 0.8	+ 0.8	- 0.0	- 0.0	+ 0.1	- 0.0	+ 0.0	- 0.2		
Nov	+ 7.8	+ 2.9	+ 5.0	+ 3.7	+ 1.3	+ 1.3	- 0.0	- 0.1	+ 0.0	- 0.0	- 0.1	-		
Dec	- 7.2	- 3.8	- 3.5	- 2.5	- 1.0	+ 0.2	- 1.1	+ 0.0	+ 0.1	- 0.1	- 0.1	-		
2017 Jan	+ 2.4	- 2.7	+ 5.2	+ 5.1	+ 0.1	- 0.2	+ 0.3	- 0.1	+ 0.1	- 0.4	- 0.0	-		
Feb	+ 3.5	+ 6.3	- 2.8	- 2.9	+ 0.2	- 0.6	+ 0.8	- 0.1	+ 0.1	+ 0.0	+ 0.0	-		
Mar	- 1.7	- 2.5	+ 0.8	- 0.3	+ 1.1	+ 0.6	+ 0.5	- 0.0	+ 0.1	- 0.1	- 0.0	-		
Apr	- 1.0	+ 0.3	- 1.2	- 3.5	+ 2.4	+ 2.3	+ 0.1	- 0.1	+ 0.1	- 0.0	+ 0.0	-		
May	+ 6.7	+ 1.9	+ 4.7	+ 2.5	+ 2.2	+ 1.7	+ 0.5	+ 0.1	- 0.1	- 0.1	+ 0.0	-		
June	- 0.1	- 3.0	+ 2.9	+ 1.3	+ 1.5	+ 1.4	+ 0.2	- 0.0	+ 0.0	- 0.4	- 0.0	-		
July	- 2.8	- 2.5	- 0.4	- 1.3	+ 0.9	+ 0.5	+ 0.4	-	+ 0.0	- 0.0	+ 0.0	-		

* 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 securities. 2 Including deposits under savings and loan contracts (see

IV Banks

7 Deposits of domestic non-banks (non-MFIs) at banks (MFIs) in Germany * (cont'd)

€ billion

Period	Deposits, total	Sight deposits	Time deposits 1,2					Savings deposits 3	Bank savings bonds 4	Memo item				
			Total	for up to and including 1 year	for more than 1 year 2					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos		
					Total	for up to and including 2 years	for more than 2 years							
Domestic enterprises and households													End of year or month*	
2014	2,931.5	1,465.4	798.4	172.5	625.9	21.8	604.1	604.0	63.7	1.8	21.5	1.2		
2015	3,027.3	1,616.1	765.8	155.3	610.5	27.1	583.5	592.7	52.6	1.4	17.8	-		
2016	3,127.0	1,740.3	756.2	152.8	603.3	30.6	572.7	584.6	45.9	1.7	15.8	0.9		
2016 Aug	3,076.0	1,686.1	757.4	151.1	606.3	31.4	574.9	584.4	48.1	1.4	16.4	0.6		
Sep	3,081.1	1,688.4	761.8	157.0	604.8	31.4	573.3	583.2	47.6	1.4	16.1	1.2		
Oct	3,095.6	1,709.2	756.7	151.1	605.6	30.9	574.8	582.7	47.0	1.4	16.0	1.1		
Nov	3,121.9	1,737.6	755.5	151.1	604.4	30.3	574.1	582.3	46.5	1.5	15.9	0.8		
Dec	3,127.0	1,740.3	756.2	152.8	603.3	30.6	572.7	584.6	45.9	1.7	15.8	0.9		
2017 Jan	3,144.2	1,757.4	757.1	156.3	600.8	30.4	570.3	584.7	45.0	3.8	15.6	2.5		
Feb	3,139.8	1,755.2	755.4	155.5	599.9	30.6	569.2	584.8	44.4	3.7	15.1	1.5		
Mar	3,138.8	1,758.1	754.1	156.3	597.8	31.3	566.4	583.0	43.6	3.7	14.8	0.9		
Apr	3,157.2	1,785.2	746.3	151.4	594.9	31.6	563.3	582.6	43.1	3.7	14.8	0.8		
May	3,158.7	1,791.1	743.1	148.9	594.2	31.9	562.4	582.0	42.4	4.0	14.6	0.4		
June	3,160.3	1,811.1	726.2	144.6	581.6	31.7	549.9	581.0	41.9	3.9	14.5	0.9		
July	3,154.3	1,810.5	722.7	142.8	580.0	31.8	548.2	579.8	41.3	4.1	14.3	0.7		
													Changes*	
2015	+ 96.4	+ 151.0	- 32.0	- 16.5	- 15.4	+ 5.1	- 20.6	- 11.3	- 11.3	- 0.4	- 3.7	- 1.2		
2016	+ 101.7	+ 124.2	- 8.9	- 2.2	- 6.7	+ 3.8	- 10.5	- 8.0	- 5.7	+ 0.3	- 1.9	+ 0.9		
2016 Aug	+ 4.3	+ 9.1	- 3.5	- 2.4	- 1.1	+ 0.2	- 1.3	- 0.8	- 0.5	- 0.0	- 0.4	- 0.2		
Sep	+ 5.4	+ 2.3	+ 4.6	+ 5.9	- 1.3	+ 0.1	- 1.4	- 1.2	- 0.3	+ 0.0	- 0.2	+ 0.5		
Oct	+ 14.5	+ 20.8	- 5.1	- 6.0	+ 0.8	- 0.6	+ 1.4	- 0.5	- 0.6	+ 0.0	- 0.1	- 0.1		
Nov	+ 26.4	+ 28.4	- 1.3	- 0.0	- 1.2	- 0.5	- 0.7	- 0.3	- 0.5	+ 0.0	- 0.1	- 0.3		
Dec	+ 5.0	+ 2.7	+ 0.7	+ 1.7	- 1.1	+ 0.3	- 1.4	+ 2.3	- 0.6	+ 0.3	- 0.1	+ 0.1		
2017 Jan	+ 17.2	+ 17.1	+ 1.0	+ 3.5	- 2.5	- 0.2	- 2.3	+ 0.1	- 1.0	+ 1.4	- 0.2	+ 1.7		
Feb	- 4.3	- 2.2	- 1.7	- 0.8	- 0.9	+ 0.2	- 1.1	+ 0.2	- 0.6	- 0.1	- 0.5	- 1.1		
Mar	- 1.0	+ 2.9	- 1.3	+ 0.8	- 2.1	+ 0.7	- 2.8	- 1.9	- 0.8	+ 0.0	- 0.3	- 0.6		
Apr	+ 18.4	+ 27.0	- 7.8	- 5.0	- 2.8	+ 0.2	- 3.1	- 0.4	- 0.5	- 0.0	+ 0.0	- 0.1		
May	+ 1.4	+ 5.9	- 3.2	- 2.5	- 0.7	+ 0.3	- 0.9	- 0.6	- 0.7	+ 0.1	- 0.2	- 0.4		
June	+ 11.0	+ 19.9	- 7.5	- 4.2	- 3.3	- 0.2	- 3.1	- 1.0	- 0.4	- 0.2	- 0.1	+ 0.4		
July	- 5.9	- 0.7	- 3.4	- 1.9	- 1.5	+ 0.1	- 1.6	- 1.2	- 0.7	+ 0.2	- 0.2	- 0.1		
of which: Domestic enterprises													End of year or month*	
2014	1,007.9	457.1	529.1	104.1	425.0	10.4	414.6	6.9	14.9	1.8	16.4	1.2		
2015	1,029.8	502.8	506.5	99.8	406.7	14.4	392.3	7.1	13.3	1.3	14.0	-		
2016	1,032.4	518.3	494.1	98.3	395.8	17.4	378.4	6.9	13.2	1.6	13.0	0.9		
2016 Aug	1,030.7	512.7	497.2	96.9	400.2	17.7	382.5	7.4	13.4	1.3	13.3	0.6		
Sep	1,035.0	512.9	501.4	103.0	398.4	17.8	380.7	7.3	13.4	1.3	13.1	1.2		
Oct	1,040.1	523.5	496.0	96.5	399.5	17.2	382.2	7.3	13.3	1.3	13.1	1.1		
Nov	1,043.0	527.1	495.6	96.6	399.0	17.0	382.0	6.9	13.3	1.3	13.0	0.8		
Dec	1,032.4	518.3	494.1	98.3	395.8	17.4	378.4	6.9	13.2	1.6	13.0	0.9		
2017 Jan	1,048.4	532.9	495.6	102.1	393.6	17.6	376.0	6.9	13.0	2.9	12.8	2.5		
Feb	1,033.8	520.4	493.6	100.5	393.1	18.0	375.1	6.8	13.0	2.8	12.4	1.5		
Mar	1,034.5	522.7	492.1	101.3	390.8	18.4	372.4	6.8	12.9	2.8	12.1	0.9		
Apr	1,035.4	530.1	485.4	97.5	387.9	18.6	369.2	6.9	13.0	2.8	12.1	0.8		
May	1,033.4	531.1	482.6	95.8	386.8	18.8	368.1	6.8	12.9	2.9	12.0	0.4		
June	1,032.3	545.0	467.6	92.9	374.7	18.8	355.9	6.8	12.9	2.8	11.9	0.9		
July	1,022.6	537.7	465.4	91.5	373.9	19.1	354.8	6.8	12.8	2.8	11.8	0.7		
													Changes*	
2015	+ 22.7	+ 46.0	- 22.1	- 3.8	- 18.3	+ 3.7	- 22.0	+ 0.3	- 1.5	- 0.5	- 2.5	- 1.2		
2016	+ 4.6	+ 15.9	- 11.2	- 1.2	- 10.1	+ 3.2	- 13.2	- 0.2	+ 0.1	+ 0.2	- 0.9	+ 0.9		
2016 Aug	+ 3.8	+ 6.0	- 2.3	- 1.2	- 1.1	+ 0.3	- 1.4	+ 0.0	+ 0.0	- 0.0	- 0.3	- 0.2		
Sep	+ 4.7	+ 0.2	+ 4.4	+ 6.1	- 1.7	+ 0.1	- 1.7	- 0.1	+ 0.1	+ 0.0	- 0.2	+ 0.5		
Oct	+ 5.0	+ 10.6	- 5.4	- 6.5	+ 1.0	- 0.5	+ 1.6	- 0.1	- 0.1	+ 0.0	+ 0.0	- 0.1		
Nov	+ 3.0	+ 3.6	- 0.5	+ 0.0	- 0.5	- 0.3	- 0.2	- 0.2	+ 0.1	+ 0.0	- 0.1	- 0.3		
Dec	- 10.6	- 8.8	- 1.5	+ 1.7	- 3.2	+ 0.4	- 3.6	- 0.1	- 0.1	+ 0.3	- 0.1	+ 0.1		
2017 Jan	+ 16.0	+ 14.6	+ 1.6	+ 3.8	- 2.2	+ 0.2	- 2.4	-	- 0.2	+ 1.4	- 0.1	+ 1.7		
Feb	- 14.2	- 12.6	- 1.6	- 1.1	- 0.5	+ 0.4	- 0.9	- 0.0	- 0.0	- 0.1	- 0.5	- 1.1		
Mar	+ 0.7	+ 2.4	- 1.5	+ 0.8	- 2.3	+ 0.4	- 2.7	- 0.1	- 0.2	- 0.0	- 0.3	- 0.6		
Apr	+ 0.9	+ 7.3	- 6.6	- 3.8	- 2.8	+ 0.2	- 3.1	+ 0.1	+ 0.2	- 0.0	+ 0.1	- 0.1		
May	- 2.0	+ 1.0	- 2.7	- 1.7	- 1.0	+ 0.1	- 1.2	- 0.1	- 0.1	-	- 0.1	- 0.4		
June	+ 8.3	+ 14.0	- 5.7	- 2.9	- 2.8	- 0.0	- 2.8	+ 0.0	- 0.0	- 0.2	- 0.1	+ 0.4		
July	- 9.7	- 7.4	- 2.2	- 1.5	- 0.7	+ 0.4	- 1.1	- 0.0	- 0.1	-	- 0.2	- 0.1		

Table IV.12). 3 Excluding deposits under savings and loan contracts (see also footnote 2). 4 Including liabilities arising from non-negotiable bearer debt securities.

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*												
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	2,094.5	1,222.0	1,186.9	206.0	828.6	152.3	35.1	262.1	248.6	25.0	182.0	41.5
2017 Feb	2,106.0	1,234.9	1,199.9	212.0	837.0	150.9	34.9	261.8	247.2	24.6	181.5	41.1
Mar	2,104.3	1,235.4	1,200.2	208.2	841.4	150.5	35.2	262.0	247.1	25.1	181.5	40.5
Apr	2,121.9	1,255.1	1,220.2	211.6	856.4	152.2	35.0	260.9	246.1	24.8	180.6	40.7
May	2,125.3	1,260.1	1,223.9	213.8	857.9	152.2	36.2	260.5	245.5	24.4	180.6	40.5
June	2,128.0	1,266.1	1,230.1	211.0	866.2	152.9	36.0	258.6	244.3	24.1	180.2	39.9
July	2,131.7	1,272.8	1,237.7	216.2	868.7	152.8	35.1	257.4	242.8	23.5	179.5	39.7
Changes*												
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	+ 97.1	+ 108.4	+ 105.3	+ 17.5	+ 78.7	+ 9.0	+ 3.0	+ 2.4	+ 1.8	+ 0.1	+ 1.9	- 0.3
2017 Feb	+ 9.9	+ 10.4	+ 10.3	+ 0.7	+ 8.7	+ 0.9	+ 0.0	- 0.1	- 0.7	- 0.3	- 0.2	- 0.2
Mar	- 1.7	+ 0.5	+ 0.2	- 3.7	+ 4.2	- 0.2	+ 0.3	+ 0.2	- 0.2	+ 0.5	- 0.2	- 0.4
Apr	+ 17.5	+ 19.8	+ 20.0	+ 3.4	+ 14.5	+ 2.1	- 0.3	- 1.2	- 1.0	- 0.2	- 1.0	+ 0.3
May	+ 3.4	+ 4.9	+ 3.7	+ 2.2	+ 1.3	+ 0.1	+ 1.3	- 0.4	- 0.6	- 0.3	- 0.0	- 0.2
June	+ 2.7	+ 6.0	+ 6.3	- 2.7	+ 8.0	+ 0.9	- 0.3	- 1.9	- 1.3	- 0.3	- 0.6	- 0.4
July	+ 3.7	+ 6.7	+ 7.6	+ 5.1	+ 2.6	- 0.1	- 0.9	- 1.2	- 1.5	- 0.6	- 0.7	- 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*													
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	199.8	7.9	3.6	2.0	2.2	0.1	13.5	42.3	13.4	11.2	16.6	1.1	13.2
2017 Feb	205.7	7.7	3.6	1.6	2.3	0.1	13.6	49.0	13.5	17.9	16.6	1.0	12.9
Mar	204.0	7.9	3.6	1.9	2.3	0.1	13.5	51.0	13.4	20.0	16.6	1.0	12.8
Apr	203.1	7.6	3.7	1.5	2.3	0.1	13.5	49.2	12.3	19.2	16.6	1.1	12.8
May	209.7	7.8	3.7	1.6	2.4	0.1	13.5	48.3	11.2	18.8	17.1	1.1	12.7
June	209.9	7.9	3.5	2.0	2.3	0.1	13.2	50.7	11.5	20.6	17.4	1.1	12.6
July	207.2	7.9	3.8	1.6	2.4	0.1	13.2	49.9	11.3	19.6	17.8	1.2	12.6
Changes*													
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	+ 3.1	- 1.2	+ 0.5	- 1.4	- 0.3	+ 0.0	- 0.5	- 1.8	+ 0.1	- 1.8	- 0.3	+ 0.1	- 0.3
2017 Feb	+ 3.5	+ 0.3	+ 0.1	+ 0.1	+ 0.1	- 0.0	+ 0.0	+ 0.3	+ 0.1	+ 0.1	+ 0.0	- 0.0	+ 0.0
Mar	- 1.7	+ 0.3	+ 0.0	+ 0.3	- 0.0	-	- 0.0	+ 2.0	- 0.1	+ 2.1	- 0.0	+ 0.0	- 0.1
Apr	- 1.0	- 0.3	+ 0.1	- 0.4	+ 0.0	-	- 0.0	- 1.8	- 1.1	- 0.8	- 0.0	+ 0.0	- 0.0
May	+ 6.7	+ 0.2	+ 0.0	+ 0.2	+ 0.0	+ 0.0	- 0.1	- 0.9	- 1.1	- 0.3	+ 0.6	- 0.0	- 0.1
June	- 0.1	+ 0.1	- 0.2	+ 0.4	- 0.0	-	- 0.3	+ 2.4	+ 0.3	+ 1.8	+ 0.3	+ 0.0	- 0.1
July	- 2.8	- 0.0	+ 0.3	- 0.4	+ 0.1	- 0.0	- 0.0	- 0.9	- 0.3	- 1.0	+ 0.3	+ 0.1	- 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									
		Total	up to and including 2 years		more than 2 years								
End of year or month*													
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	
13.5	54.5	207.5	13.3	194.3	577.7	569.3	8.4	32.7	0.1	2.9	–	2016	
14.6	55.1	206.7	12.6	194.1	578.0	569.7	8.4	31.3	0.9	2.7	–	2017 Feb	
15.0	55.1	207.0	12.9	194.1	576.2	567.9	8.3	30.7	0.9	2.7	–	Mar	
14.8	53.9	207.0	13.0	194.0	575.8	567.4	8.3	30.1	0.9	2.7	–	Apr	
14.9	53.1	207.4	13.1	194.3	575.3	567.0	8.3	29.5	1.1	2.6	–	May	
14.3	51.7	206.9	12.9	194.0	574.2	566.0	8.2	29.0	1.1	2.5	–	June	
14.6	51.3	206.1	12.7	193.4	573.1	565.0	8.1	28.5	1.3	2.5	–	July	
Changes*													
– 1.8	– 12.8	+ 2.9	+ 1.4	+ 1.4	– 11.5	– 11.1	– 0.5	– 9.8	+ 0.0	– 1.2	–	2015	
+ 0.6	– 1.0	+ 3.4	+ 0.7	+ 2.7	– 7.9	– 7.3	– 0.5	– 5.8	+ 0.1	– 0.9	–	2016	
+ 0.6	+ 0.4	– 0.5	– 0.2	– 0.2	+ 0.2	+ 0.2	– 0.0	– 0.6	+ 0.0	– 0.1	–	2017 Feb	
+ 0.4	– 0.0	+ 0.2	+ 0.3	– 0.1	– 1.8	– 1.7	– 0.1	– 0.6	+ 0.0	– 0.0	–	Mar	
– 0.2	– 1.2	+ 0.0	+ 0.0	– 0.0	– 0.5	– 0.5	+ 0.0	– 0.6	+ 0.0	– 0.1	–	Apr	
+ 0.1	– 0.8	+ 0.4	+ 0.1	+ 0.2	– 0.5	– 0.4	– 0.1	– 0.6	+ 0.1	– 0.1	–	May	
– 0.6	– 1.4	– 0.5	– 0.2	– 0.3	– 1.0	– 1.0	– 0.1	– 0.4	+ 0.0	– 0.0	–	June	
+ 0.3	– 0.4	– 0.8	– 0.2	– 0.6	– 1.2	– 1.1	– 0.1	– 0.5	+ 0.2	– 0.0	–	July	

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*												
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
56.0	31.5	8.7	10.1	5.7	0.4	93.6	9.4	57.6	25.1	1.5	–	2016
53.1	28.9	8.3	10.2	5.7	0.4	95.9	15.4	54.0	25.0	1.5	–	2017 Feb
51.7	27.1	8.2	10.7	5.7	0.4	93.4	14.7	51.4	25.8	1.5	–	Mar
51.7	27.5	7.8	10.8	5.7	0.4	94.5	15.6	49.4	28.1	1.5	–	Apr
57.0	31.6	8.4	11.3	5.8	0.2	96.5	14.5	51.5	29.1	1.4	–	May
54.4	28.8	8.3	11.5	5.8	0.0	96.9	14.2	50.8	30.5	1.4	–	June
51.4	26.0	8.1	11.6	5.7	0.0	97.9	14.5	51.1	31.0	1.3	–	July
Changes*												
+ 4.1	+ 3.8	– 1.5	+ 1.1	+ 0.7	+ 0.0	+ 4.0	+ 1.2	+ 0.6	+ 1.9	+ 0.2	–	2015
+ 3.7	+ 2.4	– 0.8	+ 1.6	+ 0.5	– 0.0	+ 2.4	– 2.6	– 2.8	+ 7.7	+ 0.2	–	2016
+ 3.7	+ 3.5	– 0.1	+ 0.2	+ 0.0	–	– 0.7	+ 2.5	– 3.1	– 0.1	+ 0.0	–	2017 Feb
– 1.4	– 1.8	– 0.1	+ 0.4	+ 0.0	– 0.0	– 2.5	– 0.7	– 2.6	+ 0.8	– 0.0	–	Mar
+ 0.1	+ 0.3	– 0.3	+ 0.1	– 0.1	–	+ 1.1	+ 0.9	– 2.1	+ 2.2	– 0.0	–	Apr
+ 5.3	+ 4.1	+ 0.5	+ 0.5	+ 0.1	– 0.0	+ 2.0	– 1.1	+ 2.2	+ 1.1	+ 0.1	–	May
– 2.6	– 2.7	– 0.1	+ 0.3	– 0.0	– 0.0	+ 0.0	– 0.3	– 0.7	+ 1.0	+ 0.0	–	June
– 2.9	– 2.9	– 0.2	+ 0.1	– 0.0	–	+ 1.0	+ 0.3	+ 0.3	+ 0.4	– 0.1	–	July

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*													
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	596.5	588.5	537.1	361.6	51.5	37.7	8.0	6.9	3.3	59.1	50.4	35.8	8.7
2017 Mar	594.6	586.7	537.0	351.5	49.7	36.2	7.9	6.8	0.1	56.8	48.2	34.4	8.6
Apr	594.0	586.2	537.0	351.6	49.2	35.8	7.8	6.8	0.1	56.5	47.8	34.1	8.7
May	593.5	585.7	536.9	349.1	48.9	35.3	7.8	6.8	0.1	55.6	47.0	33.6	8.6
June	592.4	584.7	536.2	347.5	48.5	34.9	7.7	6.7	0.1	55.1	46.6	33.3	8.5
July	591.2	583.5	538.3	353.8	45.2	34.1	7.7	6.7	0.1	54.3	46.0	32.8	8.3
Changes*													
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	- 8.8	- 7.9	+ 2.5	- 18.4	- 10.4	- 10.3	- 0.9	- 0.5	.	- 5.0	- 5.0	- 4.7	- 0.0
2017 Mar	- 1.9	- 1.9	- 1.4	- 3.4	- 0.5	- 0.4	- 0.1	- 0.1	.	- 0.7	- 0.7	- 0.5	-
Apr	- 0.5	- 0.5	- 0.0	- 0.0	- 0.4	- 0.5	- 0.0	- 0.0	.	- 0.4	- 0.4	- 0.2	+ 0.0
May	- 0.5	- 0.5	- 0.1	- 2.4	- 0.4	- 0.5	- 0.0	- 0.0	.	- 0.9	- 0.8	- 0.5	- 0.1
June	- 1.1	- 1.0	- 0.7	- 1.6	- 0.4	- 0.4	- 0.1	- 0.1	.	- 0.5	- 0.4	- 0.3	- 0.1
July	- 1.3	- 1.2	- 0.4	+ 6.3	- 0.8	- 0.8	- 0.1	- 0.0	.	- 0.9	- 0.7	- 0.5	- 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 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		more than 2 years				
						Total	of which without a nominal guarantee ⁵	Total	of which without a nominal guarantee ⁵					
End of year or month*														
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	1,098.1	177.0	28.1	407.1	90.9	111.3	4.1	37.4	5.8	949.4	0.6	0.2	33.8	0.5
2017 Mar	1,114.6	172.2	29.0	405.1	87.3	108.0	4.7	40.1	6.2	966.6	0.8	0.2	33.2	0.5
Apr	1,104.2	169.8	26.5	391.2	80.5	99.0	4.7	39.8	6.4	965.3	0.8	0.2	32.8	0.5
May	1,107.3	173.0	26.7	391.2	84.0	103.3	4.8	39.0	6.6	965.1	0.5	0.2	32.8	0.5
June	1,107.1	172.3	25.8	390.3	85.9	105.3	4.8	39.8	6.3	962.0	0.3	0.2	32.5	0.5
July	1,092.4	169.3	26.1	378.5	79.9	99.9	5.0	39.4	6.3	953.1	0.4	0.2	32.2	0.5
Changes*														
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	+ 22.1	- 12.0	- 2.1	+ 23.0	+ 2.2	+ 1.6	+ 2.0	+ 8.8	+ 0.1	+ 11.7	+ 0.3	- 0.1	+ 1.9	- 0.0
2017 Mar	- 3.6	- 2.0	+ 1.9	- 4.5	- 1.2	- 0.1	+ 0.0	- 0.1	+ 0.1	- 3.4	- 0.0	- 0.0	+ 0.3	-
Apr	- 10.4	- 2.4	- 2.5	- 13.9	- 6.8	- 8.9	- 0.0	- 0.2	+ 0.1	- 1.2	+ 0.0	+ 0.0	- 0.4	-
May	+ 3.2	+ 3.2	+ 0.2	- 0.0	+ 3.5	+ 4.2	+ 0.1	- 0.8	+ 0.2	- 0.2	- 0.3	+ 0.0	- 0.0	-
June	- 0.2	- 0.6	- 0.9	- 0.9	+ 1.9	+ 2.0	+ 0.0	+ 0.8	- 0.2	- 3.1	- 0.2	- 0.0	- 0.4	-
July	- 14.7	- 3.0	+ 0.3	- 11.8	- 6.0	- 5.4	+ 0.2	- 0.4	+ 0.0	- 8.9	+ 0.1	+ 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 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																
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	20	218.8	43.6	0.0	16.6	13.8	98.6	18.1	23.4	2.5	21.4	163.8	5.5	2.0	10.2	89.2
2017 May	20	228.1	42.8	0.0	17.1	13.1	100.2	25.1	24.8	2.6	23.4	165.4	10.1	2.9	11.1	7.4
June	20	228.7	42.5	0.0	17.1	13.0	101.0	25.2	24.8	2.5	23.9	165.4	10.1	2.9	11.0	6.9
July	20	229.3	42.9	0.0	17.1	12.9	101.7	24.7	24.9	2.6	24.9	165.3	9.9	2.9	11.0	6.9
Private building and loan associations																
2017 May	12	160.4	27.4	–	8.0	9.8	77.6	22.3	11.3	1.7	21.3	108.0	9.8	2.9	7.4	4.5
June	12	160.8	27.1	–	8.0	9.7	78.2	22.4	11.2	1.7	21.6	108.0	9.7	2.9	7.4	4.3
July	12	161.0	27.4	–	7.9	9.7	78.8	21.8	11.4	1.7	22.2	107.9	9.6	2.9	7.4	4.4
Public building and loan associations																
2017 May	8	67.7	15.4	0.0	9.1	3.3	22.6	2.8	13.5	0.8	2.2	57.4	0.3	–	3.7	2.9
June	8	67.9	15.4	0.0	9.1	3.2	22.8	2.8	13.5	0.8	2.3	57.4	0.4	–	3.6	2.6
July	8	68.3	15.5	0.0	9.3	3.2	22.9	2.9	13.5	0.9	2.7	57.4	0.3	–	3.6	2.5

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																
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	27.5	2.2	7.6	46.8	27.4	40.9	17.2	4.4	4.9	3.7	18.8	16.3	8.0	8.0	7.2	0.2
2017 May	2.5	0.0	0.6	4.2	2.4	3.3	1.4	0.3	0.4	0.3	1.6	17.3	8.3	0.6		0.0
June	2.2	0.0	0.8	4.1	2.4	3.6	1.5	0.3	0.4	0.3	1.7	17.1	8.0	0.5	1.5	0.0
July	2.1	0.0	0.7	4.1	2.3	3.5	1.5	0.4	0.4	0.3	1.6	17.3	8.0	0.6		0.0
Private building and loan associations																
2017 May	1.6	0.0	0.3	2.8	1.5	2.6	1.1	0.2	0.3	0.2	1.3	12.2	4.8	0.4		0.0
June	1.4	0.0	0.3	3.0	1.6	2.8	1.1	0.3	0.3	0.2	1.3	12.2	4.8	0.4	1.2	0.0
July	1.3	0.0	0.4	3.0	1.6	2.6	1.1	0.3	0.3	0.3	1.2	12.5	4.8	0.4		0.0
Public building and loan associations																
2017 May	0.9	0.0	0.3	1.4	0.9	0.8	0.3	0.1	0.1	0.0	0.4	5.1	3.4	0.1		0.0
June	0.8	0.0	0.4	1.1	0.8	0.8	0.4	0.1	0.1	0.1	0.4	4.9	3.2	0.1	0.4	0.0
July	0.8	0.0	0.3	1.0	0.7	0.9	0.4	0.1	0.1	0.1	0.4	4.8	3.2	0.1		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		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 and/or foreign subsidiaries ¹	Balance sheet total ⁷	Credit balances and loans				Money market paper, securities ^{2,3}	Loans			Money market paper, securities ²	Total	of which Derivative financial instruments in the trading portfolio	
				Total	German banks	Foreign banks	Total		Total	to German non-banks	to foreign non-banks				
Foreign branches															
End of year or month *															
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
2016	51	191	1,873.3	584.2	570.5	205.0	365.5	13.8	580.5	489.8	14.5	475.3	90.8	708.5	485.3
2016 Sep	50	187	1,916.6	595.9	581.3	200.4	380.9	14.6	629.3	524.9	14.3	510.6	104.4	691.4	511.1
Oct	50	186	1,942.2	626.9	613.0	212.4	400.6	13.9	599.9	496.1	13.3	482.8	103.7	715.4	497.2
Nov	50	185	1,928.8	592.4	578.4	205.9	372.5	14.0	622.8	516.4	14.1	502.3	106.4	713.7	495.0
Dec	51	191	1,873.3	584.2	570.5	205.0	365.5	13.8	580.5	489.8	14.5	475.3	90.8	708.5	485.3
2017 Jan	51	192	1,877.2	603.8	590.4	215.5	375.0	13.4	586.0	492.4	14.1	478.4	93.6	687.4	461.8
Feb	51	193	1,920.0	617.9	604.9	227.3	377.5	13.1	600.4	505.3	13.8	491.4	95.1	701.7	467.6
Mar	51	193	1,918.1	616.1	602.7	228.2	374.5	13.4	609.0	513.0	14.1	499.0	95.9	693.0	452.2
Apr	51	192	1,931.5	631.8	618.6	224.4	394.2	13.3	597.8	503.9	13.7	490.3	93.9	701.8	460.3
May	51	192	1,894.2	629.7	616.8	215.1	401.8	12.8	565.5	478.3	13.2	465.1	87.2	699.0	459.0
June	51	192	1,828.5	589.4	576.9	212.5	364.4	12.5	565.1	475.9	13.3	462.5	89.2	674.1	434.1
Changes *															
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
2016	± 0	- 7	+ 29.1	+ 49.3	+ 52.9	+ 43.7	+ 9.2	- 3.5	- 56.4	- 24.6	+ 0.5	- 25.1	- 31.8	+ 24.9	- 14.8
2016 Oct	-	- 1	+ 24.9	+ 26.9	+ 27.7	+ 11.9	+ 15.8	- 0.8	- 32.2	- 31.4	- 0.9	- 30.5	- 0.8	+ 23.3	- 16.4
Nov	-	- 1	- 15.5	- 44.0	- 43.9	- 6.5	- 37.4	- 0.2	+ 12.5	+ 11.3	+ 0.7	+ 10.6	+ 1.1	- 3.8	- 9.1
Dec	+ 1	+ 6	- 55.9	- 10.2	- 9.9	- 1.0	- 8.9	- 0.3	- 44.3	- 28.4	+ 0.4	- 28.8	- 15.9	- 5.5	- 11.1
2017 Jan	-	+ 1	+ 5.1	+ 24.7	+ 25.0	+ 10.5	+ 14.5	- 0.2	+ 11.3	+ 7.9	- 0.4	+ 8.3	+ 3.5	- 20.0	- 20.0
Feb	-	+ 1	+ 41.4	+ 9.6	+ 10.1	+ 11.8	- 1.8	- 0.4	+ 8.8	+ 7.9	- 0.2	+ 8.1	+ 0.9	+ 13.0	+ 2.9
Mar	-	-	- 1.2	+ 0.7	+ 0.4	+ 0.9	- 0.5	+ 0.4	+ 11.7	+ 10.6	+ 0.3	+ 10.3	+ 1.2	- 7.9	- 13.7
Apr	-	- 1	+ 14.9	+ 22.0	+ 22.0	- 3.8	+ 25.8	+ 0.1	- 4.5	- 3.1	- 0.4	- 2.6	- 1.4	+ 10.3	+ 11.7
May	-	-	- 35.2	+ 6.6	+ 6.8	- 9.3	+ 16.1	- 0.2	- 22.3	- 16.9	- 0.5	- 16.4	- 5.4	- 0.8	+ 4.0
June	-	-	- 64.4	- 34.7	- 34.4	- 2.5	- 31.9	- 0.2	+ 5.1	+ 2.5	+ 0.1	+ 2.3	+ 2.6	- 23.6	- 21.9
Foreign subsidiaries															
End of year or month *															
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	-
2016	20	53	320.5	82.1	72.2	21.4	50.8	9.9	161.4	130.3	22.6	107.7	31.2	76.9	-
2016 Sep	19	53	320.9	84.2	74.1	20.9	53.2	10.0	168.0	135.7	23.2	112.6	32.3	68.7	-
Oct	19	53	316.6	81.4	71.3	20.5	50.8	10.1	157.9	126.3	22.9	103.4	31.5	77.3	-
Nov	19	52	323.1	83.1	73.2	19.9	53.3	10.0	154.6	123.1	23.1	100.0	31.5	85.4	-
Dec	20	53	320.5	82.1	72.2	21.4	50.8	9.9	161.4	130.3	22.6	107.7	31.2	76.9	-
2017 Jan	20	53	314.1	81.3	71.7	22.0	49.7	9.6	161.5	130.5	22.9	107.6	31.0	71.3	-
Feb	20	53	315.4	80.7	71.2	30.9	40.4	9.5	162.0	130.8	23.1	107.7	31.2	72.7	-
Mar	20	53	309.8	79.8	70.7	31.1	39.7	9.1	162.7	131.5	23.0	108.5	31.2	67.2	-
Apr	20	53	303.2	73.1	64.1	24.8	39.3	9.0	160.8	130.9	22.8	108.0	29.9	69.3	-
May	20	53	295.9	72.1	64.6	26.7	38.0	7.5	157.0	128.3	23.0	105.3	28.7	66.8	-
June	20	51	285.2	72.4	65.2	27.0	38.2	7.2	155.5	126.6	22.9	103.7	28.9	57.2	-
Changes *															
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	-
2016	- 4	- 5	- 56.8	- 45.9	- 42.6	- 28.7	- 13.9	- 3.3	- 22.7	- 22.1	+ 0.4	- 22.4	- 0.6	+ 11.8	-
2016 Oct	-	-	- 5.6	- 3.6	- 3.5	- 0.5	- 3.0	- 0.1	- 10.6	- 9.8	- 0.3	- 9.6	- 0.8	+ 8.6	-
Nov	-	- 1	+ 3.8	- 0.0	+ 0.4	- 0.6	+ 0.9	- 0.4	- 4.2	- 4.2	+ 0.2	- 4.3	- 0.0	+ 8.0	-
Dec	+ 1	+ 1	- 3.4	- 1.6	- 1.5	+ 1.5	- 3.0	- 0.1	+ 6.6	+ 7.0	- 0.5	+ 7.4	- 0.4	+ 8.4	-
2017 Jan	-	-	- 4.8	+ 0.2	+ 0.4	+ 0.5	- 0.2	- 0.2	+ 0.6	+ 0.8	+ 0.3	+ 0.5	- 0.2	- 5.6	-
Feb	-	-	+ 0.0	- 1.4	- 1.1	+ 8.9	- 10.0	- 0.2	+ 0.0	- 0.2	+ 0.2	- 0.4	+ 0.2	+ 1.4	-
Mar	-	-	- 4.9	- 0.4	- 0.1	+ 0.2	- 0.3	- 0.3	+ 1.0	+ 1.0	- 0.1	+ 1.1	+ 0.0	- 5.5	-
Apr	-	-	- 4.9	- 5.7	- 5.7	- 6.3	+ 0.5	+ 0.1	- 1.3	- 0.0	- 0.2	+ 0.1	- 1.3	+ 2.1	-
May	-	-	- 4.9	+ 0.5	+ 1.7	+ 1.9	- 0.1	- 1.3	- 2.9	- 1.7	+ 0.2	- 1.9	- 1.2	- 2.5	-
June	-	- 2	- 9.4	+ 1.1	+ 1.2	+ 0.3	+ 0.9	- 0.1	- 0.9	- 1.2	- 0.1	- 1.1	+ 0.2	- 9.6	-

* 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 outstanding ⁵	Working capital and own funds	Other liabilities ^{6,7}		Period
Total	of banks (MFIs)			of non-banks (non-MFIs)				Total	of which Derivative financial instruments in the trading portfolio					
	Total	German banks	Foreign banks	Total	German non-banks ⁴		Foreign non-banks							
					Total	Short-term	Medium and long-term							
End of year or month *													Foreign branches	
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	
1,136.5	800.9	424.9	376.0	335.6	15.4	11.8	3.6	320.2	100.6	51.2	585.1	481.0	2016	
1,117.2	763.1	380.6	382.5	354.1	21.5	17.7	3.8	332.6	113.7	49.7	636.1	513.9	2016 Sep	
1,186.7	833.2	422.0	411.2	353.4	21.6	17.8	3.8	331.9	108.9	49.6	597.0	491.1	Oct	
1,165.0	791.8	410.5	381.3	373.2	19.1	15.5	3.6	354.1	104.2	50.3	609.4	495.3	Nov	
1,136.5	800.9	424.9	376.0	335.6	15.4	11.8	3.6	320.2	100.6	51.2	585.1	481.0	Dec	
1,161.3	804.3	417.6	386.7	357.0	15.2	11.7	3.5	341.8	111.2	50.9	553.9	456.6	2017 Jan	
1,190.7	816.8	423.2	393.6	373.9	16.5	13.2	3.4	357.4	114.0	51.2	564.0	462.0	Feb	
1,197.9	825.3	436.0	389.3	372.6	15.2	11.8	3.4	357.4	106.9	51.6	561.7	448.3	Mar	
1,210.4	846.5	422.0	424.5	363.9	15.3	12.0	3.3	348.7	104.7	51.3	565.0	455.4	Apr	
1,178.6	830.8	406.4	424.4	347.8	15.5	12.3	3.2	332.2	100.5	50.7	564.3	458.6	May	
1,151.2	801.4	424.5	377.0	349.7	14.9	11.6	3.3	334.9	93.4	50.3	533.6	429.5	June	
Changes *													Foreign subsidiaries	
- 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	
+ 66.8	+ 76.8	+ 65.6	+ 11.2	- 10.1	- 5.7	- 4.4	- 1.2	- 4.4	- 29.6	+ 1.2	- 18.1	- 17.3	2016	
+ 65.3	+ 66.1	+ 41.4	+ 24.7	- 0.7	+ 0.1	+ 0.1	- 0.1	- 0.8	- 5.5	- 0.0	- 39.1	- 25.5	2016 Oct	
- 31.1	- 50.5	- 11.5	- 39.0	+ 19.4	- 2.5	- 2.4	- 0.2	+ 21.9	- 6.8	+ 0.7	+ 12.3	- 2.6	Nov	
- 30.5	+ 7.1	+ 14.4	- 7.3	- 37.6	- 3.7	- 3.7	+ 0.0	- 34.0	- 4.0	+ 0.8	- 24.3	- 15.8	Dec	
+ 30.0	+ 8.5	- 7.3	+ 15.8	+ 21.5	- 0.2	- 0.1	- 0.1	+ 21.7	+ 11.7	- 0.3	- 31.2	- 20.5	2017 Jan	
+ 24.8	+ 8.0	+ 5.6	+ 2.4	+ 16.8	+ 1.3	+ 1.5	- 0.1	+ 15.4	+ 1.6	+ 0.3	+ 10.2	+ 2.3	Feb	
+ 9.9	+ 11.1	+ 12.8	- 1.7	- 1.2	- 1.3	- 1.3	- 0.0	+ 0.1	- 6.4	+ 0.4	- 2.4	- 11.9	Mar	
+ 19.0	+ 27.4	- 14.1	+ 41.5	- 8.5	+ 0.1	+ 0.2	- 0.1	- 8.6	- 0.7	- 0.3	+ 3.4	+ 11.1	Apr	
- 22.7	- 6.8	- 15.5	+ 8.7	- 15.9	+ 0.3	+ 0.3	- 0.1	- 16.2	- 2.1	- 0.6	- 0.8	+ 8.7	May	
- 21.7	- 23.8	+ 18.1	- 41.8	+ 2.1	- 0.7	- 0.7	+ 0.0	+ 2.8	- 5.9	- 0.4	- 30.6	- 25.8	June	
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	
247.0	134.3	71.8	62.5	112.7	12.2	6.7	5.5	100.5	13.6	23.8	36.0	-	2016	
248.4	136.3	72.9	63.3	112.2	11.2	6.4	4.7	101.0	12.5	23.8	36.2	-	2016 Sep	
243.7	140.6	76.3	64.3	103.1	10.8	6.3	4.5	92.3	12.7	23.9	36.3	-	Oct	
250.1	139.7	77.1	62.6	110.4	10.2	5.2	4.9	100.3	12.6	23.8	36.6	-	Nov	
247.0	134.3	71.8	62.5	112.7	12.2	6.7	5.5	100.5	13.6	23.8	36.0	-	Dec	
240.0	131.4	70.5	61.0	108.5	12.2	6.8	5.4	96.3	13.5	24.0	36.7	-	2017 Jan	
239.3	129.5	70.4	59.1	109.8	13.0	7.6	5.4	96.8	13.9	24.1	38.2	-	Feb	
237.1	126.8	68.1	58.6	110.3	13.8	8.4	5.4	96.5	13.8	23.7	35.2	-	Mar	
229.6	116.9	57.7	59.1	112.7	12.9	7.2	5.7	99.8	13.8	23.6	36.2	-	Apr	
224.9	114.1	55.8	58.3	110.8	13.4	7.7	5.7	97.4	13.7	23.5	33.7	-	May	
216.3	105.1	53.8	51.3	111.2	13.4	7.6	5.8	97.8	13.1	23.0	32.8	-	June	
Changes *													Foreign subsidiaries	
- 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	
- 46.2	- 33.5	- 27.8	- 5.7	- 12.7	- 0.9	- 3.8	+ 2.9	- 11.9	- 0.8	- 2.5	- 7.3	-	2016	
- 5.8	+ 3.7	+ 3.4	+ 0.3	- 9.4	- 0.4	- 0.1	- 0.3	- 9.0	+ 0.2	+ 0.1	- 0.2	-	2016 Oct	
+ 4.4	- 2.1	+ 0.8	- 2.9	+ 6.6	- 0.6	- 1.1	+ 0.4	+ 7.2	- 0.1	- 0.1	- 0.4	-	Nov	
- 3.7	- 5.8	- 5.3	- 0.5	+ 2.1	+ 2.0	+ 1.5	+ 0.6	+ 0.1	+ 1.0	+ 0.0	- 0.8	-	Dec	
- 5.8	- 2.1	- 1.3	- 0.8	- 3.7	+ 0.0	+ 0.1	- 0.1	- 3.8	- 0.1	+ 0.1	+ 1.0	-	2017 Jan	
- 1.6	- 2.5	- 0.1	- 2.4	+ 0.9	+ 0.8	+ 0.8	- 0.0	+ 0.1	+ 0.4	+ 0.1	+ 1.1	-	Feb	
- 1.7	- 2.4	- 2.2	- 0.2	+ 0.7	+ 0.7	+ 0.8	- 0.0	- 0.0	- 0.1	- 0.4	- 2.7	-	Mar	
- 6.3	- 9.1	- 10.4	+ 1.3	+ 2.8	- 0.9	- 1.2	+ 0.3	+ 3.7	+ 0.0	- 0.1	+ 1.5	-	Apr	
- 3.0	- 1.8	- 2.0	+ 0.2	- 1.2	+ 0.5	+ 0.5	+ 0.0	- 1.6	- 0.1	- 0.1	- 1.8	-	May	
- 7.7	- 8.4	- 2.0	- 6.4	+ 0.7	- 0.0	- 0.1	+ 0.1	+ 0.7	- 0.6	- 0.5	- 0.6	-	June	

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	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	11,918.5	119.2	118.8	919.0	800.3	0.0
2017 June	12,299.7	123.0	122.6	1,169.2	1,046.6	0.0
July ^P	12,260.5	122.6	122.2	...	...	...
Aug	.	.	.	.	.	.

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	3,371,095	28.3	33,711	33,546	301,989	268,443	0
2017 June	3,467,899	28.2	34,679	34,515	412,707	378,192	6
July ^P	3,456,232	28.2	34,562	34,401	...	...	...
Aug	.	.	.	.	.	.	.

(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	6,384	5,390	2,812	10,905	5,960	236	1,859
2017 June	6,583	5,618	3,231	11,065	6,088	167	1,762
July	6,424	5,570	3,260	11,140	6,124	160	1,722
Aug	.	.	.	.	.	.	.

(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	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	2,203,100	1,595	447,524	585,099	133,776
2017 June	2,274,005	1,813	487,900	585,613	118,566
July	2,282,504	2,069	465,089	585,322	121,246
Aug	.	.	.	.	123,550

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.

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 Jan 1	–0.88
2007 Jan 1	2.70	2016 July 1	–0.88
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 € million	Allotment amount	Fixed rate tenders		Variable rate tenders		Running for ... days	
			Fixed rate	% per annum	Minimum bid rate	Marginal rate 1		Weighted average rate
Main refinancing operations								
2017 Aug 9	4,591	4,591	0.00	–	–	–	6	
Aug 15	4,810	4,810	0.00	–	–	–	8	
Aug 23	7,267	7,267	0.00	–	–	–	7	
Aug 30	5,914	5,914	0.00	–	–	–	7	
Sep 6	4,310	4,310	0.00	–	–	–	7	
Sep 13	3,986	3,986	0.00	–	–	–	7	
Long-term refinancing operations								
2017 June 1	3,050	3,050	2 0.00	–	–	–	91	
June 29	2,667	2,667	2 ...	–	–	–	91	
July 27	2,860	2,860	2 ...	–	–	–	91	
Aug 31	2,899	2,899	2 ...	–	–	–	91	

* 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
2017 Feb	–0.35	–0.38	–0.37	–0.33	–0.24	–0.17	–0.11
Mar	–0.35	–0.38	–0.37	–0.33	–0.24	–0.17	–0.11
Apr	–0.36	–0.38	–0.37	–0.33	–0.25	–0.18	–0.12
May	–0.36	–0.38	–0.37	–0.33	–0.25	–0.18	–0.13
June	–0.36	–0.38	–0.37	–0.33	–0.27	–0.20	–0.15
July	–0.36	–0.38	–0.37	–0.33	–0.27	–0.21	–0.15
Aug	–0.36	–0.38	–0.37	–0.33	–0.27	–0.21	–0.16

* 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
2016 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	79,332	1.72	18,124
Sep	0.40	75,235	1.52	219,354	0.12	83,015	1.65	18,371
Oct	0.40	75,245	1.51	218,836	0.13	80,349	1.60	18,507
Nov	0.39	74,620	1.49	218,016	0.10	82,888	1.56	19,037
Dec	0.38	74,227	1.48	220,035	0.10	81,192	1.54	19,097
2017 Jan	0.37	73,435	1.46	219,585	0.10	82,672	1.53	19,293
Feb	0.35	73,708	1.45	219,045	0.10	83,514	1.52	19,144
Mar	0.34	73,460	1.44	218,575	0.09	84,520	1.49	19,649
Apr	0.33	72,221	1.42	218,122	0.09	82,082	1.44	20,074
May	0.33	71,503	1.41	217,847	0.08	82,646	1.41	20,471
June	0.33	69,952	1.40	217,154	0.08	80,018	1.35	20,770
July	0.32	69,365	1.39	216,115	0.08	78,396	1.31	21,529

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
2016 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
Sep	2.49	4,645	2.22	27,195	3.07	1,079,270	7.29	52,985	4.15	83,297	4.24	310,507
Oct	2.49	4,711	2.19	27,068	3.04	1,083,120	7.26	52,115	4.12	83,574	4.21	310,941
Nov	2.42	4,538	2.13	27,004	3.02	1,087,318	7.17	51,035	4.09	83,826	4.19	311,454
Dec	2.42	4,380	2.11	26,777	2.99	1,090,316	7.18	51,459	4.07	83,809	4.16	310,013
2017 Jan	2.43	4,463	2.10	26,399	2.96	1,090,663	7.21	51,134	4.04	83,791	4.13	310,789
Feb	2.41	4,314	2.09	26,272	2.94	1,093,062	7.24	50,975	4.02	83,726	4.11	311,206
Mar	2.47	4,342	2.07	26,205	2.91	1,097,148	7.32	51,515	4.01	84,063	4.09	311,220
Apr	2.45	4,296	2.05	26,173	2.88	1,102,315	7.10	50,383	3.99	84,268	4.08	310,696
May	2.44	4,356	2.04	26,187	2.85	1,106,601	7.13	50,320	3.96	84,963	4.06	312,176
June	2.44	4,253	2.03	26,205	2.83	1,113,177	7.17	51,412	3.95	85,256	4.04	311,592
July	2.46	4,128	2.01	26,017	2.80	1,118,675	7.15	50,266	3.93	85,647	4.03	312,428

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
2016 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
Sep	2.58	132,381	2.06	134,447	2.52	612,812
Oct	2.53	132,273	2.04	134,868	2.50	615,105
Nov	2.54	131,980	2.02	136,298	2.48	620,104
Dec	2.57	125,998	2.01	136,477	2.45	623,831
2017 Jan	2.52	130,773	2.00	136,921	2.42	628,271
Feb	2.55	132,264	1.99	136,362	2.41	631,862
Mar	2.54	132,741	1.98	136,980	2.39	632,484
Apr	2.51	133,262	1.98	137,137	2.37	637,174
May	2.45	133,371	1.97	137,779	2.35	643,570
June	2.51	134,741	1.95	138,252	2.33	639,615
July	2.45	134,305	1.95	138,761	2.31	644,819

* 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 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 nonfinancial 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 / Money and capital markets / Interest rates and yields / Interest rates on deposits and loans). ° 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 12 to 14 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
2016 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	1,148	0.86	961	0.27	533,503	0.34	53,749
Sep	0.08	1,173,762	0.32	5,240	0.50	671	0.77	885	0.26	532,980	0.33	53,031
Oct	0.07	1,184,012	0.30	6,402	0.44	716	0.75	933	0.25	533,209	0.32	52,223
Nov	0.07	1,208,967	0.30	5,075	0.58	523	0.77	907	0.24	533,406	0.32	51,649
Dec	0.07	1,220,413	0.23	5,583	0.51	621	0.68	967	0.24	536,031	0.32	51,299
2017 Jan	0.07	1,222,852	0.28	6,002	0.59	715	0.61	999	0.23	536,834	0.31	50,563
Feb	0.06	1,233,193	0.31	4,688	0.47	617	0.70	773	0.22	537,566	0.31	49,971
Mar	0.05	1,233,631	0.26	4,918	0.51	676	0.69	820	0.21	536,136	0.31	49,493
Apr	0.05	1,253,497	0.19	4,926	0.37	729	0.63	741	0.21	536,260	0.31	49,013
May	0.05	1,258,521	0.20	4,724	0.43	719	0.87	726	0.21	536,046	0.30	48,646
June	0.04	1,264,791	0.22	4,078	0.27	947	0.73	633	0.21	535,416	0.30	48,253
July	0.04	1,271,823	0.17	5,276	0.31	653	0.70	617	0.20	537,553	0.31	44,902

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
2016 July	0.01	378,718	- 0.02	9,596	0.14	569	0.25	476
Aug	0.01	388,519	- 0.06	9,727	0.19	451	0.39	286
Sep	0.01	389,701	- 0.08	15,158	0.14	598	0.30	792
Oct	0.00	399,216	- 0.03	10,736	0.14	577	0.36	521
Nov	- 0.00	400,064	- 0.11	13,017	0.24	951	0.39	1,490
Dec	- 0.00	401,493	- 0.12	15,159	0.22	1,205	0.36	538
2017 Jan	- 0.00	400,475	- 0.05	11,356	0.22	754	0.40	314
Feb	- 0.00	397,363	- 0.07	10,802	0.13	631	0.54	336
Mar	- 0.01	395,640	- 0.09	12,614	0.19	450	0.79	309
Apr	- 0.01	397,203	- 0.07	9,275	0.08	899	0.33	1,039
May	- 0.01	401,652	- 0.05	10,212	0.13	912	0.30	837
June	- 0.02	415,078	- 0.14	14,661	0.07	525	0.24	586
July	- 0.01	402,113	- 0.09	11,516	0.19	859	0.26	1,382

Loans to households												
Loans for consumption with an initial rate fixation of ⁴												
Reporting period	Total (including charges)		<i>of which</i> renegotiated loans ⁹				floating rate or up to 1 year ⁹		over 1 year and up to 5 years		over 5 years	
	Annual percentage rate of charge ¹⁰ % 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	
2016 July	6.20	6.18	8,468	7.50	1,764	5.97	298	4.77	3,405	7.20	4,765	
Aug	6.09	6.06	8,301	7.36	1,643	5.89	328	4.70	3,402	7.09	4,571	
Sep	5.94	5.92	7,802	7.11	1,560	6.04	296	4.56	3,257	6.95	4,249	
Oct	5.95	5.93	7,579	7.10	1,482	6.04	300	4.52	3,127	6.99	4,152	
Nov	5.85	5.83	7,595	7.12	1,674	6.05	316	4.51	3,312	6.91	3,967	
Dec	5.69	5.67	6,552	7.06	1,399	6.09	320	4.40	3,026	6.83	3,206	
2017 Jan	6.06	6.04	8,603	7.16	1,886	6.15	330	4.59	3,242	6.97	5,031	
Feb	5.82	5.80	8,187	6.92	1,619	6.15	273	4.37	3,094	6.69	4,820	
Mar	5.62	5.60	9,849	6.88	1,761	6.12	341	4.15	4,041	6.64	5,467	
Apr	5.66	5.65	8,222	6.91	1,544	6.17	287	4.32	3,415	6.61	4,520	
May	5.89	5.87	9,372	7.22	1,814	6.41	337	4.49	3,846	6.87	5,189	
June	5.90	5.88	8,683	7.24	1,685	6.28	308	4.49	3,574	6.89	4,801	
July	5.99	5.97	8,940	7.32	1,872	6.22	299	4.57	3,561	6.95	5,080	

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 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 +

Loans to households (cont'd)										
Loans for other purposes to households with an initial rate fixation of 5										
Reporting period	Total		of which renegotiated loans 9		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
Loans to households										
2016 July	1.89	6,818	1.73	2,543	1.69	3,394	2.66	936	1.89	2,488
Aug	2.02	5,949	1.95	1,989	1.94	2,699	2.80	793	1.85	2,457
Sep	1.89	6,462	1.76	2,153	1.76	3,266	2.69	807	1.81	2,389
Oct	1.89	6,445	1.72	2,522	1.70	3,408	2.63	928	1.87	2,109
Nov	1.92	6,305	1.89	2,070	1.79	3,051	2.71	837	1.81	2,417
Dec	1.93	7,774	1.89	2,343	1.86	3,262	2.61	1,085	1.79	3,427
2017 Jan	1.94	6,698	1.84	2,651	1.78	3,024	2.52	915	1.92	2,759
Feb	1.94	5,484	1.86	1,916	1.69	2,540	2.56	803	1.99	2,141
Mar	2.01	7,097	1.88	2,130	1.80	3,237	2.72	1,032	1.99	2,828
Apr	2.00	6,030	1.86	2,229	1.75	2,826	2.67	853	2.05	2,351
May	2.02	5,890	1.81	1,930	1.83	2,535	2.61	941	1.99	2,414
June	2.06	5,933	1.89	1,852	1.95	2,722	2.73	859	1.93	2,352
July	1.96	6,388	1.75	2,282	1.76	2,873	2.48	964	1.99	2,551
<i>of which: loans to sole proprietors</i>										
2016 July	2.01	4,661	.	.	1.88	2,323	2.82	724	1.85	1,614
Aug	2.09	3,947	.	.	1.99	1,789	2.96	589	1.89	1,569
Sep	1.99	4,261	.	.	1.88	2,013	2.89	610	1.78	1,638
Oct	2.00	4,227	.	.	1.86	2,096	2.78	728	1.82	1,403
Nov	2.03	4,139	.	.	2.00	1,920	2.78	647	1.76	1,572
Dec	2.01	5,393	.	.	1.98	2,257	2.71	881	1.76	2,255
2017 Jan	1.99	4,694	.	.	1.92	2,084	2.61	712	1.83	1,898
Feb	2.07	3,613	.	.	1.95	1,579	2.75	568	1.93	1,466
Mar	2.11	4,783	.	.	2.01	2,120	2.84	767	1.93	1,896
Apr	2.09	4,280	.	.	1.95	1,931	2.77	670	1.97	1,679
May	2.12	4,033	.	.	2.04	1,667	2.84	689	1.92	1,677
June	2.15	4,197	.	.	2.13	1,964	2.84	681	1.88	1,552
July	2.06	4,142	.	.	1.89	1,917	2.82	688	1.94	1,537

Loans to households (cont'd)													
Housing loans with an initial rate fixation of 3													
Reporting period	Total (including charges)		of which renegotiated loans 9		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 10 % 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													
2016 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	19,903	1.86	4,075	2.18	2,185	1.76	1,745	1.49	7,197	1.69	8,776
Sep	1.70	1.64	18,636	1.79	3,854	2.01	2,062	1.75	1,658	1.48	6,555	1.66	8,361
Oct	1.68	1.62	17,913	1.72	4,542	1.99	2,093	1.62	1,584	1.45	6,317	1.66	7,919
Nov	1.67	1.62	20,223	1.72	4,687	1.88	2,611	1.66	1,614	1.43	7,008	1.68	8,990
Dec	1.72	1.66	21,400	1.80	4,757	1.98	2,347	1.67	1,800	1.49	8,054	1.73	9,199
2017 Jan	1.82	1.77	19,804	1.84	5,711	2.08	2,283	1.66	1,780	1.59	7,454	1.86	8,287
Feb	1.87	1.81	17,838	1.89	4,291	2.17	1,784	1.65	1,567	1.64	6,556	1.90	7,931
Mar	1.87	1.82	22,196	1.86	4,945	2.08	2,428	1.69	1,932	1.67	7,609	1.89	10,227
Apr	1.91	1.85	18,087	1.89	4,620	2.10	2,001	1.73	1,672	1.71	6,456	1.92	7,958
May	1.88	1.83	20,484	1.92	4,136	2.17	2,288	1.77	1,731	1.66	7,308	1.88	9,157
June	1.87	1.82	19,294	1.92	3,767	2.02	2,265	1.70	1,541	1.68	6,573	1.89	8,915
July	1.88	1.82	20,405	1.88	4,612	2.04	2,389	1.68	1,726	1.66	7,420	1.92	8,870
<i>of which: collateralised loans 11</i>													
2016 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	1.46	770	1.41	3,410	1.67	3,526
Sep	.	1.55	7,930	.	.	1.89	728	1.46	708	1.39	3,109	1.61	3,385
Oct	.	1.55	7,854	.	.	1.89	764	1.43	768	1.39	3,023	1.65	3,299
Nov	.	1.51	9,115	.	.	1.54	1,225	1.48	763	1.36	3,407	1.65	3,720
Dec	.	1.57	9,705	.	.	1.85	863	1.55	878	1.41	3,968	1.66	3,996
2017 Jan	.	1.67	8,932	.	.	1.90	835	1.50	925	1.52	3,632	1.81	3,540
Feb	.	1.71	7,964	.	.	2.06	643	1.50	796	1.57	3,181	1.82	3,344
Mar	.	1.72	9,905	.	.	1.96	855	1.53	939	1.59	3,565	1.82	4,546
Apr	.	1.75	8,413	.	.	1.98	795	1.53	838	1.60	3,204	1.89	3,576
May	.	1.73	9,110	.	.	2.09	843	1.59	900	1.58	3,370	1.81	3,997
June	.	1.72	8,374	.	.	1.87	865	1.53	726	1.61	3,030	1.82	3,753
July	.	1.72	9,062	.	.	1.84	896	1.53	891	1.60	3,529	1.84	3,746

For footnotes * and 1 to 6, see p 44•. For footnotes +, 7 to 10, see p 45•. For footnote 11, see 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 +

Reporting period	Loans to households (cont'd)						Loans to non-financial corporations					
	Revolving loans 12 and overdrafts 13 credit card debt 14		of which				Revolving loans 12 and overdrafts 13 credit card debt 14		of which			
			Revolving loans 12 and overdrafts 13		Extended credit card debt				Revolving loans 12 and overdrafts 13		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	
2016 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	63,560	3.74	63,322		
Sep	8.62	41,559	8.66	33,900	15.13	4,269	3.70	66,057	3.71	65,773		
Oct	8.59	40,657	8.60	32,988	15.13	4,328	3.67	64,202	3.68	63,931		
Nov	8.50	39,342	8.51	31,782	15.13	4,222	3.61	64,064	3.63	63,786		
Dec	8.50	40,103	8.54	32,351	15.06	4,286	3.69	61,612	3.71	61,357		
2017 Jan	8.55	39,784	8.54	32,190	15.12	4,309	3.61	64,182	3.63	63,925		
Feb	8.65	39,345	8.62	31,953	15.14	4,291	3.68	65,697	3.70	65,431		
Mar	8.66	40,215	8.61	32,949	15.13	4,273	3.67	65,990	3.68	65,698		
Apr	8.50	38,972	8.49	31,353	15.13	4,295	3.64	65,154	3.66	64,865		
May	8.46	39,394	8.50	31,647	15.13	4,259	3.53	65,353	3.54	65,067		
June	8.44	40,606	8.47	32,739	15.13	4,328	3.59	67,282	3.61	66,992		
July	8.45	39,300	8.46	31,374	15.11	4,423	3.52	65,979	3.54	65,695		

Reporting period	Loans to non-financial corporations (cont'd)															
	Total		of which				Loans up to €1 million with an initial rate fixation of 15				Loans over €1 million with an initial rate fixation of 15					
			renegotiated loans 9		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																
2016 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	54,015	1.58	14,307	2.44	7,384	2.62	1,340	1.68	1,416	1.14	33,033	1.48	2,112	1.40	8,730
Sep	1.51	62,170	1.66	19,929	2.54	8,312	2.63	1,431	1.70	1,312	1.24	41,393	1.67	1,986	1.54	7,736
Oct	1.43	59,422	1.50	20,936	2.44	8,219	2.63	1,417	1.65	1,258	1.16	40,159	1.69	1,960	1.44	6,409
Nov	1.45	58,860	1.52	15,959	2.48	8,095	2.64	1,497	1.69	1,361	1.16	36,792	1.32	2,628	1.49	8,487
Dec	1.53	78,985	1.63	22,509	2.50	8,638	2.57	1,829	1.77	1,881	1.27	48,315	1.64	3,444	1.62	14,878
2017 Jan	1.33	64,819	1.54	18,857	2.42	8,119	2.60	1,328	1.86	1,423	1.01	43,339	1.40	2,830	1.57	7,780
Feb	1.33	56,958	1.55	13,746	2.55	7,309	2.58	1,326	1.83	1,209	0.99	37,140	1.29	2,001	1.54	7,973
Mar	1.50	71,530	1.60	22,647	2.51	9,245	2.59	1,733	1.85	1,665	1.20	45,163	1.41	2,977	1.67	10,747
Apr	1.43	57,323	1.46	19,903	2.44	7,699	2.54	1,493	1.81	1,371	1.14	38,649	1.41	2,188	1.67	5,923
May	1.35	65,177	1.53	18,706	2.54	8,000	2.58	1,661	1.82	1,423	0.99	41,638	1.55	3,072	1.58	9,383
June	1.41	71,950	1.50	21,083	2.51	8,904	2.57	1,681	1.84	1,442	1.13	46,903	1.08	3,655	1.61	9,365
July	1.39	67,430	1.48	20,770	2.42	8,497	2.57	1,583	1.87	1,403	1.08	43,495	1.28	3,021	1.61	9,431
of which: collateralised loans ¹¹																
2016 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
Sep	1.59	9,002	.	.	1.93	550	2.49	104	1.46	379	1.53	5,125	2.18	614	1.45	2,230
Oct	1.49	8,746	.	.	1.85	652	2.40	149	1.48	401	1.40	5,352	1.90	560	1.44	1,632
Nov	1.49	8,480	.	.	2.00	494	2.41	159	1.57	401	1.29	4,031	2.04	610	1.50	2,785
Dec	1.55	16,083	.	.	1.91	662	2.46	176	1.57	569	1.39	8,076	1.96	1,310	1.62	5,290
2017 Jan	1.57	8,742	.	.	1.80	692	2.24	141	1.81	505	1.41	4,626	2.05	518	1.60	2,260
Feb	1.46	8,259	.	.	2.07	464	2.44	158	1.78	399	1.33	4,051	1.73	512	1.40	2,675
Mar	1.48	11,857	.	.	1.87	643	2.52	166	1.72	493	1.37	7,040	1.30	519	1.60	2,996
Apr	1.42	8,360	.	.	1.81	570	2.23	164	1.69	413	1.29	5,640	1.59	299	1.62	1,274
May	1.61	8,671	.	.	2.06	545	2.54	191	1.70	401	1.45	4,558	2.04	646	1.63	2,330
June	1.55	11,011	.	.	1.85	632	2.60	150	1.75	444	1.44	6,484	1.64	625	1.66	2,676
July	1.52	9,023	.	.	1.78	661	2.46	155	1.77	415	1.34	5,050	1.74	464	1.68	2,278

For footnotes * and 1 to 6, see p 44*. For footnotes + and 7 to 10, see p 45*. **11** For the purposes of the interest rate statistic, 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. **12** 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. **13** 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. **14** 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. **15** 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										
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
2016	2,659.4	2,571.8	459.2	461.8	317.0	268.5	914.4	79.4	71.5	87.6
2015 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	2,637.2	2,552.5	478.6	480.8	312.6	248.5	882.7	78.7	70.6	84.7
Q3	2,693.1	2,608.4	470.9	486.8	315.9	261.8	922.9	79.0	71.2	84.7
Q4	2,659.4	2,571.8	459.2	461.8	317.0	268.5	914.4	79.4	71.5	87.6
2017 Q1	2,644.3	2,557.9	453.6	463.7	312.3	261.7	913.6	81.6	71.4	86.4
Insurance corporations										
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
2016	2,049.5	1,996.2	312.3	392.7	285.9	247.1	632.0	73.7	52.6	53.3
2015 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	2,034.0	1,980.7	328.6	408.0	281.7	229.6	607.7	73.1	51.9	53.2
Q3	2,081.0	2,028.4	319.5	414.0	284.9	242.8	641.4	73.4	52.5	52.6
Q4	2,049.5	1,996.2	312.3	392.7	285.9	247.1	632.0	73.7	52.6	53.3
2017 Q1	2,028.3	1,976.6	305.0	396.7	280.6	239.8	626.3	75.8	52.4	51.7
Pension funds ⁴										
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
2016	609.8	575.6	146.9	69.1	31.1	21.4	282.4	5.7	18.9	34.3
2015 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
Q3	612.1	580.0	151.5	72.8	31.0	18.9	281.5	5.6	18.7	32.1
Q4	609.8	575.6	146.9	69.1	31.1	21.4	282.4	5.7	18.9	34.3
2017 Q1	616.0	581.3	148.6	67.1	31.6	21.9	287.3	5.8	19.0	34.7

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 2016 Q4 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

End of year/quarter	Liabilities								
	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									
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
2016	2,659.4	18.7	99.6	225.3	2,079.0	1,757.6	321.4	77.0	159.9
2015 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	2,637.2	17.6	97.9	201.1	2,041.1	1,722.3	318.8	73.3	206.2
Q3	2,693.1	19.0	98.9	208.0	2,073.4	1,754.2	319.2	74.0	219.8
Q4	2,659.4	18.7	99.6	225.3	2,079.0	1,757.6	321.4	77.0	159.9
2017 Q1	2,644.3	20.3	101.7	237.8	2,071.8	1,736.9	335.0	77.5	135.2
Insurance corporations									
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
2016	2,049.5	18.7	94.4	213.9	1,536.0	1,215.1	320.9	72.5	114.0
2015 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	2,034.0	17.6	92.9	191.3	1,506.7	1,188.4	318.3	71.5	154.0
Q3	2,081.0	19.0	93.8	197.9	1,534.3	1,215.6	318.7	72.2	163.8
Q4	2,049.5	18.7	94.4	213.9	1,536.0	1,215.1	320.9	72.5	114.0
2017 Q1	2,028.3	20.3	96.5	226.0	1,521.2	1,186.7	334.5	73.0	91.4
Pension funds ⁵									
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
2016	609.8	–	5.2	11.3	543.0	542.5	0.5	4.5	45.9
2015 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
Q3	612.1	–	5.1	10.1	539.1	538.6	0.5	1.8	56.0
Q4	609.8	–	5.2	11.3	543.0	542.5	0.5	4.5	45.9
2017 Q1	616.0	–	5.2	11.7	550.6	550.2	0.5	4.5	43.8

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 2016 Q4 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	
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	57,526	
2012	51,813	- 21,419	- 98,820	- 8,701	86,103	73,231	- 3,767	- 42,017	- 3,573	41,823	55,580	
2013	- 15,969	- 101,616	- 117,187	153	15,415	85,646	16,409	- 25,778	- 12,708	54,895	- 32,380	
2014	64,027	- 31,962	- 47,404	- 1,330	16,776	95,988	53,068	- 12,124	- 11,951	77,143	10,961	
2015	31,809	- 36,010	- 65,778	26,762	3,006	67,819	123,820	- 66,330	121,164	68,986	- 92,012	
2016	69,798	27,069	19,177	17,905	- 10,012	42,728	173,193	- 58,012	187,500	43,705	- 103,395	
2016 Sep	17,625	12,468	6,106	3,712	2,650	5,157	23,838	- 4,025	17,786	10,077	- 6,214	
Oct	- 8,977	- 6,357	640	3,347	- 10,344	- 2,619	10,962	- 7,635	17,287	1,310	- 19,939	
Nov	- 193	2,417	- 5,172	- 377	7,966	- 2,611	6,331	- 2,469	18,652	- 9,852	- 6,524	
Dec	- 30,541	- 21,892	- 10,590	1,125	- 12,426	- 8,649	557	- 9,459	13,554	- 3,538	- 31,098	
2017 Jan	24,212	22,588	12,008	4,673	5,908	1,624	20,521	- 7,443	18,146	9,818	3,692	
Feb	4,188	- 2,177	12,413	1,756	- 16,346	6,365	21,814	- 5,044	16,715	10,143	- 17,626	
Mar	9,225	8,713	1,179	- 131	7,665	512	17,676	- 8,293	17,769	8,200	- 8,451	
Apr	- 12,590	- 15,170	- 5,909	- 276	- 8,985	2,580	3,520	- 5,737	12,817	- 3,560	- 16,110	
May	39,706	28,463	10,800	1,096	16,567	11,243	17,325	3,906	12,751	668	22,381	
June	3,582	- 1,090	2,876	- 5,769	1,802	4,672	10,890	- 11,745	12,871	9,764	- 7,309	
July	- 7,429	- 17,251	- 7,196	8,174	- 18,228	9,822	10,994	- 6,473	11,565	5,902	- 18,423	

€ million

Period	Shares									
	Sales = total purchases	Sales			Purchases					
		Domestic shares ⁹		Foreign shares ¹⁰	Residents					
		Total	Foreign shares ¹⁰	Total ¹¹	Credit institutions ⁶	Other sectors ¹²	Non-residents ¹³			
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	6,702	-	55,606	57,299		
2008	29,452	11,326	-	40,778	2,743	-	23,079	25,822		
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	20,187	10,106	10,081	17,336	11,991	5,345	2,851			
2014	39,903	18,778	21,125	34,148	17,203	16,945	5,755			
2015	40,293	7,668	32,625	26,058	-	5,421	31,479	14,235		
2016	33,504	4,409	29,095	32,324	-	5,143	37,467	1,180		
2016 Sep	5,438	229	5,209	6,092	503	5,589	-	654		
Oct	1,984	204	1,780	-	1,464	-	221	3,448		
Nov	3,866	681	3,185	3,772	728	3,044	94			
Dec	3,021	861	2,160	-	1,291	-	1,303	3,033		
2017 Jan	2,154	148	2,006	1,369	-	247	1,616	785		
Feb	2,436	852	1,584	2,985	1,866	1,119	-	549		
Mar	13,985	10,136	3,849	11,531	506	11,025	2,454			
Apr	- 1,261	95	- 1,356	- 3,599	-	2,589	-	2,338		
May	3,434	107	3,327	2,137	475	1,662	1,297			
June	5,794	920	6,714	64	5,220	-	5,156	5,858		
July	2,733	509	2,224	3,779	-	690	4,469	1,046		

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				Debt securities issued by special purpose credit institutions	Other bank debt securities	Corporate bonds (non-MFIs) ²	Public debt securities ³
		Total	Mortgage Pfandbriefe	Public Pfandbriefe					
Gross sales ⁴									
2005	988,911	692,182	28,217	103,984	160,010	399,969	24,352	272,380	
2006	925,863	622,055	24,483	99,628	139,193	358,750	29,975	273,834	
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 ⁵	1,206,483	717,002	29,059	7,621	511,222	169,103	73,370	416,110	
2016 Dec	56,403	32,710	340	48	23,727	8,595	9,060	14,634	
2017 Jan	123,462	82,622	4,569	2,909	62,057	13,088	6,115	34,725	
Feb	99,851	70,911	2,669	733	48,391	19,118	4,105	24,835	
Mar	95,842	47,729	3,548	756	31,244	12,182	4,691	43,421	
Apr	87,097	55,296	2,170	58	45,233	7,836	2,707	29,094	
May	88,568	55,536	1,700	238	41,685	11,913	5,015	28,016	
June	73,438	42,842	5,005	364	25,324	12,148	4,284	26,312	
July	81,160	47,165	292	562	38,013	8,298	11,105	22,889	

of which: Debt securities with maturities of more than four years ⁶

2005	425,523	277,686	20,862	63,851	49,842	143,129	16,360	131,479
2006	337,969	190,836	17,267	47,814	47,000	78,756	14,422	132,711
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 ⁵	375,859	173,900	24,741	5,841	78,859	64,460	47,818	154,144
2016 Dec	19,429	7,699	137	48	3,777	3,737	6,592	5,138
2017 Jan	41,887	26,101	3,344	1,861	15,975	4,921	4,857	10,929
Feb	31,566	17,827	2,220	733	11,542	3,332	2,843	10,896
Mar	34,636	15,895	2,772	462	6,186	6,474	3,396	15,345
Apr	27,201	15,693	2,055	23	11,781	1,834	1,547	9,962
May	29,215	12,669	1,165	136	6,045	5,322	3,142	13,404
June	24,255	10,611	3,011	54	3,390	4,156	1,784	11,860
July	31,503	12,687	111	62	9,523	2,991	7,388	11,428

Net sales ⁷

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	–	51,099	–	6,401	–	2,605
2013	–	140,017	–	125,932	–	17,364	–	37,778	–	66,760	–	3,057
2014	–	34,020	–	56,899	–	6,313	–	23,856	–	862	–	2,626
2015	–	65,147	–	77,273	–	9,271	–	9,754	–	74,028	–	1,441
2016 ⁵	–	21,951	–	10,792	–	2,176	–	12,979	–	16,266	–	1,256
2016 Dec	–	26,763	–	10,987	–	1,766	–	428	–	5,419	–	–
2017 Jan	–	5,954	–	13,059	–	2,874	–	788	–	6,724	–	51
Feb	–	2,582	–	13,750	–	1,628	–	138	–	10,618	–	162
Mar	–	11,887	–	4,049	–	1,520	–	839	–	3,038	–	1,000
Apr	–	15,906	–	5,239	–	1,191	–	1,613	–	1,034	–	14
May	–	26,524	–	10,344	–	1,329	–	1,105	–	13,027	–	–
June	–	6,370	–	1,035	–	2,036	–	245	–	4,667	–	5
July	–	12,190	–	6,664	–	2,176	–	209	–	1,958	–	–

* 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						Corporate bonds (non-MFIs)	Public debt securities
	Total	Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions	Other bank debt securities		
2005	2,914,723	1,751,563	157,209	519,674	323,587	751,093	83,942	1,079,218
2006	3,044,145	1,809,899	144,397	499,525	368,476	797,502	99,545	1,134,701
2007	3,130,723	1,868,066	133,501	452,896	411,041	870,629	95,863	1,166,794
2008	3,250,195	1,876,583	150,302	377,091	490,641	858,550	178,515	1,195,097
2009	3,326,635	1,801,029	151,160	296,445	516,221	837,203	227,024	1,298,581
2010	3,348,201	1,570,490	147,529	232,954	544,517	645,491	250,774	1,526,937
2011	3,370,721	1,515,911	149,185	188,663	577,423	600,640	247,585	1,607,226
2012	3,285,422	1,414,349	145,007	147,070	574,163	548,109	220,456	1,650,617
2013	3,145,329	1,288,340	127,641	109,290	570,136	481,273	221,851	1,635,138
2014	3,111,308	1,231,445	121,328	85,434	569,409	455,274	232,342	1,647,520
2015	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377
2016 1	3,068,111	1,164,965	132,775	62,701	633,578	335,910	275,789	1,627,358
2017 Jan	3,074,066	1,178,024	135,649	63,489	640,303	338,583	277,637	1,618,405
Feb	3,071,484	1,191,774	139,719	63,627	641,669	346,760	277,858	1,601,851
Mar	3,083,371	1,195,823	141,239	62,787	644,707	347,090	277,153	1,610,395
Apr	3,067,464	1,190,584	142,097	61,174	644,126	343,188	275,317	1,601,563
May	3,093,988	1,200,928	140,768	60,069	657,153	342,938	275,091	1,617,969
June	3,087,618	1,201,963	142,804	59,824	661,820	337,515	272,387	1,613,268
July	3,075,428	1,195,300	140,628	60,033	659,861	334,777	280,925	1,599,203

Breakdown by remaining period to maturity 2						Position at end-July 2017		
less than 2	997,789	459,724	38,453	23,878	278,128	119,264	51,978	486,090
2 to less than 4	656,063	295,732	39,718	14,185	166,426	75,403	50,410	309,922
4 to less than 6	468,011	166,665	27,350	8,878	84,096	46,340	41,399	259,949
6 to less than 8	313,041	118,798	20,503	4,812	66,858	26,626	27,111	167,134
8 to less than 10	212,230	68,392	11,374	5,693	29,494	21,831	10,860	132,978
10 to less than 15	134,045	32,636	2,513	1,248	14,889	13,987	16,323	85,086
15 to less than 20	80,566	17,874	212	1,241	13,173	3,247	8,035	54,656
20 and more	213,680	35,481	504	100	6,798	28,078	74,811	103,389

* Including debt securities temporarily held in the issuers' portfolios. 1 Sectoral reclassification of debt securities. 2 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 capita- lisation) 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, GmbH shares, etc	merger and transfer of assets	change of legal form	reduction of capital and liquidation	
2005	163,071	1,733	2,470	1,040	694	268	1,443	3,060	1,703	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	9	552	762	3,532	924,214
2012	178,617	1,449	3,046	129	570	-	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	-	465	1,044	1,446	1,478,063
2015	177,416	319	4,634	397	599	-	1,394	1,385	2,535	1,614,442
2016	176,355	1,062	3,272	319	337	-	953	2,165	1,865	1,676,397
2017 Jan	176,328	28	38	-	8	-	34	21	18	1,716,525
Feb	176,382	54	112	-	-	-	0	6	52	1,731,415
Mar	178,273	1,891	2,229	1	0	-	105	94	140	1,794,735
Apr	178,328	54	93	20	2	-	0	13	47	1,828,445
May	178,326	2	78	48	50	-	0	17	162	1,845,930
June	178,620	294	64	202	218	-	0	6	184	1,811,817
July	179,467	847	493	485	8	-	3	18	125	1,800,324

* Excluding shares of public limited investment companies. 1 Including shares issued out of company profits. 2 All marketplaces. Source: Bundesbank calculations based

on data of the Herausbergemeinschaft 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 more than 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	
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	0.1	0.0	0.0	0.1	0.3	1.0	2.1	142.50	112.72	526.55	11,481.06
2017 Mar	0.3	0.2	0.1	0.4	0.5	1.0	1.9	141.93	110.93	562.80	12,312.87
Apr	0.2	0.1	0.1	0.2	0.4	1.0	1.8	141.87	111.03	570.29	12,438.01
May	0.3	0.2	0.2	0.3	0.5	0.9	1.7	141.95	110.90	572.60	12,615.06
June	0.2	0.1	0.1	0.3	0.4	0.9	1.7	140.79	109.60	557.50	12,325.12
July	0.4	0.3	0.3	0.5	0.5	1.0	1.7	140.78	108.71	552.08	12,118.25
Aug	0.3	0.2	0.2	0.4	0.4	0.9	1.6	141.85	110.01	551.25	12,055.84

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	€ million														
	Sales = total purchases	Sales							Purchases						
		Open-end domestic mutual funds ¹ (sales receipts)							Residents						
		Total	Mutual funds open to the general public			Specialised funds			Total	Credit institutions including building and loan associations ²		Other sectors ³		Non-residents ⁵	
		of which							of which		of which				
		Money market funds	Securities-based funds	Real estate funds	Specialised funds	Foreign funds ⁴			Foreign mutual fund shares		Foreign mutual fund shares				
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	46,512	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	123,736	91,337	9,184	574	5,596	3,376	82,153	32,400	117,028	771	100	116,257	32,300	6,709	
2014	139,768	97,711	3,998	473	862	1,000	93,713	42,057	143,560	819	1,745	142,741	43,802	3,790	
2015	180,762	146,136	30,420	318	22,345	3,636	115,716	34,626	173,417	7,362	494	166,055	34,131	7,345	
2016	155,955	119,369	21,301	342	11,131	7,384	98,068	36,586	162,883	2,877	3,172	160,006	39,757	6,928	
2017 Jan	18,658	10,107	1,518	65	583	1,001	8,589	8,551	19,191	1,383	502	17,808	8,049	533	
Feb	14,721	11,872	2,730	62	1,782	603	9,141	2,849	14,854	1,263	452	13,591	2,397	133	
Mar	12,841	7,318	3,636	64	2,626	704	3,682	5,523	12,039	133	176	11,906	5,699	802	
Apr	10,284	6,496	2,607	51	1,878	450	3,890	3,788	11,594	302	193	11,292	3,981	1,309	
May	6,140	5,658	3,113	12	2,492	238	2,545	481	5,515	422	250	5,093	231	625	
June	4,858	4,745	1,831	66	874	488	2,915	113	5,512	556	662	4,956	549	654	
July	13,642	9,699	4,537	35	4,033	353	5,162	3,943	12,781	657	231	12,124	3,712	861	

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	2014	2015	2016	2015				2016				2017
				Q4	Q1	Q2	Q3	Q4	Q1			
Acquisition of financial assets												
Currency and deposits	- 10.74	34.02	34.15	15.17	3.25	7.05	18.84	5.00	- 0.48			
Debt securities	- 5.38	- 0.93	- 3.22	- 0.52	0.87	- 3.32	0.17	- 0.94	- 0.89			
short-term debt securities	1.62	- 0.77	- 0.57	0.78	0.98	- 0.70	- 0.02	- 0.82	0.23			
long-term debt securities	- 7.00	- 0.15	- 2.65	- 1.29	- 0.10	- 2.62	0.19	- 0.11	- 1.13			
Memo item												
Debt securities of domestic sectors	- 1.88	- 0.73	- 2.60	- 0.38	0.51	- 2.54	- 0.04	- 0.52	- 0.52			
Non-financial corporations	- 0.05	- 0.79	0.69	- 0.52	0.66	- 0.12	0.01	0.15	0.85			
Financial corporations	- 1.26	- 1.93	- 2.49	0.58	0.31	- 1.80	- 0.53	- 0.47	- 0.34			
General government	- 0.57	- 0.41	- 0.81	- 0.44	- 0.46	- 0.62	0.43	- 0.20	- 1.03			
Debt securities of the rest of the world	- 3.50	- 1.66	- 0.62	- 0.14	0.37	- 0.78	0.21	- 0.41	- 0.38			
Loans	18.52	27.00	10.37	- 0.25	4.88	- 8.00	- 0.62	14.11	27.62			
short-term loans	33.19	25.81	6.66	1.47	- 0.08	- 2.49	- 4.65	13.88	16.97			
long-term loans	- 14.67	1.20	3.71	- 1.72	4.96	- 5.51	4.03	0.23	10.65			
Memo item												
to domestic sectors	14.15	8.78	- 3.69	- 3.43	4.09	- 6.53	- 2.90	1.64	9.65			
Non-financial corporations	- 0.42	0.84	- 8.35	- 0.02	5.63	- 12.25	- 2.54	0.81	1.65			
Financial corporations	14.46	7.88	4.47	- 3.46	- 1.59	5.67	- 0.40	0.78	7.99			
General government	0.11	0.06	0.18	0.02	0.05	0.05	0.05	0.05	0.00			
to the rest of the world	4.37	18.22	14.06	3.18	0.79	- 1.47	2.28	12.47	17.98			
Equity and investment fund shares	- 1.82	44.50	60.98	20.55	9.56	4.15	12.22	35.06	15.49			
Equity	8.56	28.16	55.16	19.05	9.11	4.90	8.13	33.02	16.74			
Listed shares of domestic sectors	- 1.62	- 10.41	20.66	2.88	- 6.00	- 0.77	6.72	20.70	- 5.54			
Non-financial corporations	- 5.39	- 8.04	20.34	2.86	- 6.17	- 0.94	6.83	20.62	- 5.45			
Financial corporations	3.78	- 2.37	0.31	0.02	0.17	- 0.17	- 0.11	0.08	- 0.09			
Listed shares of the rest of the world	- 4.85	12.45	10.13	3.02	0.66	- 0.59	1.37	8.69	3.23			
Other equity ¹	15.02	26.12	24.37	13.15	14.45	6.26	0.04	3.63	19.05			
Investment fund shares	- 10.38	16.35	5.82	1.50	0.45	- 0.75	4.08	2.04	- 1.25			
Money market fund shares	0.23	0.21	0.36	0.35	- 0.30	- 0.10	- 0.03	0.79	- 0.28			
Non-MMF investment fund shares	- 10.61	16.13	5.46	1.15	0.75	- 0.65	4.11	1.25	- 0.97			
Insurance technical reserves	1.10	3.03	2.56	0.68	0.59	0.78	0.73	0.46	0.52			
Financial derivatives	- 1.26	0.54	4.60	- 1.48	- 2.07	0.86	- 1.07	6.88	- 1.15			
Other accounts receivable	- 78.15	31.02	- 23.24	14.86	6.87	- 7.00	- 6.05	- 17.05	75.55			
Total	- 77.74	139.18	86.20	49.02	23.95	- 5.48	24.22	43.51	116.65			
External financing												
Debt securities	1.26	7.78	23.71	- 1.17	10.40	4.60	2.88	5.82	7.57			
short-term securities	- 11.63	1.96	- 0.15	- 0.27	2.04	0.18	- 0.57	- 1.79	5.47			
long-term securities	12.89	5.82	23.85	- 0.89	8.36	4.43	3.45	7.61	2.11			
Memo item												
Debt securities of domestic sectors	- 4.27	- 1.76	10.79	- 1.20	4.97	- 1.27	1.59	2.96	3.14			
Non-financial corporations	- 0.05	- 0.79	0.69	- 0.52	0.66	- 0.12	0.01	0.15	0.85			
Financial corporations	4.12	2.07	9.97	- 0.60	3.59	1.96	1.56	2.86	2.98			
General government	0.00	0.02	0.01	0.01	- 0.00	0.00	0.01	0.00	- 0.01			
Households	0.20	0.46	0.12	- 0.07	0.73	- 0.57	0.01	- 0.05	- 0.69			
Debt securities of the rest of the world	- 3.01	6.02	12.92	0.03	5.43	3.33	1.29	2.87	4.44			
Loans	- 7.26	47.58	49.71	- 2.60	29.87	6.50	16.42	- 3.09	29.90			
short-term loans	0.55	29.91	14.52	2.92	15.01	- 2.47	2.77	- 0.80	4.00			
long-term loans	- 7.81	17.67	35.19	- 5.53	14.86	8.97	13.65	- 2.30	25.90			
Memo item												
from domestic sectors	10.90	20.72	26.30	- 9.61	25.70	- 7.68	10.51	- 2.24	10.92			
Non-financial corporations	- 0.42	0.84	- 8.35	0.02	5.63	- 12.25	- 2.54	0.81	1.65			
Financial corporations	22.78	26.86	25.92	1.42	12.51	4.08	15.67	- 6.34	12.21			
General government	- 11.46	- 6.98	8.73	- 11.04	7.56	0.50	- 2.62	3.29	- 2.94			
from the rest of the world	- 18.16	26.86	23.41	7.00	4.17	14.18	5.91	- 0.85	18.98			
Equity	31.11	16.63	8.95	0.85	3.60	2.05	2.18	1.12	2.83			
Listed shares of domestic sectors	- 0.34	7.36	21.96	11.39	- 2.67	3.30	4.33	17.00	- 6.76			
Non-financial corporations	- 5.39	- 8.04	20.34	2.86	- 6.17	- 0.94	6.83	20.62	- 5.45			
Financial corporations	2.22	11.75	- 2.31	5.09	- 1.14	3.22	- 2.25	- 2.13	- 0.88			
General government	0.03	0.11	0.07	0.01	0.04	0.05	0.01	- 0.02	0.01			
Households	2.80	3.55	3.85	3.43	4.61	0.98	- 0.26	- 1.47	- 0.44			
Quoted shares of the rest of the world	9.09	- 1.34	- 20.44	- 10.04	2.71	- 2.89	- 4.10	- 16.16	7.09			
Other equity ¹	22.37	10.61	7.43	- 0.50	3.56	1.64	1.95	0.29	2.51			
Insurance technical reserves	6.41	5.06	5.06	1.27	1.27	1.27	1.27	1.27	1.27			
Financial derivatives and employee stock options	- 0.21	- 10.81	- 0.13	- 3.90	5.34	- 5.71	8.05	- 7.81	0.67			
Other accounts payable	- 0.79	15.79	31.24	- 7.75	6.65	0.70	- 0.80	24.69	28.71			
Total	30.52	82.03	118.53	- 13.30	57.14	9.40	29.99	22.01	70.94			

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	2014	2015	2016	2016					2017
				Q4	Q1	Q2	Q3	Q4	Q1
Financial assets									
Currency and deposits	406.3	463.4	514.8	463.4	456.1	466.5	502.9	514.8	516.6
Debt securities	49.6	47.8	44.8	47.8	48.8	45.7	46.0	44.8	43.9
short-term debt securities	6.8	6.0	5.5	6.0	7.0	6.3	6.3	5.5	5.8
long-term debt securities	42.9	41.7	39.3	41.7	41.7	39.3	39.6	39.3	38.1
Memo item									
Debt securities of domestic sectors	22.9	23.3	20.8	23.3	23.8	21.4	21.4	20.8	20.3
Non-financial corporations	4.6	3.6	4.4	3.6	4.3	4.2	4.3	4.4	5.3
Financial corporations	12.7	14.5	12.0	14.5	14.8	13.0	12.5	12.0	11.6
General government	5.7	5.2	4.4	5.2	4.8	4.2	4.6	4.4	3.4
Debt securities of the rest of the world	26.7	24.4	24.0	24.4	24.9	24.3	24.5	24.0	23.6
Loans	455.4	485.2	494.5	485.2	487.8	480.0	478.4	494.5	522.8
short-term loans	356.2	383.7	390.5	383.7	382.5	380.4	375.4	390.5	407.8
long-term loans	99.2	101.5	104.0	101.5	105.3	99.6	103.0	104.0	115.0
Memo item									
to domestic sectors	303.7	312.5	308.8	312.5	316.6	310.0	307.2	308.8	318.5
Non-financial corporations	212.4	213.3	204.9	213.3	218.9	206.7	204.1	204.9	206.6
Financial corporations	84.9	92.8	97.2	92.8	91.2	96.8	96.4	97.2	105.2
General government	6.4	6.4	6.6	6.4	6.5	6.5	6.6	6.6	6.6
to the rest of the world	151.7	172.7	185.7	172.7	171.2	170.0	171.2	185.7	204.3
Equity and investment fund shares	1,700.7	1,880.9	1,926.3	1,880.9	1,797.6	1,757.1	1,814.5	1,926.3	2,005.3
Equity	1,565.2	1,728.9	1,766.4	1,728.9	1,646.5	1,605.5	1,656.3	1,766.4	1,844.5
Listed shares of domestic sectors	262.2	273.0	292.3	273.0	248.1	239.4	265.1	292.3	304.1
Non-financial corporations	252.2	266.6	286.2	266.6	242.0	233.7	259.3	286.2	298.6
Financial corporations	10.0	6.3	6.1	6.3	6.1	5.7	5.8	6.1	5.5
Listed shares of the rest of the world	50.0	62.5	73.9	62.5	62.9	62.1	64.5	73.9	79.7
Other equity ¹	1,252.9	1,393.4	1,400.2	1,393.4	1,335.5	1,303.9	1,326.6	1,400.2	1,460.7
Investment fund shares	135.5	151.9	159.9	151.9	151.1	151.7	158.2	159.9	160.8
Money market fund shares	1.2	1.4	1.9	1.4	1.0	1.1	1.0	1.9	1.7
Non-MMF investment fund shares	134.4	150.6	158.0	150.6	150.1	150.6	157.2	158.0	159.1
Insurance technical reserves	47.3	50.0	52.9	50.0	50.7	51.4	52.2	52.9	53.6
Financial derivatives	22.7	24.0	26.9	24.0	23.2	25.3	22.0	26.9	23.4
Other accounts receivable	883.4	912.6	930.1	912.6	904.1	903.5	904.0	930.1	1,016.8
Total	3,565.4	3,863.9	3,990.4	3,863.9	3,768.4	3,729.6	3,819.9	3,990.4	4,182.3
Liabilities									
Debt securities	150.9	156.8	183.8	156.8	173.1	179.0	183.0	183.8	189.7
short-term securities	1.8	3.0	2.9	3.0	5.1	5.3	4.7	2.9	8.3
long-term securities	149.1	153.7	180.9	153.7	168.0	173.7	178.3	180.9	181.4
Memo item									
Debt securities of domestic sectors	60.2	58.7	72.0	58.7	65.9	68.2	71.2	72.0	74.7
Non-financial corporations	4.6	3.6	4.4	3.6	4.3	4.2	4.3	4.4	5.3
Financial corporations	39.8	40.0	51.7	40.0	46.0	49.1	50.9	51.7	54.3
General government	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Households	15.8	15.0	15.7	15.0	15.6	14.9	15.9	15.7	15.0
Debt securities of the rest of the world	90.7	98.1	111.8	98.1	107.2	110.8	111.8	111.8	115.0
Loans	1,388.2	1,436.9	1,481.6	1,436.9	1,461.5	1,464.2	1,481.7	1,481.6	1,510.9
short-term loans	486.6	515.7	529.2	515.7	528.9	526.5	530.4	529.2	533.1
long-term loans	901.7	921.2	952.5	921.2	932.6	937.7	951.2	952.5	977.9
Memo item									
from domestic sectors	1,091.5	1,108.9	1,129.3	1,108.9	1,131.8	1,119.6	1,130.2	1,129.3	1,139.5
Non-financial corporations	212.4	213.3	204.9	213.3	218.9	206.7	204.1	204.9	206.6
Financial corporations	819.7	843.9	862.8	843.9	854.9	855.3	869.8	862.8	875.1
General government	59.4	51.7	61.5	51.7	57.9	57.7	56.3	61.5	57.8
from the rest of the world	296.7	328.0	352.4	328.0	329.7	344.6	351.4	352.4	371.4
Equity	2,543.6	2,673.9	2,749.3	2,673.9	2,570.6	2,490.5	2,665.4	2,749.3	2,870.5
Listed shares of domestic sectors	570.8	626.4	664.0	626.4	585.2	569.6	616.9	664.0	696.5
Non-financial corporations	252.2	266.6	286.2	266.6	242.0	233.7	259.3	286.2	298.6
Financial corporations	134.7	150.1	154.7	150.1	140.3	139.2	147.8	154.7	161.3
General government	35.2	43.4	44.4	43.4	41.5	40.4	40.8	44.4	47.0
Households	148.7	166.2	178.7	166.2	161.5	156.3	168.9	178.7	189.7
Quoted shares of the rest of the world	719.1	756.3	803.7	756.3	724.7	684.7	782.2	803.7	865.4
Other equity ¹	1,253.7	1,291.2	1,281.6	1,291.2	1,260.8	1,236.2	1,266.4	1,281.6	1,308.5
Insurance technical reserves	250.3	255.4	260.4	255.4	256.6	257.9	259.2	260.4	261.7
Financial derivatives and employee stock options	51.8	42.0	38.2	42.0	49.6	46.5	50.4	38.2	35.4
Other accounts payable	978.1	999.2	1,033.1	999.2	980.2	982.8	991.3	1,033.1	1,057.4
Total	5,362.9	5,564.1	5,746.4	5,564.1	5,491.6	5,420.9	5,630.9	5,746.4	5,925.6

¹ Including unlisted shares.

IX Financial accounts

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

€ billion

Item	2014	2015	2016	2015	2016				2017
				Q4	Q1	Q2	Q3	Q4	Q1
Acquisition of financial assets									
Currency and deposits	85.82	96.56	114.97	38.97	8.72	29.08	24.73	52.45	12.47
Currency	15.64	25.40	21.30	7.73	3.03	4.82	7.09	6.36	3.76
Deposits	70.18	71.16	93.68	31.24	5.70	24.26	17.63	46.09	8.72
Transferable deposits	73.84	100.96	105.26	32.22	7.24	28.09	23.41	46.52	13.26
Time deposits	8.74	- 9.22	1.28	0.44	0.83	2.16	- 1.73	0.02	- 1.59
Savings deposits (including savings certificates)	- 12.41	- 20.58	- 12.87	- 1.43	- 2.37	- 5.99	- 4.05	- 0.45	- 2.96
Debt securities	- 18.00	- 17.40	- 12.20	- 3.07	- 1.76	- 4.10	- 3.16	- 3.18	- 1.19
short-term debt securities	- 0.67	0.75	- 0.10	- 0.13	0.10	- 0.62	0.10	0.33	0.38
long-term debt securities	- 17.33	- 18.16	- 12.10	- 2.95	- 1.86	- 3.48	- 3.26	- 3.50	- 1.57
Memo item									
Debt securities of domestic sectors	- 15.08	- 9.34	- 3.81	- 1.45	1.08	- 1.57	- 1.74	- 1.58	0.11
Non-financial corporations	0.02	0.39	0.02	- 0.07	0.67	- 0.59	0.03	- 0.09	- 0.65
Financial corporations	- 12.52	- 6.80	- 2.22	- 0.78	0.74	- 0.36	- 1.29	- 1.31	1.08
General government	- 2.58	- 2.93	- 1.61	- 0.60	- 0.33	- 0.63	- 0.48	- 0.18	- 0.33
Debt securities of the rest of the world	- 2.93	- 8.06	- 8.39	- 1.62	- 2.84	- 2.53	- 1.42	- 1.60	- 1.30
Equity and investment fund shares	36.87	46.39	42.23	14.48	15.67	11.57	10.20	4.79	10.61
Equity	12.17	15.03	18.16	6.69	10.26	5.22	3.35	- 0.67	1.84
Listed Shares of domestic sectors	4.61	4.06	6.49	2.79	6.59	2.69	0.25	- 3.03	- 0.70
Non-financial corporations	2.69	3.77	3.22	2.76	4.52	0.69	- 0.30	- 1.69	- 0.36
Financial corporations	1.93	0.28	3.28	0.03	2.07	2.00	0.55	- 1.33	- 0.33
Quoted shares of the rest of the world	3.70	6.75	6.83	2.30	1.65	1.21	2.08	1.88	1.77
Other equity ¹	3.86	4.22	4.83	1.60	2.02	1.32	1.02	0.47	0.77
Investment fund shares	24.70	31.36	24.07	7.79	5.41	6.35	6.86	5.46	8.76
Money market fund shares	- 0.34	- 0.57	- 0.52	- 0.30	- 0.30	- 0.15	0.10	- 0.17	- 0.22
Non-MMF investment fund shares	25.04	31.93	24.60	8.09	5.71	6.50	6.76	5.63	8.98
Non-life insurance technical reserves and provision for calls under standardised guarantees	22.97	20.08	17.36	5.12	4.67	4.18	4.32	4.18	3.38
Life insurance and annuity entitlements	31.89	31.36	40.02	7.19	19.65	7.58	9.01	3.78	13.13
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	36.84	30.32	27.01	6.79	3.09	6.55	5.69	11.68	7.76
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	- 34.57	- 23.28	- 34.46	- 25.15	10.53	- 7.38	- 8.83	- 28.78	13.45
Total	161.82	184.03	194.93	44.33	60.57	47.49	41.95	44.92	59.60
External financing									
Loans	20.59	39.06	47.17	9.39	5.99	15.83	15.99	9.36	6.38
short-term loans	- 1.98	- 3.17	- 4.31	- 1.40	- 0.42	- 0.91	- 0.93	- 2.05	- 0.35
long-term loans	22.57	42.23	51.48	10.79	6.41	16.74	16.92	11.41	6.73
Memo item									
Mortgage loans	24.87	36.49	41.64	10.44	4.27	12.14	14.31	10.92	4.59
Consumer loans	1.21	5.44	9.78	0.32	2.11	3.93	2.86	0.88	2.41
Entrepreneurial loans	- 5.49	- 2.88	- 4.24	- 1.38	- 0.38	- 0.24	- 1.17	- 2.44	- 0.62
Memo item									
Loans from monetary financial institutions	18.87	39.35	42.87	9.38	5.24	13.81	15.74	8.08	7.10
Loans from other financial institutions	1.72	- 0.29	4.31	0.01	0.75	2.02	0.25	1.28	- 0.72
Loans from general government and rest of the world	0.00	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	0.78	- 1.14	0.34	- 0.25	0.19	0.03	0.11	0.01	- 0.16
Total	21.37	37.92	47.51	9.14	6.18	15.86	16.10	9.37	6.22

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	2014	2015	2016	2016					2017
				Q4	Q1	Q2	Q3	Q4	Q1
Financial assets									
Currency and deposits	1,998.1	2,094.7	2,208.8	2,094.7	2,103.5	2,132.6	2,157.5	2,208.8	2,222.0
Currency	127.7	153.1	174.4	153.1	156.1	160.9	168.0	174.4	178.1
Deposits	1,870.4	1,941.6	2,034.4	1,941.6	1,947.4	1,971.6	1,989.5	2,034.4	2,043.8
Transferable deposits	981.4	1,082.4	1,188.0	1,082.4	1,089.8	1,117.9	1,141.5	1,188.0	1,201.2
Time deposits	256.4	246.8	248.7	246.8	248.3	250.4	248.7	248.7	247.9
Savings deposits (including savings certificates)	632.7	612.4	597.7	612.4	609.3	603.4	599.3	597.7	594.7
Debt securities	162.2	139.8	127.4	139.8	137.1	133.5	130.6	127.4	126.7
short-term debt securities	2.1	2.9	2.7	2.9	2.9	2.3	2.4	2.7	3.1
long-term debt securities	160.1	136.9	124.7	136.9	134.2	131.2	128.3	124.7	123.6
Memo item									
Debt securities of domestic sectors	102.4	89.4	85.6	89.4	89.6	87.8	87.1	85.6	86.1
Non-financial corporations	14.1	13.4	13.9	13.4	13.9	13.1	14.1	13.9	13.3
Financial corporations	78.7	69.5	66.7	69.5	69.4	69.0	67.8	66.7	68.2
General government	9.6	6.5	5.0	6.5	6.3	5.7	5.2	5.0	4.6
Debt securities of the rest of the world	59.8	50.3	41.8	50.3	47.6	45.7	43.5	41.8	40.6
Equity and investment fund shares	951.4	1,040.7	1,108.3	1,040.7	1,023.0	1,028.9	1,069.2	1,108.3	1,155.9
Equity	508.9	555.9	590.4	555.9	543.7	541.2	564.1	590.4	615.0
Listed Shares of domestic sectors	169.7	188.9	200.8	188.9	181.8	174.6	187.9	200.8	213.0
Non-financial corporations	142.1	158.7	169.8	158.7	154.1	148.6	160.6	169.8	180.4
Financial corporations	27.6	30.3	31.0	30.3	27.6	26.0	27.3	31.0	32.6
Quoted shares of the rest of the world	64.0	74.8	86.8	74.8	73.1	76.8	80.7	86.8	93.1
Other equity ¹	275.3	292.2	302.9	292.2	288.9	289.7	295.5	302.9	308.8
Investment fund shares	442.5	484.8	517.8	484.8	479.3	487.8	505.1	517.8	540.9
Money market fund shares	4.0	3.4	2.8	3.4	3.1	3.0	3.0	2.8	2.7
Non-MMF investment fund shares	438.5	481.4	515.0	481.4	476.3	484.7	502.1	515.0	538.2
Non-life insurance technical reserves and provision for calls under standardised guarantees	307.3	324.4	337.8	324.4	327.7	331.1	334.5	337.8	341.1
Life insurance and annuity entitlements	885.6	919.5	963.2	919.5	940.4	948.8	958.6	963.2	976.3
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	752.1	783.4	810.4	783.4	786.5	793.0	798.7	810.4	818.2
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	35.8	37.1	35.6	37.1	36.8	36.5	36.0	35.6	35.3
Total	5,092.6	5,339.5	5,591.4	5,339.5	5,355.1	5,404.3	5,485.1	5,591.4	5,675.5
Liabilities									
Loans	1,570.5	1,607.5	1,655.3	1,607.5	1,613.9	1,629.7	1,645.9	1,655.3	1,661.7
short-term loans	64.6	60.9	56.6	60.9	60.5	59.6	58.6	56.6	56.3
long-term loans	1,505.9	1,546.6	1,598.7	1,546.6	1,553.4	1,570.1	1,587.2	1,598.7	1,605.4
Memo item									
Mortgage loans	1,118.0	1,154.7	1,196.4	1,154.7	1,159.0	1,171.2	1,185.5	1,196.4	1,201.0
Consumer loans	188.9	191.9	201.8	191.9	194.0	197.8	200.9	201.8	204.2
Entrepreneurial loans	263.6	260.9	257.0	260.9	260.9	260.7	259.5	257.0	256.4
Memo item									
Loans from monetary financial institutions	1,477.6	1,514.9	1,558.3	1,514.9	1,520.5	1,534.3	1,550.2	1,558.3	1,565.4
Loans from other financial institutions	92.9	92.7	97.0	92.7	93.4	95.4	95.7	97.0	96.2
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	16.4	14.9	15.6	14.9	15.8	15.9	16.3	15.6	16.5
Total	1,586.9	1,622.4	1,670.9	1,622.4	1,629.7	1,645.5	1,662.1	1,670.9	1,678.1

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

X Public finances in Germany

1 General government: deficit/surplus 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	-0.9	-16.1	-5.5	+2.2	+18.4	-0.0	-0.6	-0.2	+0.1	+0.7
2013 P	-4.0	-7.4	-2.5	+0.5	+5.4	-0.1	-0.3	-0.1	+0.0	+0.2
2014 P	+9.5	+8.7	-1.1	-1.2	+3.2	+0.3	+0.3	-0.0	-0.0	+0.1
2015 P	+19.4	+9.7	+3.8	+3.1	+2.7	+0.6	+0.3	+0.1	+0.1	+0.1
2016 P	+25.7	+7.4	+4.9	+5.2	+8.2	+0.8	+0.2	+0.2	+0.2	+0.3
2015 H1 P	+12.5	+1.5	+3.5	+4.6	+3.0	+0.8	+0.1	+0.2	+0.3	+0.2
H2 P	+6.9	+8.2	+0.4	-1.4	-0.2	+0.4	+0.5	+0.0	-0.1	-0.0
2016 H1 P	+17.5	+5.0	+4.1	+1.9	+6.6	+1.1	+0.3	+0.3	+0.1	+0.4
H2 P	+8.1	+2.4	+0.8	+3.3	+1.6	+0.5	+0.2	+0.0	+0.2	+0.1
2017 H1 pe	+18.3	-2.5	+8.1	+6.1	+6.6	+1.1	-0.2	+0.5	+0.4	+0.4
Debt level²										
End of year or quarter										
2010	2,088.8	1,334.0	629.6	143.1	1.3	81.0	51.7	24.4	5.5	0.1
2011	2,128.3	1,344.1	657.0	143.6	1.3	78.7	49.7	24.3	5.3	0.0
2012	2,204.9	1,387.9	685.5	148.2	1.2	79.9	50.3	24.9	5.4	0.0
2013	2,189.8	1,390.5	664.1	151.3	1.3	77.5	49.2	23.5	5.4	0.0
2014 P	2,189.6	1,396.5	657.0	152.5	1.4	74.7	47.6	22.4	5.2	0.0
2015 P	2,158.8	1,372.7	653.1	152.5	1.4	70.9	45.1	21.5	5.0	0.0
2016 P	2,140.4	1,366.9	637.0	152.7	1.1	68.1	43.5	20.3	4.9	0.0
2015 Q1 P	2,195.0	1,398.0	665.0	152.8	1.4	74.3	47.3	22.5	5.2	0.0
Q2 P	2,160.8	1,380.6	644.6	152.6	1.4	72.4	46.3	21.6	5.1	0.0
Q3 P	2,162.5	1,374.8	652.1	153.4	1.5	71.8	45.6	21.6	5.1	0.0
Q4 P	2,158.8	1,372.7	653.1	152.5	1.4	70.9	45.1	21.5	5.0	0.0
2016 Q1 P	2,166.4	1,382.5	645.8	154.9	1.2	70.6	45.1	21.1	5.0	0.0
Q2 P	2,169.3	1,391.2	642.1	154.4	1.1	69.9	44.9	20.7	5.0	0.0
Q3 P	2,162.3	1,381.1	642.5	155.1	1.0	69.2	44.2	20.6	5.0	0.0
Q4 P	2,140.4	1,366.9	637.0	152.7	1.1	68.1	43.5	20.3	4.9	0.0
2017 Q1 P	2,114.8	1,352.8	625.6	152.0	1.2	66.6	42.6	19.7	4.8	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 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	Intermediate consumption	Gross capital formation	Interest	Other		
€ billion													
2010	1,110.3	556.2	426.2	127.9	1,219.2	634.5	203.5	118.0	59.4	63.9	139.9	-108.9	986.5
2011	1,182.7	598.8	442.3	141.7	1,208.6	633.9	208.6	124.1	61.4	67.5	113.1	-25.9	1,045.6
2012	1,220.9	624.9	454.3	141.7	1,221.8	645.5	212.3	126.5	61.5	63.1	112.8	-0.9	1,083.7
2013	1,259.0	651.0	465.0	143.0	1,263.0	666.4	217.8	133.0	60.1	55.5	130.2	-4.0	1,120.3
2014 P	1,308.3	674.1	482.0	152.3	1,298.8	691.0	224.0	137.4	60.0	51.2	135.2	+9.5	1,160.7
2015 P	1,354.3	704.3	500.8	149.2	1,334.9	722.3	229.2	142.2	64.2	46.4	130.6	+19.4	1,210.6
2016 P	1,414.2	739.0	523.8	151.5	1,388.6	754.9	236.5	150.0	66.8	41.6	138.8	+25.7	1,269.6
as a percentage of GDP													
2010	43.0	21.6	16.5	5.0	47.3	24.6	7.9	4.6	2.3	2.5	5.4	-4.2	38.2
2011	43.8	22.2	16.4	5.2	44.7	23.4	7.7	4.6	2.3	2.5	4.2	-1.0	38.7
2012	44.3	22.7	16.5	5.1	44.3	23.4	7.7	4.6	2.2	2.3	4.1	-0.0	39.3
2013	44.5	23.0	16.5	5.1	44.7	23.6	7.7	4.7	2.1	2.0	4.6	-0.1	39.6
2014 P	44.6	23.0	16.4	5.2	44.3	23.6	7.6	4.7	2.0	1.7	4.6	+0.3	39.6
2015 P	44.5	23.1	16.5	4.9	43.9	23.7	7.5	4.7	2.1	1.5	4.3	+0.6	39.8
2016 P	45.0	23.5	16.7	4.8	44.2	24.0	7.5	4.8	2.1	1.3	4.4	+0.8	40.4
Percentage growth rates													
2010	+1.8	+0.3	+2.5	+6.1	+4.2	+1.5	+2.9	+5.7	+1.9	-1.7	+23.9	.	+1.3
2011	+6.5	+7.7	+3.8	+10.7	-0.9	-0.1	+2.5	+5.1	+3.3	+5.7	-19.2	.	+6.0
2012	+3.2	+4.4	+2.7	+0.0	+1.1	+1.8	+1.8	+2.0	+0.2	-6.5	-0.3	.	+3.6
2013	+3.1	+4.2	+2.4	+1.0	+3.4	+3.2	+2.6	+5.1	-2.2	-12.0	+15.4	.	+3.4
2014 P	+3.9	+3.6	+3.6	+6.4	+2.8	+3.7	+2.9	+3.3	-0.3	-7.7	+3.9	.	+3.6
2015 P	+3.5	+4.5	+3.9	-2.0	+2.8	+4.5	+2.3	+3.5	+7.0	-9.3	-3.4	.	+4.3
2016 P	+4.4	+4.9	+4.6	+1.6	+4.0	+4.5	+3.2	+5.5	+4.1	-10.4	+6.2	.	+4.9

Source: Federal Statistical Office. * Figures in accordance with ESA 2010. 1 Taxes and social contributions plus customs duties and levies from banks to the Single Reso-

lution Fund established at the European level.

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							
2010	634.7	530.6	7.9	713.6	190.7	308.5	57.7	39.7	11.4	- 78.9	516.5	512.7	+ 3.8	1,033.7	1,108.8	- 75.1
2011	689.6	573.4	22.8	711.6	194.3	301.3	56.8	38.5	13.7	- 22.0	526.3	511.2	+ 15.1	1,104.2	1,111.1	- 6.9
2012 P	745.0	600.0	14.7	770.2	218.8	285.2	69.9	42.6	25.5	- 25.2	536.2	518.8	+ 17.4	1,171.1	1,178.8	- 7.8
2013 P	761.8	619.7	14.7	773.6	225.3	286.9	65.7	42.8	23.5	- 11.8	536.7	531.9	+ 4.9	1,198.1	1,205.0	- 6.9
2014 P	791.8	643.6	11.3	786.7	236.0	292.9	57.1	45.9	17.6	+ 5.1	554.5	551.1	+ 3.5	1,245.3	1,236.7	+ 8.6
2015 P	829.5	673.3	10.4	804.0	244.1	302.6	49.8	46.4	12.5	+ 25.5	575.0	573.1	+ 1.9	1,300.8	1,273.4	+ 27.4
2016 P	862.1	705.8	9.0	844.5	251.3	320.5	43.4	49.0	11.8	+ 17.6	601.2	594.6	+ 6.7	1,354.2	1,330.0	+ 24.2
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	72.8	7.2	9.1	3.0	+ 23.1	142.4	142.3	+ 0.1	325.0	301.8	+ 23.2
Q3 P	202.8	166.5	3.8	198.0	62.3	71.3	16.6	11.6	3.4	+ 4.7	141.2	143.4	- 2.1	318.1	315.5	+ 2.6
Q4 P	221.5	178.2	2.6	219.3	63.4	77.4	7.3	17.3	3.5	+ 2.2	152.7	145.3	+ 7.4	348.4	338.8	+ 9.6
2016 Q1 P	205.7	169.9	1.4	206.5	60.2	81.5	17.7	8.4	2.2	- 0.8	143.0	146.6	- 3.6	321.8	326.2	- 4.5
Q2 P	216.7	176.6	2.4	194.1	60.7	77.7	5.4	10.4	2.4	+ 22.7	148.7	147.0	+ 1.7	338.5	314.2	+ 24.3
Q3 P	207.9	169.3	2.9	211.7	62.0	79.3	14.5	12.3	2.4	- 3.8	148.3	149.7	- 1.4	329.0	334.2	- 5.2
Q4 P	232.3	189.2	2.1	232.6	68.0	82.3	7.7	17.2	4.8	- 0.3	160.1	152.2	+ 7.8	364.9	357.4	+ 7.5
2017 Q1 P	215.6	180.4	0.9	200.9	63.1	80.9	13.8	10.2	1.9	+ 14.6	150.3	155.1	- 4.8	337.5	327.7	+ 9.8

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 contain numerous off-budget entities which are assigned to the general government sector as defined in the national accounts but are not yet included in the annual calculations. From 2012, also including the bad bank FMSW. ² 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 changeovers. 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
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	338.3	326.5	+ 11.8	355.1	350.6	+ 4.5	232.7	229.1	+ 3.6
2016 P	344.7	338.4	+ 6.2	381.1	373.5	+ 7.6	248.9	243.1	+ 5.8
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	91.5	83.4	+ 8.1	94.1	96.8	- 2.8	69.0	65.9	+ 3.0
2016 Q1 P	81.1	83.6	- 2.5	90.5	88.2	+ 2.4	49.0	55.1	- 6.1
Q2 P	87.5	73.6	+ 13.8	92.7	88.2	+ 4.4	61.1	57.9	+ 3.2
Q3 P	85.2	88.6	- 3.5	91.5	90.0	+ 1.5	60.7	60.7	+ 0.1
Q4 P	90.9	92.5	- 1.6	104.3	105.5	- 1.2	76.3	68.0	+ 8.3
2017 Q1 P	88.2	84.6	+ 3.5	95.6	90.0	+ 5.6	52.7	57.7	- 4.9

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 Quarterly data of core budgets and off-budget entities which are

assigned to the general government sector. 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	Central and state government and European Union							Balance of untransferred tax shares ⁴	Memo item Amounts deducted in the federal budget ⁵
	Total	Total	Central government ¹	State government ¹	European Union ²	Local government ³			
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
2016	705,791	606,965	316,854	260,837	29,273	98,679	+	148	27,836
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
Q3	169,374	145,700	76,638	61,573	7,489	23,839	-	165	7,584
Q4	189,180	164,382	83,919	72,608	7,855	32,513	-	7,715	7,253
2017 Q1	181,506	154,154	85,256	66,704	2,194	17,950	+	9,403	6,606
Q2	...	149,915	76,387	66,605	6,922	...	...	...	6,825
2016 July	.	45,538	23,479	19,654	2,405	.	.	.	3,061
2017 July	.	49,764	25,831	21,617	2,315	.	.	.	3,020

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	Joint taxes											Central government taxes ⁷	State government taxes ⁷	EU customs duties	Memo item Local government share in joint taxes
	Total ¹	Income taxes ²					Turnover taxes ⁵				Local business tax transfers ⁶				
		Total	Wage tax ³	Assessed income tax	Corporation tax	Investment income tax ⁴	Total	Turnover tax	Turnover tax on imports						
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	
2016	648,309	291,492	184,826	53,833	27,442	25,391	217,090	165,932	51,157	7,831	104,441	22,342	5,113	41,345	
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	
Q3	155,524	68,137	44,656	11,898	5,546	6,037	53,906	40,877	13,029	2,046	24,857	5,263	1,316	9,824	
Q4	175,797	78,076	52,275	14,422	6,134	5,245	56,071	42,593	13,478	3,656	31,247	5,454	1,293	11,415	
2017 Q1	165,352	76,990	45,309	17,009	8,511	6,161	57,502	44,196	13,306	438	23,364	5,834	1,224	11,198	
Q2	161,036	78,178	48,256	14,825	7,872	7,225	54,243	39,885	14,358	2,059	19,868	5,407	1,281	11,121	
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	
2017 July	52,839	21,603	16,904	- 187	187	4,699	18,927	14,476	4,451	1,874	8,254	1,757	424	3,075	

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 2016: 49.4:48.3:2.2. The EU share is deducted from central government's share. ⁶ Respective percentage share of central and state government for 2016: 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	Solidarity surcharge	Tobacco tax	Insurance tax	Motor vehicle tax	Electricity tax	Spirits tax	Other	Tax on the acquisition of land and buildings	Inheritance tax	Betting and lottery tax	Other	Total	of which	
														Local business tax ²	Real property taxes
2010	39,838	11,713	13,492	10,284	8,488	6,171	1,990	1,449	5,290	4,404	1,412	1,039	47,780	35,712	11,315
2011	40,036	12,781	14,414	10,755	8,422	7,247	2,149	3,329	6,366	4,246	1,420	1,064	52,984	40,424	11,674
2012	39,305	13,624	14,143	11,138	8,443	6,973	2,121	4,047	7,389	4,305	1,432	1,076	55,398	42,345	12,017
2013	39,364	14,378	13,820	11,553	8,490	7,009	2,102	3,737	8,394	4,633	1,635	1,060	56,549	43,027	12,377
2014	39,758	15,047	14,612	12,046	8,501	6,638	2,060	3,143	9,339	5,452	1,673	1,091	57,728	43,763	12,691
2015	39,594	15,930	14,921	12,419	8,805	6,593	2,070	3,872	11,249	6,290	1,712	1,088	60,396	45,752	13,215
2016	40,091	16,855	14,186	12,763	8,952	6,569	2,070	2,955	12,408	7,006	1,809	1,119	65,313	50,097	13,654
2015 Q1	4,704	3,783	2,223	5,825	2,454	1,806	570	904	2,760	1,668	426	353	14,288	10,912	2,982
Q2	9,512	4,278	3,683	2,187	2,361	1,465	470	937	2,561	1,617	433	227	16,368	12,383	3,636
Q3	10,159	3,714	3,981	2,436	2,108	1,643	496	1,102	3,021	1,335	401	272	15,180	11,118	3,697
Q4	15,220	4,155	5,034	1,972	1,883	1,678	534	930	2,906	1,670	452	236	14,561	11,339	2,899
2016 Q1	4,620	3,979	2,722	5,946	2,489	1,685	565	547	3,217	1,668	451	336	15,639	12,090	3,121
Q2	9,860	4,470	4,139	2,269	2,366	1,515	473	691	2,952	2,283	451	267	16,740	12,635	3,715
Q3	10,149	3,938	3,010	2,510	2,198	1,641	499	911	3,050	1,501	446	266	15,896	11,699	3,794
Q4	15,461	4,468	4,315	2,038	1,899	1,728	532	806	3,189	1,554	460	251	17,039	13,673	3,024
2017 Q1	4,812	4,324	2,637	6,178	2,536	1,746	578	553	3,359	1,641	490	343	16,593	12,905	3,228
Q2	10,091	4,809	3,634	2,353	2,374	1,784	476	-5,652	3,129	1,538	474	265	...	...	...
2016 July	3,365	1,082	715	654	768	546	171	368	981	488	137	87	.	.	.
2017 July	3,614	1,133	1,207	665	718	531	174	211	1,089	441	135	92	.	.	.

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. ¹ For the sum total, see Table X. 6. ² 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 Adminis- trative 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	Pen-sioners' health insurance							
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
2016	286,399	202,249	83,154	288,641	246,118	17,387	- 2,242	34,094	31,524	2,315	203	52	4,147
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
Q3	70,218	49,333	20,670	73,782	63,081	4,453	- 3,564	31,412	28,776	2,365	187	84	4,213
Q4	76,136	55,171	20,733	74,016	63,117	4,450	+ 2,120	34,088	31,529	2,315	192	53	4,161
2017 Q1	71,301	49,388	21,715	73,731	63,263	4,460	- 2,430	31,660	29,133	2,270	205	52	4,140
Q2	74,581	52,739	21,632	73,785	63,016	4,440	+ 796	32,535	30,372	1,901	210	52	4,136

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		
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	-
2016	36,352	31,186	1,114	-	30,889	14,435	749	7,035	.	595	5,314	+ 5,463	-
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	-
Q3	8,877	7,609	276	-	7,349	3,428	74	1,608	.	165	1,399	+ 1,529	-
Q4	10,108	8,569	299	-	7,750	3,276	77	1,841	.	134	1,642	+ 2,358	-
2017 Q1	8,859	7,564	204	-	8,834	3,973	478	1,772	.	146	1,749	+ 26	-
Q2	9,355	8,112	227	-	7,964	3,529	173	1,802	.	155	1,577	+ 1,391	-

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 govern- ment funds ³		Hospital treatment	Pharma- ceuticals	Medical treatment	Dental treatment ⁴	Thera- peutical treatment and aids	Sickness benefits		Adminis- trative expendi- ture ⁵
2010	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
2016	223,692	206,830	14,000	222,936	70,450	35,981	37,300	13,790	14,256	11,677	11,032	+ 757
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
Q3	55,632	51,377	3,500	55,114	17,421	8,929	9,166	3,399	3,585	2,842	2,628	+ 517
Q4	59,552	55,146	3,500	56,832	17,342	9,194	9,351	3,526	3,698	2,912	3,291	+ 2,720
2017 Q1	55,809	51,632	3,625	57,716	18,643	9,215	9,807	3,559	3,516	3,173	2,514	- 1,907
Q2	57,801	53,621	3,625	57,502	18,237	9,239	9,822	3,614	3,748	3,043	2,589	+ 298

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 contri-

butions from subsidised low-paid part-time employment. ³ Federal grant and liquidity assistance. ⁴ Including dentures. ⁵ Net, ie after deducting reimbursements for expenses for levying contributions incurred by other social insurance funds.

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	
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
2016	32,171	32,100	30,936	3,846	10,918	6,673	983	1,422	+	1,235
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
Q3	7,958	7,942	7,810	961	2,746	1,682	247	373	+	147
Q4	8,550	8,535	7,941	975	2,741	1,877	250	322	+	608
2017 Q1	8,558	8,538	9,092	1,046	3,194	2,261	289	405	-	534
Q2	8,978	8,962	9,379	1,080	3,230	2,440	347	397	-	400

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 ³
	Gross ²	Net		
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
2016	+ 182,486	- 11,331	- 2,332	- 16,791
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
Q3	+ 33,307	- 13,887	- 18,398	- 4,864
Q4	+ 26,890	- 12,297	+ 3,872	+ 3,333
2017 Q1	+ 47,749	- 5,700	+ 6,178	- 2,428
Q2	+ 42,941	+ 5,281	+ 318	+ 4,289

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. ³ Excluding the central account balance with the Deutsche Bundesbank.

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	
2011	2,128,324	4,440	641,685	206,631	123,064	1,152,505
2012	2,204,943	4,440	643,884	199,132	143,883	1,213,603
2013	2,189,775	4,440	634,669	190,555	145,785	1,214,327
2014	2,189,564	4,440	619,838	190,130	134,670	1,240,486
2015	2,158,813	77,220	606,481	186,661	150,966	1,137,486
2016 P	2,140,368	196,320	572,527	179,755	175,358	1,016,408
2015 Q1	2,195,020	12,335	625,817	189,048	142,040	1,225,780
Q2	2,160,801	34,310	612,663	187,280	141,307	1,185,241
Q3	2,162,548	54,990	616,499	188,165	142,763	1,160,130
Q4	2,158,813	77,220	606,481	186,661	150,966	1,137,486
2016 Q1 P	2,166,362	100,051	607,793	183,160	144,155	1,131,204
Q2 P	2,169,346	133,297	595,070	181,372	158,883	1,100,724
Q3 P	2,162,250	163,636	590,349	179,359	158,991	1,069,914
Q4 P	2,140,368	196,320	572,527	179,755	175,358	1,016,408
2017 Q1 P	2,114,849	230,505	554,222	178,219	173,785	978,117

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	1,791,672	57,172	417,469	234,355	6,818	667,198	1,725	289,225	70	113,198	4,440	2
2013	1,816,557	50,128	423,441	245,372	4,488	684,951	1,397	291,969	46	110,323	4,440	2
2014	1,817,587	27,951	429,633	259,186	2,375	703,812	1,187	277,296	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	1,805,314	19,431	429,818	246,940	1,305	725,285	1,070	263,992	59	112,972	4,440	2
2016 Q1 P	1,814,572	21,804	427,090	240,281	1,205	730,533	1,051	279,084	59	109,023	4,440	2
Q2 P	1,812,750	29,543	427,813	235,389	1,108	727,922	1,033	277,672	59	107,769	4,440	2
Q3 P	1,804,565	31,237	433,493	245,945	922	717,358	1,021	262,894	59	107,194	4,440	2
Q4 P	1,786,779	24,509	430,701	236,136	737	724,328	1,010	258,084	59	106,772	4,440	2
2017 Q1 P	1,773,085	16,098	424,930	227,906	619	730,531	995	260,835	56	106,673	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	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
Q3	1,114,708	30,626	102,053	245,945	922	714,903	1,021	7,794	-	7,002	4,440	2
Q4	1,102,410	23,609	95,727	236,136	737	722,124	1,010	11,761	-	6,866	4,440	2
2017 Q1	1,096,711	14,910	95,148	227,906	619	727,887	995	17,829	-	6,976	4,440	2
Q2	1,101,991	14,431	93,795	219,668	487	743,120	986	18,076	-	6,986	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	541,254	950	299,750	-	-	-	-	139,116	52	101,386	-	1
2013	546,354	125	313,412	-	-	-	-	134,439	35	98,343	-	1
2014	544,992	0	326,188	-	-	-	-	120,101	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	543,999	895	333,429	-	-	-	-	110,674	5	98,996	-	1
2016 Q1 P	542,715	1,278	328,858	-	-	-	-	117,194	5	95,379	-	1
Q2 P	536,884	1,173	328,397	-	-	-	-	112,651	6	94,657	-	1
Q3 P	541,819	611	331,441	-	-	-	-	115,550	6	94,212	-	1
Q4 P	538,755	900	334,975	-	-	-	-	108,948	6	93,927	-	1
2017 Q1 P	531,334	1,188	329,782	-	-	-	-	106,644	3	93,718	-	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	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	147,466	-	-	-	-	2,076	-	139,356	54	5,980	-	-
Q2 P	147,271	-	-	-	-	2,453	-	138,785	54	5,980	-	-
Q3 P	148,038	-	-	-	-	2,455	-	139,550	54	5,980	-	-
Q4 P	145,614	-	-	-	-	2,204	-	137,376	54	5,980	-	-
2017 Q1 P	145,040	-	-	-	-	2,645	-	136,362	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	2015			2016			2017						
	2014	2015	2016	2014	2015	2016	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)	110.3	112.8	114.9	5.3	2.2	1.9	2.2	1.1	4.5	1.2	0.6	4.4	- 0.3
Construction	102.9	102.9	104.9	2.8	0.0	1.9	2.5	1.4	5.3	1.7	- 0.4	6.2	1.5
Wholesale/retail trade, transport and storage, hotel and restaurant services	107.8	108.5	111.1	1.7	0.7	2.4	0.5	1.1	4.2	1.6	2.5	3.8	1.0
Information and communication	125.2	128.5	132.0	4.7	2.6	2.7	4.5	3.1	2.7	3.5	1.6	4.3	3.7
Financial and insurance activities	105.1	104.3	107.4	- 4.9	- 0.7	3.0	0.3	2.1	3.7	4.1	2.3	0.6	- 0.4
Real estate activities	103.1	103.3	103.9	- 1.2	0.2	0.6	0.1	0.5	0.9	0.4	0.5	1.2	0.6
Business services ¹	106.1	108.1	110.0	2.4	1.9	1.8	1.8	1.0	3.1	1.7	1.5	3.7	0.8
Public services, education and health	103.0	105.3	107.7	0.7	2.2	2.2	2.2	1.7	2.6	2.3	2.4	2.4	1.1
Other services	98.6	99.3	100.2	- 0.3	0.7	0.9	1.1	- 0.4	1.9	1.2	1.0	2.3	- 0.1
Gross value added	106.7	108.3	110.4	1.9	1.5	1.9	1.8	1.2	3.3	1.7	1.4	3.3	0.6
Gross domestic product ²	106.7	108.6	110.7	1.9	1.7	1.9	2.1	1.5	3.3	1.7	1.3	3.2	0.8
II Use of domestic product													
Private consumption ³	104.3	106.1	108.3	1.0	1.7	2.1	2.1	2.0	2.9	1.7	1.7	1.8	1.6
Government consumption	105.0	108.0	111.9	1.5	2.9	3.7	3.2	4.1	4.3	3.4	3.0	1.6	1.5
Machinery and equipment	106.9	111.1	113.4	5.9	3.9	2.2	7.3	4.7	6.4	1.4	- 2.6	3.3	- 0.7
Premises	109.9	108.3	111.3	2.3	- 1.4	2.7	1.7	3.1	5.4	2.1	0.4	6.2	2.3
Other investment ⁴	111.2	117.3	123.8	4.0	5.5	5.5	6.8	6.8	6.8	6.1	2.6	3.9	3.4
Changes in inventories ^{5, 6}	.	.	.	- 0.3	- 0.3	- 0.2	- 0.3	- 0.6	- 0.7	0.2	0.4	- 0.1	0.3
Domestic demand	104.4	106.1	108.7	1.3	1.6	2.4	2.7	2.2	3.2	2.4	1.9	2.3	2.0
Net exports ⁶	.	.	.	0.7	0.2	- 0.3	- 0.4	- 0.5	0.4	- 0.5	- 0.5	1.1	- 1.0
Exports	118.5	124.7	128.0	4.6	5.2	2.6	4.1	1.7	4.9	1.3	2.6	6.9	1.0
Imports	114.1	120.5	125.2	3.6	5.6	3.9	5.8	3.4	5.1	2.8	4.3	5.4	3.8
Gross domestic product ²	106.7	108.6	110.7	1.9	1.7	1.9	2.1	1.5	3.3	1.7	1.3	3.2	0.8
At current prices (€ billion)													
III Use of domestic product													
Private consumption ³	1,593.2	1,630.5	1,674.4	1.9	2.3	2.7	2.8	2.6	3.2	2.2	2.8	3.7	3.2
Government consumption	563.9	587.1	615.4	3.9	4.1	4.8	4.5	5.5	5.4	4.5	4.1	3.5	3.7
Machinery and equipment	191.7	200.8	205.8	6.5	4.7	2.5	8.2	5.2	6.7	1.7	- 2.3	3.6	- 0.4
Premises	289.7	291.0	304.5	4.5	0.4	4.6	3.4	4.6	7.3	4.1	2.5	9.1	5.4
Other investment ⁴	105.1	112.5	119.7	5.6	7.0	6.4	8.2	7.8	7.4	6.9	3.7	4.9	4.8
Changes in inventories ⁵	- 14.2	- 21.5	- 26.4	.	.	.	.	.	.	.	.	.	.
Domestic use	2,729.5	2,800.3	2,893.4	2.7	2.6	3.3	3.7	3.0	3.9	3.2	3.2	4.1	4.0
Net exports	203.0	243.3	250.6	.	.	.	.	.	.	.	.	.	.
Exports	1,340.3	1,426.7	1,450.0	4.5	6.4	1.6	4.7	1.2	3.1	- 0.0	2.3	8.6	3.1
Imports	1,137.3	1,183.4	1,199.4	2.0	4.1	1.4	3.7	0.4	1.0	0.2	3.9	9.6	7.3
Gross domestic product ²	2,932.5	3,043.7	3,144.1	3.8	3.8	3.3	4.2	3.1	4.7	2.9	2.5	4.1	2.3
IV Prices (2010=100)													
Private consumption	105.6	106.2	106.9	0.9	0.6	0.6	0.7	0.6	0.3	0.5	1.1	1.9	1.6
Gross domestic product	106.5	108.7	110.1	1.8	2.0	1.3	2.1	1.6	1.3	1.2	1.2	0.9	1.5
Terms of trade	99.5	102.1	103.7	1.4	2.7	1.5	2.7	2.5	2.2	1.3	0.2	- 2.3	- 1.2
V Distribution of national income													
Compensation of employees	1,485.1	1,542.3	1,600.3	3.9	3.9	3.8	4.1	4.2	3.4	3.7	3.9	4.3	4.2
Entrepreneurial and property income	696.2	722.6	737.7	3.3	3.8	2.1	4.6	0.8	9.5	- 0.2	- 1.2	3.3	- 1.6
National income	2,181.3	2,264.9	2,338.0	3.7	3.8	3.2	4.2	3.0	5.2	2.3	2.5	3.9	2.4
<i>Memo item:</i> Gross national income	2,990.4	3,099.8	3,197.2	3.5	3.7	3.1	4.1	3.1	4.7	2.4	2.5	3.9	2.7

Source: Federal Statistical Office; figures computed in August 2017. 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												
2013	106.4	106.4	96.4	107.7	104.4	114.0	100.1	100.6	108.3	106.0	113.7	114.7
2014	108.1	109.5	92.7	109.8	106.2	116.6	100.5	102.2	111.3	108.7	115.1	119.5
2015	108.6	107.0	97.5	110.3	106.1	117.6	102.8	101.9	111.4	109.4	114.8	119.3
2016	109.8	109.6	96.2	111.7	107.3	119.3	105.9	103.0	113.0	111.4	114.8	121.6
2016 Q2	109.2	110.9	89.0	111.6	108.2	118.9	104.2	101.1	114.5	109.2	112.9	124.2
Q3	110.1	117.9	91.8	111.4	108.3	117.6	103.0	104.0	112.6	113.5	113.2	119.3
Q4	112.9	120.5	101.6	113.3	104.8	124.1	109.6	106.1	111.7	114.1	124.1	117.7
2017 Q1	108.4	90.8	101.8	111.7	109.3	117.7	110.0	101.8	115.3	112.9	110.6	125.4
Q2 ^x	112.9	117.4	91.4	115.0	112.2	122.3	110.0	102.8	119.0	116.1	117.2	126.2
2016 July ²	110.4	120.7	91.7	111.4	109.2	117.5	99.3	102.7	113.6	111.9	111.1	121.7
Aug ²	104.5	113.6	90.6	105.1	104.2	107.8	94.1	102.4	107.0	108.2	105.8	104.6
Sep	115.4	119.5	93.1	117.7	111.5	127.5	115.7	106.9	117.3	120.3	122.6	131.7
Oct	115.7	122.4	99.5	116.8	111.9	124.0	114.5	109.9	118.6	116.7	114.2	132.1
Nov	118.7	123.6	102.2	120.2	111.8	131.6	115.9	111.3	121.8	120.4	127.3	131.0
Dec	104.3	115.4	103.1	102.9	90.6	116.7	98.4	97.2	94.6	105.3	130.9	90.1
2017 Jan	99.8	68.9	108.2	103.1	104.3	103.8	102.7	98.2	108.3	106.0	94.9	112.6
Feb	106.1	90.7	97.2	109.5	106.1	116.8	108.8	98.0	112.4	109.5	110.1	126.0
Mar	119.2	112.8	100.0	122.6	117.5	132.4	118.5	109.3	125.1	123.1	126.7	137.7
Apr ^x	111.6	116.0	93.3	113.3	111.9	119.1	110.0	101.4	117.8	114.6	112.3	127.0
May ^x	111.6	115.7	92.1	113.6	111.1	120.2	107.6	102.8	118.4	113.0	114.4	125.2
June ^x	115.4	120.4	88.8	118.1	113.6	127.6	112.4	104.1	120.8	120.7	124.9	126.5
July ^{2,x,p}	114.8	126.2	88.5	116.6	115.3	122.7	104.4	105.2	120.6	121.3	117.0	124.6
Annual percentage change												
2013	+ 0.1	± 0.0	- 1.0	+ 0.3	- 0.2	+ 0.6	- 0.4	+ 0.9	+ 0.9	- 1.7	- 1.3	+ 1.8
2014	+ 1.6	+ 2.9	- 3.8	+ 1.9	+ 1.7	+ 2.3	+ 0.4	+ 1.6	+ 2.8	+ 2.5	+ 1.2	+ 4.2
2015	+ 0.5	- 2.3	+ 5.2	+ 0.5	- 0.1	+ 0.9	+ 2.3	- 0.3	+ 0.1	+ 0.6	- 0.3	- 0.2
2016	+ 1.1	+ 2.4	- 1.3	+ 1.3	+ 1.1	+ 1.4	+ 3.0	+ 1.1	+ 1.4	+ 1.8	± 0.0	+ 1.9
2016 Q2	+ 0.6	+ 1.8	- 2.5	+ 0.9	+ 0.5	+ 1.1	+ 2.6	+ 0.4	+ 1.0	+ 1.1	- 2.6	+ 3.2
Q3	+ 0.9	+ 2.7	- 1.4	+ 0.9	+ 0.8	+ 0.9	+ 2.8	+ 0.8	+ 0.4	+ 2.3	- 0.3	+ 1.6
Q4	+ 1.4	+ 1.3	+ 0.9	+ 1.5	+ 1.5	+ 1.2	+ 4.0	+ 1.7	+ 1.8	+ 2.6	+ 1.4	+ 1.0
2017 Q1	+ 1.1	+ 2.1	- 0.6	+ 1.2	+ 1.5	+ 0.9	+ 3.1	+ 1.2	+ 2.0	+ 3.7	+ 1.3	+ 0.3
Q2 ^x	+ 3.4	+ 5.9	+ 2.7	+ 3.1	+ 3.7	+ 2.9	+ 5.6	+ 1.7	+ 3.9	+ 6.3	+ 3.8	+ 1.6
2016 July ²	- 1.3	+ 3.1	- 2.7	- 1.8	- 0.6	- 2.8	+ 2.2	- 2.0	- 1.0	+ 0.3	- 4.3	- 3.9
Aug ²	+ 2.3	+ 2.2	- 0.1	+ 2.6	+ 1.7	+ 3.9	+ 3.5	+ 1.6	+ 1.0	+ 2.9	+ 0.2	+ 7.9
Sep	+ 1.8	+ 2.8	- 1.5	+ 1.9	+ 1.5	+ 1.9	+ 2.7	+ 2.9	+ 1.1	+ 3.5	+ 3.1	+ 2.2
Oct	+ 1.6	+ 2.2	+ 0.5	+ 1.6	+ 1.6	+ 0.8	+ 4.8	+ 3.1	+ 0.9	+ 3.8	- 1.6	+ 1.5
Nov	+ 2.5	+ 1.6	+ 0.9	+ 2.8	+ 2.1	+ 3.6	+ 2.2	+ 2.4	+ 4.0	+ 4.0	+ 4.9	+ 1.2
Dec	± 0.0	+ 0.1	+ 1.4	- 0.2	+ 0.4	- 0.9	+ 5.4	- 0.6	+ 0.2	- 0.3	+ 0.6	+ 0.2
2017 Jan	- 0.4	- 5.1	+ 0.7	- 0.1	+ 1.3	- 1.1	+ 3.3	- 1.1	+ 1.0	+ 4.3	- 0.3	- 2.1
Feb	+ 1.4	+ 4.3	± 0.0	+ 1.4	+ 0.7	+ 1.7	+ 3.0	+ 2.0	+ 1.9	+ 2.6	+ 3.7	+ 0.6
Mar	+ 2.1	+ 5.2	- 2.3	+ 2.3	+ 2.4	+ 2.0	+ 3.0	+ 2.5	+ 3.0	+ 4.1	+ 0.6	+ 2.1
Apr ^x	+ 2.8	+ 6.9	+ 2.3	+ 2.2	+ 3.7	+ 0.9	+ 5.1	+ 1.5	+ 3.2	+ 7.0	+ 2.2	- 1.1
May ^x	+ 4.8	+ 5.9	+ 2.4	+ 4.9	+ 3.8	+ 6.6	+ 10.7	+ 1.7	+ 5.4	+ 7.1	+ 6.7	+ 8.2
June ^x	+ 2.7	+ 4.9	+ 3.3	+ 2.3	+ 3.5	+ 1.4	+ 1.6	+ 1.9	+ 3.1	+ 4.9	+ 2.8	- 1.6
July ^{2,x,p}	+ 4.0	+ 4.6	- 3.5	+ 4.7	+ 5.6	+ 4.4	+ 5.1	+ 2.4	+ 6.2	+ 8.4	+ 5.3	+ 2.4

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												
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	103.2	- 1.0	114.3	+ 4.7	105.9	+ 2.0	101.8	+ 2.4	107.4	+ 2.0
2014	112.4	+ 2.7	103.9	+ 0.7	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
2016	115.7	+ 0.8	102.1	- 0.9	125.3	+ 1.7	115.3	+ 0.9	112.6	+ 5.5	116.2	- 0.6
2016 July	114.1	- 2.1	102.1	- 2.8	122.1	- 1.9	117.3	- 1.2	110.0	+ 2.0	119.9	- 2.0
Aug	103.2	+ 0.4	92.9	- 0.6	109.0	+ 0.6	114.5	+ 4.3	101.9	+ 2.4	119.0	+ 4.8
Sep	113.9	+ 1.8	100.5	+ 0.5	123.3	+ 2.7	115.4	+ 1.1	119.2	+ 2.4	114.1	+ 0.6
Oct	118.7	+ 4.4	105.0	+ 2.2	128.4	+ 6.6	117.9	- 1.8	129.5	+ 12.9	113.8	- 6.6
Nov	119.0	+ 2.1	107.5	+ 2.1	127.1	+ 1.8	118.3	+ 2.5	119.1	+ 8.7	118.0	+ 0.5
Dec	121.1	+ 9.5	93.6	+ 3.7	143.0	+ 13.9	104.1	- 2.1	103.6	+ 5.0	104.2	- 4.4
2017 Jan	115.1	+ 1.1	107.0	+ 2.6	120.7	+ 1.1	116.9	- 4.1	115.6	- 0.6	117.4	- 5.2
Feb	119.0	+ 6.0	111.8	+ 10.4	123.8	+ 3.7	121.7	+ 4.1	116.6	+ 11.9	123.4	+ 1.7
Mar	133.6	+ 4.3	119.5	+ 10.0	143.8	+ 0.8	131.1	+ 8.2	135.0	+ 14.8	129.8	+ 6.0
Apr	119.4	+ 5.5	111.0	+ 5.9	125.3	+ 4.9	118.7	+ 7.8	120.9	+ 2.3	117.9	+ 10.0
May	118.3	+ 5.7	109.2	+ 7.6	125.1	+ 4.9	116.4	+ 4.4	119.4	+ 18.6	115.4	+ 0.1
June	126.7	+ 6.7	114.2	+ 10.9	136.4	+ 4.6	120.8	+ 5.9	129.6	+ 16.7	117.8	+ 2.3
July P	121.2	+ 6.2	112.3	+ 10.0	127.1	+ 4.1	123.4	+ 5.2	117.2	+ 6.5	125.5	+ 4.7
From the domestic market												
2012	103.9	- 5.3	103.3	- 5.8	105.4	- 4.9	99.1	- 4.3	101.9	- 7.5	98.2	- 2.9
2013	104.4	+ 0.5	101.9	- 1.4	107.6	+ 2.1	100.4	+ 1.3	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
2016	107.4	± 0.0	96.8	- 2.2	118.7	+ 2.1	103.4	- 1.7	105.6	+ 3.4	102.6	- 3.5
2016 July	105.6	- 6.0	97.6	- 3.8	113.6	- 8.0	105.1	- 5.1	102.9	- 1.6	105.9	- 6.1
Aug	99.7	+ 0.7	91.0	- 2.4	107.8	+ 4.2	103.0	- 3.5	101.3	+ 1.6	103.6	- 5.1
Sep	104.4	- 0.9	92.8	- 3.5	116.0	+ 1.5	104.0	- 3.5	115.8	+ 0.7	99.8	- 5.1
Oct	111.0	+ 3.1	100.5	+ 1.8	122.2	+ 4.7	107.0	- 1.1	120.6	+ 6.8	102.2	- 4.1
Nov	111.3	+ 0.8	102.4	+ 0.4	120.9	+ 1.4	107.5	- 0.7	114.6	+ 5.7	105.0	- 3.0
Dec	107.3	+ 9.6	86.4	+ 2.7	131.0	+ 16.1	91.0	+ 0.2	88.9	+ 6.3	91.7	- 1.8
2017 Jan	106.2	+ 0.5	100.8	+ 2.1	112.0	- 1.0	103.6	+ 0.2	104.6	+ 1.6	103.2	- 0.4
Feb	113.5	+ 7.5	108.4	+ 13.9	119.3	+ 3.2	109.9	+ 1.9	104.3	+ 3.8	111.9	+ 1.4
Mar	122.5	+ 4.9	111.5	+ 9.2	135.3	+ 1.9	111.2	+ 2.0	117.6	+ 1.0	109.0	+ 2.4
Apr	111.8	+ 3.2	104.8	+ 2.7	120.7	+ 4.0	99.9	+ 0.6	106.3	+ 0.1	97.7	+ 0.9
May	107.8	+ 2.7	102.7	+ 7.2	114.0	- 0.5	101.7	- 0.8	102.9	+ 8.2	101.3	- 3.6
June	116.4	+ 7.4	104.4	+ 7.6	130.3	+ 7.6	104.7	+ 4.0	106.4	+ 4.9	104.1	+ 3.7
July P	114.9	+ 8.8	107.4	+ 10.0	123.1	+ 8.4	110.8	+ 5.4	107.3	+ 4.3	112.0	+ 5.8
From abroad												
2012	109.2	- 0.7	105.2	- 3.0	111.6	+ 0.2	107.7	+ 3.5	97.3	- 3.7	111.3	+ 5.8
2013	113.5	+ 3.9	104.8	- 0.4	118.4	+ 6.1	110.7	+ 2.8	100.8	+ 3.6	114.1	+ 2.5
2014	117.9	+ 3.9	107.4	+ 2.5	123.4	+ 4.2	118.0	+ 6.6	102.0	+ 1.2	123.5	+ 8.2
2015	120.7	+ 2.4	107.7	+ 0.3	127.4	+ 3.2	122.1	+ 3.5	110.7	+ 8.5	126.0	+ 2.0
2016	122.4	+ 1.4	108.3	+ 0.6	129.4	+ 1.6	125.5	+ 2.8	118.8	+ 7.3	127.8	+ 1.4
2016 July	121.0	+ 0.7	107.4	- 1.6	127.4	+ 1.8	127.7	+ 1.8	116.2	+ 5.1	131.8	+ 0.9
Aug	106.1	+ 0.3	95.1	+ 1.4	109.8	- 1.3	124.4	+ 10.6	102.4	+ 3.1	132.0	+ 12.7
Sep	121.7	+ 3.8	109.5	+ 4.8	127.8	+ 3.3	125.1	+ 4.6	122.2	+ 3.9	126.2	+ 4.9
Oct	124.9	+ 5.4	110.3	+ 2.6	132.3	+ 7.7	127.2	- 2.3	137.2	+ 18.0	123.7	- 8.3
Nov	125.2	+ 2.9	113.6	+ 4.0	130.9	+ 1.9	127.6	+ 5.0	123.1	+ 11.2	129.1	+ 3.1
Dec	132.4	+ 9.4	102.0	+ 4.5	150.4	+ 12.7	115.3	- 3.6	116.4	+ 4.1	114.9	- 6.1
2017 Jan	122.4	+ 1.7	114.3	+ 3.2	126.0	+ 2.2	128.3	- 6.8	125.1	- 2.2	129.4	- 8.2
Feb	123.5	+ 4.9	115.9	+ 6.8	126.6	+ 4.0	131.7	+ 5.6	127.4	+ 18.5	133.2	+ 2.1
Mar	142.6	+ 3.9	129.0	+ 10.9	149.1	+ 0.2	148.2	+ 12.5	150.2	+ 26.5	147.5	+ 8.4
Apr	125.5	+ 7.2	118.2	+ 9.4	128.2	+ 5.4	134.8	+ 13.0	133.6	+ 3.8	135.1	+ 16.4
May	126.9	+ 8.0	116.9	+ 8.0	131.9	+ 8.0	128.9	+ 8.1	133.7	+ 26.7	127.3	+ 2.7
June	135.1	+ 6.3	125.8	+ 14.3	140.1	+ 2.9	134.6	+ 7.2	149.9	+ 25.3	129.4	+ 1.3
July P	126.3	+ 4.4	118.0	+ 9.9	129.6	+ 1.7	134.2	+ 5.1	125.8	+ 8.3	137.0	+ 3.9

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		Civil engineering		Industry		Public sector 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	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	
2013	119.2	+ 3.9	126.5	+ 4.2	140.6	+ 6.3	128.0	+ 3.1	93.9	+ 2.4	111.9	+ 3.7	121.9	+ 2.7	107.7	+ 4.2
2014	118.6	- 0.5	127.2	+ 0.6	146.6	+ 4.3	126.7	- 1.0	90.6	- 3.5	109.9	- 1.8	121.7	- 0.2	104.0	- 3.4
2015	124.2	+ 4.7	133.6	+ 5.0	165.4	+ 12.8	124.4	- 1.8	98.5	+ 8.7	114.8	+ 4.5	122.6	+ 0.7	109.3	+ 5.1
2016	142.2	+ 14.5	153.8	+ 15.1	193.4	+ 16.9	143.0	+ 15.0	107.5	+ 9.1	130.7	+ 13.9	137.1	+ 11.8	126.9	+ 16.1
2016 June	165.2	+ 19.9	181.1	+ 24.4	223.0	+ 27.6	175.0	+ 25.6	117.0	+ 9.6	149.3	+ 14.8	161.6	+ 20.4	145.6	+ 15.0
July	152.6	+ 15.6	163.6	+ 17.3	195.1	+ 5.8	158.3	+ 31.4	117.2	+ 9.2	141.7	+ 13.7	144.0	+ 19.2	144.4	+ 17.9
Aug	138.9	+ 12.2	148.6	+ 14.2	184.0	+ 16.7	141.7	+ 15.2	99.7	+ 3.1	129.2	+ 9.9	132.4	+ 11.0	127.5	+ 11.0
Sep	144.5	+ 7.6	161.6	+ 6.7	225.4	+ 11.5	133.2	- 0.5	120.3	+ 16.6	127.4	+ 8.6	129.7	+ 1.1	127.1	+ 12.3
Oct	145.3	+ 23.4	156.9	+ 22.6	194.5	+ 22.9	147.8	+ 26.9	110.2	+ 7.1	133.6	+ 24.4	144.7	+ 20.1	126.1	+ 27.9
Nov	127.1	+ 7.0	139.7	+ 1.9	189.3	+ 24.3	121.8	- 15.8	95.1	+ 12.0	114.5	+ 13.9	124.4	- 11.5	104.8	+ 26.0
Dec	131.1	+ 6.2	150.0	+ 10.9	171.8	+ 2.8	153.8	+ 22.6	95.6	- 5.5	112.2	+ 0.4	141.0	+ 22.8	104.6	- 8.7
2017 Jan	113.5	+ 4.7	125.0	+ 6.3	154.5	+ 4.6	122.5	+ 15.2	74.4	- 19.0	102.1	+ 2.8	124.5	+ 11.8	85.9	- 4.2
Feb	130.2	+ 7.9	144.2	+ 14.4	176.0	+ 11.6	139.0	+ 20.3	97.3	+ 2.6	116.2	+ 0.7	127.3	+ 16.1	114.8	- 2.0
Mar	179.0	+ 8.7	190.5	+ 13.1	243.5	+ 7.0	172.4	+ 17.7	139.8	+ 19.5	167.6	+ 4.2	165.2	+ 10.2	167.3	+ 8.3
Apr	165.2	+ 9.4	170.3	+ 9.6	204.6	+ 4.6	166.4	+ 16.7	114.5	+ 0.4	160.0	+ 9.1	153.8	+ 9.5	160.9	+ 11.8
May	155.5	- 1.2	162.5	- 7.7	202.0	- 3.7	143.2	- 17.5	142.1	+ 20.8	148.6	+ 7.1	138.8	- 11.0	154.0	+ 11.7
June	173.0	+ 4.7	187.6	+ 3.6	237.9	+ 6.7	164.1	- 6.2	158.6	+ 35.6	158.4	+ 6.1	155.9	- 3.5	164.5	+ 13.0

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 *

Adjusted for calendar variations ◦

Period	of which															
	in stores by enterprises main product range															
	Food, beverages, tobacco ¹		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		Retail sale via mail order houses or via internet as well as other retail sale ²					
At current prices		At prices in year 2010		At current prices												
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	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	
2013	106.2	+ 1.6	101.3	+ 0.5	109.0	+ 3.6	103.0	+ 0.7	95.4	- 3.6	102.3	- 2.1	103.4	+ 2.7	123.4	+ 5.9
2014	108.2	+ 1.9	102.7	+ 1.4	111.6	+ 2.4	104.9	+ 1.8	94.6	- 0.8	101.9	- 0.4	110.7	+ 7.1	126.2	+ 2.3
2015	³ 112.2	+ 3.7	³ 106.7	+ 3.9	114.8	+ 2.9	105.2	+ 0.3	95.5	+ 1.0	104.6	+ 2.6	116.6	+ 5.3	³ 151.5	+ 20.0
2016	⁵ 115.0	+ 2.5	⁵ 108.9	+ 2.1	117.1	+ 2.0	104.8	- 0.4	95.5	± 0.0	106.1	+ 1.4	121.4	+ 4.1	166.4	+ 9.8
2016 July	114.9	+ 1.6	109.2	+ 1.2	119.1	+ 2.9	107.2	- 0.6	89.6	- 1.2	106.3	+ 2.9	124.0	+ 3.7	150.0	+ 0.8
Aug	110.8	+ 1.5	105.5	+ 1.3	115.8	+ 0.5	96.6	+ 0.7	84.4	- 1.7	101.4	+ 2.4	118.2	+ 5.9	152.9	+ 4.3
Sep	110.7	+ 0.7	104.5	+ 0.2	112.3	+ 2.1	100.3	- 10.6	87.9	- 5.5	101.2	- 0.9	119.7	+ 5.2	156.9	- 0.7
Oct	120.4	+ 3.9	113.2	+ 3.4	118.6	+ 2.7	127.7	+ 6.2	101.1	+ 3.3	112.5	+ 1.6	124.3	+ 4.1	179.0	+ 9.3
Nov	121.1	+ 2.6	113.9	+ 1.7	118.6	+ 1.9	107.6	+ 3.4	109.1	- 1.3	112.4	- 1.8	126.5	+ 3.2	198.8	+ 7.1
Dec	139.6	+ 3.6	131.7	+ 2.1	137.6	+ 2.8	124.5	+ 0.2	151.8	+ 2.4	115.8	+ 2.1	135.7	+ 3.7	214.7	+ 5.1
2017 Jan	⁵ 108.6	+ 2.4	⁵ 102.5	+ 0.4	108.5	+ 0.4	86.6	- 4.9	114.2	+ 15.9	91.0	- 2.0	119.2	+ 2.6	170.4	+ 8.5
Feb	107.1	+ 5.4	100.2	+ 3.0	108.9	+ 3.1	80.5	+ 0.4	93.6	+ 9.2	93.0	- 1.1	116.4	+ 2.4	160.5	+ 4.2
Mar	122.3	+ 6.5	113.7	+ 4.5	121.6	+ 3.8	108.5	+ 10.8	103.8	+ 14.2	116.8	+ 3.8	127.0	+ 2.6	180.9	+ 4.8
Apr	120.3	+ 5.6	111.5	+ 3.9	123.5	+ 5.5	106.3	- 5.5	95.1	+ 15.7	112.1	+ 0.6	123.2	+ 3.4	172.5	+ 14.8
May	119.9	+ 5.0	111.2	+ 3.3	122.8	+ 3.5	107.8	- 0.6	90.6	+ 14.2	110.0	+ 0.4	124.5	+ 5.0	172.1	+ 9.4
June	118.6	+ 6.4	110.5	+ 4.7	121.3	+ 4.5	108.2	+ 5.0	96.3	+ 13.0	106.5	+ 3.2	123.5	+ 5.3	169.3	+ 10.6
July ⁶	120.0	+ 4.4	112.5	+ 3.0	...	...	...	...	...	...	...	...	...	...	...	...

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 Including stalls and markets. ² Not in stores, stalls or markets. ³ As of May 2015, integration of a larger online retail sales based enterprise that founded a business

establishment in Germany in May 2015. ⁴ As of January 2016, figures are provisional, and particularly uncertain in recent months due to estimates for missing reports. ⁵ New reporting sample including new entities; statistical breaks in the reporting sample eliminated by chain-linking. ⁶ Unadjusted figures partially estimated by the Federal Statistical Office.

XI Economic conditions in Germany

6 Labour market *

Period	Employment 1		Employment subject to social contributions 2,3						Solely jobs exempt from social contributions 2	Short time workers 4		Unemployment 5		Unemployment rate 5,6 in %	Vacancies, 5,7 thousands
	Thousands	Annual percentage change	Total		of which:			Total		Cyclically induced	Total	Recipients of insured unemployment benefits			
			Thousands	Annual percentage change	Production sector	Services excluding temporary employment	Temporary employment						of which:		
2012	42,062	+ 1.2	29,341	+ 2.3	8,739	19,604	773	4,981	171	67	2,897	902	6.8	478	
2013	42,319	+ 0.6	29,713	+ 1.3	8,783	19,958	743	5,017	191	77	2,950	970	6.9	457	
2014	42,672	+ 0.8	30,197	+ 1.6	8,860	20,332	770	5,029	134	49	2,898	933	6.7	490	
2015	43,069	+ 0.9	30,822	+ 2.1	8,937	20,839	806	4,856	130	44	2,795	859	6.4	569	
2016	43,638	+ 1.3	31,485	+ 2.2	9,022	21,390	834	4,805	128	42	2,691	822	6.1	655	
2014 Q2	42,641	+ 0.9	30,080	+ 1.7	8,829	20,255	753	5,043	72	56	2,886	900	6.6	487	
Q3	42,861	+ 0.8	30,284	+ 1.7	8,896	20,344	800	5,065	50	37	2,860	909	6.6	512	
Q4	42,965	+ 0.8	30,614	+ 1.6	8,956	20,625	796	5,018	110	46	2,738	846	6.3	510	
2015 Q1	42,517	+ 0.7	30,360	+ 1.8	8,833	20,551	756	4,863	310	51	2,993	1,011	6.9	515	
Q2	42,998	+ 0.8	30,671	+ 2.0	8,895	20,740	792	4,863	61	47	2,772	822	6.3	560	
Q3	43,286	+ 1.0	30,927	+ 2.1	8,974	20,864	840	4,868	47	33	2,759	827	6.3	595	
Q4	43,476	+ 1.2	31,329	+ 2.3	9,049	21,201	837	4,828	101	46	2,655	775	6.0	604	
2016 Q1	43,096	+ 1.4	31,064	+ 2.3	8,927	21,120	793	4,786	312	50	2,892	932	6.6	610	
Q2	43,557	+ 1.3	31,326	+ 2.1	8,983	21,279	820	4,824	59	47	2,674	782	6.1	653	
Q3	43,832	+ 1.3	31,536	+ 2.0	9,039	21,391	858	4,827	46	35	2,651	808	6.0	682	
Q4	44,066	+ 1.4	32,015	+ 2.2	9,137	21,772	866	4,782	93	36	2,547	766	5.8	677	
2017 Q1	43,746	+ 1.5	31,792	+ 2.3	9,040	21,699	830	4,727	...	...	2,734	987	6.2	671
Q2	44,221	+ 1.5	32,079	+ 2.4	9,113	21,869	853	4,753	...	...	2,513	822	6.2	717
2014 Apr	42,499	+ 1.0	30,060	+ 1.7	8,826	20,244	749	5,030	77	60	2,943	938	6.8	485	
May	42,658	+ 0.9	30,125	+ 1.6	8,836	20,292	751	5,060	72	56	2,882	893	6.6	481	
June	42,765	+ 0.9	30,175	+ 1.9	8,854	20,295	779	5,087	66	52	2,833	869	6.5	495	
July	42,792	+ 0.9	30,121	+ 1.8	8,860	20,219	800	5,100	54	40	2,871	909	6.6	502	
Aug	42,815	+ 0.8	30,312	+ 1.6	8,904	20,362	802	5,046	44	32	2,902	934	6.7	515	
Sep	42,976	+ 0.8	30,663	+ 1.7	8,992	20,608	813	5,013	51	39	2,808	885	6.5	518	
Oct	43,065	+ 0.8	30,676	+ 1.6	8,980	20,645	808	5,021	61	49	2,733	836	6.3	517	
Nov	43,017	+ 0.7	30,636	+ 1.6	8,960	20,645	798	5,020	63	52	2,717	834	6.3	515	
Dec	42,813	+ 0.8	30,398	+ 1.7	8,864	20,565	753	5,012	204	39	2,764	867	6.4	498	
2015 Jan	42,444	+ 0.7	30,276	+ 1.8	8,815	20,498	747	4,846	327	50	3,032	1,043	7.0	485	
Feb	42,470	+ 0.7	30,342	+ 1.9	8,819	20,546	756	4,821	352	52	3,017	1,034	6.9	519	
Mar	42,638	+ 0.8	30,528	+ 2.0	8,865	20,651	777	4,829	251	50	2,932	955	6.8	542	
Apr	42,832	+ 0.8	30,645	+ 1.9	8,895	20,723	784	4,850	67	54	2,843	868	6.5	552	
May	43,013	+ 0.8	30,718	+ 2.0	8,901	20,776	794	4,875	57	44	2,762	815	6.3	557	
June	43,150	+ 0.9	30,771	+ 2.0	8,915	20,788	819	4,902	59	45	2,711	782	6.2	572	
July	43,190	+ 0.9	30,744	+ 2.1	8,934	20,724	840	4,908	49	35	2,773	830	6.3	589	
Aug	43,245	+ 1.0	30,986	+ 2.2	8,993	20,899	846	4,841	40	26	2,796	851	6.4	597	
Sep	43,422	+ 1.0	31,330	+ 2.2	9,076	21,150	850	4,810	51	39	2,708	799	6.2	600	
Oct	43,508	+ 1.0	31,365	+ 2.2	9,067	21,203	846	4,813	61	47	2,649	764	6.0	612	
Nov	43,545	+ 1.2	31,384	+ 2.4	9,059	21,243	842	4,845	66	52	2,633	764	6.0	610	
Dec	43,374	+ 1.3	31,145	+ 2.5	8,963	21,163	798	4,843	177	39	2,681	798	6.1	591	
2016 Jan	43,005	+ 1.3	30,967	+ 2.3	8,904	21,060	784	4,775	343	48	2,920	961	6.7	581	
Feb	43,059	+ 1.4	31,055	+ 2.3	8,921	21,116	793	4,771	343	50	2,911	947	6.6	614	
Mar	43,224	+ 1.4	31,195	+ 2.2	8,951	21,205	804	4,783	252	52	2,845	888	6.5	635	
Apr	43,388	+ 1.3	31,299	+ 2.1	8,980	21,267	809	4,808	67	55	2,744	817	6.3	640	
May	43,577	+ 1.3	31,395	+ 2.2	8,997	21,324	826	4,839	57	45	2,664	774	6.0	655	
June	43,707	+ 1.3	31,374	+ 2.0	8,991	21,289	846	4,864	54	42	2,614	754	5.9	665	
July	43,689	+ 1.2	31,258	+ 1.7	8,974	21,188	852	4,861	43	31	2,661	805	6.0	674	
Aug	43,807	+ 1.3	31,658	+ 2.2	9,070	21,475	864	4,805	50	38	2,684	830	6.1	685	
Sep	43,999	+ 1.3	32,009	+ 2.2	9,157	21,731	869	4,770	46	35	2,608	787	5.9	687	
Oct	44,086	+ 1.3	32,046	+ 2.2	9,154	21,775	871	4,768	50	39	2,540	756	5.8	691	
Nov	44,131	+ 1.3	32,070	+ 2.2	9,147	21,809	876	4,795	52	40	2,532	756	5.7	681	
Dec	43,982	+ 1.4	31,849	+ 2.3	9,062	21,732	835	4,795	178	30	2,568	785	5.8	658	
2017 Jan	43,663	+ 1.5	31,709	+ 2.4	9,017	21,649	825	4,720	370	43	2,777	910	6.3	647	
Feb	43,707	+ 1.5	31,775	+ 2.3	9,032	21,691	828	4,707	335	42	2,762	1,014	6.3	675	
Mar	43,868	+ 1.5	31,934	+ 2.4	9,078	21,783	838	4,715	...	...	2,662	935	6.0	692
Apr	44,047	+ 1.5	32,031	+ 2.3	9,104	21,844	840	4,744	...	...	2,569	861	5.8	706
May	44,239	+ 1.5	32,148	+ 2.4	9,128	21,913	860	4,766	...	...	2,498	810	5.6	714
June	44,377	+ 1.5	32,182	+ 2.6	9,139	21,915	880	4,784	...	...	2,473	796	5.5	731
July	44,387	+ 1.6	...	...	...	...	...	...	...	...	2,518	842	5.6	750
Aug	...	...	...	...	...	...	...	...	...	...	2,545	855	5.7	765

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 Unadjusted figures estimated by the Federal Employment Agency. In 2015 and 2016, the estimated values for Germany deviated from the final data by a maximum of 1.1 % for employees subject to social contributions, by a maximum of 0.5 % for persons solely in jobs exempt from social contributions, and by a maximum of 33.9 % for cyclically induced short-time work. 9 From January 2017, persons receiving additional income assistance (unemployment benefit and unemployment benefit II at the same time) shall be assigned to the legal category of the Third Book of the Social Security Code (SGB III). 10 Initial preliminary estimate by the Federal Statistical Office. 11 From May 2017 calculated on the basis of new labour force figures.

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 Unadjusted figures estimated by the Federal Employment Agency. In 2015 and 2016, the estimated values for Germany deviated from the final data by a maximum of 1.1 % for employees subject to social contributions, by a maximum of 0.5 % for persons solely in jobs exempt from social contributions, and by a maximum of 33.9 % for cyclically induced short-time work. 9 From January 2017, persons receiving additional income assistance (unemployment benefit and unemployment benefit II at the same time) shall be assigned to the legal category of the Third Book of the Social Security Code (SGB III). 10 Initial preliminary estimate by the Federal Statistical Office. 11 From May 2017 calculated on the basis of new labour force figures.

XI Economic conditions in Germany

7 Prices

Period	Harmonised Index of Consumer Prices							Memo item: Consumer price index (national concept)	Con- struction price index	Index of producer prices of industrial products sold on the domestic market 5	Index of producer- prices agricultural products 5	Indices of foreign trade prices		HWWI Index of World Market Prices of Raw Materials 6	
	Total	of which 1				Housing rents 4	Exports					Imports	Energy 7	Other raw materials 8	
		Food 2	Non- energy industrial goods	Energy 3	Services										
	2015 = 100							2010 = 100		2015 = 100					
Index level															
2012	⁹ 97.5	⁹ 94.2	98.1	107.8	95.9	96.1	⁹ 104.1	105.7	107.0	119.4	104.9	108.7	166.8	128.7	
2013	99.1	97.4	98.7	109.8	97.4	97.3	105.7	107.9	106.9	120.7	104.3	105.9	160.2	117.6	
2014	99.9	98.8	99.2	107.5	98.8	98.8	106.6	109.7	105.8	111.1	104.0	103.6	142.8	108.3	
2015	100.0	100.0	100.0	100.0	100.0	100.0	106.9	111.3	103.9	106.9	104.9	100.9	100.0	100.0	
2016	100.4	101.3	101.0	94.6	101.2	101.2	107.4	113.4	102.1	¹⁰ 106.6	104.0	97.8	83.2	98.4	
2015 Oct	100.1	100.4	101.2	97.6	100.0	100.3	107.0		103.1	108.9	104.4	99.3	91.6	93.4	
Nov	100.1	100.5	101.0	97.7	100.1	100.4	107.1	111.8	102.9	107.6	104.5	99.1	89.6	92.7	
Dec	100.1	100.2	100.4	95.0	101.2	100.4	107.0		102.4	107.3	104.1	97.9	77.5	89.4	
2016 Jan	99.1	100.4	99.7	92.7	99.9	100.6	106.1		101.7	106.8	103.9	96.4	64.5	88.2	
Feb	99.5	100.8	99.9	91.8	100.6	100.7	106.5	112.5	101.2	106.0	103.4	95.8	64.0	88.6	
Mar	100.3	101.2	101.0	92.7	101.5	100.8	107.3		101.2	106.6	103.6	96.5	72.3	93.6	
Apr	99.8	101.6	101.5	93.6	99.7	100.9	106.9		101.3	105.9	103.5	96.4	75.1	95.5	
May	100.2	101.3	101.4	95.0	100.5	101.0	107.2	113.1	101.7	106.0	103.7	97.3	82.6	97.2	
June	100.3	101.0	100.7	96.2	100.9	101.1	107.3		102.1	106.4	103.9	97.8	87.9	98.9	
July	100.7	101.3	100.0	95.1	102.2	101.2	107.6		102.3	110.0	104.1	97.9	84.4	100.2	
Aug	100.6	100.9	100.3	94.3	102.3	101.4	107.6	113.7	102.2	106.7	104.0	97.7	83.9	98.6	
Sep	100.6	101.2	101.5	94.9	101.4	101.5	107.7		102.0	¹⁰ 104.7	104.0	97.8	83.9	97.0	
Oct	100.8	101.2	102.0	96.2	101.2	101.7	107.9		102.7	108.8	104.3	98.7	96.2	99.8	
Nov	100.8	102.0	102.0	95.2	101.1	101.8	108.0	114.1	103.0	111.2	104.8	99.4	95.4	108.5	
Dec	101.8	102.6	101.6	97.3	102.8	102.0	108.8		103.4	113.1	105.2	101.3	106.6	114.0	
2017 Jan	101.0	103.2	100.7	98.2	101.0	102.2	108.1		104.1	114.8	105.8	102.2	108.9	115.9	
Feb	101.7	104.6	101.0	98.4	101.9	102.3	108.8	115.5	104.3	116.2	106.0	102.9	110.2	118.9	
Mar	101.8	103.4	102.6	97.5	102.0	102.4	109.0		104.3	117.6	106.0	102.4	99.7	116.4	
Apr	101.8	103.4	102.7	98.3	101.5	102.6	109.0		104.7	119.9	106.2	102.3	100.4	110.1	
May	101.6	103.5	102.7	96.9	101.5	102.8	108.8	116.6	104.5	120.9	106.0	101.3	93.1	104.2	
June	101.8	103.6	102.0	96.1	102.5	102.9	109.0		104.5	121.2	105.8	100.2	85.7	100.4	
July	102.2	103.8	101.4	95.9	103.8	103.0	109.4		104.7	120.2	105.7	99.8	86.5	102.9	
Aug	102.4	103.8	101.8	96.3	103.8	103.1	109.5	...	...	...	...	...	90.1	103.3
Annual percentage change															
2012	⁹ + 2.1	⁹ + 3.2	+ 1.3	+ 5.6	+ 1.3	+ 1.2	⁹ + 2.0	+ 2.7	+ 1.6	+ 5.3	+ 1.5	+ 2.2	+ 7.5	- 5.3	
2013	+ 1.6	+ 3.4	+ 0.7	+ 1.8	+ 1.5	+ 1.3	+ 1.5	+ 2.1	- 0.1	+ 1.1	- 0.6	- 2.6	- 4.0	- 8.6	
2014	+ 0.8	+ 1.5	+ 0.5	- 2.1	+ 1.4	+ 1.6	+ 0.9	+ 1.7	- 1.0	- 8.0	- 0.3	- 2.2	- 10.9	- 7.9	
2015	+ 0.1	+ 1.2	+ 0.8	- 7.0	+ 1.2	+ 1.2	+ 0.3	+ 1.5	- 1.8	- 3.8	+ 0.9	- 2.6	- 30.0	- 7.7	
2016	+ 0.4	+ 1.3	+ 1.0	- 5.4	+ 1.2	+ 1.2	+ 0.5	+ 1.9	- 1.7	¹⁰ - 0.3	- 0.9	- 3.1	- 16.8	- 1.6	
2015 Oct	+ 0.2	+ 1.7	+ 1.5	- 8.7	+ 1.3	+ 1.1	+ 0.3		- 2.3	+ 5.0	+ 0.2	- 4.1	- 32.5	- 11.6	
Nov	+ 0.2	+ 1.9	+ 1.1	- 7.6	+ 1.1	+ 1.1	+ 0.4	+ 1.5	- 2.5	+ 3.9	+ 0.3	- 3.5	- 29.3	- 13.1	
Dec	+ 0.2	+ 1.4	+ 0.7	- 6.5	+ 1.1	+ 1.0	+ 0.3		- 2.3	+ 4.4	+ 0.2	- 3.1	- 28.4	- 14.8	
2016 Jan	+ 0.4	+ 1.2	+ 1.2	- 5.7	+ 1.2	+ 1.1	+ 0.5		- 2.4	+ 4.3	- 0.5	- 3.8	- 30.0	- 17.4	
Feb	- 0.2	+ 1.1	+ 1.0	- 8.6	+ 0.7	+ 1.1	± 0.0	+ 1.5	- 3.0	+ 1.1	- 1.2	- 5.7	- 40.7	- 16.3	
Mar	+ 0.1	+ 1.4	+ 0.8	- 8.9	+ 1.6	+ 1.1	+ 0.3		- 3.1	+ 1.4	- 1.6	- 5.9	- 33.7	- 12.6	
Apr	- 0.3	+ 1.2	+ 1.1	- 8.5	+ 0.5	+ 1.1	- 0.1		- 3.1	- 0.1	- 2.0	- 6.6	- 35.0	- 9.6	
May	± 0.0	+ 0.9	+ 1.2	- 8.0	+ 1.1	+ 1.1	+ 0.1	+ 1.8	- 2.7	+ 1.1	- 1.6	- 5.5	- 29.3	- 7.2	
June	+ 0.2	+ 0.9	+ 0.9	- 6.4	+ 1.4	+ 1.1	+ 0.3		- 2.2	+ 0.9	- 1.3	- 4.6	- 22.4	- 4.4	
July	+ 0.4	+ 1.5	+ 0.9	- 7.0	+ 1.4	+ 1.1	+ 0.4		- 2.0	+ 5.3	- 1.2	- 3.8	- 20.4	- 1.4	
Aug	+ 0.3	+ 1.2	+ 0.7	- 5.9	+ 1.3	+ 1.3	+ 0.4	+ 2.0	- 1.6	+ 4.5	- 0.9	- 2.6	- 8.3	+ 2.7	
Sep	+ 0.5	+ 1.2	+ 0.8	- 3.6	+ 1.3	+ 1.3	+ 0.7		- 1.4	¹⁰ - 2.5	- 0.6	- 1.8	- 7.6	+ 3.1	
Oct	+ 0.7	+ 0.8	+ 0.8	- 1.4	+ 1.2	+ 1.4	+ 0.8		- 0.4	- 0.1	- 0.1	- 0.6	+ 5.0	+ 6.9	
Nov	+ 0.7	+ 1.5	+ 1.0	- 2.6	+ 1.0	+ 1.4	+ 0.8	+ 2.1	+ 0.1	+ 3.3	+ 0.3	+ 0.3	+ 6.5	+ 17.0	
Dec	+ 1.7	+ 2.4	+ 1.2	+ 2.4	+ 1.6	+ 1.6	+ 1.7		+ 1.0	+ 5.4	+ 1.1	+ 3.5	+ 37.5	+ 27.5	
2017 Jan	+ 1.9	+ 2.8	+ 1.0	+ 5.9	+ 1.1	+ 1.6	+ 1.9		+ 2.4	+ 7.5	+ 1.8	+ 6.0	+ 68.8	+ 31.4	
Feb	+ 2.2	+ 3.8	+ 1.1	+ 7.2	+ 1.3	+ 1.6	+ 2.2	+ 2.7	+ 3.1	+ 9.6	+ 2.5	+ 7.4	+ 72.2	+ 34.2	
Mar	+ 1.5	+ 2.2	+ 1.6	+ 5.2	+ 0.5	+ 1.6	+ 1.6		+ 3.1	+ 10.3	+ 2.3	+ 6.1	+ 37.9	+ 24.4	
Apr	+ 2.0	+ 1.8	+ 1.2	+ 5.0	+ 1.8	+ 1.7	+ 2.0		+ 3.4	+ 13.2	+ 2.6	+ 6.1	+ 33.7	+ 15.3	
May	+ 1.4	+ 2.2	+ 1.3	+ 2.0	+ 1.0	+ 1.8	+ 1.5	+ 3.1	+ 2.8	+ 14.1	+ 2.2	+ 4.1	+ 12.7	+ 7.2	
June	+ 1.5	+ 2.6	+ 1.3	- 0.1	+ 1.6	+ 1.8	+ 1.6		+ 2.4	+ 13.9	+ 1.8	+ 2.5	- 2.5	+ 1.5	
July	+ 1.5	+ 2.5	+ 1.4	+ 0.8	+ 1.6	+ 1.8	+ 1.7		+ 2.3	+ 9.3	+ 1.5	+ 1.9	+ 2.5	+ 2.7	
Aug	+ 1.8	+ 2.9	+ 1.5	+ 2.1	+ 1.5	+ 1.7	+ 1.8	...	...	...	...	...	+ 7.4	+ 4.8

Sources: Eurostat; Federal Statistical Office and Bundesbank calculation based on data from the Federal Statistical Office; for the Index of World Market Prices of Raw Materials: HWWI. **1** Differences from the official figures are due to rounding. **2** Including alcoholic beverages and tobacco. **3** Electricity, gas and other fuels well as

transport fuels and lubricants. **4** Net rents. **5** Excluding value-added tax. **6** For the euro area, in euro. **7** Coal, crude oil (Brent) and natural gas. **8** Food, beverages and tobacco as well as industrial raw materials. **9** From January 2012, increase in tobacco tax. **10** From September 2016 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
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	1,167.4	3.0	778.3	2.8	388.1	0.1	1,166.4	1.9	1,717.2	1.3	153.7	- 2.5	8.9
2014	1,212.7	3.9	806.9	3.7	398.4	2.6	1,205.2	3.3	1,759.8	2.5	166.6	8.4	9.5
2015	1,260.8	4.0	836.6	3.7	417.0	4.7	1,253.7	4.0	1,804.0	2.5	173.5	4.2	9.6
2016	1,311.5	4.0	869.1	3.9	430.1	3.1	1,299.2	3.6	1,854.1	2.8	179.7	3.5	9.7
2016 Q1	305.5	4.5	202.4	4.5	108.4	2.3	310.8	3.7	457.0	2.6	58.5	2.7	12.8
Q2	319.5	3.6	207.6	3.7	106.0	3.1	313.6	3.5	462.9	3.4	43.6	5.3	9.4
Q3	323.3	3.9	218.6	3.6	108.8	4.2	327.4	3.8	461.8	2.2	37.7	2.0	8.2
Q4	363.1	4.1	240.4	3.8	106.9	3.0	347.4	3.6	472.4	2.9	39.9	4.4	8.5
2017 Q1	319.2	4.5	211.6	4.5	112.9	4.2	324.5	4.4	475.8	4.1	62.5	6.8	13.1
Q2	333.3	4.3	215.3	3.7	110.0	3.8	325.3	3.8	477.5	3.1	44.6	2.5	9.4

Source: Federal Statistical Office; figures computed in August 2017. * 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	
2009	98.4	2.0	98.3	2.0	98.4	2.3	98.2	2.5	97.6	- 0.1
2010	100.0	1.6	100.0	1.7	100.0	1.7	100.0	1.8	100.0	2.5
2011	101.7	1.7	101.7	1.7	101.8	1.8	101.8	1.8	103.4	3.4
2012	104.5	2.7	104.4	2.6	104.7	2.9	104.7	2.9	106.2	2.7
2013	107.0	2.5	107.0	2.5	107.3	2.5	107.3	2.5	108.4	2.1
2014	110.1	2.9	110.0	2.8	110.2	2.7	110.2	2.7	111.4	2.8
2015	112.6	2.2	112.4	2.2	112.6	2.2	112.7	2.3	114.5	2.8
2016	115.0	2.1	114.8	2.1	115.0	2.1	115.2	2.2	117.3	2.4
2016 Q1	106.3	2.0	106.1	1.9	106.5	2.3	113.9	2.3	110.6	2.9
Q2	107.9	2.1	107.6	2.1	107.7	1.9	114.9	2.1	114.6	2.0
Q3	117.4	2.1	117.2	2.2	117.6	2.2	115.9	2.2	115.4	2.4
Q4	128.3	2.2	128.1	2.2	128.5	2.2	116.2	2.3	128.4	2.5
2017 Q1	109.0	2.5	108.8	2.5	109.1	2.4	116.8	2.5	113.7	2.7
Q2	110.1	2.1	109.9	2.1	110.2	2.3	117.6	2.4	117.5	2.5
2017 Jan	108.9	2.6	108.7	2.5	108.8	2.4	116.5	2.4	.	.
Feb	109.0	2.7	108.7	2.7	109.1	2.7	116.8	2.7	.	.
Mar	109.2	2.3	108.9	2.3	109.3	2.3	117.0	2.3	.	.
Apr	110.3	2.5	110.0	2.5	110.3	2.6	117.5	2.6	.	.
May	110.2	2.1	109.9	2.1	110.2	2.1	117.6	2.3	.	.
June	109.9	1.7	109.6	1.6	110.0	2.3	117.8	2.3	.	.
July	138.5	1.9	138.2	1.9	138.6	1.8	118.0	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 2017.

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				
	€ billion	Annual change in % 3	€ billion	Annual change in % 3	Weighted average	Distribution 2			€ billion	Annual change in % 3	Weighted average	Distribution 2				
						First quartile	Median	Third quartile				First quartile	Median	Third quartile		
				%	Annual change in percentage points 3	%	%	%			%	Annual change in percentage points 3	%	%	%	
Total																
2009	1,158.6	-10.7	135.6	-16.9	11.7	-0.9	3.9	9.4	15.7	55.9	-29.2	4.8	-1.3	-0.1	4.9	9.3
2010	1,321.0	13.3	181.4	30.6	13.7	1.8	6.6	11.4	18.5	98.3	66.6	7.4	2.4	3.2	6.8	12.1
2011	1,414.4	8.5	175.9	0.5	12.4	-1.0	5.4	10.9	17.4	93.9	-4.1	6.6	-0.9	2.7	6.6	12.0
2012	1,533.0	6.6	189.3	3.1	12.4	-0.4	5.2	10.2	17.5	95.7	-7.7	6.2	-0.9	1.9	6.0	11.0
2013	1,541.1	-0.6	187.1	-2.8	12.1	-0.3	5.1	10.3	18.3	99.5	5.5	6.5	0.4	1.9	5.8	10.9
2014	1,565.6	1.0	198.7	4.9	12.7	0.5	5.7	10.3	17.2	109.3	8.5	7.0	0.5	1.9	6.1	11.1
2015	1,636.2	6.9	196.4	-1.0	12.0	-1.0	6.1	10.6	17.6	91.6	-16.3	5.6	-1.5	1.7	6.5	11.3
2016 P	1,626.0	-0.4	222.7	11.9	13.7	1.5	6.5	11.3	17.8	112.1	9.2	6.9	0.5	2.5	6.5	12.0
2012 H1	751.0	8.1	93.3	3.6	12.4	-0.5	4.7	9.1	16.8	55.7	1.6	7.4	-0.5	1.0	5.7	11.4
H2	782.2	5.2	95.9	2.6	12.3	-0.3	4.7	11.0	17.9	39.9	-19.2	5.1	-1.4	1.4	6.8	11.7
2013 H1	762.8	-0.2	93.4	-3.5	12.2	-0.4	3.4	9.3	16.5	53.8	-7.6	7.1	-0.6	0.6	4.9	10.7
H2	780.0	-1.1	93.8	-2.0	12.0	-0.1	5.4	10.7	19.2	45.7	25.5	5.9	1.3	1.7	6.1	12.1
2014 H1	757.2	-0.9	97.2	4.6	12.8	0.7	4.7	9.5	16.0	57.8	9.4	7.6	0.7	1.0	5.2	10.5
H2	808.7	2.9	101.5	5.2	12.6	0.3	5.4	10.8	19.1	51.5	7.6	6.4	0.3	1.7	7.1	12.0
2015 H1	815.7	8.7	102.9	5.7	12.6	-0.4	4.8	10.1	17.6	59.1	1.4	7.3	-0.5	1.1	5.9	10.9
H2	831.7	5.2	93.8	-7.5	11.3	-1.5	6.3	11.5	18.1	32.7	-36.7	3.9	-2.6	2.3	7.1	11.7
2016 H1	782.3	-2.0	111.7	6.2	14.3	1.1	5.7	10.3	17.3	65.6	2.8	8.4	0.4	1.5	6.4	11.3
H2 P	843.8	1.1	110.9	18.3	13.2	1.9	6.1	11.8	18.8	46.4	21.2	5.5	0.8	2.9	7.5	12.5
Groups with a focus on the production sector 4																
2009	837.7	-11.8	94.9	-20.6	11.3	-1.3	2.5	9.0	14.0	40.0	-32.6	4.8	-1.5	-1.4	4.3	8.8
2010	980.7	15.8	136.2	38.7	13.9	2.3	6.6	11.4	16.3	75.7	72.4	7.7	2.6	3.0	7.3	12.0
2011	1,079.0	10.6	130.0	-1.7	12.1	-1.5	5.5	11.3	16.4	74.1	-4.9	6.9	-1.1	2.1	6.8	11.5
2012	1,173.8	7.7	140.8	5.3	12.0	-0.3	5.4	10.2	16.1	81.7	2.2	7.0	-0.4	1.8	6.1	9.8
2013	1,179.0	-0.8	138.7	-2.6	11.8	-0.2	4.4	10.3	15.5	74.5	-5.8	6.3	-0.3	1.3	5.7	10.0
2014	1,197.3	1.0	147.9	5.8	12.4	0.6	5.1	9.6	15.3	82.0	9.3	6.9	0.5	1.4	5.9	10.2
2015	1,283.3	7.0	144.0	-2.7	11.2	-1.1	6.1	10.4	15.5	65.2	-20.2	5.1	-1.8	1.8	6.5	10.0
2016 P	1,267.1	-1.1	164.4	11.2	13.0	1.4	6.5	10.8	16.0	80.5	4.4	6.4	0.3	2.8	6.2	10.4
2012 H1	580.1	9.5	73.3	5.2	12.6	-0.5	5.7	10.5	14.9	46.8	3.5	8.1	-0.5	1.9	6.1	10.5
H2	593.9	6.1	67.5	5.3	11.4	-0.1	4.4	10.5	15.9	34.9	0.2	5.9	-0.3	0.6	6.2	10.2
2013 H1	588.8	-0.1	71.7	-4.8	12.2	-0.6	3.1	9.3	15.0	43.1	-10.9	7.3	-0.9	0.6	5.3	9.7
H2	591.7	-1.4	67.1	-0.3	11.3	0.1	4.0	10.4	15.8	31.4	1.7	5.3	0.2	0.6	5.8	10.9
2014 H1	584.4	-1.1	74.2	3.8	12.7	0.6	4.7	9.6	15.0	46.2	8.9	7.9	0.7	1.4	5.4	9.6
H2	613.1	3.0	73.7	7.8	12.0	0.5	4.4	9.8	15.8	35.8	9.8	5.8	0.4	0.7	6.3	10.7
2015 H1	636.8	8.8	80.1	7.9	12.6	-0.1	5.1	10.0	15.4	48.8	4.9	7.7	-0.3	2.1	6.1	10.0
H2	647.1	5.3	63.9	-13.3	9.9	-2.1	5.3	10.9	15.5	16.4	-52.5	2.5	-3.3	1.7	6.8	10.3
2016 H1	610.8	-2.7	83.9	1.2	13.7	0.5	6.6	10.3	15.3	50.6	-6.6	8.3	-0.3	1.7	6.4	9.9
H2 P	656.4	0.5	80.5	23.8	12.3	2.3	6.1	11.0	16.8	29.9	35.1	4.6	0.9	2.7	6.3	10.4
Groups with a focus on the services sector																
2009	321.0	-7.4	40.7	-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	340.4	5.8	45.1	8.9	13.3	0.4	5.6	10.8	19.6	22.6	46.8	6.7	1.7	3.3	5.9	12.4
2011	335.5	1.7	45.9	7.6	13.7	0.8	5.4	10.1	20.7	19.7	-0.7	5.9	-0.1	3.2	6.1	13.8
2012	359.2	2.8	48.5	-3.4	13.5	-0.9	5.1	10.0	22.7	14.0	-47.2	3.9	-3.0	2.1	5.7	14.0
2013	362.2	-0.1	48.4	-3.3	13.4	-0.4	5.1	9.9	21.1	25.0	84.4	6.9	3.0	2.5	5.9	12.2
2014	368.3	1.0	50.8	2.2	13.8	0.2	6.0	12.7	22.6	27.3	5.7	7.4	0.3	2.9	6.5	13.7
2015	352.9	6.4	52.4	4.8	14.9	-0.2	6.1	11.4	22.1	26.4	-1.6	7.5	-0.6	1.4	6.7	14.1
2016 P	358.9	2.4	58.3	14.4	16.2	1.7	6.7	12.7	24.8	31.5	24.8	8.8	1.6	2.3	8.2	15.2
2012 H1	170.9	3.3	20.0	-2.6	11.7	-0.7	2.6	8.0	21.0	8.9	-9.8	5.2	-0.7	-0.4	4.5	13.9
H2	188.3	2.3	28.5	-4.0	15.1	-1.0	5.2	11.2	23.7	5.1	-73.2	2.7	-5.2	2.7	7.4	15.3
2013 H1	174.0	-0.5	21.7	1.4	12.5	0.2	3.9	8.0	19.2	10.7	12.8	6.2	0.7	0.9	4.6	12.8
H2	188.3	0.3	26.7	-6.7	14.2	-1.1	5.6	11.3	21.8	14.3	241.4	7.6	5.2	2.2	7.3	13.4
2014 H1	172.9	-0.5	23.0	7.6	13.3	1.0	4.8	9.3	20.4	11.6	11.6	6.7	0.7	1.0	5.1	13.5
H2	195.6	2.4	27.8	-2.2	14.2	-0.7	6.4	13.5	23.8	15.7	1.4	8.1	-0.1	3.6	8.1	18.0
2015 H1	178.9	8.4	22.8	-2.2	12.7	-1.5	4.4	10.9	21.5	10.3	-15.7	5.8	-1.6	-0.5	4.5	14.2
H2	184.7	4.6	29.9	10.8	16.2	0.9	7.3	12.2	23.5	16.3	9.3	8.8	0.4	2.5	7.7	15.0
2016 H1	171.5	1.2	27.8	27.7	16.2	3.5	5.1	10.3	23.1	15.0	62.1	8.7	3.3	1.0	6.4	14.9
H2 P	187.4	3.5	30.4	4.4	16.2	0.1	6.9	13.2	24.2	16.5	2.8	8.8	-0.1	4.0	8.9	16.9

* Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. Excluding groups engaged in real estate activities. 1 Earnings before interest, taxes, depreciation 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	2014	2015	2016	2016	2017					
				Q4	Q1	Q2 P	Apr	May	June P	
A Current account	+ 250,091	+ 336,415	+ 372,933	+ 100,493	+ 69,776	+ 68,322	+ 22,280	+ 17,923	+ 28,119	
1 Goods										
Exports	1,964,242	2,110,012	2,117,767	552,786	557,533	561,616	173,415	195,528	192,673	
Imports	1,723,277	1,759,899	1,741,840	458,636	485,715	476,602	149,331	166,894	160,377	
Balance	+ 240,964	+ 350,111	+ 375,924	+ 94,149	+ 71,818	+ 85,014	+ 24,084	+ 28,634	+ 32,296	
2 Services										
Receipts	713,996	775,948	785,782	204,934	192,243	203,905	63,345	68,011	72,549	
Expenditure	628,632	706,018	741,150	211,430	180,655	189,850	57,524	64,390	67,936	
Balance	+ 85,363	+ 69,930	+ 44,633	- 6,494	+ 11,587	+ 14,055	+ 5,821	+ 3,621	+ 4,613	
3 Primary income										
Receipts	630,047	640,729	633,740	179,093	158,025	163,055	52,206	55,756	55,093	
Expenditure	564,244	590,557	543,468	132,491	133,434	160,010	44,491	62,738	52,781	
Balance	+ 65,800	+ 50,174	+ 90,268	+ 46,600	+ 24,592	+ 3,046	+ 7,715	- 6,981	+ 2,312	
4 Secondary income										
Receipts	93,022	104,279	111,062	28,979	25,819	27,811	8,474	10,672	8,665	
Expenditure	235,060	238,079	248,953	62,741	64,041	61,604	23,815	18,023	19,766	
Balance	- 142,036	- 133,799	- 137,891	- 33,762	- 38,222	- 33,792	- 15,341	- 7,350	- 11,101	
B Capital account	+ 14,167	- 13,251	- 2,224	- 462	- 15,583	+ 1,093	- 340	+ 326	+ 1,107	
C Financial account (Increase: +)	+ 252,979	+ 299,560	+ 358,194	+ 83,744	+ 53,066	+ 118,031	+ 14,932	+ 8,490	+ 94,609	
1 Direct investment	+ 61,184	+ 237,130	+ 180,588	+ 17,260	+ 36,699	- 16,379	+ 20,298	+ 7,694	- 44,371	
By resident units abroad	+ 159,981	+ 847,353	+ 314,753	+ 120,135	+ 147,157	+ 11,240	+ 28,040	+ 22,854	- 39,654	
By non-resident units in the euro area	+ 98,799	+ 610,225	+ 134,164	+ 102,876	+ 110,458	+ 27,620	+ 7,743	+ 15,160	+ 4,717	
2 Portfolio investment	+ 32,867	+ 122,107	+ 475,619	+ 92,866	+ 76,509	+ 73,710	+ 49,771	- 15,422	+ 39,361	
By resident units abroad	+ 459,120	+ 399,293	+ 389,539	+ 14,644	+ 167,731	+ 196,464	+ 43,992	+ 79,069	+ 73,403	
Equity and investment fund shares	+ 139,790	+ 18,716	+ 21,345	+ 24,896	+ 29,379	+ 54,044	+ 22,371	+ 14,372	+ 17,301	
Long-term debt securities	+ 226,811	+ 368,644	+ 369,848	+ 15,676	+ 91,820	+ 125,739	+ 43,066	+ 42,051	+ 40,622	
Short-term debt securities	+ 92,520	+ 11,935	- 1,654	- 25,927	+ 46,533	+ 16,682	- 21,445	+ 22,647	+ 15,480	
By non-resident units in the euro area	+ 426,255	+ 277,185	- 86,080	- 78,222	+ 91,222	+ 122,754	- 5,779	+ 94,491	+ 34,042	
Equity and investment fund shares	+ 318,092	+ 222,371	+ 126,388	+ 25,314	+ 81,828	+ 147,883	+ 30,992	+ 74,380	+ 42,511	
Long-term debt securities	+ 127,440	+ 99,546	- 261,466	- 83,234	- 37,637	- 15,796	- 37,479	+ 19,126	+ 2,557	
Short-term debt securities	- 19,277	- 44,733	+ 48,997	- 20,302	+ 47,032	- 9,331	+ 709	+ 986	- 11,026	
3 Financial derivatives and employee stock options	+ 45,722	+ 90,347	+ 22,630	+ 15,168	+ 15,482	- 4,389	+ 1,012	+ 3,144	- 8,545	
4 Other investment	+ 108,848	- 160,593	- 336,099	- 46,128	- 73,091	+ 66,760	- 51,634	+ 11,672	+ 106,722	
Eurosysteem	+ 31,510	- 25,390	- 151,070	- 90,066	- 26,169	+ 35,755	+ 30,494	+ 5,795	- 534	
General government	+ 11,832	+ 19,286	+ 4,059	- 2,678	+ 281	- 7,301	- 2,689	- 1,417	- 3,195	
MFIs (excluding the Eurosysteem)	+ 99,280	- 122,527	- 152,878	+ 45,401	- 19,752	+ 26,205	- 47,895	- 11,288	+ 85,388	
Enterprises and households	- 33,775	- 31,964	- 36,210	+ 1,215	- 27,451	+ 12,099	- 31,545	+ 18,582	+ 25,062	
5 Reserve assets	+ 4,361	+ 10,569	+ 15,458	+ 4,580	- 2,533	- 1,669	- 4,514	+ 1,402	+ 1,443	
D Net errors and omissions	- 11,277	- 23,604	- 12,515	- 16,286	- 1,127	+ 48,616	- 7,008	- 9,758	+ 65,382	

* 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 Supple- mentary trade items 2
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	+ 165,078	+ 163,426	- 8,900	- 31,574	+ 68,235	- 35,010	+ 419	+ 120,857	+ 2,836	- 44,639
2012	+ 193,590	+ 200,401	- 10,518	- 32,775	+ 64,858	- 38,894	- 413	+ 151,417	+ 1,297	- 41,759
2013	+ 189,616	+ 212,662	- 3,663	- 41,376	+ 61,969	- 43,639	- 563	+ 225,360	+ 838	+ 36,307
2014	+ 218,026	+ 228,361	- 5,873	- 25,323	+ 56,177	- 41,188	+ 2,355	+ 238,630	- 2,564	+ 18,248
2015	+ 259,963	+ 261,182	- 2,668	- 18,602	+ 57,370	- 39,987	- 635	+ 234,603	- 2,213	- 24,725
2016 r	+ 262,402	+ 271,486	- 1,434	- 21,218	+ 52,136	- 40,001	+ 1,112	+ 243,586	+ 1,686	- 19,928
2014 Q3	+ 55,457	+ 60,537	- 2,570	- 12,921	+ 15,683	- 7,843	+ 420	+ 52,796	+ 332	- 3,081
Q4	+ 66,413	+ 60,143	- 2,536	- 3,609	+ 21,123	- 11,244	- 216	+ 68,678	- 1,722	+ 2,481
2015 Q1	+ 59,401	+ 60,330	- 1,426	- 2,104	+ 17,030	- 15,855	+ 298	+ 29,421	- 21	- 30,277
Q2	+ 59,356	+ 68,659	- 1,737	- 2,871	+ 611	- 7,043	+ 505	+ 72,121	- 465	+ 12,260
Q3	+ 67,057	+ 67,516	+ 978	- 10,628	+ 16,866	- 6,697	+ 701	+ 67,337	- 1,455	- 421
Q4	+ 74,149	+ 64,676	- 483	- 2,999	+ 22,864	- 10,391	- 2,138	+ 65,723	- 272	- 6,287
2016 Q1	+ 64,331	+ 64,120	+ 621	- 3,363	+ 16,933	- 13,359	- 269	+ 36,937	+ 1,228	- 27,125
Q2	+ 70,047	+ 77,864	+ 242	- 4,009	+ 584	- 4,393	+ 1,092	+ 62,620	+ 761	- 8,518
Q3	+ 59,069	+ 67,878	- 126	- 11,696	+ 13,516	- 10,630	+ 228	+ 61,531	- 261	+ 2,233
Q4 r	+ 68,955	+ 61,623	- 2,171	- 2,150	+ 21,103	- 11,620	+ 61	+ 82,498	- 43	+ 13,482
2017 Q1 r	+ 65,814	+ 67,184	+ 2,419	- 3,315	+ 15,902	- 13,958	+ 457	+ 74,476	- 360	+ 8,205
Q2	+ 55,738	+ 67,897	- 170	- 4,015	+ 4,662	- 12,805	+ 7	+ 64,700	+ 385	+ 8,956
2015 Feb	+ 16,422	+ 19,540	- 767	- 993	+ 5,410	- 7,535	+ 65	+ 10,355	+ 266	- 6,132
Mar	+ 27,996	+ 25,280	+ 458	- 238	+ 7,039	- 4,084	+ 204	+ 21,211	- 660	- 6,989
Apr	+ 21,755	+ 22,266	- 1,084	- 514	+ 2,898	- 2,895	+ 377	+ 30,681	- 69	+ 8,549
May	+ 11,465	+ 20,915	- 690	- 1,177	- 6,268	- 2,005	+ 483	+ 16,041	- 78	+ 4,093
June	+ 26,136	+ 25,478	+ 38	- 1,180	+ 3,980	- 2,143	- 355	+ 25,400	- 318	- 382
July	+ 25,776	+ 25,151	- 896	- 3,062	+ 6,027	- 2,339	+ 448	+ 20,865	- 1,170	- 5,359
Aug	+ 14,760	+ 16,897	+ 661	- 4,616	+ 5,265	- 2,785	+ 44	+ 21,976	- 180	+ 7,171
Sep	+ 26,521	+ 25,469	+ 1,213	- 2,950	+ 5,575	- 1,573	+ 209	+ 24,497	- 105	- 2,233
Oct	+ 22,205	+ 23,927	+ 147	- 4,630	+ 6,013	- 3,105	- 85	+ 20,171	+ 154	- 1,949
Nov	+ 25,362	+ 22,542	+ 4	- 685	+ 6,368	- 2,863	+ 183	+ 24,896	- 548	- 649
Dec	+ 26,582	+ 18,207	- 634	+ 2,315	+ 10,483	- 4,423	- 2,236	+ 20,656	+ 123	- 3,689
2016 Jan	+ 14,614	+ 13,864	- 3	- 1,527	+ 4,518	- 2,241	- 37	- 2,007	- 186	- 16,584
Feb	+ 20,578	+ 22,729	+ 724	- 226	+ 5,600	- 7,525	+ 520	+ 18,706	+ 1,478	- 2,392
Mar	+ 29,139	+ 27,528	- 99	- 1,610	+ 6,815	- 3,594	- 752	+ 20,238	- 64	- 8,149
Apr	+ 28,093	+ 27,954	- 116	- 858	+ 2,726	- 1,730	+ 1,287	+ 25,738	+ 696	- 3,642
May	+ 17,916	+ 23,371	+ 511	- 880	- 4,001	- 574	+ 268	+ 14,378	+ 776	- 3,806
June	+ 24,038	+ 26,539	- 153	- 2,271	+ 1,859	- 2,089	- 463	+ 22,504	- 711	- 1,071
July	+ 18,297	+ 20,755	+ 520	- 3,503	+ 4,494	- 3,449	- 139	+ 18,115	+ 342	- 43
Aug	+ 17,016	+ 21,394	- 367	- 4,965	+ 5,092	- 4,504	- 126	+ 18,180	+ 93	+ 1,290
Sep	+ 23,756	+ 25,730	- 279	- 3,227	+ 3,930	- 2,677	+ 493	+ 25,236	- 695	+ 987
Oct r	+ 18,832	+ 20,877	+ 163	- 3,551	+ 5,076	- 3,570	- 182	+ 30,423	- 145	+ 11,773
Nov r	+ 24,993	+ 23,683	- 385	- 339	+ 5,677	- 4,029	- 90	+ 25,794	+ 140	+ 892
Dec r	+ 25,131	+ 17,062	- 1,949	+ 1,740	+ 10,349	- 4,021	+ 332	+ 26,281	- 38	+ 817
2017 Jan r	+ 13,979	+ 16,000	+ 278	- 1,271	+ 6,080	- 6,830	- 262	+ 19,471	- 124	+ 5,754
Feb r	+ 20,701	+ 23,105	+ 993	- 777	+ 3,008	- 4,635	+ 271	+ 7,355	- 216	- 13,618
Mar r	+ 31,134	+ 28,080	+ 1,148	- 1,268	+ 6,814	- 2,492	+ 448	+ 47,650	- 21	+ 16,068
Apr	+ 14,710	+ 19,526	- 43	- 769	+ 4,234	- 8,281	- 311	+ 18,894	- 2	+ 4,495
May	+ 16,036	+ 23,379	- 1,020	- 1,801	- 4,624	- 918	+ 66	+ 6,955	- 47	- 9,147
June	+ 24,993	+ 24,992	+ 893	- 1,445	+ 5,052	- 3,606	+ 251	+ 38,851	+ 434	+ 13,607
July p	+ 19,421	+ 22,227	+ 708	- 3,830	+ 5,421	- 4,396	+ 570	+ 17,381	+ 463	- 2,610

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

Group of countries/country		2014	2015	2016	2017					
					Jan. / Jun.	Mar	Apr	May	Jun	Jul P
All countries ¹	Exports	1,123,746	1,193,555	1,206,857	638,504	118,335	100,997	110,671	107,344	103,701
	Imports	910,145	949,245	954,825	516,210	93,036	83,051	88,653	85,016	84,215
	Balance	+ 213,601	+ 244,310	+ 252,032	+ 122,294	+ 25,299	+ 17,946	+ 22,018	+ 22,328	+ 19,486
I European countries	Exports	761,914	803,425	821,178	438,788	79,299	70,555	75,296	74,575	...
	Imports	642,738	653,782	658,194	354,041	63,926	56,942	60,429	58,295	...
	Balance	+ 119,176	+ 149,643	+ 162,985	+ 84,747	+ 15,373	+ 13,613	+ 14,867	+ 16,281	...
1 EU member states (28)	Exports	648,446	692,493	707,694	377,112	67,960	60,852	64,273	64,029	...
	Imports	527,117	543,334	551,901	294,521	53,140	47,445	50,357	49,195	...
	Balance	+ 121,329	+ 149,159	+ 155,794	+ 82,592	+ 14,820	+ 13,407	+ 13,915	+ 14,833	...
Euro area (19)	Exports	413,753	434,075	442,458	237,023	42,497	38,305	40,867	40,071	...
	Imports	350,550	356,643	359,300	190,808	34,421	30,660	32,534	32,024	...
	Balance	+ 63,203	+ 77,432	+ 83,158	+ 46,215	+ 8,076	+ 7,645	+ 8,333	+ 8,048	...
<i>of which</i> Austria	Exports	55,807	58,217	59,872	31,104	5,563	5,205	5,396	5,198	...
	Imports	36,218	37,250	38,621	20,406	3,710	3,290	3,513	3,372	...
	Balance	+ 19,590	+ 20,967	+ 21,251	+ 10,699	+ 1,853	+ 1,915	+ 1,882	+ 1,827	...
Belgium and Luxembourg	Exports	47,345	46,196	47,078	25,646	4,655	4,203	4,323	4,367	...
	Imports	42,548	40,116	41,073	22,479	4,054	3,753	3,946	3,727	...
	Balance	+ 4,797	+ 6,079	+ 6,006	+ 3,167	+ 601	+ 450	+ 377	+ 640	...
France	Exports	100,580	102,762	101,369	53,565	9,249	8,642	9,423	8,981	...
	Imports	66,714	66,819	65,606	32,370	5,895	4,968	5,286	5,511	...
	Balance	+ 33,866	+ 35,943	+ 35,763	+ 21,195	+ 3,354	+ 3,674	+ 4,137	+ 3,470	...
Italy	Exports	54,240	57,987	61,414	33,099	5,990	5,191	5,780	5,702	...
	Imports	48,522	49,038	51,783	27,635	4,869	4,507	4,736	4,892	...
	Balance	+ 5,718	+ 8,949	+ 9,631	+ 5,464	+ 1,121	+ 684	+ 1,044	+ 809	...
Netherlands	Exports	72,736	79,191	78,949	42,422	7,718	6,831	7,229	7,038	...
	Imports	87,796	87,889	83,340	45,482	8,143	7,575	7,615	7,180	...
	Balance	- 15,060	- 8,697	- 4,391	- 3,060	- 426	- 745	- 385	- 142	...
Spain	Exports	34,820	38,715	40,611	22,142	4,103	3,385	3,799	3,826	...
	Imports	24,804	26,442	27,824	16,076	2,994	2,347	2,792	2,889	...
	Balance	+ 10,016	+ 12,273	+ 12,786	+ 6,066	+ 1,108	+ 1,038	+ 1,007	+ 937	...
Other EU member states	Exports	234,693	258,417	265,236	140,089	25,463	22,547	23,406	23,957	...
	Imports	176,567	186,691	192,600	103,713	18,719	16,785	17,823	17,172	...
	Balance	+ 58,126	+ 71,727	+ 72,636	+ 36,377	+ 6,744	+ 5,762	+ 5,583	+ 6,786	...
<i>of which</i> United Kingdom	Exports	79,163	89,018	86,145	43,385	8,200	6,644	7,166	7,240	...
	Imports	38,545	38,414	35,704	18,644	3,667	3,015	3,102	2,932	...
	Balance	+ 40,618	+ 50,604	+ 50,441	+ 24,742	+ 4,533	+ 3,630	+ 4,063	+ 4,307	...
2 Other European countries	Exports	113,468	110,932	113,484	61,676	11,338	9,703	11,023	10,546	...
	Imports	115,621	110,448	106,293	59,521	10,786	9,497	10,071	9,099	...
	Balance	- 2,153	+ 484	+ 7,191	+ 2,155	+ 553	+ 206	+ 951	+ 1,447	...
<i>of which</i> Switzerland	Exports	46,202	49,070	50,331	27,720	5,141	4,306	4,865	4,681	...
	Imports	39,392	42,089	43,948	23,532	4,383	3,710	3,996	3,467	...
	Balance	+ 6,810	+ 6,981	+ 6,383	+ 4,188	+ 758	+ 595	+ 868	+ 1,215	...
II Non-European countries	Exports	358,337	387,398	382,941	198,167	38,806	30,173	35,066	32,486	...
	Imports	267,407	295,461	296,626	162,031	29,110	25,972	28,224	26,722	...
	Balance	+ 90,930	+ 91,936	+ 86,315	+ 36,135	+ 9,696	+ 4,201	+ 6,841	+ 5,764	...
1 Africa	Exports	22,505	23,897	24,504	13,823	2,410	2,606	2,510	2,051	...
	Imports	20,242	18,307	16,670	10,027	1,873	1,661	1,708	1,653	...
	Balance	+ 2,263	+ 5,590	+ 7,834	+ 3,797	+ 537	+ 945	+ 803	+ 398	...
2 America	Exports	135,293	156,982	147,703	76,556	15,285	11,375	13,239	12,421	...
	Imports	74,191	85,582	83,388	45,243	8,522	7,072	8,040	7,535	...
	Balance	+ 61,103	+ 71,400	+ 64,315	+ 31,312	+ 6,762	+ 4,303	+ 5,199	+ 4,886	...
<i>of which</i> United States	Exports	95,928	113,733	106,911	55,687	11,250	8,243	9,495	8,808	...
	Imports	49,207	60,217	57,957	31,084	6,068	4,902	5,424	5,131	...
	Balance	+ 46,721	+ 53,516	+ 48,954	+ 24,604	+ 5,182	+ 3,341	+ 4,071	+ 3,676	...
3 Asia	Exports	190,973	196,297	200,357	102,365	20,129	15,246	18,393	17,055	...
	Imports	170,050	188,621	193,564	104,571	18,370	16,784	18,087	17,242	...
	Balance	+ 20,923	+ 7,676	+ 6,793	- 2,205	+ 1,758	- 1,538	+ 305	- 187	...
<i>of which</i> Middle East	Exports	35,462	39,518	36,785	16,073	3,485	2,177	3,037	2,326	...
	Imports	7,865	7,330	6,582	3,359	572	572	636	603	...
	Balance	+ 27,597	+ 32,188	+ 30,204	+ 12,714	+ 2,913	+ 1,605	+ 2,401	+ 1,723	...
Japan	Exports	16,910	16,968	18,344	9,502	1,843	1,474	1,557	1,534	...
	Imports	19,007	20,180	21,933	11,598	2,123	1,859	2,041	1,795	...
	Balance	- 2,097	- 3,213	- 3,589	- 2,096	- 281	- 385	- 484	- 261	...
People's Republic of China ²	Exports	74,369	71,284	76,088	41,148	7,914	6,097	7,481	7,083	...
	Imports	79,828	91,930	93,885	48,669	8,243	7,794	8,366	7,972	...
	Balance	- 5,459	- 20,646	- 17,797	- 7,521	- 329	- 1,696	- 885	- 890	...
New industrial countries and emerging markets of Asia ³	Exports	48,476	51,510	51,918	25,919	5,068	4,074	4,466	4,390	...
	Imports	38,782	42,478	42,875	25,183	4,617	4,116	4,226	4,327	...
	Balance	+ 9,695	+ 9,032	+ 9,042	+ 736	+ 450	- 43	+ 241	+ 63	...
4 Oceania and polar regions	Exports	9,566	10,221	10,377	5,423	982	946	924	958	...
	Imports	2,924	2,951	3,003	2,191	343	455	389	292	...
	Balance	+ 6,641	+ 7,271	+ 7,373	+ 3,232	+ 639	+ 491	+ 535	+ 667	...

* 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. 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			
2012	- 32,775	- 10,189	- 35,422	+ 8,793	+ 3,030	+ 1,442	- 9,459	+ 3,103	+ 2,187	+ 61,666	+ 1,005
2013	- 41,376	- 9,881	- 37,713	+ 8,056	+ 3,656	- 870	- 5,518	+ 3,073	+ 541	+ 60,205	+ 1,223
2014	- 25,323	- 7,301	- 37,653	+ 7,008	+ 3,639	+ 2,785	- 1,418	+ 3,024	+ 451	+ 54,849	+ 877
2015	- 18,602	- 5,476	- 36,595	+ 9,331	+ 4,942	+ 4,037	- 3,116	+ 3,106	+ 783	+ 56,948	- 361
2016	- 21,218	- 5,962	- 38,266	+ 9,189	+ 6,450	+ 3,312	- 3,276	+ 3,119	+ 652	+ 53,196	- 1,712
2015 Q4	- 2,999	- 1,865	- 8,595	+ 2,526	+ 1,662	+ 1,985	- 1,239	+ 585	+ 372	+ 19,476	+ 3,016
2016 Q1	- 3,363	- 1,660	- 6,286	+ 2,095	+ 1,215	+ 219	- 819	+ 852	+ 756	+ 16,817	- 640
Q2	- 4,009	- 1,080	- 8,654	+ 2,174	+ 1,190	+ 1,238	- 687	+ 831	- 107	+ 3,501	- 2,810
Q3	- 11,696	- 1,414	- 15,956	+ 1,892	+ 1,629	+ 483	- 173	+ 833	- 384	+ 15,089	- 1,190
Q4	- 2,150	- 1,808	- 7,371	+ 3,029	+ 2,416	+ 1,372	- 1,597	+ 604	+ 386	+ 17,788	+ 2,928
2017 Q1	- 3,315	- 1,260	- 5,956	+ 2,016	+ 1,223	+ 426	- 1,464	+ 723	+ 740	+ 16,280	- 1,118
Q2	- 4,015	- 438	- 9,179	+ 2,305	+ 1,600	+ 908	- 948	+ 785	- 91	+ 6,584	- 1,832
2016 Sep	- 3,227	- 424	- 5,195	+ 565	+ 264	+ 672	+ 357	+ 288	- 109	+ 4,451	- 413
Oct	- 3,551	- 480	- 5,301	+ 640	+ 1,081	- 14	- 166	+ 198	+ 175	+ 5,484	- 583
Nov	- 339	- 773	- 1,540	+ 1,321	+ 727	+ 29	- 728	+ 209	+ 151	+ 5,938	- 412
Dec	+ 1,740	- 555	- 529	+ 1,068	+ 609	+ 1,357	- 702	+ 197	+ 60	+ 6,366	+ 3,923
2017 Jan	- 1,271	- 470	- 1,575	+ 831	+ 289	- 317	- 660	+ 201	+ 271	+ 6,219	- 410
Feb	- 777	- 298	- 1,459	+ 478	+ 484	+ 62	- 498	+ 277	+ 272	+ 3,072	- 335
Mar	- 1,268	- 492	- 2,921	+ 707	+ 450	+ 681	- 307	+ 244	+ 197	+ 6,989	- 373
Apr	- 769	- 109	- 1,760	+ 881	+ 688	- 392	- 532	+ 262	- 42	+ 4,720	- 444
May	- 1,801	- 165	- 3,049	+ 806	+ 293	+ 212	- 554	+ 255	- 18	- 3,162	- 1,444
June	- 1,445	- 164	- 4,371	+ 618	+ 619	+ 1,088	+ 138	+ 268	- 31	+ 5,026	+ 56
July P	- 3,830	- 266	- 4,879	+ 599	+ 836	+ 67	- 635	+ 175	- 189	+ 5,977	- 367

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	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
2012	- 38,894	- 25,446	- 5,167	+ 5,206	- 13,448	- 2,952	- 2,952	- 2,952
2013	- 43,639	- 28,923	- 4,733	+ 6,174	- 14,715	- 3,250	- 3,229	- 3,229
2014	- 41,188	- 28,106	- 5,972	+ 8,101	- 13,082	- 3,476	- 3,451	- 3,451
2015	- 39,987	- 24,925	- 6,648	+ 9,830	- 15,062	- 3,540	- 3,523	- 3,523
2016	- 40,001	- 26,227	- 8,376	+ 9,934	- 13,774	- 4,214	- 4,196	- 4,196
2015 Q4	- 10,391	- 6,832	- 2,111	+ 1,002	- 3,560	- 885	- 881	- 881
2016 Q1	- 13,359	- 10,088	- 2,840	+ 1,307	- 3,271	- 1,052	- 1,049	- 1,049
Q2	- 4,393	- 836	- 1,567	+ 5,561	- 3,556	- 1,053	- 1,049	- 1,049
Q3	- 10,630	- 6,866	- 1,702	+ 1,772	- 3,763	- 1,053	- 1,049	- 1,049
Q4	- 11,620	- 8,437	- 2,267	+ 1,294	- 3,183	- 1,055	- 1,049	- 1,049
2017 Q1	- 13,958	- 7,816	- 2,668	+ 1,774	- 6,141	- 1,157	- 1,153	- 1,153
Q2	- 12,805	- 2,861	- 1,394	+ 5,170	- 9,944	- 1,158	- 1,153	- 1,153
2016 Sep	- 2,677	- 1,576	- 268	+ 1,124	- 1,101	- 351	- 350	- 350
Oct	- 3,570	- 2,830	- 659	+ 329	- 740	- 352	- 350	- 350
Nov	- 4,029	- 2,910	- 451	+ 27	- 1,119	- 353	- 350	- 350
Dec	- 4,021	- 2,696	- 1,157	+ 937	- 1,325	- 351	- 350	- 350
2017 Jan	- 6,830	- 3,731	- 1,622	+ 189	- 3,099	- 386	- 384	- 384
Feb	- 4,635	- 2,699	- 699	+ 714	- 1,936	- 385	- 384	- 384
Mar	- 2,492	- 1,386	- 347	+ 871	- 1,106	- 386	- 384	- 384
Apr	- 8,281	- 1,856	- 398	+ 811	- 6,425	- 385	- 384	- 384
May	- 918	+ 829	- 198	+ 3,216	- 1,748	- 387	- 384	- 384
June	- 3,606	- 1,835	- 798	+ 1,143	- 1,771	- 386	- 384	- 384
July P	- 4,396	- 2,675	- 905	+ 430	- 1,721	- 385	- 384	- 384

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
2012	- 413	+ 1,745	- 2,158
2013	- 563	+ 1,105	- 1,668
2014	+ 2,355	+ 2,898	- 542
2015	- 635	+ 2,377	- 3,012
2016	+ 1,112	+ 3,324	- 2,212
2015 Q4	- 2,138	+ 279	- 2,418
2016 Q1	- 269	- 521	+ 253
Q2	+ 1,092	+ 2,219	- 1,127
Q3	+ 228	+ 887	- 659
Q4	+ 61	+ 739	- 679
2017 Q1	+ 457	+ 643	- 186
Q2	+ 7	+ 445	- 438
2016 Sep	+ 493	+ 653	- 160
Oct	- 182	- 11	- 170
Nov	+ 90	+ 244	- 334
Dec	+ 332	+ 507	- 175
2017 Jan	- 262	- 85	- 178
Feb	+ 271	+ 8	+ 263
Mar	+ 448	+ 719	- 271
Apr	- 311	- 37	- 274
May	+ 66	+ 215	- 149
June	+ 251	+ 267	- 16
July P	+ 570	+ 780	- 209

XII External sector

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

€ million

Item	2014	2015	2016	2016		2017			
				Q4	Q1	Q2	May	June	July P
I Net domestic investment abroad (Increase: +)	+ 301,030	+ 249,102	+ 380,469	+ 30,612	+ 235,373	+ 36,179	+ 12,374	+ 32,142	- 5,169
1 Direct investment	+ 83,960	+ 101,357	+ 69,323	+ 21,373	+ 48,982	+ 22,668	+ 9,853	+ 12,672	+ 3,218
Equity	+ 56,733	+ 67,801	+ 61,655	+ 15,717	+ 16,835	+ 14,149	+ 5,817	+ 2,171	+ 4,395
of which									
Reinvestment of earnings ¹	+ 18,535	+ 9,711	+ 13,224	- 79	+ 6,206	+ 7,891	+ 1,921	+ 2,655	+ 1,201
Debt instruments	+ 27,227	+ 33,556	+ 7,668	+ 5,655	+ 32,147	+ 8,520	+ 4,036	+ 10,500	- 1,177
2 Portfolio investment	+ 146,979	+ 122,005	+ 96,602	- 573	+ 30,952	+ 20,473	+ 12,444	+ 7,051	+ 14,818
Shares ²	+ 8,935	+ 19,561	+ 17,288	+ 3,383	+ 5,528	- 2,404	+ 719	+ 2,266	+ 1,053
Investment fund shares ³	+ 42,057	+ 34,626	+ 36,586	+ 9,923	+ 16,923	+ 4,382	+ 481	+ 113	+ 3,943
Long-term									
debt securities ⁴	+ 95,025	+ 73,519	+ 48,826	- 9,718	+ 5,347	+ 19,465	+ 12,284	+ 4,810	+ 9,200
Short-term									
debt securities ⁵	+ 963	- 5,700	- 6,098	- 4,161	+ 3,155	- 970	- 1,041	- 139	+ 622
3. Financial derivatives and employee stock options ⁶	+ 31,896	+ 26,202	+ 32,792	+ 13,473	+ 0	+ 2,351	+ 1,185	- 312	- 224
4. Other investment ⁷	+ 40,759	+ 1,750	+ 180,067	- 3,617	+ 155,799	- 9,699	- 11,060	+ 12,298	- 23,444
Monetary financial institutions ⁸	+ 76,296	- 90,287	+ 18,747	- 1,411	+ 72,179	- 26,659	- 20,486	+ 7,139	- 17,260
Long-term	+ 21,139	- 2,803	+ 45,099	+ 27,253	+ 12,896	+ 2,596	+ 1,318	- 381	+ 1,731
Short-term	+ 55,156	- 87,484	- 26,353	- 28,664	+ 59,283	- 29,255	- 21,804	+ 7,520	- 18,991
Enterprises and households ⁹	- 2,952	- 19,122	- 10,373	- 31,064	+ 7,423	- 11,894	- 3,520	+ 5,107	- 1,875
Long-term	+ 6,364	+ 12,513	+ 1,254	+ 886	- 162	- 723	- 222	- 790	+ 156
Short-term	- 9,316	- 31,635	- 11,627	- 31,950	+ 7,585	- 11,171	- 3,298	+ 5,897	- 2,031
General government	+ 17,295	- 12,205	+ 1,202	- 9,717	- 567	- 2,565	- 497	- 3,536	- 749
Long-term	- 405	- 7,557	- 5,331	- 447	- 1,253	- 1,240	- 310	- 792	- 180
Short-term	+ 17,700	- 4,648	+ 6,533	- 9,270	+ 686	- 1,325	- 187	- 2,744	- 569
Bundesbank	- 49,880	+ 123,364	+ 170,491	+ 38,574	+ 76,764	+ 31,420	+ 13,442	+ 3,588	- 3,560
5. Reserve assets	- 2,564	- 2,213	+ 1,686	- 43	- 360	+ 385	- 47	+ 434	+ 463
II Net foreign investment in the reporting country (Increase: +)	+ 62,400	+ 14,499	+ 136,883	- 51,886	+ 160,898	- 28,521	+ 5,419	- 6,709	- 22,551
1 Direct investment	+ 11,930	+ 47,284	+ 46,695	- 7,520	+ 28,686	+ 5,896	+ 2,580	+ 8,531	+ 2,938
Equity	+ 23,558	+ 20,935	+ 12,126	- 886	+ 5,627	- 887	- 2,252	- 215	+ 1,910
of which									
Reinvestment of earnings ¹	+ 3,325	+ 4,375	+ 5,905	+ 378	+ 3,565	+ 1,533	- 195	+ 482	+ 1,545
Debt instruments	- 11,628	+ 26,349	+ 34,569	- 6,634	+ 23,059	+ 6,783	+ 4,831	+ 8,746	+ 1,029
2 Portfolio investment	+ 13,483	- 74,941	- 111,309	- 51,609	- 20,789	- 4,557	+ 24,303	- 13,820	- 18,613
Shares ²⁾	+ 6,314	+ 9,725	- 985	+ 6,402	+ 1,460	- 2,181	+ 1,297	- 5,858	- 1,051
Investment fund shares ³	- 3,790	+ 7,345	- 6,928	- 449	+ 136	- 1,338	+ 625	- 654	+ 861
Long-term									
debt securities ⁴	+ 14,131	- 101,208	- 95,730	- 29,253	- 12,459	+ 781	+ 13,854	- 749	- 15,926
Short-term									
debt securities ⁵	- 3,171	+ 9,197	- 7,666	- 28,308	- 9,926	- 1,819	+ 8,526	- 6,559	- 2,497
3. Other investment ⁷	+ 36,987	+ 42,156	+ 201,497	+ 7,243	+ 153,000	- 29,860	- 21,463	- 1,420	- 6,876
Monetary financial institutions ⁸	+ 32,480	- 41,166	+ 86,802	- 23,705	+ 107,204	- 18,932	- 14,179	- 26,030	- 381
Long-term	- 14,558	- 19,536	+ 5,834	+ 7,425	+ 2,847	+ 347	- 478	+ 2,319	- 723
Short-term	+ 47,039	- 21,630	+ 80,968	- 31,130	+ 104,357	- 19,279	- 13,701	- 28,349	+ 342
Enterprises and households ⁹	+ 16,355	+ 10,459	+ 1,988	- 3,712	+ 13,837	- 16,249	- 4,970	+ 1,648	- 730
Long-term	+ 2,960	+ 15,960	+ 6,716	+ 1,142	+ 3,042	+ 667	+ 2,469	- 2,128	+ 1,413
Short-term	+ 13,395	- 5,501	- 4,728	- 4,854	+ 10,795	- 16,916	- 7,439	+ 3,775	- 2,144
General government	- 5,575	- 11,521	+ 1,796	- 7,892	+ 1,161	- 548	- 3,797	- 1,645	+ 2,837
Long-term	- 931	- 3,942	- 2,847	- 1,041	- 2,850	- 842	- 667	- 134	- 13
Short-term	- 4,645	- 7,579	+ 4,642	- 6,850	+ 4,012	+ 294	- 3,130	- 1,511	+ 2,850
Bundesbank	- 6,273	+ 84,383	+ 110,911	+ 42,552	+ 30,797	+ 5,869	+ 1,483	+ 24,608	- 8,601
III Net financial account (Net lending: + / net borrowing: -)	+ 238,630	+ 234,603	+ 243,586	+ 82,498	+ 74,476	+ 64,700	+ 6,955	+ 38,851	+ 17,381

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 °

€ million

End of reporting period	External assets									External-liabilities ^{3,4}	Net external position (col 1 minus col 10)
	Total	Reserve assets					Other investment		Portfolio investment ²		
		Total	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			
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	66,278	37,670
2003	95,394	76,680	36,533	1,540	6,069	32,538	18,259	4,474	454	83,329	12,065
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	396,314	282,490
2015	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	481,801	318,907
2016	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	592,799	397,651
2014 Dec	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	396,314	282,490
2015 Jan	751,062	176,741	121,607	14,895	6,488	33,751	527,698	515,266	46,623	451,800	299,262
Feb	744,552	172,120	116,647	14,956	6,361	34,157	525,795	513,365	46,637	443,519	301,033
Mar	767,856	176,922	119,988	15,311	5,944	35,679	544,130	531,701	46,804	434,696	333,160
Apr	762,437	171,758	116,812	14,967	5,796	34,184	544,620	532,192	46,058	436,061	326,376
May	758,500	173,842	118,141	15,124	5,744	34,833	538,619	526,191	46,039	436,637	321,863
June	756,263	168,299	113,838	15,000	5,617	33,844	543,502	531,074	44,461	439,905	316,357
July	763,247	163,071	108,872	15,172	4,919	34,107	555,013	542,585	45,162	444,709	318,537
Aug	781,286	162,917	110,012	14,934	5,164	32,807	573,712	561,284	44,657	440,954	340,331
Sep	774,428	161,922	108,959	14,941	5,191	32,831	567,602	555,174	44,903	462,529	311,899
Oct	786,694	166,664	112,836	15,126	5,199	33,503	575,246	562,818	44,784	468,522	318,172
Nov	813,320	163,816	108,820	15,475	5,217	34,303	604,946	592,518	44,558	482,779	330,541
Dec	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	481,801	318,907
2016 Jan	807,971	164,656	111,126	15,055	5,197	33,278	599,427	587,000	43,888	473,127	334,844
Feb	839,336	177,917	122,535	15,109	6,899	33,374	617,434	605,006	43,985	489,497	349,839
Mar	837,375	171,266	117,844	14,730	6,730	31,962	621,617	609,190	44,491	492,161	345,214
Apr	856,266	175,738	121,562	14,793	6,759	32,623	638,201	625,774	42,327	495,599	360,667
May	884,887	173,927	118,133	14,970	6,839	33,984	667,972	655,544	42,988	501,617	383,270
June	922,232	184,628	128,963	14,746	6,780	34,139	693,498	681,070	44,106	518,466	403,766
July	904,044	186,300	130,417	14,698	6,736	34,449	672,748	660,320	44,996	518,921	385,124
Aug	918,692	183,951	128,171	14,685	6,642	34,452	689,906	677,479	44,834	525,322	393,370
Sep	957,860	183,796	128,795	14,657	6,605	33,738	728,554	715,738	45,510	549,884	407,976
Oct	947,718	181,623	126,245	14,708	6,631	34,039	720,795	708,029	45,300	543,007	404,711
Nov	991,108	177,348	121,032	14,917	6,572	34,826	766,905	754,057	46,855	552,602	438,506
Dec	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	592,799	397,651
2017 Jan	1,034,804	177,256	121,656	14,806	6,523	34,270	809,862	795,621	47,687	577,997	456,807
Feb	1,060,894	184,666	128,507	14,976	6,248	34,935	828,264	814,375	47,964	609,242	451,652
Mar	1,075,039	181,898	126,158	14,886	6,183	34,671	843,892	829,751	49,249	623,526	451,513
Apr	1,089,144	180,726	126,011	14,697	6,055	33,963	858,281	843,439	50,137	603,092	486,052
May	1,098,879	175,958	122,486	14,459	5,907	33,107	871,724	857,272	51,197	604,291	494,588
June	1,098,880	171,295	118,235	14,349	5,695	33,016	875,312	860,764	52,273	628,709	470,171
July	1,092,769	169,735	117,330	14,124	5,531	32,750	871,752	856,510	51,282	619,840	472,930
Aug	1,089,838	171,044	119,770	14,071	5,530	31,673	867,696	852,511	51,097	629,414	460,424

° 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														
2013	787,308	282,026	505,282	325,614	179,668	164,454	15,214	939,252	144,884	794,368	632,110	162,258	95,302	66,957
2014	833,644	279,559	554,085	365,230	188,856	174,058	14,798	959,833	154,566	805,267	636,328	168,939	102,126	66,813
2015	866,912	265,170	601,743	409,858	191,885	177,397	14,488	1,003,050	150,054	852,996	672,312	180,684	109,062	71,622
2016	855,814	241,683	614,131	412,871	201,260	187,086	14,174	1,025,815	128,831	896,984	708,734	188,250	115,808	72,443
2017 Feb	859,012	232,639	626,372	421,305	205,068	190,478	14,590	1,038,330	125,004	913,326	724,197	189,129	113,847	75,282
Mar	887,996	232,783	655,213	438,025	217,189	202,812	14,377	1,068,018	128,102	939,916	743,702	196,214	121,734	74,480
Apr	864,608	220,308	644,300	433,207	211,093	196,561	14,532	1,046,984	122,302	924,682	732,879	191,803	117,103	74,700
May	862,375	215,937	646,438	436,547	209,892	195,247	14,645	1,044,280	119,183	925,096	734,160	190,936	115,520	75,416
June	873,636	216,911	656,726	441,631	215,094	201,253	13,841	1,051,719	119,559	932,160	740,409	191,751	118,820	72,931
July	866,935	215,982	650,953	441,123	209,830	196,358	13,471	1,049,737	116,696	933,040	744,498	188,542	115,030	73,512
Industrial countries ¹														
2013	697,475	278,723	418,753	296,675	122,077	108,620	13,458	852,420	143,577	708,843	594,623	114,220	79,543	34,676
2014	733,191	274,660	458,531	330,034	128,497	115,398	13,099	869,392	153,412	715,980	595,396	120,583	85,122	35,461
2015	761,648	261,267	500,381	368,033	132,348	119,309	13,038	906,968	145,136	761,832	635,205	126,627	90,716	35,911
2016	748,340	237,789	510,551	371,663	138,888	126,211	12,677	931,963	124,504	807,460	674,402	133,058	95,933	37,125
2017 Feb	747,595	228,425	519,170	377,934	141,236	128,239	12,997	943,381	121,211	822,170	689,721	132,448	94,191	38,257
Mar	771,527	228,776	542,751	391,878	150,873	138,047	12,826	973,574	123,684	849,890	710,107	139,783	101,848	37,935
Apr	747,178	216,494	530,683	385,883	144,800	131,859	12,941	952,807	118,386	834,421	699,917	134,504	96,593	37,911
May	745,902	211,998	533,904	391,173	142,730	129,749	12,981	948,825	115,512	833,313	700,437	132,875	94,797	38,078
June	756,604	212,904	543,701	396,298	147,402	135,227	12,176	956,798	115,708	841,090	707,159	133,931	97,108	36,823
July	751,524	212,099	539,425	397,711	141,714	129,873	11,840	953,243	111,216	842,027	711,897	130,130	93,451	36,679
EU member states ¹														
2013	589,286	264,271	325,014	237,949	87,066	76,539	10,527	713,044	129,044	583,999	504,337	79,663	53,340	26,323
2014	617,489	259,516	357,973	266,777	91,196	80,585	10,611	724,674	138,894	585,780	502,054	83,726	56,580	27,147
2015	626,482	243,139	383,344	289,190	94,153	83,665	10,488	743,011	134,564	608,448	524,316	84,132	58,384	25,748
2016	605,613	219,938	385,675	288,730	96,945	86,930	10,016	757,649	114,258	643,390	555,414	87,976	61,160	26,817
2017 Feb	605,236	210,465	394,771	293,345	101,426	91,179	10,248	767,240	110,276	656,963	567,253	89,710	62,133	27,577
Mar	618,618	209,900	408,718	301,027	107,691	97,616	10,075	793,285	109,512	683,773	588,420	95,353	68,002	27,351
Apr	596,286	197,208	399,078	296,736	102,341	92,078	10,264	780,830	107,987	672,842	581,525	91,317	64,010	27,307
May	590,986	193,047	397,938	297,142	100,796	90,502	10,294	778,585	105,601	672,985	582,110	90,874	63,385	27,490
June	597,934	194,237	403,696	300,021	103,675	94,123	9,553	786,173	105,077	681,096	589,821	91,274	64,949	26,326
July	593,787	192,951	400,836	300,800	100,037	90,470	9,567	783,830	100,316	683,514	593,947	89,567	63,452	26,115
of which: Euro-area ²														
2013	428,179	197,430	230,749	174,605	56,143	49,968	6,175	603,366	101,722	501,645	448,142	53,502	36,671	16,832
2014	456,469	204,043	252,426	194,207	58,219	51,999	6,220	606,525	107,694	498,831	444,401	54,430	37,994	16,932
2015	465,919	195,751	270,168	208,862	61,305	54,730	6,575	598,884	93,947	504,937	452,298	52,639	37,498	14,644
2016	445,368	167,575	277,794	213,498	64,295	57,575	6,721	609,399	75,639	533,760	477,891	55,869	41,068	14,801
2017 Feb	443,805	161,817	281,989	215,485	66,504	59,343	7,161	622,955	77,170	545,785	488,796	56,989	41,686	15,303
Mar	449,986	158,004	291,982	221,726	70,256	63,246	7,010	638,661	72,629	566,032	504,951	61,081	45,743	15,338
Apr	437,053	149,207	287,846	220,490	67,356	60,187	7,169	631,496	70,909	560,587	501,343	59,244	43,966	15,279
May	435,699	150,097	285,602	219,346	66,256	59,140	7,116	627,775	67,035	560,740	501,801	58,940	43,574	15,366
June	438,331	148,448	289,883	221,502	68,381	61,226	7,155	636,945	69,711	567,234	507,451	59,783	44,573	15,210
July	434,466	146,411	288,055	221,613	66,441	59,233	7,209	635,610	66,063	569,547	509,842	59,705	44,403	15,301
Emerging economies and developing countries ³														
2013	89,826	3,303	86,523	28,937	57,586	55,829	1,757	86,829	1,307	85,522	37,487	48,035	15,755	32,280
2014	100,400	4,849	95,551	35,193	60,358	58,659	1,699	90,439	1,153	89,285	40,931	48,354	17,003	31,352
2015	104,276	3,094	101,182	41,825	59,358	57,908	1,450	91,912	947	90,964	36,908	54,057	18,346	35,711
2016	106,063	2,647	103,416	41,192	62,224	60,727	1,497	90,708	1,401	89,307	34,132	55,175	19,875	35,300
2017 Feb	110,007	2,942	107,064	43,359	63,705	62,113	1,593	92,355	1,446	90,909	34,276	56,633	19,625	37,008
Mar	115,050	2,761	112,289	46,112	66,177	64,627	1,551	91,237	1,457	89,780	33,396	56,384	19,857	36,527
Apr	115,444	2,541	112,903	46,758	66,145	64,554	1,591	91,597	1,613	89,984	32,735	57,249	20,475	36,774
May	115,005	2,665	112,340	45,339	67,001	65,337	1,664	92,803	1,273	91,530	33,522	58,007	20,687	37,321
June	115,552	2,742	112,810	45,299	67,511	65,846	1,665	92,055	1,240	90,815	33,049	57,765	21,674	36,091
July	113,919	2,607	111,311	43,369	67,943	66,312	1,631	91,888	1,195	90,693	32,401	58,292	21,541	36,751

* 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 fi-

gures shown in Table XI.7. **1** From July 2013 including Croatia. **2** From January 2014 including Latvia; from January 2015 including Lithuania. **3** All countries that are not regarded as industrial countries. 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	Canada	China	Denmark	Japan	Norway	Sweden	Switzerland	United Kingdom	United States
	AUD	CAD	CNY ¹	DKK	JPY	NOK	SEK	CHF	GBP	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
2016	1.4883	1.4659	7.3522	7.4452	120.20	9.2906	9.4689	1.0902	0.81948	1.1069
2016 Oct	1.4470	1.4594	7.4198	7.4402	114.47	9.0009	9.7073	1.0887	0.89390	1.1026
Nov	1.4331	1.4519	7.3883	7.4406	116.93	9.0807	9.8508	1.0758	0.86894	1.0799
Dec	1.4356	1.4070	7.2983	7.4362	122.39	9.0252	9.7095	1.0750	0.84441	1.0543
2017 Jan	1.4252	1.4032	7.3189	7.4355	122.14	8.9990	9.5110	1.0714	0.86100	1.0614
Feb	1.3886	1.3942	7.3143	7.4348	120.17	8.8603	9.4762	1.0660	0.85273	1.0643
Mar	1.4018	1.4306	7.3692	7.4356	120.68	9.0919	9.5279	1.0706	0.86560	1.0685
Apr	1.4241	1.4408	7.3892	7.4376	118.29	9.1993	9.5941	1.0727	0.84824	1.0723
May	1.4878	1.5041	7.6130	7.4400	124.09	9.4001	9.7097	1.0904	0.85554	1.1058
June	1.4861	1.4941	7.6459	7.4376	124.58	9.4992	9.7538	1.0874	0.87724	1.1229
July	1.4772	1.4641	7.7965	7.4366	129.48	9.3988	9.5892	1.1059	0.88617	1.1511
Aug	1.4919	1.4889	7.8760	7.4379	129.70	9.3201	9.5485	1.1398	0.91121	1.1807

* 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 countries 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	96.1	96.1	95.8	96.5	95.8	97.8	99.5	95.8	97.6	98.2	98.0	97.7
2000	87.2	86.7	86.0	85.2	88.1	85.9	91.8	97.3	85.2	90.8	93.0	92.0	90.9
2001	87.8	87.1	86.3	85.9	90.6	86.9	91.6	96.4	85.9	90.1	93.0	91.4	90.8
2002	90.1	90.2	89.2	89.2	95.1	90.5	92.2	95.4	88.4	90.5	93.5	91.9	91.7
2003	100.7	101.2	100.0	100.3	107.1	101.4	95.5	94.5	97.4	94.7	97.0	96.5	96.7
2004	104.6	104.9	102.8	103.7	111.7	105.0	95.8	93.2	99.8	94.9	98.4	98.0	98.3
2005	102.9	103.4	100.5	101.7	109.7	102.4	94.6	91.9	98.8	92.8	98.4	96.9	96.5
2006	102.8	103.3	99.6	100.4	109.6	101.7	93.3	90.3	98.2	91.0	98.5	96.4	95.8
2007	106.1	106.0	101.4	102.3	113.0	103.6	94.2	89.5	102.0	91.2	100.7	97.8	96.9
2008	109.3	108.1	102.7	105.5	117.2	105.5	94.3	88.0	105.1	90.3	102.1	97.7	97.0
2009	110.7	108.8	103.8	110.5	120.2	106.6	94.6	88.8	104.4	90.8	101.7	97.9	97.4
2010	103.6	101.1	95.5	102.5	111.7	97.6	92.1	88.5	98.0	87.0	98.7	93.6	91.9
2011	103.3	100.1	93.4	101.1	112.4	97.0	91.7	88.3	97.3	86.1	98.1	92.7	91.3
2012	97.7	94.8	87.9	94.9	107.3	92.2	89.9	88.3	92.3	83.5	95.8	89.7	88.2
2013	101.0	97.7	90.6	97.5	111.8	95.1	92.2	88.8	97.6	85.4	98.1	91.4	90.1
2014	101.4	97.2	90.6	98.5	114.3	95.4	92.8	89.6	97.9	86.2	98.2	91.6	90.7
2015	91.7	87.6	82.3	88.0	105.7	P 87.0	90.0	90.5	89.2	82.5	94.1	86.4	P 85.8
2016	94.4	89.5	84.5	P 89.1	109.7	P 89.3	90.9	91.1	90.6	84.0	P 94.7	P 87.4	P 87.0
2014 Sep	99.5	95.2			111.9	93.3					97.6	90.7	89.6
Oct	98.6	94.3			111.3	92.5					97.2	90.1	89.1
Nov	98.4	94.1	88.1	95.8	111.3	92.4	92.2	89.9	95.8	85.0	97.2	90.0	89.0
Dec	98.4	94.0			112.3	93.0					97.1	89.9	89.2
2015 Jan	94.6	90.3			108.1	89.3					95.1	87.8	87.0
Feb	92.8	88.7	82.9	89.7	106.2	87.8	90.1	90.4	89.7	82.5	94.8	87.2	86.4
Mar	90.0	86.1			103.0	85.1					93.6	85.6	84.6
Apr	89.1	85.3			101.7	84.0					93.4	85.2	84.0
May	91.0	87.0	81.1	86.7	104.1	85.8	89.6	90.4	88.4	81.9	94.0	86.2	85.1
June	91.7	87.7			105.2	86.8					94.1	86.4	85.6
July	90.7	86.6			104.3	85.8					93.7	85.8	85.0
Aug	92.4	88.1	82.6	88.0	107.2	88.0	90.2	90.6	89.6	82.8	94.3	86.7	86.4
Sep	93.2	88.9			108.7	89.2					94.5	87.1	87.1
Oct	93.0	88.8			108.2	88.7					94.6	87.1	86.9
Nov	90.5	86.3	82.6	87.6	105.1	P 86.0	90.3	90.8	89.4	82.9	93.5	85.8	P 85.3
Dec	91.9	87.5			107.1	P 87.5					93.7	86.2	P 85.9
2016 Jan	93.0	88.4			108.9	P 88.7					93.9	86.7	P 86.7
Feb	94.2	89.2	84.2	P 88.9	110.3	P 89.9	90.8	91.2	90.3	83.8	94.4	87.2	P 87.1
Mar	93.6	88.8			109.1	P 89.0					94.5	87.0	P 86.7
Apr	94.4	89.5			109.8	P 89.4					94.8	87.5	P 87.0
May	94.6	89.9	84.7	P 89.2	110.3	P 89.9	90.9	91.1	90.6	84.1	94.7	87.7	P 87.4
June	94.4	89.7			109.9	P 89.6					94.5	87.6	P 87.2
July	94.6	89.8			109.6	P 89.2					94.8	87.6	P 86.9
Aug	94.9	90.1	84.9	P 89.3	110.1	P 89.6	91.1	91.1	91.1	84.2	95.0	87.7	P 87.1
Sep	95.1	90.1			110.3	P 89.7					95.1	87.7	P 87.2
Oct	95.1	90.3			110.0	P 89.5					95.4	87.8	P 87.1
Nov	94.6	89.6	84.3	P 88.9	109.7	P 89.0	90.8	90.9	90.7	83.8	94.7	87.4	P 86.7
Dec	93.7	88.9			108.6	P 88.2					P 94.6	P 87.3	P 86.6
2017 Jan	93.9	89.1			109.1	P 88.4					P 94.4	P 87.0	P 86.3
Feb	93.4	88.8	82.9	P 88.0	108.2	P 87.9	90.5	90.8	90.0	83.2	P 94.4	P 87.0	P 86.1
Mar	94.0	89.2			108.6	P 88.0					P 94.6	P 87.1	P 86.1
Apr	93.7	89.0			108.3	P 87.7					P 94.4	P 87.0	P 85.9
May	95.6	90.5	...	...	110.5	P 89.3	P 91.6	P 91.5	P 91.8	P 84.3	P 95.4	P 88.1	P 87.1
June	96.3	91.3			111.5	P 90.1					P 95.9	P 88.5	P 87.6
July	97.6	P 92.4			113.4	P 91.6					P 96.6	P 89.2	P 88.5
Aug	99.0	P 93.8	...	...	115.1	P 93.0	...	...	...	...	P 97.3	P 89.9	P 89.3

* 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 2017, pp 41-43). 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, Czechia, 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 (see footnote 5) 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

November 2016

- The current economic situation in Germany

■ Financial Stability Review

December 2016

- Outlook for the German economy – macro-economic projections for 2017 and 2018 and an outlook for 2019
- Wage dynamics amid high euro-area unemployment
- German enterprises' profitability and financing in 2015

■ Monthly Report

For information on the articles published between 2000 and 2016 see the index attached to the January 2017 Monthly Report.

January 2017

- The Eurosystem's bond purchases and the exchange rate of the euro
- Recent developments in the indebtedness of the private non-financial sector in selected euro-area countries

Monthly Report articles

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

February 2017

- The current economic situation in Germany

October 2016

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

March 2017

- German balance of payments in 2016
- Federal states' cyclical adjustment in the context of the debt brake

April 2017

- The role of banks, non-banks and the central bank in the money creation process

- Demographic change, immigration and the potential output of the German economy

May 2017

- The current economic situation in Germany

June 2017

- Outlook for the German economy – macro-economic projections for 2017 and 2018 and an outlook for 2019
- Design and implementation of the European fiscal rules

July 2017

- The market for corporate bonds in the low-interest-rate environment
- The development of government interest expenditure in Germany and other euro area countries
- Return on private financial assets taking into account inflation and taxes
- The danger posed to the global economy by protectionist tendencies
- Changes to the MFI interest rate statistics

August 2017

- The current economic situation in Germany

September 2017

- Monetary policy indicators at the lower bound based on term structure models
- Distributed ledger technologies in payments and securities settlement: potential and risks
- The performance of German credit institutions in 2016
- Changes to the investment funds statistics: scope enhancements, results and outlook

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-ökonometrisches 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 2017^{2, 4}
- 2 Banking statistics customer classification, July 2017²
- 3 Aufbau der bankstatistischen Tabellen, July 2013^{2, 3}
- 4 Financial accounts for Germany 2011 to 2016, May 2017²
- 5 Extrapolated results from financial statements of German enterprises 1997 to 2015, December 2016²
- 6 Verhältniszahlen aus Jahresabschlüssen deutscher Unternehmen von 2013 bis 2014, May 2017^{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 2017^{1, 2}
- 11 Balance of payments by region, July 2013
- 12 Technologische Dienstleistungen in der Zahlungsbilanz, June 2011³

■ Discussion Papers*

- 15/2017
 M-PRESS-CreditRisk: A holistic micro- and macro-prudential approach to capital requirements
- 16/2017
 CDS and credit: Testing the small bang theory of the financial universe with micro data
- 17/2017
 Financial crises and the dynamic linkages between stock and bond returns
- 18/2017
 Google data in bridge equation models for German GDP
- 19/2017
 Banks' trading after the Lehman crisis – The role of unconventional monetary policy
- 20/2017
 The Fisher paradox: A primer
- 21/2017
 Interest-rate pegs, central bank asset purchases and the reversal puzzle
- 22/2017
 The optimal conduct of central bank asset purchases
- 23/2017
 The financial market effects of the ECB's asset purchase programs
- 24/2017
 Euro area banks' interest rate risk exposure to level, slope and curvature swings in the yield curve
- 25/2017
 Optimal trend inflation

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.