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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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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 Data unknown, not to be published or not meaningful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

GDP growth rate expected to be lower in first quarter than in preceding quarters

The German economy continues to boom, even though the growth rate of gross domestic product (GDP) in the first quarter of 2018 might be distinctly lower than in the preceding quarters. Contrary to previous expectations, the manufacturing sector is likely to have made, at best, only a marginal contribution to the expansion of economic activity. Industrial output fell sharply in February and data for January were also revised downwards. As regards the low output in February, strikes in the metalworking and electrical engineering industries as well as the unusually severe flu outbreak probably played a role. The latter is also likely to have dampened economic activity in other sectors. In line with the decline in manufacturing output, German enterprises also suffered a sharp setback in their export business in February. The orders situation in industry is still very good, however, and there is no shortage of new orders in the construction sector either. The recent upward revision of the statistical data on construction output supports the picture of a sector near to full capacity.

Industry

Major dip in industrial output in February

German industrial output went down steeply in February 2018. The strikes in the metalworking and electrical engineering industries and the particularly severe flu outbreak this year probably contributed to the decline of a seasonally adjusted 2% on the month. The impact of these one-off effects was still moderate in January and on an average of January and February the contraction in industrial output at ¼% compared with the fourth quarter of 2017 was significantly smaller. Broken down by sector, German manufacturers of machinery and equipment in particular had to cope with sharp

production cutbacks. The production of computer, electronic and optical products also fell substantially. In line with this, the output of capital goods as a whole experienced the strongest decline (-¾%). Manufacturers of intermediate goods were likewise unable to maintain the high level of production of the fourth quarter last year (-½%), while significantly more consumer goods were produced (+1½%).

In February 2018, a slight month-on-month rise in industrial orders was recorded in seasonally adjusted terms (+¼%). On an average of January and February, however, the inflow of orders was significantly down on the quarter (-1½%). In regional terms, the decline in demand within Germany and from non-euro area countries had a particularly dampening effect. By contrast, impetus was provided by buoyant economic developments in the euro area, which generated considerably more new orders. With regard to the individual sectors, mainly intermediate goods manufacturers recorded fewer new orders (-2½%). In addition, producers of capital goods also faced muted demand (-1¼%). By contrast, the inflow of orders for consumer goods held steady at the high level of the last quarter of 2017. Overall, the recent slowdown in incoming orders in German industry must be seen in the context of the exceptionally large volume of orders towards the end of 2017. For instance, the level of industrial orders in February was clearly higher than the figure for the fourth quarter of 2017. The orders situation can thus still be considered very positive.

Industrial sales followed industrial output in February 2018 and fell sharply on the month in seasonally adjusted terms (-2%). On an average of January and February, the decline, at ¼%, was significantly smaller compared with the final quarter of 2017. In regional terms, the moderate overall figure was mainly a result of a

Only a marginal increase in new orders

Industrial sales and exports plummet in February

Economic conditions in Germany*

Seasonally adjusted

Period	Orders received (volume)			
	Industry; 2015 = 100			2010 = 100
	Total	of which		Main construction
Domestic		Foreign		
2017 Q2	105.7	104.9	106.3	129.9
Q3	108.1	105.9	109.8	127.7
Q4	111.9	107.3	115.4	140.7
Dec	114.0	107.8	118.7	157.1
2018 Jan	110.0	105.3	113.6	137.0
Feb	110.3	103.8	115.2	...
Period	Output; 2015 = 100			
	Industry			Con-struction
	Total	of which		
Inter-mediate goods		Capital goods		
2017 Q2	104.1	104.1	104.3	109.8
Q3	105.7	105.8	106.0	109.3
Q4	106.9	107.4	107.2	109.9
Dec	107.7	108.5	108.2	109.4
2018 Jan	107.6	107.1	108.0	112.4
Feb	105.5	106.4	104.7	109.9
Period	Foreign trade; € billion			Memo item Current account balance in € billion
	Exports	Imports	Balance	
	2017 Q2	318.48	257.86	60.62	59.52
Q3	320.57	258.57	62.00	68.24
Q4	330.04	265.94	64.10	70.90
Dec	111.49	89.70	21.79	24.80
2018 Jan	110.99	89.50	21.49	25.96
Feb	107.48	88.31	19.17	22.38
Period	Labour market			
	Employment	Vacancies ¹	Un-employment	Un-employment rate in %
	Number in thousands			
2017 Q3	44,365	744	2,522	5.7
Q4	44,517	770	2,466	5.5
2018 Q1	...	783	2,393	5.4
Jan	44,645	782	2,415	5.4
Feb	44,690	784	2,392	5.4
Mar	...	784	2,373	5.3
Period	Prices			
	Import prices	Producer prices of industrial products	Con-struction prices ²	Harmonised consumer prices
	2010 = 100			2015 = 100
2017 Q3	100.3	104.9	117.5	102.2
Q4	102.2	105.7	118.4	102.7
2018 Q1	...	106.3	120.4	103.1
Jan	102.7	106.4	.	103.0
Feb	102.1	106.2	.	103.1
Mar	...	106.3	.	103.1

* 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.

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strong decline in non-euro area countries. The decline in automotive sales, in particular, had a major impact here. Sales in Germany as well as in the euro area continued to rise markedly, however. With regard to the economic sectors, sales declined across the board, as sales of intermediate, capital and consumer goods contracted at a similar rate. In line with this, nominal exports posted a significant seasonally adjusted fall in February compared with the previous month (-3¼%) and on an average of January and February they were thus clearly down on the fourth quarter of 2017 (-¾%). In price-adjusted terms, the decline was even somewhat stronger at 1%. Compared with exports, nominal imports decreased considerably less in February on the month (-1¼%). On an average of January and February there was therefore still a slight increase (+¼%) compared with the previous quarter, but this was a result of higher prices alone.

Construction

Construction output in February 2018 showed a sharp decline on the month. The contraction of a seasonally adjusted 2¼% must be seen in the context of the colder than average weather conditions for this period and the preceding months' figures being revised upwards significantly, however. Taking an average of January and February, this resulted in a considerable increase in construction activity compared with the final quarter of 2017 (+1¼%). Growth in activity in the finishing trades (+1¾%) was slightly stronger than in the main construction sector (+¾%). Other economic indicators also suggest that the construction boom in Germany will continue. Orders received in the main construction sector declined significantly in January – figures are available up to then – compared with the average of the extremely strong final quarter of 2017. The volume of orders was clearly higher than the average of the third quarter of 2017, however. According to the construction price index of the Federal Statistical Office, the increase in prices for con-

Construction boom continues

struction work continued to accelerate and in February reached 4.2% compared with the previous year.

Labour market

Further rise in employment; outlook positive but no further improvement expected

Employment rose sharply in February 2018, although less so than in the previous three months. The total seasonally adjusted number of persons in work went up by 45,000 on the month. Over the last twelve months, the increase amounted to 618,000 persons, or 1.4%. Growth in total employment continued to be sustained by the strong rise in jobs subject to social security contributions; in January 2018, these were up by as much as 762,000 on the year. By contrast, the number of self-employed persons and persons working exclusively in low-paid part-time jobs both contracted significantly in a 12-month comparison, although in the latter the decline has slowed down for the time being. Leading indicators of the demand for labour such as the Federal Employment Agency's BA-X job index and the labour market barometer of the Institute for Employment Research (IAB) are all holding steady at an extremely high level, but have not risen further overall. The Ifo employment barometer has even seen a distinct contraction.

Considerable fall in registered unemployment

After seasonal adjustment, unemployment in March 2018 showed a significant fall on the month. There were 2.37 million persons registered as unemployed with the Federal Employment Agency, 19,000 fewer than in February. The unemployment rate went down by 0.1 percentage point to 5.3%. This means that the registered unemployment figure was 204,000 lower than in March 2017. Total underemployment even showed a slightly stronger decrease as the number of persons taking part in labour market policy measures gradually declined. The unemployment component of the IAB labour market barometer rose slightly in March and points to a further decrease in unemployment over the next three months.

Prices

In March 2018, crude oil prices initially remained at the low level quoted at the end of February. However, they went up distinctly at the middle of the month, mainly on the back of geopolitical uncertainties. On average, the figure was 1.6% up on the month. Prices continued to rebound significantly in the first half of April. As this report went to press, the price of a barrel of Brent crude oil stood at US\$74. The discount on crude oil futures was US\$2¾ for deliveries six months ahead and US\$5¾ for deliveries 12 months ahead.

Steep rise in crude oil prices

Import prices fell significantly in February 2018, mainly due to the energy component. However, even excluding energy, the earlier appreciation of the euro continued to have a dampening impact on prices. By contrast, domestic sales prices, for which data up to March are already available, remained broadly stable including and excluding energy. At the end of the period under review, the year-on-year figure for import prices turned negative (-0.6%) and held steady at +2.0% in the case of industrial producer prices.

Decline in import prices, domestic producer prices stable

After seasonal adjustment, there was no further growth in consumer prices (HICP) in March 2018. Somewhat stronger price increases for services and a moderate upward momentum for rents were offset by falling prices for energy and other industrial goods. Food prices remained largely unchanged. The year-on-year growth rate rose from +1.2% to +1.5% (CPI +1.6% from +1.4%) due in part to the strong decline in food prices in March 2017. Excluding energy and food, annual inflation fell from +1.4% to +1.3%. A negative base effect in non-energy industrial goods and a drop in their prices in the current month overshadowed the price-enhancing effects of an early Easter on services.

Consumer prices unchanged in March

Public finances¹

Local government finances

2017: further sharp increase in surplus amid considerable revenue growth

Following another highly positive final quarter, the local government core budgets and off-budget entities recorded a surplus of €10½ billion in 2017, which is double the already favourable surplus recorded one year previously. Again, total revenue rose considerably, by 4½% (€11½ billion). This was attributable, first and foremost, to additional tax receipts of €6 billion (+7%), which were primarily from the municipal share of income tax. However, there was also a marked increase in local business tax receipts and turnover tax revenue (resulting from the amount of €1 billion ceded by central government). Transfers from state government accounted for revenue growth of €2½ billion (+3%). On the one hand, the general grants afforded under the local government financial equalisation schemes and central government's contribution to accommodation costs for recipients of unemployment benefit II, which was increased in part for the purpose of offsetting refugee-related expenditure, each went up by €1½ billion. On the other hand, however, there was a marked decline in refunds, in particular – likely not least in connection with the declining numbers of asylum seekers. Revenue from fees rose sharply once again (by 6%, or €1½ billion), not least due to an expansion of the reporting group in North Rhine-Westphalia continuing to make itself felt in the first half of the year.²

Expenditure growth more subdued, not least thanks to sharp decline in spending on benefits for asylum seekers

On the expenditure side, growth remained much more subdued on the whole at 2½% (€6 billion). Other operating expenditure grew at the same pace (by €1½ billion). By contrast, personnel expenditure increased by a fairly sharp 4½% (€3 billion), with only around half of this rise being arithmetically attributable to the second stage of the general increase in negotiated pay rates from February 2017 onwards. Somewhat less was spent on social benefits, however. In view of the spike in the number of asylum seekers qualifying for refu-

gee protection, there was a significant increase in accommodation costs for recipients of (central government-financed) unemployment benefit II (+6%, or €½ billion). However, spending on benefits for asylum seekers who have not (yet) qualified for such protection fell far more sharply overall (-34%, or €2 billion). Spending on social assistance remained on its marked upward trajectory (+3%, or €1 billion), despite some relief being afforded by last year's expansion of the benefits provided under the public long-term care insurance scheme.³ Thanks to dynamic developments in the final quarter, the upturn in fixed asset formation stood at 3½% (€1 billion). Overall, growth in investment expenditure at each government level was driven primarily by the acquisition of immovable and movable assets. However, spending fell slightly in construction investment, the largest sub-sector, with developments varying greatly from federal state to federal state.

From this year onwards, a long-term central government package providing an additional €2½ billion will ease the strain on local government coffers. In addition, further marked increases in other receipts from taxes and transfers from state government are expected. By comparison, burdens such as those arising from the negotiated wage agreement are likely to have a lesser impact on local government core budgets and off-budget entities. Overall, there ought to therefore also be funds available for the significant expansion of fixed asset formation by local government without fully depleting surpluses. In the medium term, meas-

Financial prospects remain favourable in medium term

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

² In the third quarter of 2016, further off-budget entities were added to the reporting group for cash statistics. As a result, the growth rates for revenue and expenditure were still biased upwards in the first half of 2017.

³ For more information on the effects here, see Deutsche Bundesbank, Commentaries, Monthly Report, March 2018, p 11.

ures such as phasing out special transfers to other government levels in the case of local business tax will also provide further relief. While the Federal Constitutional Court most recently ruled that real estate tax is unconstitutional in its current form, it has granted a long transitional period (compared with the periods granted in other rulings) for the continued application of existing legislation.⁴ As a result, it should be possible to prevent the loss of this important source of revenue. Overall, the outlook for local government finances is therefore favourable, and there should be fiscal space available in many municipalities.

Debt in 2017 down markedly, with reduction of cash advances in particularly affected federal states

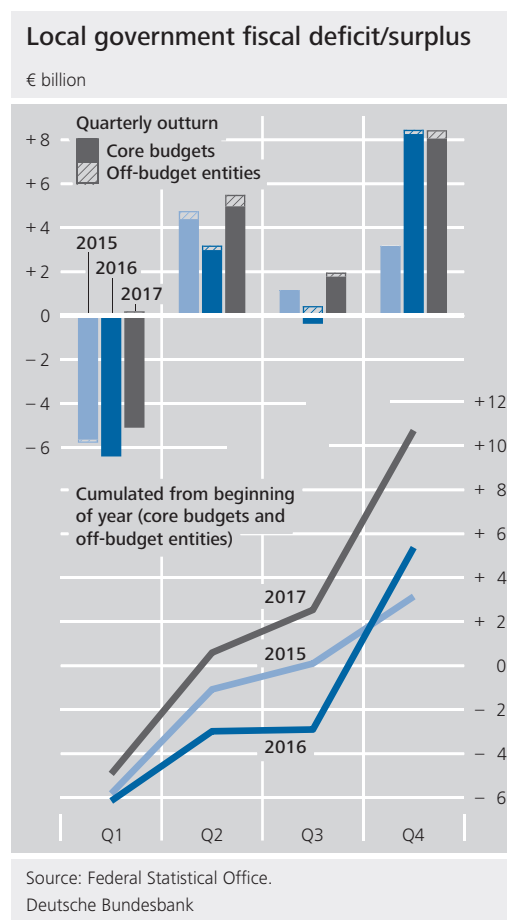
As the municipalities used their surpluses in large part to boost their reserves, debt reduction lagged far behind their cash surplus. That said, local government debt had fallen markedly by €6 billion to €142½ billion compared with the level observed at the end of 2016,⁵ with regular loans and securities debt having contracted by €1½ billion to €98½ billion. The volume of cash advances fell more sharply, decreasing by €4½ billion to €43½ billion. A high level of debt *per capita* arising from such cash advances, which are actually only intended to bridge short-term liquidity shortfalls, points to a strained financial situation. A state-by-state analysis reveals that the values for Saarland, Rhineland-Palatinate, North Rhine-Westphalia and Hesse have significantly exceeded national figures for some years now. The fact that the local authorities in these four states accounted, in net terms, for almost the entire decline in cash advances suggests that considerable progress has now been made here, too, in the area of fiscal consolidation.

■ Securities markets

Bond market

Muted net sales in the German bond market

At €99.4 billion, gross issuance in the German bond market in February 2018 was slightly up on the January figure (€96.2 billion). After deducting redemptions, which were lower than



in the previous month, and taking account of changes in issuers' holdings of their own debt securities, the outstanding volume of domestic bonds grew by €5.3 billion. Foreign debt securities worth €0.4 billion net were placed in the German market. On balance, therefore, the outstanding volume of debt securities in Germany rose by €5.7 billion.

In the reporting month, credit institutions issued debt securities worth €12.7 billion net, compared with €1.2 billion in the previous month. On balance, these were almost exclusively debt securities issued by specialised credit institutions, the outstanding volume of which rose by

Rise in credit institutions' capital market debt

⁴ In the absence of any revision, existing legislation may be used until the end of 2019. If legislation is revised, the transitional period is extended for a further five years – and thus until the end of 2024 at the latest.

⁵ Debts owed to all public and non-public sector lenders apart from other municipalities and municipal special-purpose associations. The interim quarterly statistics were used for 2017; the reporting group in these is aligned to that in the 2016 annual statistics.

Sales and purchases of debt securities

€ billion

Item	2017	2018	
	February	January	February
Sales			
Domestic debt securities ¹	- 2.2	- 2.3	5.3
<i>of which</i>			
Bank debt securities	12.4	1.2	12.7
Public debt securities	- 16.3	- 4.0	- 9.5
Foreign debt securities ²	5.5	17.1	0.4
Purchases			
Residents	20.9	19.7	1.8
Credit institutions ³	- 5.0	1.2	- 5.0
Deutsche Bundesbank	16.7	6.1	5.7
Other sectors ⁴	9.3	12.4	1.1
<i>of which</i>			
Domestic debt securities	5.6	- 0.6	0.4
Non-residents ²	- 17.6	- 4.9	3.8
Total sales/purchases	3.3	14.8	5.7

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.

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€10.4 billion. Other bank debt securities, mortgage Pfandbriefe and public Pfandbriefe were also placed in the market, albeit with lesser volumes of €1.7 billion, €0.5 billion and €0.1 billion net respectively.

Net issuance on the part of enterprises

Domestic enterprises increased their capital market debt by €2.1 billion net in February, compared with €0.5 billion in the previous month. Mainly instruments with a maturity of more than one year were issued (€1.1 billion).

Decline in public sector capital market debt

By contrast, the public sector decreased its holdings of bond market liabilities by €9.5 billion net in the reporting month, compared with €4.0 billion in the previous month. On balance, this was primarily attributable to state and local governments, which redeemed securities in the amount of €8.0 billion net. The Federal government redeemed predominantly five-year Federal notes worth €13.7 billion net. This contrasted with net issuance of two-year Federal Treasury notes (Schätze) in the amount of €5.9

billion, ten-year and thirty-year Federal bonds (Bunds) totalling €3.8 billion and €1.7 billion respectively, and Federal Treasury discount paper (Bubills) worth €1.0 billion.

The Deutsche Bundesbank, in particular, bought debt securities in February, adding a net €5.7 billion worth of paper to its balance sheet, primarily under the Eurosystem's asset purchase programmes. Non-resident investors and domestic non-banks purchased bonds worth €3.8 billion and €1.1 billion net respectively. By contrast, German credit institutions sold debt securities totalling €5.0 billion net.

Purchases of debt securities

Equity market

In the reporting month, new shares worth €1.1 billion were issued in the German equity market. Over the same period, the outstanding volume of foreign shares in Germany increased by €14.0 billion. Domestic non-banks dominated the buyers' side of the market in February, acquiring shares totalling €19.2 billion net. By contrast, domestic credit institutions and non-resident investors sold equities in the net amount of €3.7 billion and €0.3 billion respectively.

Net issuance in the German equity market

Mutual funds

In February, the inflows recorded by domestic mutual funds were smaller than in the previous month (€8.6 billion compared with €15.0 billion). The fresh funds benefited mainly specialised funds reserved for institutional investors (€6.8 billion). Among the various asset classes, equity funds in particular recorded inflows (€2.3 billion), but funds of funds (€1.7 billion), mixed securities funds (€1.6 billion), open-end real estate funds (€1.3 billion) and bond funds (€1.0 billion) also saw fresh funds injected. By contrast, the volume of foreign mutual fund shares in the German market fell by €1.4 billion in February. Domestic non-banks were the sole buyers of mutual fund shares on balance (€7.3

German mutual funds record muted inflows

billion). Meanwhile, domestic credit institutions and foreign investors were barely active in the market on balance.

■ Balance of payments

Current account surplus up slightly

Germany's current account recorded a surplus of €20.7 billion in February 2018. The result was €0.4 billion up on the previous month because the increase in the goods account surplus was slightly larger than the decline in the surplus from invisible current transactions, which comprise services as well as primary and secondary income.

Goods account surplus widened

The surplus in the goods account widened by €1.5 billion on the month to reach €19.8 billion in the month under review, with goods imports falling more sharply than goods exports.

Smaller surplus from invisible current transactions

The surplus generated by invisible current transactions fell by €1.1 billion to €0.9 billion in February, primarily because the deterioration in the primary income balance outweighed the improved outturn in the services account. Net receipts in the primary income account contracted by €1.9 billion to €5.7 billion, largely on account of higher dividend payments on portfolio investments by non-residents. In addition, the deficit in the secondary income account widened slightly, increasing by €0.3 billion to €5.4 billion. The services account, meanwhile, closed with a surplus of €0.7 billion in February, following a deficit of €0.5 billion one month earlier, because expenditure shrank more strongly than receipts. A closer look at this account reveals a preponderance of smaller declines in multiple items on both sides of the balance sheet, though receipts from IT services did pick up distinctly.

Inflows from portfolio investment

The international financial markets in February saw price corrections on the equity markets and rising yields on government bonds. This was the backdrop against which Germany's cross-border portfolio investment generated net capital imports in the amount of €0.5 bil-

Major items of the balance of payments

€ billion

Item	2017	2018	
	Feb	Jan	FebP
I Current account	+ 23.4	+ 20.3	+ 20.7
1 Goods¹	+ 22.3	+ 18.3	+ 19.8
Exports (fob)	101.3	106.4	103.7
Imports (fob)	79.0	88.1	83.8
Memo item			
Foreign trade ²	+ 19.8	+ 17.3	+ 18.4
Exports (fob)	102.3	107.1	104.7
Imports (cif)	82.4	89.8	86.3
2 Services³	- 0.6	- 0.5	+ 0.7
Receipts	19.4	21.5	20.9
Expenditure	19.9	22.0	20.3
3 Primary income	+ 6.3	+ 7.6	+ 5.7
Receipts	17.4	15.9	16.1
Expenditure	11.1	8.3	10.5
4 Secondary income	- 4.6	- 5.1	- 5.4
II Capital account	+ 0.3	+ 0.5	0.0
III Financial account			
(increase: +)	+ 14.4	+ 26.0	+ 18.3
1 Direct investment	+ 4.1	+ 4.2	+ 4.5
Domestic investment			
abroad	- 2.3	+ 7.8	+ 13.6
Foreign investment			
in the reporting country	- 6.4	+ 3.6	+ 9.1
2 Portfolio investment	+ 28.7	+ 38.7	- 0.5
Domestic investment			
in foreign securities	+ 10.4	+ 33.1	+ 2.9
Shares ⁴	+ 1.7	+ 6.2	+ 3.9
Investment fund shares ⁵	+ 3.1	+ 9.8	- 1.4
Long-term debt securities ⁶	+ 3.4	+ 14.6	+ 1.5
Short-term debt securities ⁷	+ 2.1	+ 2.5	- 1.1
Foreign investment			
in domestic securities	- 18.4	- 5.6	+ 3.5
Shares ⁴	- 0.6	- 1.5	- 0.4
Investment fund shares	- 0.1	+ 0.9	0.0
Long-term debt securities ⁶	- 13.2	+ 11.3	- 3.8
Short-term debt securities ⁷	- 4.4	- 16.2	+ 7.7
3 Financial derivatives⁸	+ 3.1	- 0.5	+ 2.4
4 Other investment⁹	- 21.3	- 16.3	+ 11.4
Monetary financial institutions ¹⁰			
of which			
Short-term	- 1.2	- 50.8	+ 8.4
Enterprises and households ¹¹	- 5.8	- 51.3	+ 5.3
General government	- 10.2	+ 12.5	+ 1.0
Bundesbank	+ 2.8	+ 0.9	- 7.2
Bundesbank	- 12.7	+ 21.1	+ 9.2
5 Reserve assets	- 0.2	- 0.1	+ 0.6
IV Errors and omissions¹²	- 9.3	+ 5.2	- 2.4

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.

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lion, compared with net capital exports of €38.7 billion in January. Non-residents acquired securities in Germany worth €3.5 billion on balance, investing principally in money market instruments (€7.7 billion). They offloaded bonds worth €3.8 billion and shares worth €0.4 billion on balance. Demand among domestic investors for international securities was muted at best, with purchases of foreign securities coming to €2.9 billion overall. Their acquisitions centred around shares (€3.9 billion), but they also added a smaller volume of bonds issued by non-residents (€1.5 billion) to their portfolios. However, domestic investors disposed of investment fund shares (€1.4 billion) and money market instruments (€1.1 billion).

Direct investment sees net capital exports

Direct investment generated net capital exports of €4.5 billion in February, compared with €4.2 billion one month earlier. Domestic enterprises supplied their affiliates abroad with a net €13.6 billion worth of funds. Once more, they mainly did this by stepping up their foreign affiliates' equity capital (€16.4 billion), both by injecting equity capital in the narrower sense of the term and by reinvesting net earnings. Intra-group lending, on the other hand, was scaled back (€2.8 billion). Non-resident enterprises, mean-

while, invested €9.1 billion in affiliated enterprises in Germany, largely by granting them loans (€7.3 billion). On top of this, they increased their equity stakes in affiliated enterprises in Germany (€1.8 billion), primarily by reinvesting net earnings.

Other statistically recorded investment, which comprises loans and trade credits (where these do not constitute direct investment), bank deposits and other investments, registered net capital exports of €11.4 billion in February, after January had seen net capital imports of €16.3 billion. This was the result of outflows in the banking system (€17.6 billion), with both the Bundesbank (€9.2 billion) and monetary financial institutions (€8.4 billion) posting net exports of capital. In both cases, their claims on the foreign sector grew more strongly than their liabilities. The Bundesbank's TARGET2 balance climbed by €31.9 billion. Transactions by enterprises and households likewise resulted in a net outflow of capital (€1.0 billion), while general government registered inflows from abroad (€7.2 billion).

Other investment: net capital exports

The Bundesbank's reserve assets rose – at transaction values – by €0.6 billion in February.

Reserve assets

Wage growth in Germany: assessment and determinants of recent developments

The swift macroeconomic recovery in Germany following the recent recession was accompanied by strong growth in employment. Furthermore, last year saw unemployment hit its lowest level since German reunification. While the initial phase of the economic recovery brought with it catch-up effects in nominal rates of wage growth, the rise in hourly earnings since 2014 has failed to keep pace with the continuing high demand for labour. The finding of comparatively moderate wage growth over the past few years has also attracted attention internationally. Moreover, as wage growth is a key determinant of trend inflation, it is in the interests of monetary policymakers to observe and analyse the wage formation process.

Comparisons with similar phases of the business cycle before the Great Recession and with wage growth in other euro area countries do not suggest a weakening of wage dynamics. The leeway for income distribution, which can be defined by labour productivity and prices, has also been utilised quite well over the past few years – in contrast to the preceding decade. Nevertheless, the finding of moderate wage growth emerges more clearly by placing it in the empirical context of the determinants used in the economic literature. Analyses using the Beveridge curve and the wage Phillips curve present a picture of perceptibly dampened wage dynamics.

The results also indicate that the high level of labour market-oriented net migration over the past few years, chiefly from other EU countries, has helped to satisfy the increasing demand for labour. This has tended to be accompanied by a wage dampening effect. All things considered, the data currently available suggest that this effect stems to a large extent from many immigrant workers taking up employment in comparatively low-paid areas of activity or sectors.

Over the past few years, relatively moderate productivity growth and subdued inflation itself have also played a part in wage growth. Their impact in this period does not appear to be larger than average, however. Furthermore, non-wage-related factors in the negotiated pay settlements, such as making working hours more flexible combined with possibilities of opting for a higher wage increase or more time off, were of major importance, although it is difficult to quantify their impact on wage dynamics.

Looking to the future, there is much to suggest that the dampening effects will have a decreasing impact. The tightening of the situation on the labour market, which can already be identified on the basis of several indicators, is therefore likely to play a greater role in shaping wage growth.

Moderate wage growth with high increase in employment

Wage growth since 2014 rather moderate

The rapid macroeconomic recovery in Germany following the end of the recession in 2008-09 was accompanied by strong growth in employment. Last year, unemployment, which has been declining since then, hit its lowest level since German reunification. Moreover, wage bargainers have once again been achieving pay settlements which are higher than those agreed during the period of marked wage moderation between 1997 and 2007. Added to this are instances of higher profit-sharing granted to employees, including as compensation for wage concessions during the crisis and in view of rising corporate profits.¹ In the following years, too, high bonus payments were made, especially in the large industrial corporates. Over the past few years, the upward trajectory of the dynamics of both negotiated pay rates and gross earnings has not continued at the same pace, however. Negotiated rates of pay on an

hourly basis rose comparatively moderately by 2.4% on an annual average during the period from 2014 to 2017.² In the case of actual earnings, the rates of growth during this period, at an annual average of 2.7%, may likewise be regarded as rather moderate when measured by the ongoing positive development of the labour market.³

The moderate nominal wage dynamics in Germany over the past few years are, taken in isolation, inconsistent with the extremely high demand for labour. For some years now, various survey findings and indicators have been pointing to increasing tightness in the German labour market. For example, the ifo Institute's labour shortage indicator,⁴ the Federal Employment Agency's BA-X job vacancy index and the aggregate ratio of vacancies to unemployed persons have been reaching all-time highs since 2015.

Growing labour market tightness

For monetary policy, the analysis of wage growth is of major importance with regard to potential instances of price pass-through which may be reflected in the Harmonised Index of

Positive analysis of wage growth

Negotiated pay rates and actual earnings in Germany

Year-on-year percentage change, on an hourly basis



Sources: Federal Statistical Office (actual earnings) and Bundesbank calculations (negotiated pay rates). ¹ The large rise in actual earnings in 2009 is due to special factors during the Great Recession, such as the reduction of positive balances on working time accounts with no cut in remuneration.

Deutsche Bundesbank

¹ In the metalworking and electrical engineering industries, for example, the IG Metall trade union entered pay negotiations in the winter of 2010 without any specific wage demands, and the ensuing negotiated pay settlement contained an agreement that there would be no increase in scheduled rates of pay for 11 months. As compensation, employees received two one-off payments. The 2012 pay agreement then contained a permanent 4.3% increase in scheduled rates of pay from May 2012.

² Calculations based on the Bundesbank's negotiated pay rate statistics covering around 500 collective wage agreements and regulations on civil servant pay relating to roughly three-fifths of employees. Rates of remuneration in sectoral or firm-level collective wage agreements serve as a benchmark for a further fifth of employees. See P Ellguth and S Kohaut, *Tarifbindung und betriebliche Interessenvertretung: Ergebnisse aus dem IAB-Betriebspanel 2016*, WSI-Mitteilungen, pp 278-286.

³ The gross salaries and wages per hour worked by employees designated as actual earnings also include individual supplementary payments, bonuses, allowances outside collective agreements and other, for example, commission-based remuneration components. These cover all forms of paid employment.

⁴ According to ifo Institute data for manufacturing and construction. Multi-year and consistent time series since 1991 are available only for these two sectors.

Consumer Prices.⁵ Nevertheless, wages are only one of several factors that determine prices. Moreover, they are not a politically manageable macroeconomic variable but rather the outcome of a negotiation process, enshrined in the German constitution, between autonomous wage bargaining parties or individual employers and employees. From a monetary policy perspective, the analysis of wage developments is therefore based on a positive approach. The aim is not only to classify wage dynamics in terms of the real economic situation on the product and labour markets but also to set it in relation to current and expected macroeconomic price developments. This is because the latter are essentially what determines the monetary policy stance.

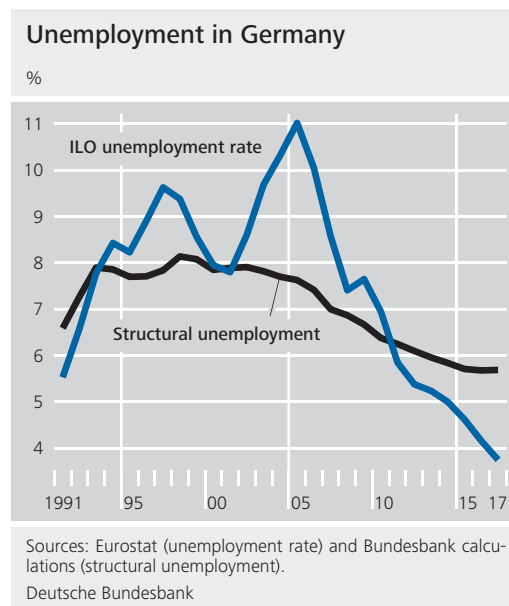
Various reference values for recent wage dynamics

In order to assess recent wage dynamics in Germany, use is made, first, of comparisons with earlier boom periods in the German economy, with wage dynamics in other euro area countries, and with the nominal leeway for income distribution resulting from productivity growth and inflation. Second, wage dynamics can be gauged on the basis of more econometrically shaped model approaches. Two frequently used concepts for analysing cyclical developments in wages are the labour market search model, of which the Beveridge curve is one of the core components, and the (wage) Phillips curve.

Assessment of recent wage dynamics based on historical and regional comparisons

Increase in earnings since 2014 stronger than in earlier periods of expansion

It is true that wage dynamics over the past few years have been weaker than they were in periods of economic prosperity in the former Federal Republic of Germany prior to reunification. They were, however, noticeably stronger than in the two earlier expansionary periods for Germany as a whole: the economic upswing around the turn of the millennium as well as the boom immediately preceding the outbreak of the Great Recession of 2008-09. Actual



hourly wages in Germany increased by 2.7% per year on an average of the period from 2014 to 2017, while the increase in the two four-year periods from 1997 to 2000 and from 2004 to 2007 amounted to no more than 2.0% and 0.6% per year respectively.⁶ A similar picture can be seen in the case of negotiated rates of pay on an hourly basis, which, at 2.4% on average in the period from 2014 to 2017, likewise showed a higher rate of growth than in the two reference periods used for comparison,

⁵ There is a two-way relationship between wages and prices; inflation may have feedback effects on wage formation. From a monetary policy angle, the focus is less on an analysis of real wages that is possibly of more immediate interest from the perspective of the social partners and with regard to issues to do with the real economy.

⁶ The introduction of the general statutory minimum wage at the beginning of 2015 and its latest increase in 2017 also play a certain part in this context. Roughly calculated, the introduction of the minimum wage contributed, as a one-off effect, around ½ percentage point to the rise in actual earnings in 2015. The introduction of the minimum wage had a minor effect on the increase in aggregate negotiated rates of pay, as the wage surge due to the minimum wage predominantly affected low-paid workers not covered by collective pay agreements. In addition, a series of generally binding sector-specific minimum wages were raised perceptibly immediately prior to 2015, for example in the hairdressing trade. See Deutsche Bundesbank, Impact of the introduction of the minimum wage on consumer prices – initial findings, Monthly Report, May 2015, pp 64-66. Together with the general statutory minimum wage, this also had an impact on higher pay grades. See Deutsche Bundesbank, Initial indications of how the minimum wage is affecting the increase in earnings, Monthly Report, August 2015, pp 55-56. The upward wage impulses resulting from the latest increase in the minimum wage in 2017 remained manageable from a macroeconomic perspective.

Negotiated pay rates and actual earnings from a long-term perspective

Year-on-year percentage change



Sources: Federal Statistical Office (actual earnings) and Bundesbank calculations (negotiated pay rates). **1** Change in methodology in 1985; data are of only limited comparability with earlier figures. **o** West Germany up to 1991, Germany as a whole thereafter.

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when the average annual increase was 1.9% and 1.0% respectively. This was also reflected in the recently positive wage drift – the difference between the rates of change in actual and negotiated rates of pay. The longer-term average of 2.1% per year since 1994 in the case of negotiated hourly rates of pay and of 2.2% per year in the case of actual hourly remuneration was likewise exceeded on an average of the past four years.

Higher rates of growth in actual earnings in Germany than on euro area average

Hourly wages have also increased relatively sharply in Germany recently when compared with other countries of the euro area. Since 2014, which marked the beginning of the latest economic upturn in the euro area, actual earnings in Germany – as mentioned above – have gone up by 2.7% per year on average, whereas the increase in other euro area countries has been only 1% during the same period.⁷ Before the financial and economic crisis, however, the period from 2000 to 2007 saw a sharp rise in gross hourly earnings in the other

euro area countries, at 3.5%, while the increase in Germany was considerably weaker at 1.4%. Overall, wage growth since the financial and economic crisis shows that the period of wage moderation in Germany has come to an end. Moreover, wage dynamics in Germany are serving as a positive stimulus for the aggregate rate of wage growth in the euro area.

Wage growth and the leeway for income distribution

One key benchmark for aggregate wage growth in the long term is provided by the leeway for income distribution. If real gross wages and salaries per hour grow on a long-term average at the same rate as hourly labour productivity, the aggregate labour income share fluctuates around a constant average value that is consistent with a long-term growth equilibrium. Market-based wage growth in the long term is thus likely to be guided by both developments in labour productivity and the aggregate price level.⁸ Nevertheless, structural changes in an economy's institutional framework can lead to permanent changes in the level of the equilibrium labour income share. Additionally, the full effect of cyclical factors on the labour income share may unfold over a period of several years. As a result, aggregate wage growth may, on average, remain either above or below the leeway for income distribution for several years before the labour income share approaches the equilibrium level.

Prices and labour productivity important in long term

⁷ In many member states, key factors behind the wage increases following the financial and economic crisis, as well as the sovereign debt crisis, were the – sometimes marked – underutilisation in the labour market, country-specific adjustment processes as well as, in some cases, the labour market effects of major reforms. See Deutsche Bundesbank, Wage dynamics amid high euro area unemployment, Monthly Report, December 2016, pp 33-55.

⁸ From the employers' perspective, the cost-related impact of wage increases relative to sales prices is likely to be of main interest, whereas for employees' wage demands, a comparison with consumer prices in terms of the wage increases' purchasing power is of particular importance.

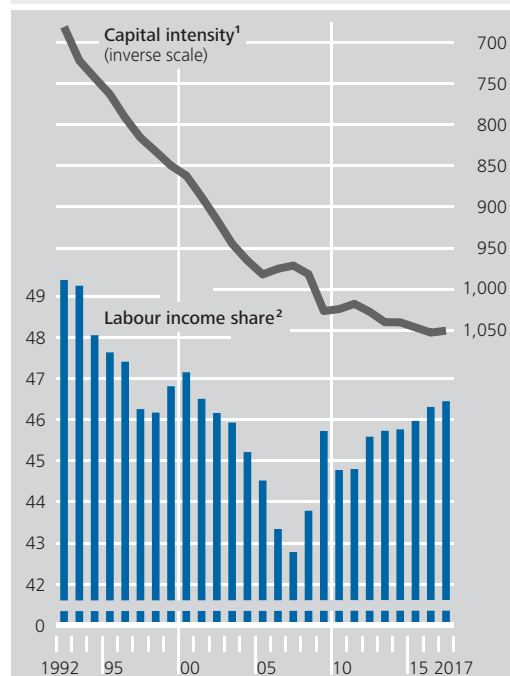
Temporary trend decline in the labour income share

From German reunification until about 2007, the price-adjusted rise in wages failed to keep pace with growth in labour productivity.⁹ Owing to this development, the aggregate labour income share followed a downward trend in this period. The “wage moderation”, which persisted roughly from 1997 until 2007, was possibly also a response to technological change, especially to the capital intensification of production from the early 1990s to the outbreak of the financial and economic crisis in 2008. As a result, it was presumably possible to limit the employment losses caused by an increased substitution of capital for labour.¹⁰ The diminishing degree of collective bargaining coverage among employees – as documented by the IAB establishment panel – may have also contributed to the declining labour income share in this period. This effect is likely to be due – at least in some sectors – to the associated reduced bargaining power of trade unions in collective wage bargaining.

Wage-dampening effect of capital intensification weaker in recent years

In the period from 2011 to 2017, the pace of capital intensification slowed down, ie fewer workers were substituted by capital than before. More recently, the ratio of capital employed to total hours worked remained more or less unchanged. The wage-dampening effect of capital intensification has therefore been less pronounced over the past few years than on average since reunification, although the effect continues to exist. The decline in collective bargaining coverage has also slowed down since the end of the financial and economic crisis. In line with this, relatively small negative contributions to wage growth have been documented in empirical model analyses since then. Nevertheless, the precise timing of the effects of lower collective bargaining coverage and reduced trade union bargaining power on wage formation is subject to uncertainties. Therefore, it cannot be ruled out that this development is affecting current wage dynamics more strongly than is suggested by the more or less unchanged degree of collective bargaining coverage in recent years.

Capital intensity and labour income share



1 Capital stock at constant 2010 prices (€ billion) divided by total hours worked (in billion hours). **2** Gross wages and salaries divided by gross value added (each at current prices).
 Deutsche Bundesbank

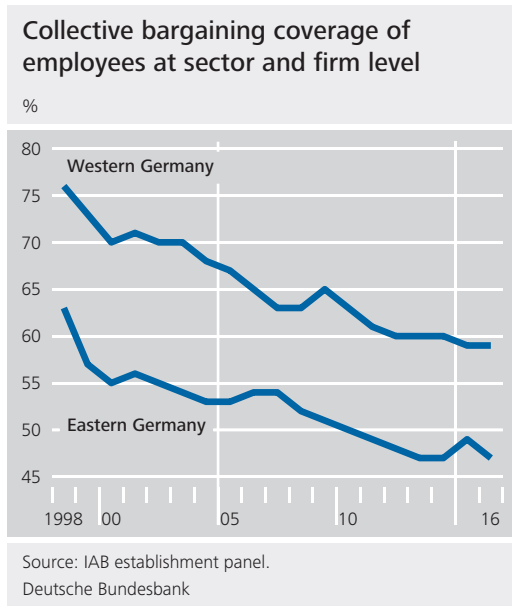
In the course of the recovery from the financial and economic crisis, labour productivity rapidly regained its previous level. Since then, however, labour productivity has grown at an annual average of roughly 0.8%, which is considerably below the pace in the years prior to the crisis.¹¹ Its contribution to wage growth in recent years was thus, if anything, below average. Moreover, the average inflation rate over the period from 2011 to 2017, at 1.3%, under-

Recently, merely subdued impulses from labour productivity growth and inflation

⁹ In this case, Labour productivity is based on the hourly concept in order to capture the rising share of part-time employees in the period under consideration.

¹⁰ See L Karabarounis and B Neiman (2014), The global decline of the labor share, The Quarterly Journal of Economics, pp 61-103, as well as D Acemoglu and D Autor (2011), Skills, tasks and technologies: implications for employment and earnings, Handbook of labor economics 4b, Chapter 12.

¹¹ Possible factors in this context are also the productivity-dampening effects of the labour market integration of low-skilled persons in the wake of labour market reforms in the first half of the last decade as well as the high level of immigration over the past few years. See also Deutsche Bundesbank, Demographic change, immigration and the potential output of the German economy, Monthly Report, April 2017, pp 35-47.



shot its long-term average. According to Consensus Economics data, the expected medium-term inflation rate relative to horizons of two to ten years fluctuated only a little around its long-term mean.¹² Furthermore, owing to sharply falling energy prices, the inflation rate was extremely low in 2015 and 2016. If the period since 2011 is analysed to assess the effects of actual and expected inflation, wage-boosting impulses are likely to have been generated to a certain extent from 2011 to 2014 compared with more wage-dampening ones in the years thereafter.¹³ In summary, wage growth over the past few years was higher than the contributions due to the increase in productivity and inflation.¹⁴ The trend of wage moderation has thus reversed. Nevertheless, at the end of the period under review, the aggregate labour income share was still below its early-1990s level.¹⁵

Wage developments through the lens of the Beveridge and Phillips curves

The assessments of wage developments in recent years made thus far, which have been based on simple comparisons with previous expansionary periods, with other countries, and with the leeway for income distribution,

do not support the notion of surprisingly weak wage growth in Germany. However, such comparisons largely neglect the respective economic environment and the situation on the labour market itself. Approaches which are more deeply rooted in the empirical economic literature and which take these factors explicitly into account are available in the form of the Beveridge curve and the Phillips curve.

Wage growth in the recent past has exceeded the rates seen in previous economic upturns. However, in view of the currently very low level of underutilisation in the labour market, current wage growth is only moderate by historical standards. For instance, the ratio of job vacancies to unemployment has increased in recent years. This development is probably partly attributable to increased labour market efficiency. The rise in the ratio of job vacancies to unemployment appears to be more than just a short-term cyclical phenomenon, as it also manifests itself in the longer-term trends of unemployment and vacancies. Placing the vacancy-unemployment ratio – which, according to the Beveridge curve concept, is an indicator of labour market tightness – in relation to wage growth shows that wage developments have been in line with trend growth in the ratio

Measured in terms of labour market tightness, current wage growth only moderate

¹² The expected inflation rate is cited in the press releases of some German trade unions as an important determining factor in wage negotiations. The estimation of expected inflation may be historical or forward-looking; see German Council of Economic Experts, Für eine zukunftsorientierte Wirtschaftspolitik, Jahresgutachten 2017/18, p 128.

¹³ According to a special survey by the Deutsche Bundesbank on the 2015-16 pay round, wage bargainers considered both the low actual rate of inflation and subdued inflation expectations to be of relevance at that time to the moderate outcome of wage negotiations.

¹⁴ This applies not only to the growth rate of negotiated wages but also, in particular, to that of gross wages and salaries. Over the past few years, the long-term determinants were of greater importance for growth in negotiated wages than they were for growth in gross wages and salaries, which reacted more strongly to changes in cyclical factors. In this regard, variable compensation components in the high income segment outside the collective wage scales possibly also played a part.

¹⁵ Data for the Federal Republic of Germany prior to reunification suggest that the aggregate labour income share had already been following a downward trend since the early 1980s, which was interrupted only for a short while in the early 1990s owing to high wage growth rates, especially in eastern Germany.

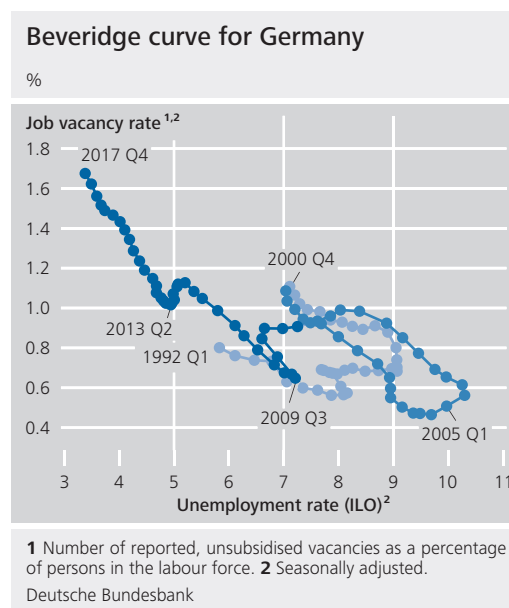
of vacancies to structural unemployment. However, given the currently high degree of labour market tightness, it is not just trend factors but also cyclical factors that have played a role. With this in mind, estimation results show that wage growth in recent years was weaker than would have been expected on the basis of actual labour market tightness alone (see the box on pages 20 and 21).¹⁶

Analysis in context of wage Phillips curve relationship

The Phillips curve concept is probably the most prominent model-based tool for analysing cyclical wage and price developments from a macroeconomic perspective.¹⁷ The wage Phillips curve approach captures the relationship between the labour market in the real economy and nominal wage growth. When employed in macroeconomic models, the wage Phillips curve allows for the analysis of wage developments in relation to key macroeconomic determinants. The core elements include a measure of labour market tightness and an assumption of how inflation expectations are shaped in the context of wage negotiations. Additional factors include labour productivity growth as well as, in some cases, institutional path dependencies in the wage-setting process. Furthermore, the effects of exceptional historical factors, such as German reunification or the currently observed labour market-oriented immigration flow from other EU member states, could also play a role. Using econometric techniques, it is possible to quantify the assumed relationships (see the box on pages 23 to 25).

Labour demand at record high

Following the wage Phillips curve concept, there is a positive relationship between wage growth and the contemporaneous degree of labour market tightness. One explanation for this is that, in times of high levels of employment, the search for a suitable job is considerably easier than in times of high underemployment. Employers may therefore increase their wage offers in order to recruit new staff or retain existing employees. Also, in collective wage negotiations, high labour demand is likely to strengthen the bargaining power of



employees over employers. Currently, a large number of indicators suggest that labour market demand is exceptionally high. For example, the number of registered unemployed is at its lowest level since German reunification. In addition, the ratio of vacancies to the number of registered unemployed in Germany reached a record high in 2017. The vacancy rate has also increased more or less continuously since 2013, when the latest upturn in employment began. Furthermore, survey-based indicators, such as the ifo Employment Barometer or the IAB labour market barometer, do indeed suggest very high labour demand in Germany. Estimates of the unemployment gap, which is the difference between the unemployment rate and the structural rate of unemployment, are consistent with this finding. Given the current results of the available indicators, it is likely that the excellent situation on the German labour market in recent years has, all else being equal, exerted upward pressure on wage dynamics.

¹⁶ Stronger wage growth in the light of the overall macroeconomic landscape was also widely expected on the basis of surveys. See European Central Bank, What can we learn from the ECB Survey of Professional Forecasters about perceptions of labour market dynamics in the euro area?, Economic Bulletin, 2017 (8), pp 49-51.

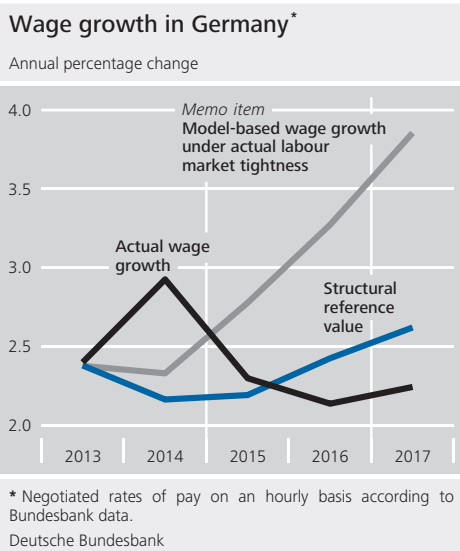
¹⁷ See also Deutsche Bundesbank, The Phillips curve as an instrument of analysis and forecasting inflation in Germany, Monthly Report, April 2016, pp 31-45.

Wages and labour market tightness from the perspective of the Beveridge curve

In addition to purely statistical benchmarks, current wage developments in Germany can be assessed using the wage dynamics that would be suggested by model-based analytical concepts. This can be done in a two-stage procedure. In a first step, the traditional search and matching model of the labour market – where unemployment may also arise in equilibrium – serves as a conceptual framework within which a trend measure for labour market tightness can be derived.¹ Equilibrium labour market tightness – ie the aggregate ratio of vacancies to unemployed – is the product of the interplay between wage-setting and the jobs on offer. It is assumed in this context that the larger the ratio of vacancies to unemployed, the higher the wages employees tend to be able to bargain. By contrast, the number of jobs offered by enterprises is likely to rise with lower wages, all else being equal. In the steady state, the vacancy to unemployment ratio is therefore associated with an equilibrium wage. From an empirical perspective, the trend components of the labour market variables are approximately in line with the steady state. In a second step, the rate of wage growth associated

with the development of trend labour market tightness according to the estimates derived from a standard vector-autoregressive model is determined as a reference measure.²

The starting point for calculating trend labour market tightness is the Beveridge curve, which represents the combinations of vacancies and unemployment. Its downward slope results from the fact that economic upturns typically go hand in hand with a decline in unemployment and an increase in the number of vacancies. Using Federal Employment Agency unemployment figures, the number of reported vacancies as well as labour market flows, it is possible to determine this macroeconomic relationship for Germany.³ Following Germany's far-reaching reforms in the first half of the 2000s, the underlying labour market conditions have, in some respects, changed substantially. This presents another difficulty when implementing such an approach empirically. The estimations indicate that the Beveridge Curve has changed significantly in the wake of the labour market



¹ See C Pissarides (2000), *Equilibrium Unemployment Theory*, 2nd edition, MIT Press.

² See F Kajuth (2018), *A benchmark for wage growth through the lens of the Beveridge curve*, *Applied Economics Letters* 25 (7), pp 487-492.

³ In the model-based approach, the Beveridge curve depicts combinations of vacancies and unemployed where the associated unemployment rate remains constant over time, all else being equal. This means that the percentage change in the size of the labour force corresponds to the percentage change of those in work. This is composed of the share of unemployed persons and inactive persons entering employment plus the share of workers becoming unemployed or inactive. See M Daly, B Hobijn, A Sahin und R Valletta (2012), *A search and matching approach to labor markets: did the natural rate of unemployment rise?*, *Journal of Economic Perspectives* 26 (3), pp 3-26; and R Barnichon, M Elsby, B Hobijn and A Sahin (2010), *Which industries are shifting the Beveridge curve?*, *Federal Reserve Bank of San Francisco Working Paper* 2010-32.

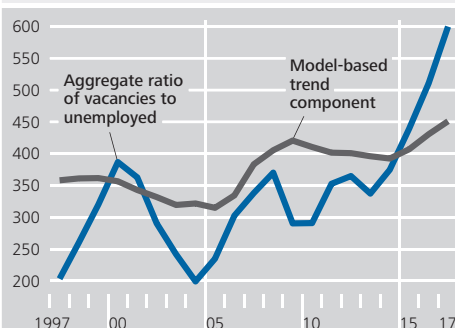
reforms.⁴ In line with the transmission mechanisms based on the model approach, this is likely to reflect mainly the improved employment opportunities for the unemployed since then. This is due to a number of factors, including more intensive job placement and greater efforts in job seeking.⁵

On the basis of the derived Beveridge curve relationship, it is possible to use data on the time-varying structural unemployment rate to calculate the trend component of the number of vacancies.⁶ The results indicate that the trend vacancy to unemployment ratio – the degree of structural tightness in the labour market – has risen markedly in the period since the labour market reforms were introduced. Moreover it has increased somewhat further of late. Comparing this trend variable as a structural benchmark with the actual relationship of the vacancy to unemployment ratio, actual labour market tightness has significantly exceeded its trend component over the past few years.

The trend labour market tightness derived from the Beveridge curve is then built into an econometric model as an explanatory variable for wage growth. Further explanatory variables are labour productivity and price dynamics.⁷ The benchmark for wage increases is the wage growth that was to be expected over the past years according to the model estimates and with regard to structural labour market tightness. The results indicate that actual wage dynamics in recent years were broadly consistent with the accelerating trend component of labour market tightness.⁸ With regard to the cyclical component of labour market tightness, larger wage increases were to be expected, all else being equal. If the simulation calculations are based on the actual tightness ratio, the wage increases in the period since about 2015 would, in fact, have to be rated as rather low in comparison with the model-based dynamics. This suggests that, in the past few years, additional dampening factors have been influencing the cyclical component of wages.

Labour market tightness in Germany

Number of job vacancies per 1,000 unemployed¹



¹ Aggregate number of vacancies extrapolated from the number of registered unsubsidised vacancies on the basis of data on the notification rate of the Institute for Employment Research (IAB). Broader concept of unemployment according to the definition of the Federal Employment Agency.

Deutsche Bundesbank

⁴ In line with existing academic studies, dummy variables are used in our calculations to take account of possible structural breaks resulting from the labour market reforms. See R Fahr and U Sunde (2009), Did the Hartz reforms speed up the matching process? A macro-evaluation using empirical matching functions, *German Economic Review* 10 (3), pp 284-316; S Klinger and T Rothe (2012), The impact of labour market reforms and economic performance on the matching of the short-term and the long-term unemployed, *Scottish Journal of Political Economy* 59 (1), pp 90-114.

⁵ This is supported by the fact that there has been a persistent increase in transition rates of unemployed into employment since roughly 2007. See Deutsche Bundesbank, The macroeconomic impact of labour market reforms in Germany, *Monthly Report*, January 2014, pp 34-36.

⁶ The non-accelerating inflation rate of unemployment (NAIRU), calculated within a Phillips curve-based framework, serves as a measure of the structural unemployment rate. See F Kajuth (2016), NAIRU estimates for Germany: new evidence on the inflation-unemployment trade-off, *German Economic Review* 17 (1), pp 104-125. As with the other data on labour market flows used in the calculations, it is based on data on the unemployment rate according to the concept of the Federal Employment Agency. Using the trend unemployment rate based on the Hodrick-Prescott filter produces more or less identical results.

⁷ Wage dynamics data are based on negotiated rates of pay on an hourly basis. Labour productivity growth is expressed as real gross value added per hour worked. The percentage change of the private consumption deflator serves as the measure of inflation. The assessment period from 2013 onwards was not included in the estimation sample.

⁸ The relatively strong increase in negotiated rates of pay in 2014 is also, in part, attributable to back-payments relating to retail sector salary increases agreed the previous year. See Deutsche Bundesbank, Economic conditions in Germany, *Monthly Report*, February 2014, p 61. Overall, the dynamics of actual earnings show slight fluctuation around the reference value in the review period. Looking at actual earnings per hour, the interpretation of the wage dynamics barely changes.

Broader measure of underemployment also very low

In addition to the concept of registered unemployment, there are other approaches to measuring the underutilisation of labour based on a broader definition of underemployment. For example, the underemployment concept developed by the Federal Employment Agency also includes persons participating in active labour market policies or those not working due to temporary incapacity.¹⁸ As participants in active labour market policies are not counted as officially unemployed, but would often be unemployed if they were not on these schemes, it seems that the Federal Employment Agency's definition of underemployment more adequately captures the measure of labour market slack relevant for wage dynamics.¹⁹ The Federal Employment Agency's data on underemployment corroborate the results based on the narrower indicators, showing that the labour market is tight at present. Further, alternative measures of unemployment – for example, the internationally standardised unemployment rate (ILO definition) or the broad measure of underemployment based on Eurostat indicators – follow a broadly similar path to that of registered unemployment or that of underemployment as defined by the Federal Employment Agency, and therefore provide no notable additional explanatory power as far as wage growth is concerned.²⁰

Strong labour market-oriented immigration for a number of years

Given the high rates of immigration since around 2011, especially from central and eastern European countries that have joined the EU since 2004 and from southern European countries, it is possible that conventional measures of labour market tightness, such as the rate of job vacancies relative to underemployment in Germany, reflect actual labour market tightness only inadequately.²¹ The introduction of full freedom of movement for workers in the EU since 2011 is one of the factors that have caused potential labour supply in Germany to increase considerably.²² By mid-2017 (up to which point relevant data are available), a net total of around 1.8 million persons had immigrated to Germany from other EU member states.

Immigration can affect wage dynamics in Germany via various channels. One important issue that needs to be determined is whether the skills profile of immigrants is relatively similar to that of domestic workers, or whether it tends to complement the latter.²³ If the skills profiles are similar, immigrants compete with domestic workers in the German labour market. The expansion of the relevant labour supply is thus likely to dampen wage growth – both in macroeconomic terms and for domestic workers. By contrast, if the skills profiles are complementary, the resident population's wages tend to rise as their skills profile becomes relatively scarcer as a result of immigration. Nevertheless, even in the latter case, there may be subdued wage growth at the macroeconomic level if the immigrants themselves are employed mainly in relatively low-paid jobs and if this effect prevails at the macroeconomic level.

In recent years, immigrants have largely taken up employment in sectors and low-complexity jobs with below-average wages, which has also been facilitated by the previous liberalisa-

Immigration impacts wage dynamics via various transmission channels

¹⁸ See Federal Employment Agency (2009), *Umfassende Arbeitsmarktstatistik: Arbeitslosigkeit und Unterbeschäftigung. Methodenbericht, Statistik*; and Federal Employment Agency (2011), *Weiterentwicklung des Messkonzepts der Unterbeschäftigung, Methodenbericht, Statistik*.

¹⁹ The added information value stems, in particular, from the fact that participation rates in active labour market policies are often the result of administrative factors – such as the testing of new programmes or the discontinuation of poorly evaluated ones – and therefore follow different trends than registered unemployment.

²⁰ The broad measure of underemployment based on Eurostat indicators comprises standardised unemployment (ILO definition) and additionally takes account of persons who work part-time but would like to work full-time, persons who are looking for employment but are not currently available to work, or those who are available to work but are not currently looking for a job. This measure is similar to the U-6 rate of unemployment used by the US Bureau of Labor Statistics.

²¹ Job vacancies in Germany are, in principle, available to all job-seekers in Germany and other EU countries, whereas underemployment is a purely domestic concept.

²² See Deutsche Bundesbank, *op cit*, Monthly Report, April 2017, pp 35-47.

²³ For a conceptual analysis of the wage and employment effects of labour market-oriented immigration, see A Chasamboulli and T Pavlios (2014), *A search-equilibrium approach to the effects of immigration on labor market outcomes*, *International Economic Review* 55 (1), pp 111-129.

Wage dynamics in Germany through the lens of a generalised wage Phillips curve

The Phillips curve is a widely used empirical tool for analysing aggregate wage dynamics. In the following, an example based on the wage equation of the Bundesbank's macroeconomic model is presented. This wage equation combines the most common explanatory approaches for wage dynamics in both the long and the short term.¹ Based on the concept of long-term labour market equilibrium, it is assumed that wage growth is related to developments in the aggregate price level and labour productivity. In addition, cyclical factors such as fluctuations in the utilisation of labour may also play a role in the short to medium term:

$$\begin{aligned} \Delta \log(w_t) = & c_1 + c_2 \{ \log(w_{t-1}) - \log(p_{t-1}) - \log(a_{t-1}) \} \\ & + \sum_{i=0}^m c_i^\theta \theta_{t-i} + \sum_{i=0}^n c_i^a \Delta \log(a_{t-i}) \\ & + \sum_{i=0}^q c_i^\pi \pi_{t-i} + \sum_{i=0}^r c_i^e \pi_{t-i}^e \\ & + \sum_{i=0}^s c_i^{EUI} EUI_{t-i} + \sum_{i=1}^u c_i^w \Delta \log(w_{t-i}) \\ & + \sum_{i=0}^v c_i^T T_{t-i} + \varepsilon_t \end{aligned}$$

The specification of the estimation equation relates the growth rate of gross wages and salaries, w_t , to their deviation from the level implied by their long-term relationship with labour productivity, a_t , and the aggregate price level (measured here by the national consumer price index excluding food and energy), p_t , (each in logarithmic form).² This equation assumes that, in the long term, wage growth will align with the leeway for income distribution, which results from developments in labour productivity and the aggregate price level. This concept is based on the assumption that the labour income share fluctuates around a constant average value in the long term.³

Additional cyclical factors include the degree of labour market tightness, θ_t , and

labour productivity growth. Furthermore, both the actual inflation rate, π_t , and survey-based inflation expectations, π_t^e , feed into the estimation equation, thus taking into account the forward-looking behaviour of employers and employees.⁴ The expected future inflation rate helps them to assess anticipated developments in real purchasing power and real labour costs.⁵ Moreover, net immigration from other EU member states to Germany relative to the domestic working age population (15 to 65 years), EUI_t , also plays an important role.⁶ This figure reflects the expansion of the labour force due to the arrival of labour market-oriented immigrants from other EU member states over the past few years, and thus supplements the traditional measure of labour market tightness.

¹ See O Blanchard and L Katz (1999), Wage dynamics: reconciling theory and evidence, *American Economic Review* 89(2), pp 69-74.

² All wage and productivity data used here are hourly figures.

³ This assumption is supported by the fact that the labour income share based on gross wages and salaries in Germany displayed a declining trend in the first half of the sample period, particularly up to around 2007. Yet an upward trend has been observed since 2007, meaning that at present, the labour income share is once again around the same level as in the mid-1990s.

⁴ The number of vacancies relative to the Federal Employment Agency's definition of underemployment serves as a measure of labour market tightness, partially constructed on the basis of data from the German Council of Economic Experts. The survey-based inflation expectations supplied by Consensus Economics are based on a five-year horizon.

⁵ Further one-off effects, T_t , which influence the growth rate of gross wages and salaries per hour, are due to unsystematic fluctuations in the total number of hours worked. This figure is affected, inter alia, by rates of absence due to illness and weather conditions (particularly in the construction sector).

⁶ Immigration from other EU member states is typically labour market-oriented, as indicated by, among other things, the high employment rates among nationals of these countries in Germany.

Wage equation estimation results*

As a percentage/in percentage points

Explanatory variables	Quarter-on-quarter percentage change in gross wages and salaries per hour		
	Partial effect ⁵	t-value or F-statistic	Number of lags ⁶
Error correction term ¹	-0.032**	-2.29	1
Labour productivity growth ²	0.105[***]	10.4	0 to 2
Labour market tightness ³	0.377[***]	6.05	1 to 3
Immigration ⁴	-0.002*	-1.8	10
Inflation expectations	0.004*	1.89	1
Past inflation rates	0.247[**]	2.97	1 to 4
R ²	0.73		

* Sample period: 1996 Q2 to 2017 Q4. The estimation includes a constant and one-off effects (not shown). **1** Percentage deviation of wages from the model-based long-term relationship. **2** Gross value added in relation to the total number of hours worked. **3** Job vacancies in relation to underemployment (Federal Employment Agency definition). **4** Net immigration from EU member states in relation to the domestic population between the ages of 15 and 65. **5** */**/** denote significance at the 10%, 5% and 1% level. **6** Denotes individual past values.

Deutsche Bundesbank

According to the estimation results, all coefficients display plausible signs and are statistically significant in most cases.⁷ The results also show that growth in gross wages and salaries in the short to medium term is positively correlated with growth in labour productivity, in the degree of labour market tightness and in actual as well as expected inflation rates. On the other hand, net immigration from other EU member states has exerted a dampening effect on wage growth in recent years. In addition, the results indicate that, in the sample period, the greater the deviation of gross wages and salaries from the level expected on the basis of labour productivity and the national consumer price index, the higher the growth rate of gross wages and salaries in the following years.

Based on the estimation results, the contributions of the various factors to past wage

growth can be decomposed. In the long term, both consumer prices and labour productivity were important factors in wage growth. Among the cyclical factors, labour market tightness has delivered increasingly positive contributions to wage growth over the past few years. This also reflects the excellent situation on the German labour market against the background of an intact wage Phillips curve.⁸ Whilst underemployment has been declining in the past few years, firms may have tended to increase their wage offers in order to recruit new staff or retain existing employees. The contribution of the expected inflation rate to wage growth was above average in the period from around 2012 to 2014, and has been more or less neutral since.

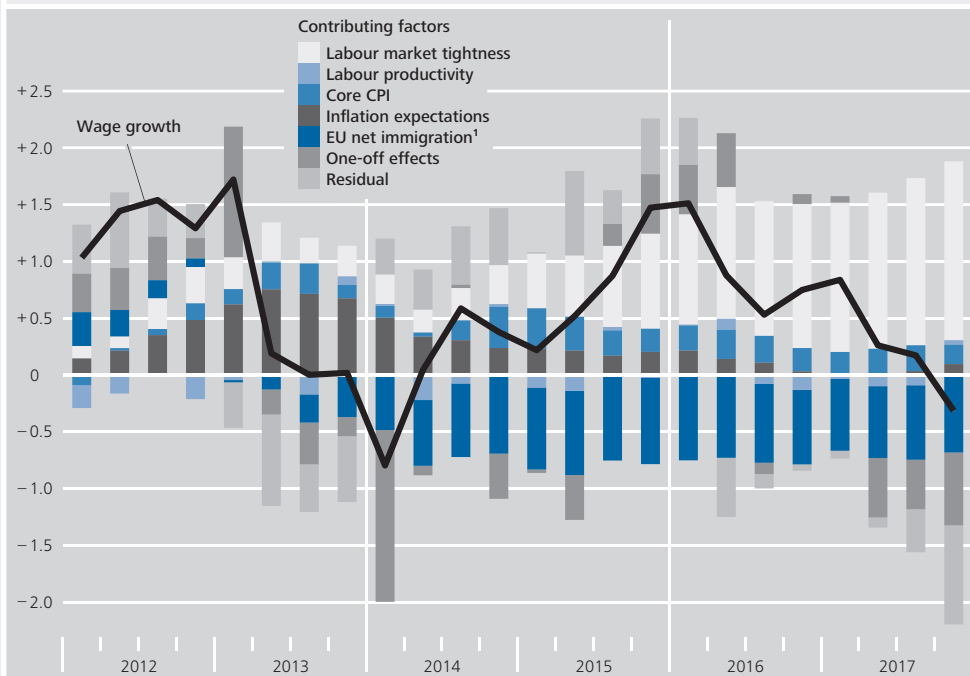
Strong labour market-oriented immigration from other EU member states has had a dampening effect on wage growth in the past few years. However, according to the estimations, wage pressures resulting from the domestic demand for labour have considerably exceeded the wage-dampening impact of immigration at the same time. Furthermore, the results suggest that the wage effect of immigration kicks in with a time lag of up to three years. This lag, which appears relatively long at first glance, is consistent with findings of other studies on the duration of immigrants' integration into the German labour market. For example, according to evidence from the migration sample of the Institute for Employment Research (IAB) and the German Socio-Economic Panel (SOEP), the employment

⁷ The estimations are based on quarterly data for the period 1996-2017. The number of lags used was determined on the basis of the statistical significance of individual lags.

⁸ This finding is robust to alternative measures of labour market tightness, such as the unemployment rate, its deviation from the structural unemployment rate, or the ifo indicator of labour shortages in the manufacturing sector.

Contributions to wage growth in Germany*

Year-on-year, percentage points



* Deviations from model-implied mean. Wage growth is measured in terms of gross wages and salaries per hour. Sample period: 1996 Q2 to 2017 Q4. ¹ Net immigration from EU member states (changing official composition) in Germany.

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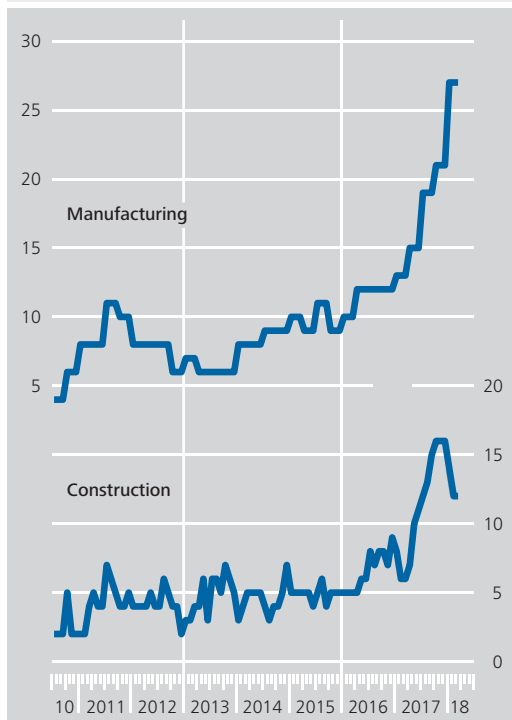
rates of non-refugee immigrants take around five years to converge to the levels observed among the domestic population.⁹ Potential reasons for the length of this process include a lack of language proficiency, a shortage of information concerning the institutional frameworks, and cultural barriers.¹⁰

⁹ See H Brücker, H Hauptmann and E Vallizadeh (2015), Flüchtlinge und andere Migranten am deutschen Arbeitsmarkt: Der Stand im September 2015, IAB Aktueller Bericht, No 14/2015, Institute for Employment Research.

¹⁰ See A Romiti, P Trübswetter and E Vallizadeh (2015), Lohnanpassung von Migranten: Das soziale Umfeld gibt die Richtung vor, IAB Kurzbericht, No 25/2015, Institute for Employment Research.

Impediments to production caused by labour shortages

Percentage of enterprises, seasonally and calendar-adjusted



Source: ifo Institute.
 Deutsche Bundesbank

Immigrants mainly employed in sectors and low-complexity jobs with below-average wages

tions of institutional conditions in the German labour market.²⁴ By contrast, in the 1990s, during the previous phase of strong net immigration to Germany, the capacity to absorb such forms of employment, which often serve as a stepping stone into the labour market, was more limited. Hence, the sectoral shifts towards low-paid jobs were much smaller at that time.²⁵

Wage-dampening effect of immigration in large part due to employment composition

Overall, based on the data currently available, the dampening effect of labour market-oriented immigration on wage growth seems to be largely attributable to the relatively low wages immigrants earn themselves, rather than being due to immigration pushing down the wages of domestic workers.²⁶ In addition, a comparison with previous groups of immigrants indicates that their relatively low average wage level thus far should increase considerably as they become continuously better integrated into the German labour market. Wage-augmenting effects resulting from this develop-

ment are therefore expected in the coming years.

■ Institutional factors

As far as negotiated pay rates are concerned, estimates using the wage Phillips curve show that the growth rates of negotiated rates of pay in previous periods also play a role in the current wage growth developments. One reason for this backward-looking component is likely to be the now rather common two-step structure of collective agreements concluded for a longer duration. Where collective agreements are concluded for a period of two years, an initial increase generally occurs at the beginning of the period, followed by a further increase after the end of the first year. The second increase is often slightly lower, but the amount is still in keeping with the first increase.²⁷

Phased increases in collective agreements

In addition to the model-based results, there have also been other determinants of wage growth in recent years, with non-wage components becoming more significant in the con-

Growing importance of non-wage components in collective agreements

²⁴ In 2017, immigrants from these countries were, to a large extent, employed as unskilled or skilled workers in sectors of the economy with a rather low average wage level (agriculture, temporary agency employment, hospitality, other business-related services excluding temporary agency employment, construction and logistics).

²⁵ For more information on the wage effects during the period of immigration in Germany in the 1990s, see C Dustmann, U Schönberg and J Stuhler (2017), Labor supply shocks, native wages, and the adjustment of local employment, *The Quarterly Journal of Economics* 132(1), pp 435-483; and FD'Amuri, G Ottaviano and G Peri (2010), The labor market impact of immigration in Western Germany in the 1990s, *European Economic Review* 54, pp 550-570.

²⁶ This assessment is consistent with the results of case studies on phases of labour market-oriented migration within the EU in the 2000s. See B Galgoczi, J Leschke and A Watt (2009), *EU labour migration since enlargement. Trends, impacts, and policies*, Ashgate Publishing, Farnham (GB).

²⁷ For example, the rather modest growth in negotiated rates of pay in 2017 is due in part to phased increases agreed more than one year previously in the context of very low inflation rates. A number of major economic sectors, such as the metal-working and electrical engineering industries, negotiated as planned in 2018 after the previous round in 2016.

text of collective agreements.²⁸ For example, questions relating to the sustainability of occupational pension schemes played a role in the pay round of central and local government in 2016, while the flexibility of individuals' working hours along with more options and personal freedom to take time off for family, to care for relatives, and for recuperation in the case of shift workers played a prominent role in the most recent pay round in the metal-working and electrical engineering industries.²⁹ The effects of such components on the agreed increases in negotiated pay rates are difficult to quantify. Under certain circumstances, they could lead, either directly or indirectly, to greater costs for employers – for example, if the increased complexity of human resources management raises the administrative burden. Moreover, agreed supplementary pension benefits increase employees' compensation. It can generally be assumed that the negotiated wage resulting from a collective agreement is not independent of side agreements on other components not directly related to wages. As the interests of workers have often been satisfied in this regard in recent years, it is likely that this has somewhat dampened the collectively agreed wage increase.³⁰

■ Conclusion and outlook

Comparisons with previous expansionary periods, developments in other countries and the leeway for income distribution provide no indication that nominal wage growth in Germany has been unusually weak in Germany in recent years. Given the very high level of employment and the increasing shortage of skilled workers, substantially higher wage growth would have been expected in the last few years, based purely on historical regularities. However, a number of factors counteracted this trend. For example, the increased supply of available workers from the EU dampened aggregate wage increases. One contributing factor was that the expansion of the labour supply due to immigration was often focused on sec-

tors and low-complexity jobs with below-average wage levels. Moreover, the low inflation rates in 2015 and 2016 and the relatively low productivity growth in recent years led to wage-dampening effects. Moreover, the importance of qualitative non-wage related components of wage agreements increased, but the direct and indirect wage effects of these are difficult to quantify. The fact that the collective bargaining coverage of employees has fallen significantly over much of the past 20 years has also played a role. While this decline has slowed in the past few years, it is likely that its effects were still unfolding.

From today's perspective, in view of the underlying economic conditions, it is likely that negotiated rates of pay will be higher in future than they have been in recent years. The dampening effect of labour market-oriented net migration on average earnings, which, according to estimation results, is subject to a time lag, may yet be felt for some time. However, the gradual rise in inflation is, when viewed in isolation, likely to support wage growth in the near future, the available indicators suggest that the already pronounced labour shortages will probably continue to grow, and the economic outlook remains favourable. In this respect, it is reasonable to assume that, in the coming years, labour market tightness will be reflected to a greater extent in actual wage developments.³¹

Current economic conditions favour higher nominal wage increases in future

Upward pressure on wages due to domestic labour market tightness dampened by net immigration

²⁸ For more information on qualitative components in the context of collective bargaining, see, for example, Deutsche Bundesbank, Economic conditions in Germany, Monthly Report, August 2017, p 55.

²⁹ The latest wage agreements for Deutsche Bahn, Volkswagen and Deutsche Post likewise give salaried employees the option of choosing between either the agreed wage increase or more leisure time.

³⁰ This effect is not directly captured in the empirical tests presented here using the Beveridge curve and the wage Phillips curve. Instead, it is reflected in the residuals of the respective estimation equations, or it is implicitly taken into account via other determinants that show a statistical correlation with this effect.

³¹ See Deutsche Bundesbank, Outlook for the German economy – macroeconomic projections for 2018 and 2019 and an outlook for 2020 Monthly Report, December 2017, pp 29-30.

Germany's external position: new statistical approaches and results since the financial crisis

Germany's international investment position (IIP) shows its residents' financial assets and liabilities vis-à-vis non-residents, valued at market prices. It documents and illustrates Germany's external position vis-à-vis the rest of the world. Its importance as a macroeconomic account system has grown since the financial crisis because it highlights external interconnectedness and therefore potential channels of contagion. For this reason, the IIP is also part of the G20 initiative to identify and close data gaps. Germany's net external assets, ie residents' assets minus liabilities vis-à-vis non-residents, in relation to the nominal gross domestic product (GDP), grew from just under 20% at the start of 2007 to around 60% by the end of 2017, with external assets standing at €8,346 billion against liabilities of €6,417 billion. The net external asset position in relation to GDP is an indicator in the European Union (EU) procedure for the prevention and correction of macroeconomic imbalances.

This article presents a three-dimensional account system that examines the changes in Germany's net external assets in an income, instrument and sector account, each capturing specific aspects. The income account reveals Germany's current account surpluses to be the driving force for generating net external wealth, though this was partly offset by negative valuation effects and statistical adjustments. This is why growth in Germany's net external assets failed to keep up with developments in the cumulative current account surpluses from 2007 to 2017; nonetheless, growth was still substantial with an increase of €1,457 billion or around 40 percentage points in relation to GDP.

The instrument account considers the IIP's functional categories of financial assets. It demonstrates the significance of portfolio investment in Germany's IIP. For the first time in over 30 years, residents' holdings of foreign securities are larger than non-residents' holdings of securities issued in Germany. On the one hand, German enterprises and households have strongly invested in this asset class. On the other hand, non-residents have been net sellers of German government bonds since 2015, meaning that the stock of German government bonds within foreign portfolios has fallen by just over a quarter. The launch of the asset purchase programme (APP) in particular is likely to have contributed to this turnaround. In the sector account, enterprises and households recorded the highest increase in assets, thereby remaining the most important net creditor vis-à-vis non-residents. This is followed by the Bundesbank, which has now become the second-largest net creditor sector due to increasing TARGET2 claims. The net external position of monetary financial institutions declined by comparison, and government remained the only net debtor.

Finally, the article presents another newly developed approach that links the IIP database with exchange rate information in order to better explain and model the impact of exchange rate effects, namely the indices for exchange rate effects in the international investment position.

The IIP as an external account system in the European and international context

The German economy's net external assets have increased sharply

The IIP shows all financial assets and liabilities between residents and non-residents, valued using market prices and exchange rates on the relevant reporting date. This means the IIP is a stock account for which the financial account, as a sub-account of the balance of payments, records the corresponding financial flows.¹ Changes in the IIP are the result of financial transactions with non-residents, which are shown in the financial account of the balance of payments, and valuation effects whenever market prices or exchange rates move.² Cross-border holdings of financial assets have risen sharply in recent decades, with claims *vis-à-vis* non-residents significantly outpacing liabilities; on balance, Germany's net external assets rose from just under 20% to around 60% of GDP from the start of 2007 to the end of 2017. When the European monetary union was launched at the start of 1999, Germany had a net foreign liability position.³

A high degree of financial openness

In absolute terms, Germany's net external assets stand at €1,929 billion at the end of 2017. A glance at the gross figures indicates that German creditors hold €8,346 billion

worth of foreign assets, while Germany's liabilities stand at €6,417 billion. As a result, Germany's external assets and liabilities currently add up to four-and-a-half times its GDP. This ratio, which is also used to describe an economy's financial openness, grew fairly steadily until 2012 and has since remained at a high level.

The high level of financial openness also reflects stakeholders' desire for internationally diversified investment. Investors believe that higher external assets reduce a portfolio's vulnerability to national shocks and thereby stabilise earnings prospects. If an ever larger share of German investors' portfolios is made up of foreign investments or denominated in foreign currencies, "home bias" – signifying that the securities portfolios of individual countries usually exhibit a clear preference for instruments of that country⁴ – in portfolio investment declines.

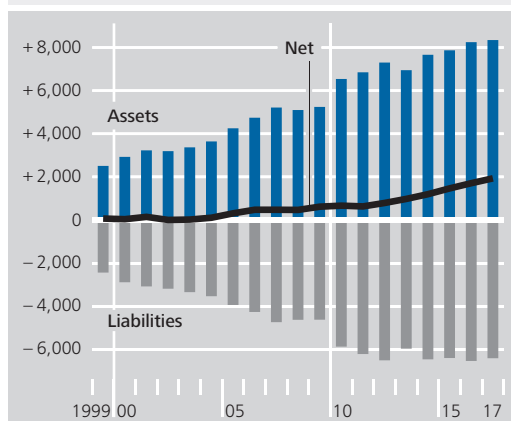
Lower vulnerability to national shocks owing to international diversification

At the same time, however, capital market developments in other countries or exchange rate movements are also having a greater impact on the national economy: cyclical stimuli are increasingly being passed on not only via

Impact of external developments increases with financial integration

Germany's international investment position

€ billion, year-end data



Deutsche Bundesbank

¹ For further information and data on Germany's IIP, see https://www.bundesbank.de/Navigation/EN/Statistics/External_sector/International_investment_position/international_investment_position.html?https=1 For more information on the methodological approach, see International Monetary Fund (IMF) (2009), Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6); and Deutsche Bundesbank, Changes in the methodology and classifications of the balance of payments and the international investment position, Monthly Report, June 2014, pp 57-68.

² Finally, "other adjustments" also cause changes in the IIP. These mainly comprise conceptual and methodological deviations from the balance of payments and may be of a considerable magnitude. Shifts that occur on account of the reallocation of an investment to another functional category or of an enterprise to another sector, for example, are also documented here.

³ For more on Germany's IIP from 1999 to 2007, see Deutsche Bundesbank, Germany's international investment position since the beginning of monetary union: developments and structure, Monthly Report, October 2008, pp 15-32.

⁴ For details on its evolution since the start of the monetary union, see Deutsche Bundesbank, Evolution of home bias in portfolio investment, Monthly Report, October 2008, p 24.

conventional channels, such as international trade links, but also through income and wealth effects, which are determined by level and structural shifts in external assets.⁵ This was observed during the international financial and sovereign debt crisis.⁶ Since the IIP shows not only aggregates and net figures but also the structure of the asset and liability sides, risk and sensitivity analyses can be carried out for the various sectors, for instance by drawing on their capital structure, maturity profile and currency breakdown.⁷ This may provide initial indications of a potential change in the value of assets as a result of market price or exchange rate movements.⁸

G20 Data Gaps Initiative calls for deeper classification by currencies and sectors

The resolutions by the finance ministers and central bank governors of G20 countries in 2009 and 2015 on the Data Gaps Initiative also take account of the greater importance of the IIP as a macroeconomic account system.⁹ The aim of this initiative is to close gaps in economic and financial statistics that became apparent during the global financial crisis. For the IIP, each of the G20 countries is requested to supply a breakdown of its asset and liability positions in the most important currencies. In addition, domestic sectors are to be broken down into greater detail than before.

The IIP as a stock statistic supplements analysis of balance-of-payment flows

The persistence of unhealthy macroeconomic developments can be evaluated more comprehensively and reliably by using stock variables than by only considering the underlying flows.¹⁰ It is possible, for example, that a current account surplus and the concomitant transaction-related rise in net claims may be more than offset by negative valuation effects; this may be the case especially for strong revaluations on the financial markets.

The net external position is an indicator in the EU's MIP

The EU's Macroeconomic Imbalance Procedure (MIP)¹¹ therefore includes a limit not only for the current account balance as an external indicator but also for the net external position. If a member state's net external liabilities exceed 35% of GDP, the European Commission will conduct an in-depth analysis. In the past, high

net liabilities in particular have proven to be unsustainable. The reason why no limit has been placed on net external assets is that a high creditor position is not considered, *per se*, to be problematic for a member state or for the functioning of the monetary union.¹²

Three-dimensional account system for changes in the net IIP

Between 2007 and 2017, Germany's net assets *vis-à-vis* non-residents increased by €1,457 billion, or just under 40 percentage points in relation to GDP. In order, first, to analyse the factors underlying this growth, and, second, to examine how it is reflected in the respective

Income, instrument and sector account each highlight different aspects of the IIP

⁵ See J Kearns and N Patel, Does the financial channel of exchange rates offset the trade channel?, in BIS Quarterly Review, December 2016, pp 95-113. The authors point out that the counterbalancing effects of the trade channel may be more than offset by exchange rate effects through high external debt denominated in a foreign currency.

⁶ An overview can be found in P-O Gourinchas and H Rey (2014), External adjustment, global imbalances, valuation effects, in Handbook of International Economics, Vol 4, pp 585-645; and PR Lane and GM Milesi-Ferretti (2014), Global imbalances and external adjustment after the crisis, IMF Working Paper, 14/151.

⁷ See G Bruneau, M Leboeuf and G Nolin (2017), Canada's international investment position: benefits and potential vulnerabilities, in Bank of Canada, Financial System Review, June 2017, pp 43-57; and L Berger-Thompson and B Chapman (2017), Foreign currency exposure and hedging in Australia, in Reserve Bank of Australia, Bulletin, December Quarter 2017, pp 67-75.

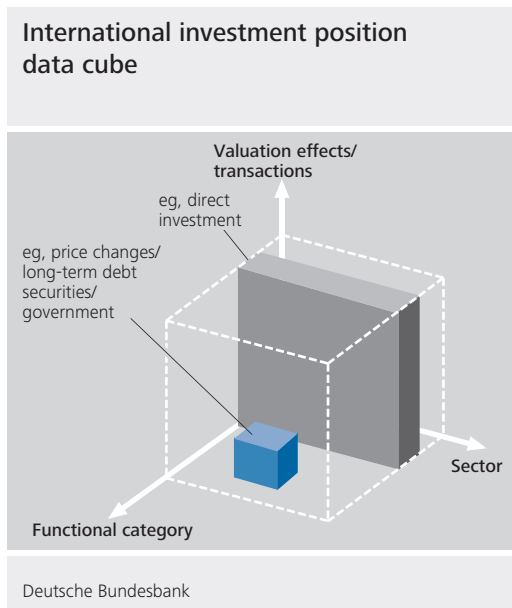
⁸ When interpreting the results, it should be borne in mind that investors may fully or partially hedge against market price or exchange rate risks.

⁹ See IMF and Financial Stability Board (FSB) (2009), The financial crisis and information gaps, Report to the G-20 Finance Ministers and Central Bank Governors, Recommendation No 12; and IMF and FSB (2015), The financial crisis and information gaps, Sixth Progress Report on the Implementation of the G-20 Data Gaps Initiative, Recommendation No II.10.

¹⁰ See IMF (2014), Are global imbalances at a turning point?, World Economic Outlook, October 2014, Chapter 4, pp 115-154.

¹¹ Macroeconomic Imbalance Procedure, Regulation (EU) No 1176/2011 of 16 November 2011 and European Commission (2012), Macroeconomic Imbalance Procedure, Scoreboard for the surveillance of macroeconomic imbalances, European Economy, Occasional Papers 92.

¹² With regard to the growing net international investment position in certain EU countries, the European Commission has pointed out, however, that these high net positions could entail risks, especially valuation losses. See, for example, European Commission (2016), Alert Mechanism Report 2017.



functional categories of assets and the distribution across domestic sectors, the IIP offers a three-dimensional account system. This consistent framework illustrates changes in the net IIP in an income, instrument and sector account. The income account establishes the link to the balance of payments, the instrument account shows how changes in the net IIP are reflected in the various functional categories of financial assets, and the sector account considers the domestic sectors involved.¹³

When combined, these three dimensions provide a comprehensive “data cube”, from which any number of sections can be examined for a variety of analytical purposes. If several attributes are to be combined, “slices” of the cube can be configured. For example, it is possible to cut out the direct investment “slice” and study how growth in the net external position is distributed across domestic sectors in this functional category or what contribution valuation effects make to the overall change in net direct investment. If attributes from all three dimensions are selected, the focus lies on a single small cuboid or data point, such as examining the extent to which market price effects have impacted on the government’s long-term debt securities.

Combining the three dimensions provides an analytical data cube

The cube does not necessarily need to include net values; it is also possible to depict the asset or liability side separately. In principle, this data cube for the IIP can be extended by adding extra features – eg, a currency breakdown and partner countries – to make it a hypercube. The provision of the IIP data cube in a system of internationally harmonised time series keys makes it significantly easier to analyse these data in practice.¹⁴

Data cube can be extended

IIP income account

The income account allows for the macroeconomic context, dissecting the build-up in external assets into several components. The chart on page 33 shows clearly that the positive current account balance between 2007 and 2017 was the driving force behind the growth in Germany’s net external assets. The latter did, however, lag behind the current account surpluses, which added up to €2,173 billion over the entire period.¹⁵ The difference between the cumulative current account surpluses and the rise in net external assets of €716 billion is due to valuation effects,¹⁶ the impact of financial derivatives,¹⁷ and other adjustments, all of

Valuation effects slowed growth in net external assets

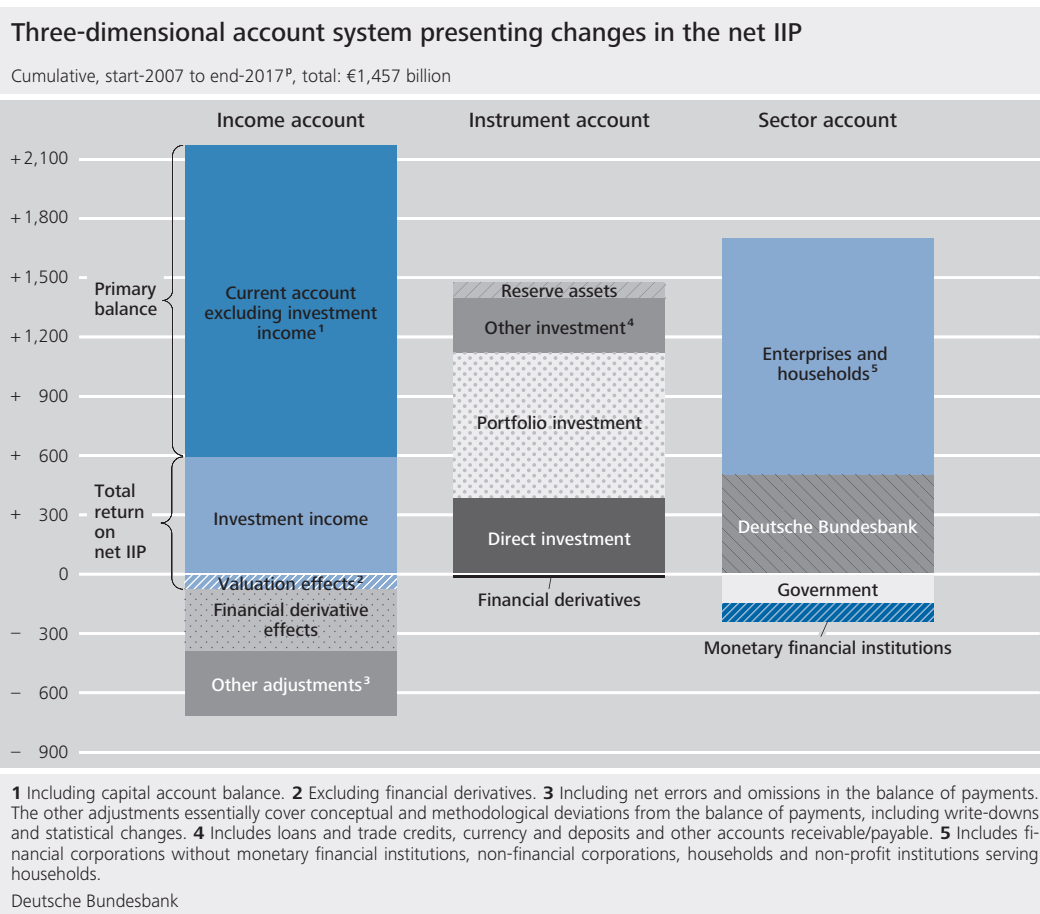
¹³ For a detailed description of this approach, see U Schipper (2017), Transaction and valuation effects on Germany’s international investment position (IIP) – new statistical approaches and IIP trends, IFC Bulletin No 42, pp 99-104.

¹⁴ The Statistical Data and Metadata Exchange (SDMX) enables specific information on the underlying time series to be found at a certain place in the code. This makes it much easier for the user to classify the corresponding stocks and flows, as well as to compare data series from different national and international sources.

¹⁵ Including the capital account balance.

¹⁶ Excluding valuation effects on financial derivatives.

¹⁷ Financial derivatives have a special role for technical and conceptual reasons and are therefore shown separately here. Between 2007 and 2017, their negative impact totalled €312 billion. Around half of this occurred between 2007 and 2011, and this was mainly due to the business activities of German special purpose vehicles. See Deutsche Bundesbank, Certificates and warrants in the balance of payments, Monthly Report, March 2008, pp 26-27. Since 2012, however, the net effect has come from the mostly negative cross-border cash flows, which are largely linked to interest rate swaps that domestic credit institutions conclude in order to hedge fixed-income securities against interest rate risk.



which have a negative sign.¹⁸ The crisis years of 2007, 2008 and 2011 were particularly striking, when Germany's net external assets declined despite surpluses in the current account because the total of the negative effects exceeded the positive balance of payments transactions.

considerable, were in opposite directions and thus largely offset each other during the two periods.

Differing market price effects before and after 2012 – exchange rate effects almost negligible in cumulative terms

Valuation effects,¹⁹ consisting of market price and exchange rate effects, largely balanced each other out (-€75 billion) in the period under review. The setbacks from the crisis years were followed by a countermovement: immediately after the financial crisis began, from the start of 2007 until the end of 2011, the net external position was hit by valuation losses amounting to €208 billion. This has turned around since the start of 2012 as the financial markets have slowly stabilised, and Germany's external assets recorded valuation gains of €133 billion. The different trends during the two periods are primarily due to market price effects. Exchange rate effects played only a minor role on balance because movements in individual years, albeit

The net valuation effects described here are calculated from the difference between the impact of market prices and exchange rates on external assets and liabilities. An increase in liabilities caused by valuation effects reduces the net external position. If there is a broad-based appreciation of the euro, exchange rate effects will cause foreign currency investments which are converted into euro on the balance sheet to decline in value on both sides of the balance sheet. The net effect of an appreci-

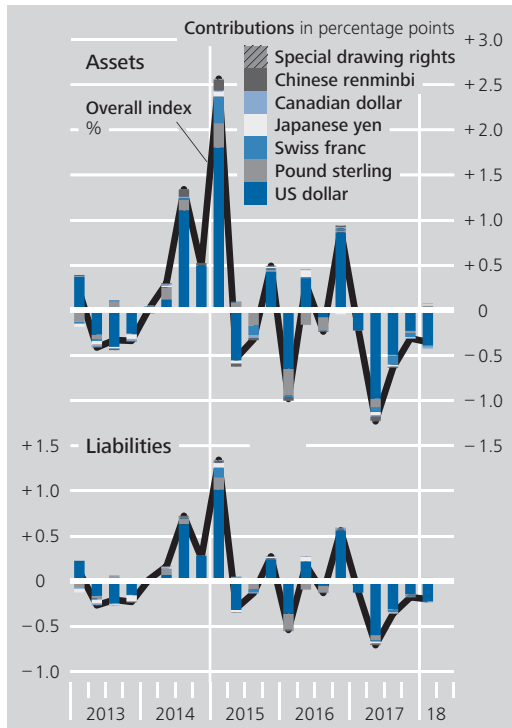
Structure of assets and liabilities determines the net effect of valuation adjustments

¹⁸ This discrepancy was put in the spotlight under the headline "Are Germans bad investors?", prompting charged discussions. See Deutsche Bundesbank, Discrepancy between changes in net foreign assets and the cumulated financial account: an unsuitable indicator of wealth losses, Monthly Report, May 2014, pp 48-50; and R Frey, U Grosch and A Lipponer (2014), Fallstricke bei der Bestimmung von Vermögensverlusten deutscher Anleger im Ausland, Wirtschaftsdienst, 94 (2014) 11, pp 806-812.

¹⁹ Excluding valuation effects on financial derivatives.

Indices of exchange rate effects in the IIP

Quarter-on-quarter change



Deutsche Bundesbank

ation or depreciation therefore ultimately depends on the currency composition of the external assets and liabilities. Since the foreign currency investments on the asset side exceed those on the liability side in Germany's IIP, an appreciation of the domestic currency will result, all other things being equal, in net valuation losses and a decline in the net external position. A similarly nuanced approach, which takes instrument structure into account, has to be taken when considering the net effect of market price changes on the respective asset and liability positions.

For example, in 2017, a record-high valuation adjustment of €123 billion due to exchange rate movements was carried out. Last year, the euro recorded significant gains primarily on account of the favourable economic data in the euro area, after having first dropped to its lowest level in 14 years at the end of 2016. The euro closed 2017 with an increase of around 14% on the US dollar, which is by far the most

Strong euro brought record currency losses in 2017

important foreign currency in Germany's IIP.²⁰ While the euro appreciation resulted in lower valuations of €207 billion on the asset side, downward revisions on the liability side only came to €84 billion, resulting in the aforementioned negative net exchange rate effects which reduced Germany's net external position by over 6% in 2017.

This mirrors the high level of foreign currency exposure in absolute terms, which is defined as the difference between foreign currency assets and foreign currency liabilities. Exposure doubled during the period under review and made up almost half of German GDP by the end of 2017, reaching around €1.5 trillion. Nevertheless, Germany's IIP is seeing a long-term trend decline in the share of foreign currency, not least because a single currency area has emerged with the European monetary union, which has opened up investment potential outside of Germany's economy without the need to take up foreign currency positions. On the asset side, the share denominated in foreign currencies has fallen from 45% to 33% from the start of the monetary union to the end of 2017, while on the liability side this figure fell from 21% to 19%.

Low foreign currency exposure due to the large euro economic area

In order to better explain the impact of exchange rate effects, the Bundesbank has developed the indices of IIP-weighted exchange rate effects (IIE), which are expanded on more fully in the box on pages 36 and 37. These indices, which are based on the IIP's currency composition, show the impact of exchange rates on aggregate positions and on individual functional categories of assets and sectors, and can also be used for sensitivity analyses. The data are available immediately after the end of each quarter and therefore have a three-month lead on IIP statistics. For instance, the indices

Indices of exchange rate effects on the IIP

²⁰ The Bundesbank has published a currency breakdown in euro and foreign currency for Germany's IIP since the 1984 reporting period. Following the requirements of the BPM6 and the Data Gaps Initiative, at the end of 2016 it began to carry out a more differentiated currency breakdown and to list USD, GBP, JPY, CHF, CNY and CAD separately as of the 2012 reporting period.

for the first quarter of 2018 indicate exchange rate losses of 0.35% (around -€29 billion) on the asset side compared to the preceding quarter, and of 0.20% (around -€13 billion) on the liability side. It is therefore already foreseeable that exchange rate effects will reduce the net external position compared to the end of 2017.

Excursus: interpreting valuation effects

Caution is warranted when interpreting valuation effects

As a rule, valuation effects should be interpreted with a degree of caution. Valuations are corrected to comply with the accounting convention that IIP stocks should be reported at market values, where possible. Thus, the values recorded in the IIP do not reflect realised gains or losses. It should also be noted, especially from a sectoral perspective, that net external assets capture only part of the financial assets of that sector. Hedging activities which investors may have used to eliminate valuation risks in full or in part, meaning that open positions are transferred to other domestic or foreign sectors, are not taken into account either. This is information which the IIP either does not collect for conceptual reasons or cannot provide due to the method of data collection. Therefore, the valuation effects shown in the IIP cannot simply be equated with realised losses and gains.

Valuation paradox: if a country is in financial distress, net external assets expand

Particular issues may arise as a result of marking sovereign bonds to market. In the crisis period from 2007 to 2011, the prices of German government bonds increased, which meant that the value of foreign investors' holdings rose by a total of €133 billion. This higher-rated sovereign debt on the liability side alone caused net external assets as reported at the end of 2011 to fall by 5 percentage points in relation to GDP. Meanwhile, the German government's payment obligations remained unchanged as the nominal amount has to be repaid upon maturity. With the opposite sign, this chain of causality can lead to the following valuation paradox in crisis countries. The fur-

ther a country moves towards insolvency, the better its reported net external position becomes. Given that prices for government bonds at risk of default fall, these liabilities are also given a lower valuation in the IIP, although the crisis country's payment obligations remain unchanged.²¹

Investment income under the IIP income account

The income account also decomposes the change in net external assets into the current account balance excluding investment income (external primary account balance) on the one hand and the total return on net IIP on the other. The latter is defined as valuation effects plus the balance of cross-border investment income. In order to depict investment income as part of the change in net external assets, the income account uses the correlations in the balance of payments. Instead of defining the changes in net external assets as the sum of the financial account balance, valuation effects, and other adjustments, as per usual, a link is established to the current account balance, with the balance of cross-border investment income contained therein being presented separately.²²

Distinction between total return and primary balance

Investment income is shown separately as it is determined by the volume and structure of outstanding external assets and liabilities. The same applies to valuation effects. Taken together, investment income and valuation effects can be interpreted as the total return on individual IIP positions or net external assets. The income account thus shows the feedback loop between financial stocks and the resulting

Feedback loop between external assets and investment income

²¹ For debt securities, there is already a recommendation in place that nominal values be reported as supplementary information. See IMF (2009), Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6), p 125.

²² This rearrangement is possible because the following applies to the balance of payments' sub-accounts. Financial account balance = current account balance + capital account balance + net errors and omissions. See the chart on p 33 and the explanations provided there.

New indices of exchange rate effects in the international investment position

A notable percentage of financial assets and liabilities in Germany's international investment position (IIP) are denominated in a foreign currency (see page 34 of the main article). Exchange rate movements therefore have a major impact on trends in the IIP. A newly developed index concept now allows more in-depth analyses. The indices of IIP-weighted exchange rate effects (IIE) show how the value of external assets changes solely as a result of exchange rate movements.

IIE are highly granular and allow conclusions to be drawn about the impact of changes in the prices of individual currencies on asset and liability holdings broken down by sector and instrument. The concept is based on a system of weighted exchange rates. The index system weights are based on IIP stocks broken down by currency, sector and asset class and listed separately for assets and liabilities.¹ The choice of disaggregated weighting units permits aggregation at any level along the dimensions currency, sector and asset class.

The calculation of the IIP-weighted indices of exchange rate effects encompasses the US dollar, pound sterling, Japanese yen, Swiss franc, Canadian dollar and Chinese renminbi. In addition, the weighting matrix must take into account the large percentage of euro on the asset and liability sides, which dampens the effect of exchange rate movements on the aggregate market value of foreign assets.

The weighting matrix further includes the asset classes reported on in the IIP (see page 38). In a sectoral account, the weighting matrix is based on the core sectors outlined in the IIP (see page 39), with financial

corporations broken down into the sub-sectors central bank, credit institutions, money market funds and other financial corporations.

The weighting of the IIE is based on the most recent data available, as abrupt transaction-related adjustments of asset or liability positions in the IIP cannot be ruled out. On the basis of the quarterly IIP data, which has been available broken down by currency since the end of 2012, a chained Laspeyres index for exchange rates is constructed. The chain links are as follows:

$$(1) IE_t = \sum_k \sum_i \sum_s \frac{E_t^k}{E_{t-1}^k} g_{t-1}^{k,i,s},$$

where

$$g_{t-1}^{k,i,s} = \frac{E_{t-1}^k A_{t-1}^{k,i,s}}{\sum_k \sum_i \sum_s E_{t-1}^k A_{t-1}^{k,i,s}},$$

with

IE_t the link of the Laspeyres exchange rate index at the end of the quarter t .

E_t^k the exchange rate of currency k ($k = 1, \dots, K$) vis-à-vis the euro at the end of quarter t . Exchange rates are cited using the direct quotation method (eg US\$1 = €0.88). There is no exchange rate conversion for any euro-denominated assets, ie $E = 1$.

¹ By contrast, the trade-weighted nominal effective exchange rates that the Bundesbank has been calculating since the early 1970s condense developments in bilateral exchange rates into a single index, which can be used, for example, to measure the impact of exchange rate movements on a country's or a currency area's price competitiveness (see Deutsche Bundesbank, Adjustments in the calculation of effective exchange rates and indicators of price competitiveness in August 2013, Monthly Report, August 2013, pp 50-52; and Deutsche Bundesbank, Recalculated weights for indicators of the German economy's price competitiveness, Monthly Report, August 2017, pp 41-43).

$A_{t-1}^{k,i,s}$ the holdings of asset class i mapped to sector s , denominated in currency k at the end of the previous quarter $t-1$.

$g_{t-1}^{k,i,s}$ the weight at the end of the previous quarter $t-1$, where the euro-denominated external assets stand for the respective currency-sector asset class combination in relation to the foreign assets as a whole.

In order to obtain an index (including for developments over several periods), the quarterly links are chain-linked through continuous multiplication:

$$(2) \text{ IIE}_t = 100 \cdot \text{IE}_1 \cdot \text{IE}_2 \cdot \dots \cdot \text{IE}_t \\ = \text{IIE}_{t-1} \cdot \text{IE}_t$$

IIE_t refers to the index value at time t , where the value for the fourth quarter of the initial year is made to equal 100 as the reference period (ie 2012 Q4 = 100). The term in equation (2) after the second equals sign indicates that a current index value is created by multiplying the previous value with the current chain link. An increase in the IIE represents a stock-weighted depreciation of the euro and thus an increase in asset or debt levels after conversion into the single currency.

The IIE have similar characteristics to the better-known chain indices of the annual-overlap or monthly-overlap type, which are used, for instance, to calculate price-adjusted gross domestic product or harmonised consumer prices. The chain-linked use of weights may cause statistical distortions in the form of "path dependencies"² over the longer term, as a result of which it may no longer be possible to clearly distinguish between exchange rate and structural effects in international assets.

As when analysing other chain indices, there are programmes available for the IIE³ that allow the growth contributions to the exchange rate-related percentage change in an aggregate to be calculated. For example, the sectors' arithmetic growth contributions to the percentage change in portfolio investment as a whole can be determined.

The IIE allow exchange rate-related wealth effects, which the IIP would only show with a lag of three months, to be approximated in a timely manner based on current exchange rates. Methodologically advanced risk analyses can also be carried out. In addition, sensitivity analyses can be used to identify individual sectors which would, in certain scenarios, be majorly affected by (assumed) changes in the prices of individual currencies. In addition, methods for analysing time series can be applied to the indices, for example to measure the exchange rate-related volatility of the market value of individual asset holdings.

When interpreting the IIE as a measure of risk for changes in the value of assets in individual domestic sectors as a result of exchange rate movements, it should be noted, however, that the hedging operations which financial market players use to reduce their currency risk are not taken into consideration. Moreover, no account is taken of individual enterprises' option of offsetting their exchange rate risk within an international group.

² See United Nations et al, System of National Accounts 2008 (2008 SNA), No 15.43, p 300.

³ The program KIXCC, which was developed for quarterly chain-linking, is also available for use by non-Bundesbank users.

income-relevant revenue or expenditure. The external primary account balance, which does not depend on the volume and structure of the current IIP, is captured separately. It encompasses the current account balance less investment income plus the quantitatively negligible capital account balance.²³

Investment income balance

In cumulated terms, the balance of investment income over the reporting period from 2007 to 2017 came to €595 billion. A significant part of the total increase in net assets of €1,457 billion is thus attributable to the remuneration of past current account surpluses. Surpluses thus contain a self-perpetuating element as they are usually linked to the accumulation of yield-bearing assets, and the resulting capital gains, in turn, have a positive effect on the current account. However, since 2012, growth in net investment income has no longer kept pace with that of net external assets. The unchanged positive accumulation effects on net investment income have been offset by negative yield effects.²⁴ Hence, the downward trend in net investment income as a percentage of net IIP can be explained, first, by the yield level effect, reflecting the global decline in interest rates. Second, the continued positive yield differential has slightly declined as the yields on German external assets fell more sharply than those on external liabilities. This development was particularly pronounced in the case of long-term debt securities, where the counter-movement to the previously high spreads on the bond markets as a result of the crisis is likely to have played a role.

■ IIP instrument account

Portfolio investment exhibits the highest growth ...

The IIP instrument account shows which investment and financing instruments account for the net increase, broken down into the five functional categories direct investment, portfolio investment, financial derivatives, other investment, and reserve assets, which are each broken down further. The individual investment categories feature different investment targets,

payment obligations and potential return, but also different exposures to loss. Over the entire period from 2007 to 2017, the strongest growth was recorded in portfolio investment (+€738 billion), followed by direct investment (+€382 billion) and other investment (+€273 billion). The expansion in reserve assets (+€82 billion) was mainly due to a higher valuation for gold holdings. The net stock of financial derivatives dropped slightly (-€18 billion).

The growth in portfolio investment has been very uneven. Between 2007 and 2011, net portfolio investment initially fell by €330 billion, mainly due to valuation adjustments. In the subsequent period, it recorded a very pronounced increase. With a, mainly transaction-related, increase in the amount of €1,068 billion, portfolio investment accounted for over 80% of the growth in net external assets during this period. Against this backdrop, the balance of portfolio investment moved into positive territory for the first time in more than 30 years during 2015.

The development in portfolio investment is, not least, attributable to changes in the ownership structure of long-term German government

... and is responsible for the uneven distribution of IIP growth over time

²³ The analysis of public budget deficits, too, makes a distinction between interest payments on outstanding debt and the primary balance. This is done, inter alia, in the context of sustainability calculations to determine how high the primary surplus needs to be given a certain interest burden in order to stabilise the debt-to-GDP ratio. The European Commission conducts similar sustainability analyses for IIP and the current account balance, where, in a next step, the current account balance, which is defined as the benchmark, could be broken down further into the balance of investment income and the external primary balance. See European Commission (2017), Alert Mechanism Report 2018, p 7; and European Commission (2016), The macroeconomic imbalance procedure. Rationale, process, application: a compendium, European Economy, Institutional Paper 39, November, p 86.

²⁴ For details on the breakdown of the change in investment income into an accumulation effect and a yield effect, as well as an analysis of investment income from 1999 to 2014, see Deutsche Bundesbank, Effects on the cross-border investment income balance: asset accumulation, portfolio shifts and changes in yields, Monthly Report, March 2015, pp 81-85; and TA Knetsch and AJ Nagengast (2016), On the dynamics of the investment income balance, Deutsche Bundesbank Discussion Paper, No 21/2016. For developments at the current end, see Deutsche Bundesbank, German balance of payments in 2017, Monthly Report, March 2018, p 24.

*Turnaround:
 non-residents
 net sellers of
 German govern-
 ment bonds*

debt securities. Attracted by the excellent credit rating and outstanding liquidity of Federal bonds, non-resident investors have generally been net buyers year after year. However, the statistics show that, since 2015, non-resident investors have shorted Federal securities on balance. As a result, the government's reported external debt through this instrument has dropped by €312 billion, or around one-quarter, over the past three years. Since March 2015, the one-off effect of the Eurosystem's public sector purchase programme (PSPP) has been a major factor in this development.

■ IIP sector account

*IIP sector
 account looks at
 domestic sectors*

The IIP sector account shows sectoral net IIP growth, broken down into the domestic core sectors government, central bank, monetary financial institutions (MFIs),²⁵ financial corporations without MFIs, as well as the sector non-financial corporations, households and non-profit institutions serving households.²⁶ This helps identify both structural changes in the individual sectors' asset and liability positions and sectoral shifts. Here, too, the financial crisis has clearly left its mark.

*MFIs reduce
 their exposures*

Since the beginning of 2007, MFIs have reduced their net position *vis-à-vis* non-residents by €95 billion; overall, their net external assets had contracted to €294 billion at the end of 2017. Even more pronounced than the decline in the net position was the drop in gross figures due to the deleveraging process in the wake of the financial crisis, namely by €359 billion on the asset side and €253 billion on the liability side.²⁷ In recent years, the decline in MFIs' net external assets has been related to the impact of the APP. There was a decline, in particular, in the net position of MFIs in other investment, which reflects deposits of foreign commercial banks domiciled either inside or outside the euro area with credit institutions domiciled in Germany. These deposits increased, *inter alia*, as a result of non-resident investors selling their securities to the Eurosystem – ie not only to the

Bundesbank, but also to other national central banks and the ECB – sales which are settled by commercial banks domiciled in Germany.²⁸

In such cases, the deposits of foreign commercial banks represent a counterpart to the Bundesbank's increased TARGET2 claims on the ECB. All in all, the Bundesbank's net external assets rose by €502 billion between 2007 and 2017, in particular due to the increase in TARGET2 claims. With net external assets worth €471 billion at the end of 2017, the Bundesbank is the second-largest domestic net creditor sector, after it had been a net borrower at the beginning of the reference period.

*Bundesbank is
 now the second-
 largest net
 creditor vis-à-vis
 non-residents*

The largest net creditor by far, however, is the enterprises and households sector, which saw its net external assets expand by €1,197 billion from early 2007 to €1,981 billion at the end of 2017. At €1,845 billion, the sub-sector financial corporations without MFIs accounts for the bulk of this position, including mutual funds, insurers, and pension funds. In view of the anticipated population ageing in Germany, this position can mainly be attributed to the fact that investors are making provisions for their future financing needs.

*Enterprises and
 households
 sector by far the
 largest net
 creditor*

These corporations are chiefly invested in foreign shares and debt securities. Around 80% of their net external assets are in the portfolio investment category, which is particularly affected by market price developments in the equity and bond markets. By contrast, the second sub-sector, which includes non-financial corporations, households, and non-profit insti-

*Financial
 corporations are
 heavy buyers
 of foreign
 investment
 instruments*

²⁵ Excluding the central bank.

²⁶ The breakdown into "financial corporations without MFIs" and "non-financial corporations, households and non-profit institutions serving households" was only introduced for the end-2012 report. Previously, these two sectors had been combined under "enterprises and households".

²⁷ Excluding financial derivatives, as these have only been recorded in the IIP since the end of 2010.

²⁸ See Deutsche Bundesbank, The increase in Germany's TARGET2 claims, Monthly Report, March 2017, p 30; and Deutsche Bundesbank, The impact of Eurosystem securities purchases on the TARGET2 balances, Monthly Report, March 2016, pp 53-55.

tutions serving households, mainly acts as a direct investor or represents the destination for foreign equity capital. However, given the high amounts on both sides of the balance sheet (€1,980 billion in assets and €1,844 billion in liabilities), net external assets, at €137 billion, are relatively low.

Government reduced its net debt vis-à-vis non-residents in recent years

The sole net debtor *vis-à-vis* non-residents is the government sector. Although general government increased its liabilities overall during the period starting in 2007 by a further €146 billion to €818 billion at the end of 2017, the picture has changed over the last three years. The combination of rising budget surpluses and the Eurosystem's securities purchases under the APP has caused German government debt to fall significantly *vis-à-vis* non-residents.

matured into a comprehensive database, enabling the Bundesbank to fulfil the reporting requirements of European and international organisations in terms of IIP data. The IIP now provides detailed data relating to the nature of stock changes, functional asset category, sector, currency, and partner country, opening up a broad scope for analyses across a wide range of issues. The three-dimensional concept presented here, and applied by way of example, expands the analytical framework for IIP stock variables by enabling a consistent and comprehensive overview of the changes in external assets and liabilities in terms of their determinants, investment structure, and distribution across the domestic sectors. Furthermore, the indices of IIP-weighted exchange rate effects provide opportunities for data analysis, not least as part of sensitivity analyses.

■ Conclusion

As a result of implementing the methodological manual BPM6, the German IIP statistics have

Current regulatory developments in the field of payments and in the settlement of securities and derivatives

The field of payments and the financial market infrastructure have evolved considerably in recent years. The Eurosystem has made substantial contributions in this regard with its TARGET2 and TARGET2-Securities payment and settlement systems, which were discussed at length in the Bundesbank's December 2017 Monthly Report. At the same time, however, regulation also has a significant impact on developments in these areas. The backdrop to this is that resilient financial market infrastructures are of major importance owing to their central functions for the financial system and the real economy. In order to ensure the secure settlement of payments as well as securities and derivatives transactions, the principles for financial market infrastructures (PFMI) were adopted by the G20 countries back in 2012. In keeping with these principles, the focus in recent years has consequently been on establishing them in a binding manner for payment systems, central securities depositories and central counterparties. The main subject of the current debate is the revision of the supervisory and regulatory framework for central counterparties that has been in place since 2012. The framework in the European Union currently being discussed envisages a stronger role for central banks and the European Securities and Markets Authority (ESMA), and, in particular, a tighter regime for the supervision of central counterparties in non-EU countries. This aspect has become particularly important in light of the forthcoming withdrawal of the United Kingdom from the European Union. In order to assess possible policy options, the Bundesbank is primarily concerned with the security of payment transactions and the settlement of securities and derivatives transactions. In addition, the recovery and resolution of central counterparties is, in future, to be harmonised throughout Europe by implementing international standards. The requirements for the monitoring of systemically important payment systems have been tightened in order, amongst other things, to counter the mounting threat of cyber crime and to give the supervising central banks new review and evaluation rights. Especially with regard to the increased threat situation, sustained efforts are needed in the area of financial market infrastructures, but also in the financial sector as a whole, to improve cyber resilience. In the EU payments landscape, the regulations are being amended significantly with the implementation of the second Payment Services Directive (PSD2), which pursues the main goal of deepening market integration within the European Union and strengthening competition. In particular, the possibility for account holders to grant third parties access to an account, which is also referred to as "open banking" in the current debate, may be a catalyst for significant structural changes in the payment services market.

Financial market infrastructures and payment services

Principles for financial market infrastructures

In response to the lessons learned from the financial crisis, regulation of the financial markets has been tightened significantly in recent years. In addition to further developing banking regulation, the rules for settling payments as well as securities and derivatives transactions were also revised and toughened. This was based on the principles for financial market infrastructures¹ (PFMI) agreed upon internationally by the G20 countries in 2012, which are also widely recognised beyond these countries. These principles formulate standardised requirements for risk management, administrative structures and the transparency of financial market infrastructures. The latter play a major role in the financial system as they are used, amongst other things, to settle financial transactions. They concentrate risks and can, owing to their central function in the closely intertwined network of the financial sector, become a major contagion channel in crisis situations. The financial market infrastructures (see the chart on page 43) include:

- Payment systems

Participants use these systems to process their payments. In some cases, payment systems are also used by other financial market infrastructures for the purpose of money settlement.

- Central securities depositories (CSDs)

Nowadays, securities are almost always held with CSDs. Investors receive the associated ownership rights via a safe custody account, which is held by the investor's bank at a CSD.

- Securities settlement systems (SSSs)

These are run by CSDs to, for example in the case of a purchase, transfer securities by

book entry from one safe custody account to another with settlement finality.

- Central counterparties (CCPs)

These entities take over the clearing – ie the transmission, reconciliation and netting as well as the risk management – of pending securities and derivatives transactions up until their maturity, interposing themselves between two trading partners. The risk positions associated with clearing are calculated by the CCP in a timely manner and on an ongoing basis and are secured by means of collateral provided by the contracting parties.

- Trade repositories (TRs)²

Trade repositories maintain a centralised and standardised record of transaction and position data for derivatives transactions.

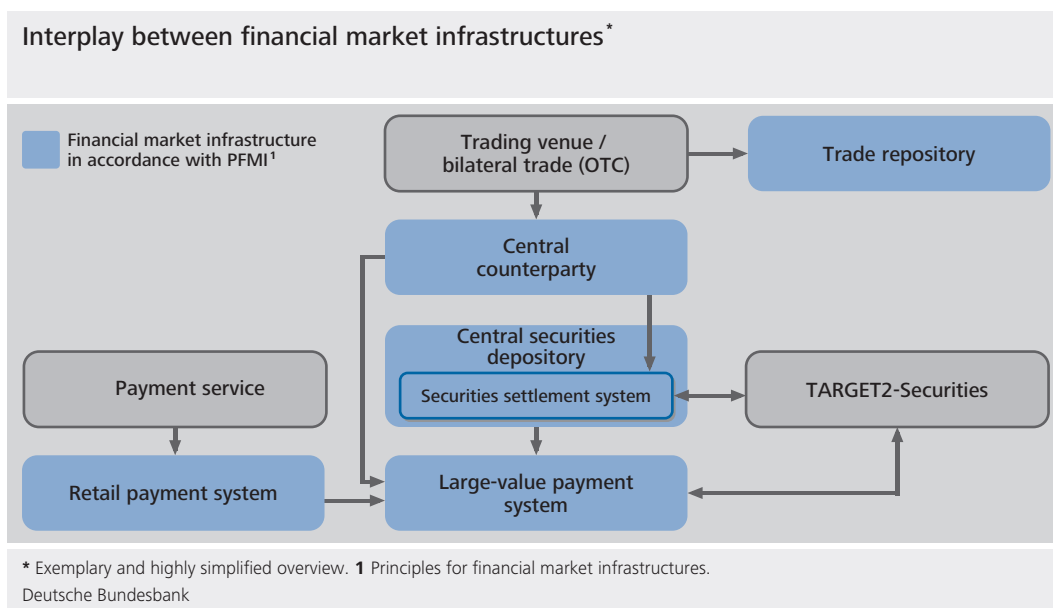
Within the EU, the PFMI have achieved a binding character for certain financial market infrastructures (eg for CCPs, CSDs and systemically important payment systems) through their consistent implementation in the shape of European legislation. The legal framework thus created is constantly being developed further in order to take account of current developments and findings.

In addition to strengthening the security and efficiency of the financial market infrastructures to protect against crises, the legal framework for the provision of payment services is also to be fundamentally revised to promote innovation and consumer rights with the aim of supporting convergence in the European single payments market.

Payment services in the single market

¹ See Deutsche Bundesbank, The new CPSS-IOSCO Principles for financial market infrastructures, Monthly Report, July 2012, pp 33-43 and <https://www.bis.org/cpmi/pub/d101a.pdf>

² The topic of trade repositories is not covered in this article.



Central counterparties

Function and significance of central counterparties

CCPs are a central component of the financial market infrastructure and serve, amongst other things, to mitigate risks in the financial system and to facilitate the settlement of transactions. As a central counterparty, they interpose themselves between the parties to financial transactions that take place at a trading venue (eg a stock exchange) or also outside trading venues (over-the-counter (OTC) transactions). A central counterparty acts as the buyer to the seller and as the seller to the buyer and thus ensures performance of the contract on behalf of both parties. CCPs therefore always have a balanced book under normal business operations, ie for each position assumed by a CCP for a market participant, there is a matching position with another market participant. In this vein, they act as risk managers for their clearing members and only to a lesser degree as risk bearers.³ In terms of risk management, the CCP uses its equity capital only to a lesser extent, instead primarily making use of the resources of its clearing members. These must pledge collateral for the transactions that they conduct (known as initial margins) and pay into a default fund as a supplementary insurance arrangement supported by all members to protect the system as a whole. The use of a CCP not only helps market participants to mitigate their

credit risk exposures to their counterparties, but also allows them to reduce their funding and capital costs by netting countervailing transactions in their overall portfolio.

CCPs usually have quasi-monopoly positions in sub-markets and, being systemically important financial market infrastructures, they cannot be readily replaced. Since the decision made by G20 leaders in Pittsburgh in 2009 to settle all standardised OTC derivatives transactions via CCPs, the importance of CCPs for the functioning of the financial system has increased further.⁴ This is why particular attention is being paid to CCPs at the national, European and international level, and also by the Bundesbank.

Revision of the regulatory framework

For CCPs, the international requirements were transposed into a legally binding regime at the EU level with the regulation on OTC derivatives, central counterparties and trade repositories

EMIR

³ This statement applies at least to losses which may arise in connection with the default of a clearing member.

⁴ See Deutsche Bundesbank, Increased importance of central counterparties, Financial Stability Review 2016, pp 79-90.

(European Market Infrastructure Regulation: EMIR⁵), which came into force on 16 August 2012 as well as with supplementary regulatory technical standards (RTS). With the EMIR, the CCPs in the EU were subject to a uniform supervisory and monitoring framework for the first time. The German CCPs – Eurex Clearing AG and European Commodity Clearing AG – received EMIR authorisation in April and June 2014, respectively. In addition to articulating supervisory requirements for CCPs, the EMIR also legally enshrines, amongst other things, the tasks and cooperation of the authorities in the supervision and authorisation of CCPs, the obligation to settle certain OTC derivatives via CCPs (clearing obligation) and also reporting obligations for derivatives contracts. The EMIR also provides recognition regimes for CCPs domiciled in non-EU countries wishing to offer services in the EU. One of the conditions for recognising such CCPs is that the non-EU country's supervisory and regulatory framework is equivalent to the EMIR.

*EMIR review
and REFIT*

Back in 2015, the European Commission began reviewing the regulatory framework, as envisaged in the EMIR. This review is also part of the European Commission's Regulatory Fitness and Performance Programme (REFIT) which aims to simplify European legislation and, in particular, to reduce bureaucracy and cut the costs to society as a whole.

Following the completion of this review, the European Commission put forward a proposal in May 2017 for a regulation to amend the EMIR.⁶ This proposal foresees just minor changes on balance. One is to simplify the existing rules on the suspension of the clearing obligation and to allow them to be applied more quickly than in the past, if necessary. Another is to create incentives for central clearing and improve access to CCPs. The proposal also aims to ensure greater transparency surrounding the calculation of collateral requirements by CCPs.

Proposals regarding the supervision of non-EU CCPs and the amendment of the CCP supervisory regime for EU CCPs

Furthermore, the importance of the CCP business has increased significantly, owing, *inter alia*, to the obligation to clear standardised OTC transactions via CCPs. On account of the global market structure, a concentration of CCPs in non-EU countries cannot be ruled out. The current recognition procedure no longer takes sufficient account of this. The problem of overseeing and supervising non-EU CCPs in Europe is being accentuated in particular by the forthcoming withdrawal of the United Kingdom from the EU ("Brexit"), as a large proportion of OTC interest rate and credit derivatives are currently cleared via CCPs in London.

EMIR II

As things currently stand, UK CCPs still fall within the supervisory and regulatory perimeter laid down by the EMIR. Following the effective withdrawal of the United Kingdom from the European single market, a situation could arise where UK CCPs are automatically declared to be non-EU CCPs, unless subsequent arrangements are made in the meantime. Transactions conducted in the United Kingdom would then fall outside the common European supervisory and regulatory framework. This was one of the reasons why the European Commission put

⁵ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories.

⁶ Proposal of 4 May 2017 for a regulation of the European Parliament and of the Council amending Regulation (EU) No 648/2012 concerning the clearing obligation, the suspension of the clearing obligation, the reporting obligations, the risk mitigation techniques for OTC derivatives contracts not cleared by a central counterparty, the registration and supervision of trade repositories and the requirements for trade repositories.

forward a further proposal in June 2017 for a revised version of the EMIR (EMIR II).⁷

Non-EU CCPs

The European Commission proposes making the future supervision of non-EU CCPs by EU authorities contingent on their classification in terms of systemic importance. In future, for example, the requirements for a non-EU CCP should vary according to its degree of systemic importance for financial stability in the EU as a whole or in one or more member states. For non-systemically important non-EU CCPs ("Tier 1" CCPs), the current procedure for assessing the equivalence of the supervisory and regulatory framework with the EMIR will continue to apply. However, systemically important non-EU CCPs ("Tier 2" CCPs) would have to meet key EMIR requirements and submit to extensive monitoring and information exchange rights of the European Securities and Market Authority (ESMA). A legal opinion should be available confirming that the ESMA is able to enforce these rights in the non-EU country. In the case of substantially systemically important CCPs, the European Commission could also, on the ESMA's recommendation, adopt an implementing act according to which such a CCP would only be allowed to offer its services within the EU if it is authorised to do so and is thus also domiciled in the EU ("location requirement"). This may be necessary in particular if the risks which a substantially systemically important non-EU CCP presents to financial stability in the EU or in an EU member state would not be sufficiently mitigated despite compliance with strict prudential provisions. From the Bundesbank's perspective, the three-stage approach of the European Commission generally provides an appropriate framework to take account of the varying systemic importance of CCPs.

Strengthening of ESMA should be viewed critically

The organisation of intra-European supervision is another area where the European Commission is proposing two major changes: strengthening the ESMA's role in the supervision of EU CCPs, and involving the relevant central bank of issue (CBI) to a greater degree. For ex-

ample, the national competent authorities for CCPs – in Germany the Federal Financial Supervisory Authority (BaFin) – would, in future, have to obtain the ESMA's approval for important decisions in connection with the supervision of CCPs. It is also proposed that a CCP Executive Session be set up within the ESMA, which would be responsible for general tasks related to CCPs and the supervision of EU CCPs and non-EU CCPs. From the Bundesbank's perspective, these proposals should be viewed critically as the approach adopted so far – besides only coming into force just a short time ago – has by and large proven its worth, and the innovations are likely to complicate, rather than simplify the supervisory regime.

The European Commission's proposal, on the other hand, which foresees giving the central bank of issue a greater role in future in terms of authorisation and ongoing supervision, is to be viewed differently. Since negative effects on the smooth functioning of payment systems, on the liquidity management of clearing participants and on the general liquidity situation on the money market need to be prevented, the greater say this proposal would give the CBI would have more of a bearing on the CCP's risk management. The Eurosystem already assumes the role of the CBI for the euro, mainly through participation in the existing EMIR colleges of supervisors for CCPs. For CCPs domiciled in the euro area, the Eurosystem is normally represented by the national central bank in the CCP's home country. For CCPs outside the euro area, this task is performed by the European Central Bank (ECB). In both cases, the CBI's decision-making process for the euro is carried out via the Eurosystem's decision-making bodies, the decisions of which are binding for the respective representative. Accordingly, the Bundes-

⁷ Proposal of 13 June 2017 for a regulation of the European Parliament and of the Council amending Regulation (EU) No 1095/2010 establishing a European Supervisory Authority (European Securities and Markets Authority) and amending Regulation (EU) No 648/2012 as regards the procedures and authorities involved for the authorisation of CCPs and requirements for the recognition of non-EU CCPs.

*Rights of the
Eurosysteem and
the ECB*

bank represents the Eurosystem as the CBI in dealings with the German CCPs Eurex Clearing AG and European Commodity Clearing AG.

In order for the Eurosystem to be able to perform its role as a central bank of issue in accordance with the proposed revised version of the EMIR with legal certainty, the Governing Council of the ECB decided to issue a recommendation to the European Parliament and the Council of the European Union to amend the Statute of the European System of Central Banks (ESCB) and of the ECB⁸ in order to provide a clear legal basis for regulatory competences in the area of central clearing for financial instruments.

Recovery and resolution of CCPs

*Recovery and
resolution of
CCPs*

The increased importance of CCPs makes it all the more crucial to ensure that CCPs are secure and resilient in crisis situations. The minimum standards for CCP risk management laid down in the EMIR are generally designed to ensure that a CCP can cover the losses from the simultaneous default of the two clearing members with the largest risk positions under extreme but plausible market conditions. For this purpose, CCPs hold prefunded resources in the form of margins and a default fund. For more intense stress situations, there are currently only international standards and guidelines in place, according to which such losses must be covered but not prefunded. There are no statutory EU provisions, however. A forthcoming EU regulation for a recovery and resolution regime is to close this regulatory gap.⁹ Both the recovery and the resolution of a CCP are intended to safeguard financial stability and to ensure that the critical functions of the CCP are maintained, while minimising the use of public funds to protect taxpayers to as great an extent as possible. Regular insolvency proceedings, on the other hand, could jeopardise these objectives, since they would primarily serve to satisfy the insolvency creditors.

The viability of a CCP as a going concern can be jeopardised by two types of risk. The first involves losses from the default of clearing members which are unable to meet their financial obligations (default losses). The second relates to other losses such as those arising from operational or investment risks (non-default losses).

If a clearing member were to default, this would cause an imbalance in the CCP's otherwise matched book.¹⁰ This is generally why position allocation tools and loss allocation tools are needed. Position allocation tools may include the voluntary participation of clearing members in auctions or bilateral sales of the defaulting clearing member's positions. A further, enforceable position allocation tool is the close-out of positions of non-defaulting clearing members holding counter positions to the defaulting clearing member (tear-up or termination). Such close-out operations may result in losses that are not covered by the collateral¹¹ furnished by the defaulting clearing member or the additional amount of the CCP's dedicated own resources. Certain position and loss allocation tools are already provided for today as part of the regular default management framework, above all the use of resources from the prefunded default fund.¹² Other instruments are proposed in the European Commission's draft

*Risks to the
viability of a CCP
as a going
concern*

⁸ Recommendation for a Decision of the European Parliament and of the Council amending Article 22 of the Statute of the European System of Central Banks and of the European Central Bank (ECB/2017/18).

⁹ Proposal of 28 November 2016 for a regulation of the European Parliament and of the Council on a framework for the recovery and resolution of central counterparties and amending Regulations (EU) No 1095/2010, (EU) No 648/2012 and (EU) No 2015/2365. On 19 December 2017, a compromise proposal was published by the European Council: <http://data.consilium.europa.eu/doc/document/ST-15432-2017-INIT/en/pdf>. On 31 January 2018, a report was published by the European Parliament: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2018-0015+0+DOC+XML+V0//EN>

¹⁰ Losses not arising from the default of a clearing member can often only be covered by CCPs using their own funds.

¹¹ Initial margin and clearing member's default fund contribution.

¹² Known as the "default waterfall" in accordance with the EMIR.

Default waterfall and examples of measures for the recovery of a central counterparty (CCP)	
Default waterfall (prescribed by EMIR)	Position allocation tools: – Hedging of positions – Auctions and sale of positions on the open market Loss allocation tools: – Margins posted by the defaulting clearing member – Defaulting clearing member’s default fund contribution – CCP’s dedicated own resources – Non-defaulting clearing members’ default fund contributions
Additional measures from the recovery plan (agreed between the CCP and clearing members)	Position allocation tools: – Closure of positions (termination, full/partial tear-up) Loss allocation tools: – Cash call – Reduction in the CCP’s payment obligations (haircut)
Deutsche Bundesbank	

regulation, including the possibility of allocating losses by requesting cash calls from surviving clearing members (assignments) or applying haircuts to the variation margin gains of those clearing participants receiving payments from the CCP (gains based haircutting).

The table above provides an overview of the resources available to a CCP to cover losses associated with a member’s default pursuant to the EMIR as well as possible recovery measures should these resources prove insufficient.

The draft regulation stipulates that European CCPs will have to submit recovery plans in future which, in particular, include the identification of critical functions, the stress scenarios, a description of the recovery tools and the criteria for triggering their deployment.

While a default by a clearing member can normally be managed by a CCP autonomously, for the most part, as part of its risk management framework, implementing the more extensive measures needed for recovery, though likewise a matter for the CCP itself to handle, requires greater involvement on the part of the authorities. According to the draft regulation, recovery planning will involve the CCP’s competent supervisory authority and a college whose members are expected to include, *inter alia*,

the supervisory and resolution authorities for major clearing members. Not only would this take into account the interests and capabilities of the clearing members; it would also underline that responsibility for having adequate levels of risk provisioning lies with the clearing members and their respective competent authorities.

The resolution of a CCP, on the other hand, would be carried out by the competent resolution authority. The tools used for this purpose are, in some cases, identical to those used for a recovery. In addition to these, it is envisaged that the resolution authorities will have further tools at their disposal, such as the sale of business and bridge CCP tools.

Resolution of a CCP

Recovery plans and role of authorities

Central securities depositories

Central securities depositories (CSDs) provide important services for banks with regard to the safe custody, administration and settlement of securities which indirectly benefit banks’ customers. In the European Union, there are 28 national and two international CSDs. The oversight policy framework for CSDs prescribed by the international requirements is currently undergoing a major overhaul as a result of the

Central Securities Depositories Regulation

Central Securities Depositories Regulation (CSDR)¹³, which largely came into force in September 2014, and supplementary legislation at the European level. Much like the EMIR, the CSDR transposes the principles for financial market infrastructures into a single European supervisory and oversight regime for CSDs. In some respects, particularly in the area of settlement discipline, the CSDR even goes beyond the international requirements in terms of its content.

*Authorisation
under the CSDR*

In a reflection of the single European authorisation process which already exists for central counterparties under the EMIR, the CSDR now also establishes a similar arrangement for CSDs, according to which the CSD services defined in the CSDR are to be reviewed and evaluated in terms of risk. After the corresponding secondary legislation at the European level entered into force on 30 March 2017, CSDs had until 30 September 2017 to submit requests for authorisation. In Germany, Clearstream Banking AG Frankfurt (CBF) submitted its authorisation request in good time to BaFin – the competent national supervisory authority for securities. In formal terms, once BaFin has finished checking this request for completeness, it is to forward all the documents to the Bundesbank's oversight function, which then has up to three months to issue its opinion. In practice, BaFin and the Bundesbank liaise closely on this task, which includes preparing and checking the completeness of authorisation requests and reviewing their contents. Since CBF also has a banking licence, the Bundesbank is involved in this cooperative national supervisory and oversight regime in its function as a banking supervisor as well.

*Eurosystem's
CBI function*

As the euro ranks among the most important settlement currencies for the national CSDs located in the euro area, the Eurosystem, in its CBI function, is also to be involved in the authorisation processes for CBF alongside the Bundesbank. The Bundesbank will represent the Eurosystem as the CBI in dealings with CBF in much the same way as it does in matters of

CCP supervision. Within the Eurosystem, however, the Bundesbank will be bound by the rules of the Eurosystem's decision-making bodies in this respect. The Eurosystem's status as the CBI has ramifications beyond the authorisation process. Given that any monetary policy operations between banks and the Eurosystem have to be secured and the marketable assets either stored with or transferred to a CSD, the Eurosystem is an important user of the settlement services provided by CSDs. To date, the Eurosystem has carried out independent reviews and evaluations of the securities settlement systems operated by CSDs from a user's perspective. These will be discontinued in the foreseeable future as their content overlaps with the provisions of the CSDR to a large extent. It is envisaged that the insights into the risk situation gained through the Eurosystem's CBI role will be used in future to assure the suitability of the CSDs concerned for the Eurosystem's monetary policy operations.¹⁴

From a legal perspective, the TARGET2-Securities (T2S) platform¹⁵ operated by the Eurosystem is neither a CSD nor a securities settlement system, which means that it does not fall within the immediate scope of the CSDR. As a technical platform for securities settlement in central bank money, T2S does provide central services for participating CSDs, however. The indirect impact of this is that T2S must enable participating CSDs to comply in full with the CSDR requirements.

CSDR and T2S

Established by the European Commission in 2016, the European Post-Trade Forum (EPTF) is expected to play an important role in removing

EPTF

¹³ Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012.

¹⁴ In this context, it was also necessary to make modifications to the Guideline on the implementation of the Eurosystem monetary policy framework, with the amendments applying from 18 April 2018. See Article 2 of Guideline ECB/2018/3 of 7 February 2018.

¹⁵ For more information, see Deutsche Bundesbank, The Eurosystem's financial market infrastructure – origin and future set-up, Monthly Report, December 2017, pp 69-88.

any remaining post-trade barriers to the integration of European financial markets and the full implementation of a European capital markets union.¹⁶ The expert group's report of 15 May 2017 discusses the "Giovannini barriers"¹⁷ in greater detail and provides an overview of lingering and newly identified barriers. Building on this report, the EPTF carried out a public consultation from 23 August until 15 November 2017 to identify trends in post-trade services, dismantle market barriers and better manage existing risks. The ultimate objective of all of these efforts is to make the European post-trade landscape even more efficient, more competition-oriented and, above all, safer. Another topic on the EPTF's agenda is how new technologies (eg blockchain) and the services provided by innovative FinTech companies impact on securities settlement.

Systemically important payment systems

SIPS Regulation

In July 2014, the ECB exercised its authority to issue regulations in the area of payment systems oversight¹⁸ for the first time. The Regulation on the oversight requirements for systemically important payment systems (SIPS Regulation)¹⁹ governs responsibilities, rights and obligations in the oversight of systemically important payment systems. Like the CSDR, the SIPS Regulation goes beyond the international standards in terms of its requirements. For instance, systemically important payment systems are expected to ensure that final settlement takes place in central bank money at the end of the day.

Systemic importance and tasks of oversight authorities

Systemic importance is measured here using a combination of different criteria: the value of the payments settled, market penetration, the scope of cross-border activity, and use by other financial market infrastructures (see the chart on page 50). Once a year, the Eurosystem conducts a review to determine which payment systems are considered systemically important within the meaning of the SIPS Regulation and

nominates a competent oversight authority in the Eurosystem for each system meeting the criteria. This authority is responsible for monitoring the compliance of the payment system with the SIPS Regulation and has the right to obtain information from the system operator as well as to issue recommendations for corrective action if necessary. Should breaches of the Regulation be identified, the ECB has the power to impose sanctions on the system operator.

In August 2014, the Eurosystem classified four payment systems as systemically important (see the table on page 50): TARGET2, the payment system operated by the Eurosystem, and the commercial systems EURO1, STEP2-T and CORE(FR). The Banque de France was nominated as the competent authority for CORE(FR), while the ECB is responsible for the other systems. The Bundesbank assists the ECB with these oversight activities in the Eurosystem. The retail payment system operated by the Bundesbank, on the other hand, does not meet the above-mentioned criteria. It falls into the category of other retail payment systems which only have to observe selected rules in certain areas.

November 2017 saw the ECB Governing Council approve amendments to the SIPS Regula-

Revision of the SIPS Regulation

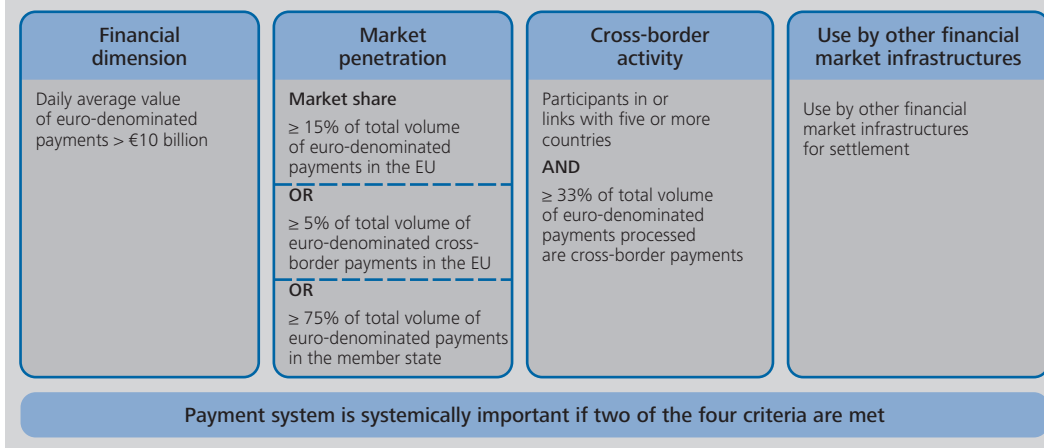
¹⁶ The ESCB only has observer status in the EPFT. The EPFT's members are primarily representatives from various interest groups and independent experts.

¹⁷ The origins of this term can be traced back to the Giovannini Group, a group named after its chairman Alberto Giovannini, which published reports between 2001 and 2003 on cross-border clearing and settlement arrangements in the EU securities markets and identified various barriers (https://ec.europa.eu/info/publications/giovannini-reports_en).

¹⁸ The oversight of payments and settlement systems is a central bank task aimed at promoting security and efficiency. The central bank monitors existing and planned systems, reviews their security and efficiency, and ensures that changes are made where appropriate. For more information, see Deutsche Bundesbank, Payment system oversight – a contribution to the stability of the financial system and the efficiency of payment operations, Monthly Report, January 2004, pp 29-44.

¹⁹ Regulation of the European Central Bank (EU) No 795/2014 of 3 July 2014 on oversight requirements for systemically important payment systems (ECB/2014/28).

Criteria for determining a payment system's systemic importance



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tion²⁰ which mainly comprise more stringent rules for credit and liquidity risk assessment, new cyber resilience requirements and new powers for competent oversight authorities. In future, overseers will be able to appoint an expert to perform an independent review of the system, which means that individual elements can be assessed in detail if, for example, the competent authority itself does not have the necessary expertise. The competent authority can also conduct on-site inspections.

Cyber resilience

The revision also reflects the Eurosystem's focus on the increased threat posed by cyber risks in

recent years, although it does not spell out how cyber resilience is to be achieved in detail. Having said that, the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) already published their *Guidance on cyber resilience for financial market infrastructures*²¹ back in June 2016. This document outlines general objectives for strengthening cyber resilience, and leaves scope for the relevant financial market infrastructure to determine how these objectives may be achieved individually. The key aspects of the guidance document are as follows.

Payment volumes in systemically important payment systems*

2016, total

SIPS	Number of transactions (in millions)	Value of transactions (€ billion)
TARGET2	89.0	485,811.8
EURO1	53.3	41,103.6
STEP2-T	10,419.0	13,169.3
CORE(FR)	14,432.2	5,513.0
Total	24,993.5	545,597.7

* Source: Statistical Data Warehouse of the ECB.

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- Cyber resilience should also receive due attention from the FMI's board and senior management.
- The ability to resume operations quickly and safely following a successful cyber attack should be top priority.
- Cyber resilience should be tested regularly and information on the threat environment analysed.

²⁰ Regulation (EU) 2017/2094 of the European Central Bank of 3 November 2017 amending Regulation (EU) No 795/2014 on oversight requirements for systemically important payment systems (ECB/2017/32).

²¹ See also <https://www.bis.org/cpmi/pub/d146.htm>

- The importance of cyber resilience should be reflected in the company culture.
- Improvements in cyber resilience require the joint efforts of the industry as a whole.

The Eurosystem has since formulated specific oversight requirements for the guidance document's application in the euro area. These requirements are currently open for public consultation.²² They exist not only to assist oversight authorities in reviewing financial market infrastructures, but also to outline detailed steps for infrastructure operators to improve cyber resilience and to encourage the achievement of this objective through dialogue and close cooperation between operators and oversight authorities.

■ Payment services

PSD2 ...

In 2009, the Payment Services Directive (PSD) formed a harmonised legal framework for the settlement of payments in the EU. The revised version of this legislation (PSD2²³) is now expected to be a catalyst for major change in the payment services market.

In its revised form, the PSD2's objectives are, on the one hand, to further deepen market integration within the European Union and help strengthen competition and consumer rights. On the other hand, new rules are expected to add to the security of retail payments, especially with regard to the use of innovative payment methods such as payments made using a mobile phone.

... transposed into national law since January 2018

The PSD2 had to be transposed into national law by 13 January 2018. This was done in Germany, *inter alia*, through amendments to the Civil Code (*Bürgerliches Gesetzbuch*) and the Payment Services Oversight Act (*Zahlungsdiensteaufsichtsgesetz*) via the Act implementing the provisions of the Second Payment Services Directive of 17 July 2017, which entered into force on 13 January 2018.

One key amendment of the PSD2 is the addition of payment initiation services (PIS) and account information services (AIS) to the list of payment services. While providers of PIS initiate customers' credit transfer orders from payment accounts held with their payment service provider (particularly where e-commerce purchases are paid for), providers of AIS make available to their customers consolidated information on one or more of their payment accounts held with other payment service providers (PSPs). With the introduction of the PSD2, the interaction between account servicing payment service providers (ASPSPs) and these third-party providers, which have been in the market since the mid-2000s, is now governed by law.

New payment service providers ...

The inclusion of an additional service provider in the PIS and AIS process chains between the customer and the ASPSP meant that the existing rules needed to be amended and new ones introduced. The resulting changes relate to both the specific rights and obligations which the new entrants have towards their customers, such as the handling of confidential customer data, and also to the rules concerning their relationship with the ASPSPs, particularly with regard to identification requirements and secure communications. The existing transparency and disclosure requirements for PSPs, however, have been left largely unchanged.

... prompt new rules

Lastly, in addition to strengthening consumer rights, the PSD2 also contains a raft of new rules to increase the security in retail payments and improve the protection of customers' financial data. Perhaps the most important of these is the requirement for PSPs to use strong

More security in retail payments

²² See ECB press release of 10 April 2018, ECB launches public consultation on cyber resilience oversight expectations.

²³ See also Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC.

Strong customer authentication

Requirements of strong customer authentication

- Generation of an authentication code based on at least two independent elements from different categories (knowledge, possession, inherence)
- For remote payments, dynamic linking of the authentication code to payment amount and payee

Exemptions from strong customer authentication

- Access to account information without disclosure of sensitive payment data
- Contactless payment transactions at the point of sale of up to €50
- Transport fares and parking fees at unattended payment terminals
- Remote electronic payments to trusted beneficiaries/as recurring transactions (same payee and payment amount)/to the same natural or legal person/of up to €30
- Corporate payments based on secure payment processes and protocols
- Payment transactions posing a low level of risk according to real-time transaction risk analysis

Measures for the protection of personalised security credentials

- Ensure the confidentiality and integrity of authentication codes during all phases of the authentication
- Ensure the confidentiality and integrity of personalised security credentials throughout their lifecycle

customer authentication.²⁴ Strong customer authentication has to be applied when a customer (a) accesses their payment account online, in other words via the internet or a mobile device, (b) initiates an electronic payment, or (c) carries out any action through a remote channel which may imply a risk of payment fraud or other abuse. For remote electronic payments, strong customer authentication must also include elements that dynamically link the payment transaction to the respective payment amount and payee.

In key areas, the PSD2 contains only general provisions, which still need to be fleshed out. To this end, the PSD2 assigned the European Banking Authority (EBA), in cooperation with the ECB, three mandates to draw up regulatory technical standards (RTS) and guidelines.²⁵

The debate surrounding the EBA's RTS for strong customer authentication and secure communication has attracted particular attention. The EBA drew up these RTS in cooperation with the ECB and several central banks from the European Economic Area, including the Deutsche Bundesbank. They were published by the European Commission as a delegated act on 13 March 2018 and provide further details – ensuring technology and business-model neutrality – concerning the type of authentication that PSPs have to require from their customers as well as possible exemptions to the application of strong customer authentication (see the adjacent box). Furthermore, they also include provisions on the protection of personalised security credentials and on the design of common and secure standards for communication between the dif-

Mandates for the European Banking Authority

Regulatory technical standards for strong customer authentication and secure communication

²⁴ In accordance with Article 4 (30) PSD2 and section 1 (24) of the Payment Services Oversight Act, strong customer authentication requires at least two independent factors from two out of three categories: "knowledge" (= something only the user knows, such as a password), "possession" (= something only the user possesses, such as a payment card) and inherence (= something that the user is, such as a fingerprint).

²⁵ A further eight mandates are of a purely banking supervisory nature and assigned exclusively to the EBA.

ferent PSPs as well as between PSPs and their customers.

The core of this second part of the standards is the obligation for ASPSPs to provide at least one interface to the customer account for payment initiation service providers (PISPs) and account information service providers (AISPs). This access to payment accounts can take place through the customer's existing online banking interface or via a new dedicated interface, known as an application programming interface (API), and requires the third-party PSP to identify itself to the ASPSP. If the ASPSP opts to have a dedicated interface, this interface must offer the same level of availability and performance as access via the customer interface. Furthermore, ASPSPs opting for an API have to provide a contingency fallback mechanism via which PISPs and AISPs can access the customer account, also after having identified themselves to the ASPSP. However, an ASPSP may, under certain conditions, be relieved of this obligation by its national supervisory authority. The RTS will enter into force 18 months after publication. For those payment accounts covered by the PSD2, this will also put an end to the current practice of PISPs and AISPs accessing customer accounts without prior identification.

In December 2017, the EBA adopted guidelines on security measures and control mechanisms to contain the operational and security risks of payment services. Taking into account the principle of proportionality, the EBA and the ECB developed requirements, including some pertaining to governance, risk assessment, protection of data and systems, business continuity and testing, in line with the existing EBA guidelines on the security of internet payments and with other standards and frameworks. The new rules have a wider scope than the existing EBA guidelines as they apply to all providers and payment services that are covered by the PSD2. They shall be implemented by the national supervisory authorities in their respective supervisory practices.

The guidelines on major incident reporting entered into force on 13 January 2018. They require PSPs to report relevant incidents to their competent supervisory authority. In Germany, this is BaFin, which forwards the reports to the Bundesbank, the EBA and the ECB, and – if the incident is of relevance – also notifies other national authorities.

In addition to the PSD2 and its downstream acts, other European rules and projects have a significant influence on the provision of payment services. They include, for example, the Fourth Money Laundering Directive and the new Regulation on information accompanying transfers of funds, which, in line with current international standards and recommendations, modernise the legal framework to combat money laundering and terrorist financing.²⁶

This results, *inter alia*, in changes in customer identification, such as when consumers open a payment account electronically. For instance, under the German legislation transposing the Fourth EU Money Laundering Directive on authentication of online services, electronic identification means as defined in the Regulation on electronic identification and trust services for electronic transactions²⁷ are also accepted under certain conditions. This can be, for example, an electronic identity card or a chip card containing data that is used to identify a person. The German transposition also mentions the possibility of using video identi-

Guidelines on major incident reporting

Prevention of money laundering and terrorist financing ...

... promotes support for digital business processes through electronic identification

Guidelines on the management of operational and security risks

²⁶ See also Directive (EU) 2015/489 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC as well as Regulation (EU) 2015/847 of the European Parliament and of the Council of 20 May 2015 on information accompanying transfers of funds and repealing Regulation (EC) No 1781/2006.

²⁷ Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC. According to Article 3 (2) of the Regulation, an electronic identification means is "a material and/or immaterial unit containing person identification data and which is used for authentication for an online service".

“Consumer Financial Services Action Plan: Better Products, More Choice”

cation procedures. BaFin has already outlined requirements for the use of such procedures for institutions operating in Germany. These developments can help fully digital business processes become more firmly established and thus capitalise to an even greater extent on the potential offered by digitalisation.

Lastly, in March 2017, the European Commission published the “Consumer Financial Services Action Plan: Better Products, More Choice”. Concrete action followed on 28 March 2018 in the shape of a Commission proposal stating that, in the future, charges on cross-border payments in euro should be set at the level of domestic payments for the EU as a whole. To date, this regulation has only applied to euro area countries. The proposal also aims at increasing transparency for payments involving a currency conversion, thus boosting competition.²⁸

■ Conclusion

Resilient financial market infrastructures are of paramount importance for both the financial system and the real economy, given their central role in settling financial transactions. Disruptions to these critical components can have significant implications for the participating banks, for financial markets and for the performance of tasks by the Eurosystem. One reason for this is that central banks rely heavily on the services of CSDs to receive collateral for monetary policy loans to counterparties or to hold securities under the current purchase programmes. In addition to effective supervision and oversight, the provision of settlement services in highly liquid and highly secure central bank money is also crucial to reducing risks and safeguarding financial stability.

In view of the heightened threat situation, strengthening the cyber resilience of financial market infrastructures has a particularly high priority for supervisory and overseeing authorities. In this context, it is essential to give due

consideration to the fact that while advancing digitalisation means efficiency gains, it also opens up new points for attack and changes the risk situation for market infrastructure operators. Responsibility for taking action to raise the level of protection lies primarily with the system operators and market participants themselves. But it is not simply a matter of implementing suitable technical devices – risk awareness has to become part of the corporate culture. Given the rapid pace of change, supervisors are applying a new approach; rather than monitoring whether specific provisions have been fulfilled, they instead analyse the degree of maturity of the defensive measures in place and steps being taken to improve them. In addition, the Eurosystem has made a valuable contribution by setting up the European Cyber Resilience Board (ECRB). The aim of this board is to promote dialogue on cyber resilience among European financial market infrastructures, central banks and other regulators.

Other key points to be addressed concern CCPs. Central clearing has experienced a veritable boom in recent years. As a result, efforts should be stepped up to complete the work on the European recovery and resolution regime for CCPs in the near future. The aim must be to establish a credible regime that ensures financial stability and, in the event of a serious occurrence, manages as far as possible without having to resort to using public funds. For the Bundesbank, it is essential that the future supervisory regime for non-EU CCPs is based on functioning supervision by the authorities of the EU member states in compliance with regulations valid across the EU. Accordingly, when assessing concrete policy options, precedence must be given to ensuring that payment transactions and the settlement of securities and derivatives transactions are secure, with cost considerations taking second place. In any event,

²⁸ Proposal for a regulation of the European Parliament and of the Council amending Regulation (EC) No 924/2009 as regards certain charges on cross-border payments in the Union and currency conversion charges SWD (2018)84.

due to the multiple interactions with its tasks, the Eurosystem should be appropriately involved in supervision.

The PSD2 substantially amends the rules governing EU payment transactions. Well-established structures in the market for payment services are likely to be broken down as a result, in particular, of the possibility for third parties to offer customers innovative services on the basis of access to their accounts (known as “open banking”). The Bundesbank is of the opinion that the rules outlined in the PSD2 as well as the related RTS provide a good basis for the further digitalisation of payment transactions, in particular by increasing competition and ensuring that security levels are high. Consistent implementation of the PSD2 and application of the RTS across all member states are

essential in order to stimulate competition throughout the EU and overcome fragmentation in national markets. In addition, care must be taken to ensure that the provision of dedicated interfaces (APIs), which both third-party PSPs and other credit institutions can access, in the banking industry is sufficiently standardised. Only then will it be possible for new and attractive products for consumers to grow and thrive in the Single Euro Payments Area. At this stage, it is difficult to say whether these new products will be brought to the market more by traditional credit institutions, start-ups or existing internet platforms. However, the leading credit institutions appear to have recognised that the PSD2 does indeed offer scope to increase the service level of the payment account they offer their own customers, and to thus enhance their own attractiveness.

Maastricht debt: methodological principles, compilation and development in Germany

The Maastricht Treaty established the government deficit and (gross) government debt as cornerstones of the European fiscal rules. The respective ceilings defined in the Treaty are 3% and 60% of gross domestic product (GDP). In Germany, the Federal Statistical Office compiles the deficit data as defined by the Maastricht Treaty, while the Bundesbank compiles the Maastricht debt data.

Maastricht debt encompasses loans, debt securities issued and deposits received as well as liabilities arising from coins in circulation. To make the figures comparable across Europe, the European System of Accounts (ESA) is used as a common statistical basis for the compilation. The required data come from very different accounting systems in Germany, because not just core budgets but also off-budget entities have to be included. Moreover, local government accounting is governed by rules specific to the relevant state government, which sometimes grant the option of choosing between double-entry and single-entry bookkeeping. Furthermore, to compile the Maastricht debt data, additions and adjustments have to be performed against the original data stemming from the national debt statistics and use made of several other data sources, special surveys and model calculations.

In recent years, agreements have been reached at the European level imposing much higher requirements on the scope and quality of the statistics that have to be reported, and the supervision by Eurostat has been extended. This presents mounting challenges for Germany, too. Against this backdrop, it would make sense to aim for a more harmonised accounting system across general government that depicts income and expenditure flows with balance sheet stocks in an integrated way. At the very least, however, the existing accounting systems need to be adapted such that European and international data needs can be met.

Figures for Germany's Maastricht debt are available from 1991. The debt ratio rose from 39% to 81% in 2010, driven particularly by burdens connected with German reunification and by the financial and economic crisis. Other factors that played a role were the propping up of the financial markets, when state-owned "bad banks" took on bank portfolios, and later also the assistance loans granted to other euro area member states. Over the past few years, the debt ratio has been scaled back significantly thanks to very favourable macroeconomic developments and healthy budgets in addition to portfolio deleveraging at the "bad banks". At the end of 2017, the ratio stood at 64.1%, while debt amounted to €2.09 trillion. It looks likely that Germany will fall back below the 60% limit by the coming year at the latest.

Sound public finances are linchpin of European monetary union

The Maastricht criteria: cornerstones of the European fiscal rules

Sound public finances are a key foundation for a stability-oriented monetary union. The EU member states therefore set out fiscal rules in the Maastricht Treaty and subsequently augmented them with the Stability and Growth Pact. The Maastricht Treaty specifies reference values: 3% of gross domestic product (GDP) for the government deficit and 60% of GDP for government debt (the Maastricht criteria). As a rule, these should not be exceeded.¹ The reference values (and extensive additional data) have to be compiled by member states using common Europe-wide rules and reported to Eurostat, Europe's statistical office, twice a year. Eurostat reviews the figures, expresses any reservations it may have, and can request adjustments or make them itself. As a particular consequence of Greece's serious misreporting of data, the statistical reporting requirements and checks were intensified considerably. Moreover, specific requirements were placed on the government accounting systems underpinning the statistics, and the option of imposing sanctions for attempted fraud and serious negligence in reporting was introduced. The European Council can impose sanctions on the recommendation of the European Commission.² Finally, the debt criterion was given a greater emphasis in the fiscal framework (Stability and Growth Pact) and was fleshed out.

Methodology, compilation and development in Germany

In Germany, the Bundesbank is responsible for compiling the Maastricht debt data and the Federal Statistical Office for compiling the Maastricht deficit data as well as for the relevant definition of the government sector. This article describes the methodological principles as well as the precise compilation of Maastricht debt by the Bundesbank and explains the differences compared to the results of the national debt statistics. In addition, it explains the Maastricht debt data, which are available from 1991.

Methodological principles

The Maastricht debt data is compiled based on the European System of Accounts (ESA). These rules largely follow the standards of the global System of National Accounts (SNA),³ which is revised and updated with the collaboration of international organisations and national statistics agencies. The current version of the European framework (ESA 2010),⁴ which was drawn up by Eurostat and the national statistical offices to primarily reflect European needs, sets out how economic activities in the EU are to be statistically recorded in the national accounts. Questions of interpretation relating to the compilation of the Maastricht reference values are also answered by a comprehensive and regularly updated manual (MGDD).⁵ Additional binding rules are found in Eurostat's guidelines, clarifications and technical compilation guides for specific cases. Each member state releases an extensive inventory of the methods, procedures and sources used to explain exactly how the European requirements are implemented on the basis of the national data resources available to them.⁶ Given the vast number of detailed rules and specificities surrounding implementation, this article focuses on the most substantial factors and interrelationships.

Maastricht debt is based on ESA 2010 and additional requirements

¹ See Deutsche Bundesbank, Design and implementation of the European fiscal rules, Monthly Report, June 2017, pp 29-44.

² The size of these sanctions hinges on the misconduct with which the party is charged as well as the extent of the misreporting and can be as much as 0.2% of GDP. In Germany, 0.2% of GDP currently equals €6½ billion.

³ The current version, SNA 2008, was issued by the European Commission, the International Monetary Fund, the Organisation for Economic Co-operation and Development, the United Nations and the World Bank.

⁴ Regulation (EU) No 549/2013.

⁵ Manual on Government Deficit and Debt, latest edition 2016, available at: <http://ec.europa.eu/eurostat/en/web/products-manuals-and-guidelines/-/KS-GQ-16-001>

⁶ Available at: <http://ec.europa.eu/eurostat/de/web/government-finance-statistics/excessive-deficit-procedure/edp-inventories>

Definition of the government sector

Government sector: core budgets and off-budget entities of central, state and local government and social security funds

According to the ESA, the general government sector comprises units that primarily engage in non-market production and that are financed mostly by compulsory levies, as well as those that principally redistribute income and wealth. In Germany, a distinction is made between the subsectors of central, state and local government (including its associations, such as district authorities) and the social security funds, which in turn are divided into core budgets and off-budget entities. The off-budget entities include all funds, agencies and undertakings that are spun off from the core budgets or newly established and which largely perform government functions, regardless of their legal form.⁷

Off-budget entities are government-controlled units engaged mainly in non-market production

It is often difficult to make an economic distinction between government and corporate activity. Besides the government's core budgets, there are a multitude of entities that are organised as businesses and are influenced and financed by government to varying degrees. According to the ESA, entities such as these only belong to the government sector if government has direct or indirect control over the set-up of their core business and they engage principally in non-market production.⁸ The latter is mostly defined in terms of the entity not covering more than half of its production costs (including interest and depreciation of fixed assets) by market sales.⁹ If market activity predominates, the entity is not assigned to the government sector. Hence, general government can in fact be the majority owner of entities engaged in corporate activity which do not belong to the government sector because they lack key characteristics of government activity.¹⁰ Maastricht debt captures liabilities of the general government sector as thus defined.¹¹

Definition of Maastricht debt

Maastricht debt comprises the consolidated gross debt of general government. "Gross" means that no government assets are offset when calculating the debt level. "Consolidated" means that government liabilities to other government entities are eliminated. The Maastricht debt level thus represents the government's debt to other domestic sectors and foreign creditors.

Maastricht debt constitutes a consolidated gross figure and ...

Maastricht debt does not include all financial liabilities of a government. Of the eight categories of financial assets (ESA code: AF¹²) between which the ESA distinguishes, only three make up Maastricht debt (the liability items

... includes liabilities arising from currency and deposits, loans and securities

⁷ Off-budget entities can also be formed by acquiring participating interests, provided the acquired entity mainly performs government activities. The current list of off-budget entities is published by the Federal Statistical Office, available at: https://destatis.de/DE/ZahlenFakten/GesellschaftStaat/OeffentlicheFinanzenSteuern/OeffentlicheFinanzen/Methoden/Downloads/ListeExtrahaushalte2017_pdf.pdf?__blob=publicationFile

⁸ The public sector is defined more broadly than the government sector, and also contains entities majority-owned by government that are predominantly engaged in market production. It includes, for instance, promotional and development banks, savings banks and Landesbanken, but often also entities such as public utilities and waste management operations.

⁹ This criterion applies to non-financial corporations. In the case of financial corporations (such as banks), the crucial factor is whether they act as a financial intermediary and are themselves exposed to the risks posed by their business or whether these risks lie with the government instead.

¹⁰ A more detailed account can be found in P Schmidt et al, Die Abgrenzung des Staatssektors in den Volkswirtschaftlichen Gesamtrechnungen, Wirtschaft und Statistik, 1/2017, pp 35 ff.

¹¹ A debt indicator based on the public sector would also contain the liabilities of all enterprises majority-owned by government. However, this would mean the inclusion of market producers whose liabilities are not under the control of policymakers. Notwithstanding this, the ESA allows for individual activities of non-government entities to be rerouted through government for statistical purposes, provided the tasks can be clearly demarcated as government activities within an entity assigned to another sector. A typical example of this would be the specifically assigned business activities ("Zuweisungsgeschäfte") of the Reconstruction Loan Corporation (Kreditanstalt für Wiederaufbau), the German Federal development bank which is not part of the government sector. These are conducted on behalf of central government, with the Federal budget assuming the respective costs and risks.

¹² The abbreviation for financial assets (AF: actif financier) is used for both asset and liability items.

AF.2, AF.3 and AF.4).¹³ This restriction exists in part because not all government liabilities are considered relevant in the context of EU budgetary surveillance, and partly also because of practical measurement aspects and problems with data availability. Specifically, the ESA distinguishes between the following items.

- “Monetary gold and special drawing rights (AF.1)” are normally recorded in central bank balance sheets only. Central banks do not belong to the general government sector according to the ESA.
- “Currency and deposits (AF.2)” form part of Maastricht debt. They include, for example, deposits of third parties held in custody accounts with the central government and liabilities arising from coins in circulation, which are attributed to central government as the issuer of German euro coins. By contrast, banknotes are solely a central bank liability.
- “Debt securities (AF.3)” form part of Maastricht debt. A distinction is made between “short-term debt securities (AF.31)” (money market paper) with an original maturity of no more than one year and “long-term debt securities (AF.32)” (capital market paper) with an original maturity of more than one year. These include, for example, bonds issued by central government or securitised liabilities of winding-up agencies (“bad banks”) within the government sector.
- “Loans (AF.4)” form part of Maastricht debt. These also include, for example, bank loans granted to local government enterprises, which, as non-market producers, count as off-budget entities in the government sector. Like debt securities, loans are differentiated by their original maturity and split into “short-term loans (AF.41)” and “long-term loans (AF.42)”. Government cash advances are classified as short-term loans, even though in some cases at the local government level they are evidently arranged with

longer maturities. Furthermore, cash collateral received as part of derivatives transactions also counts toward loan liabilities.

- “Equity and investment fund shares or units (AF.5)” are equity instruments and therefore do not form part of Maastricht debt.
- Claims against “insurance, pension and standardised guarantee schemes (AF.6)” do not form part of Maastricht debt. They comprise prospective liabilities already accrued but not yet due, the size of which is sometimes still undetermined, arising from funded government pension schemes and from standardised guarantee schemes. Neither play a role in Germany at the moment, as the items of particular relevance in Germany – claims on unfunded pension schemes of government employers (pensions) and on the statutory pension insurance scheme – are not recorded under AF.6.¹⁴ They do not fall under any other ESA instrument category either; instead, they are simply recorded as memo items.¹⁵
- “Financial derivatives and employee stock options (AF.7)” do not form part of Maastricht debt. They include, for example, interest rate swaps which are used for debt management, particularly to manage interest rate fixation periods and any currency risk.

¹³ Nonetheless, according to Council Regulation (EC) No 479/2009 and Regulation (EU) No 549/2013 all categories named in the ESA, particularly trade payables, are required.

¹⁴ Civil servant pension entitlements, for which a capital stock is built up in funds or reserves, are not recorded in AF.6 either, since the system as a whole is not considered to be a funded scheme. The Federal Statistical Office has performed extensive calculations of the claims of households on pension schemes. Preliminary results can be found in T Haug, *Berechnung der Pensions- und Rentenanwartschaften in den Volkswirtschaftlichen Gesamtrechnungen*, *Wirtschaft und Statistik*, 2/2018, pp 77 ff.

¹⁵ In view of demographic change, in particular, it is important that these government burdens are also taken into account when analysing fiscal sustainability. However, the reported size of the liabilities is heavily dependent on assumptions about discount factors, for example, and long-term developments in demographics and the labour market. Furthermore, future burdens on government budgets are influenced by legislative changes (such as an increase in the retirement age).

However, derivatives can also be designed such that the government counterparty initially receives additional compensation which it rebalances over the life of the instrument. The derivative thus entails a *de facto* loan relationship. To take this situation into account, loan components such as this are now eliminated from the derivatives and added to the loan portion of Maastricht debt (AF.4).

- “Other accounts receivable/payable (AF.8)” are “trade credits and advances” and “other accounts receivable/payable, excluding trade credits and advances”, and do not form part of Maastricht debt. The former are created by the time lag between the performance of an agreed transaction and the corresponding payment. The latter arise due to timing differences between distributive transactions (eg in the case of court rulings on tax refunds) or financial transactions in the secondary market and the actual payment. As a general rule, AF.8 should only contain short-term, largely unavoidable items of a small size.¹⁶ For these reasons, and owing to poor data availability, this item was not included in the Maastricht definition of debt. However, the financial and sovereign debt crisis revealed that unpaid invoices, for example, can become a very relevant substitute for normal financing in the capital market.¹⁷ Since 2012, trade credits incurred by government have therefore been considered relevant to the loan portion (AF.4) of Maastricht debt in two specific cases: when key terms of the contract are renegotiated and when the creditor transfers its claim to a third party without recourse.¹⁸ Neither of these applications has so far played a role in Germany, however. Germany has a basic problem capturing other accounts receivable/payable (AF.8) because the single-entry bookkeeping method is still very widespread among government entities.

Contingent liabilities, such as guarantees and sureties as well as provisions, are not liabilities

as recorded in the ESA accounts and therefore are not a component of Maastricht debt.¹⁹ However, the ESA does permit exceptions to this rule. For example, new government guarantees on liabilities of non-government entities, where it is deemed very probable that they will be called, are recorded as though they had already been called.²⁰ A guaranteed liability of this kind is therefore counted towards Maastricht debt.²¹

Contingent liabilities to be recorded as Maastricht debt in exceptional cases

Valuation of the debt components

Aside from the question of which categories have to be included in Maastricht debt, the issue of how each of them are valued also has to be clarified. The ESA stipulates that currency and deposits as well as loans are recorded at their nominal value²² and securities at market value. Because the ESA is a national system of accounts, in which the creditors’ claims must match the debtors’ liabilities, these valuations

Maastricht debt is recorded at face value

¹⁶ According to ESA 10 (20.132), government financing presented as long-term trade credits is classified as loans (AF.4). The MGDD (VIII.2.1 (3)) specifies long-term as meaning an original maturity of more than one year.

¹⁷ In Italy, for example, unpaid government invoices amounted to 4% of GDP between 2010 and 2012. See Note on stock of liabilities of trade credits and advances (October 2014), <http://ec.europa.eu/eurostat/documents/1015035/2022675/Note-on-AF-81L-Oct2014.pdf>

¹⁸ See The statistical recording of some operations related to trade credits incurred by government units (July 2012), <http://ec.europa.eu/eurostat/documents/1015035/2041337/Statist-record-of-some-operations-rel-to-trade-credits-i.pdf/f2238d11-9257-4a0e-bd9a-39dcf1fb2cfd>

¹⁹ However, information about government contingent liabilities has to be provided on the basis of Council Directive 2011/85/EU (EU Budgetary Frameworks Directive), amongst other legislation.

²⁰ A corresponding expense is recorded in the Maastricht deficit. In the government budgets, authorisations for expenditure and future commitments have to be given for such guarantees.

²¹ The other case of contingent liabilities having to be recorded pursuant to the ESA relates to standardised guarantees (such as those for export financing) for which the available data allow for a reliable estimation of the probable number of calls under the guarantee, such that the insurance technical reserves can be recorded properly. However, these guarantees are recorded in AF.6 and therefore do not form part of Maastricht debt.

²² Nominal value equals face value plus accrued interest and any issue premiums or discounts (to be spread over the life of the instrument).

are applicable for both assets and liabilities. Debt as defined by the Maastricht Treaty departs from this, however, in that the three liability items included (AF.2 to AF.4) are recognised at face value.²³

Face value normally equals a debt's repayment amount

The face value of a government debt is equal to its principal, which is the originally agreed repayment amount less any repayments already made (redemptions). In the case of indexed liabilities (eg inflation-linked bonds), the face value also encompasses the change in the repayment amount caused by past index movements. Interest payments on the principal are only included in the face value if they were explicitly credited.²⁴ In the case of securities, the issue price often differs from the face value on account of pricing in the auction process.²⁵ Premiums or discounts on the issue are spread over the residual maturity of the security and recorded in the fiscal balance as interest costs/savings in addition to the coupons.²⁶ As the face value is not marked to market, it is unaffected by market forces. Debt instruments issued in foreign currency are one exception. These are converted at the relevant exchange rate on the reporting date and change the level of Maastricht debt accordingly, in the absence of any compensatory exchange rate hedging transactions, such as currency swaps (otherwise, the hedged rate should be recognised).

Compilation of Germany's Maastricht debt

Biannual notification of Maastricht debt as part of fiscal surveillance

As part of European fiscal surveillance, Maastricht debt is to be reported to the European Commission (Eurostat). To do this, current values for the four previous year-end levels are reported twice each year – in the spring notification at the end of March and the autumn notification at the end of September.²⁷ Furthermore, there are obligations at the European level to provide quarterly Maastricht debt four times per year.²⁸

The annual debt statistics²⁹ and annual financial asset stock statistics³⁰ form the essential framework for the data to be reported. These official statistics are captured by the Federal Statistical Office in cooperation with the state statistical offices on the basis of the German Law on the Statistics of Public Finance and Public Service Personnel (*Gesetz über die Statistiken der öffentlichen Finanzen und des Personals im*

Other sources required in addition to official national debt statistics ...

²³ See Article 1 (5) sentence 3 of Council Regulation (EC) No 479/2009. These different valuation methods from those in the ESA are the reason why debt as defined by the Maastricht Treaty does not equal the sum of the three liability items recorded in the national accounts (financial accounts).

²⁴ For accrued interest bonds, such as Type B Federal savings notes, where all interest claims are added to the principal over the fixed lifetime of the instrument, the face value is equal only to the principal agreed upon issue.

²⁵ In principle, premiums and discounts are also possible for loans.

²⁶ Premiums or discounts occur when a security's coupon differs from the market interest rate prevailing at the time of issuance. This is often the case for tap issues, in particular. However, the issuer is also able to charge premiums for the initial issue by offering coupons higher than the market interest rate. This equals a de facto higher liability, which is not reflected in Maastricht debt. Subsequently, there is also certain room for manoeuvre over time owing to the option of choosing between a new issue at market rates or a tap issuance of a previous issue with higher coupons. In addition, securities without a coupon also have premiums when effective interest rates are negative. See Deutsche Bundesbank, The development of government interest expenditure in Germany and other euro area countries, Monthly Report, July 2017, pp 33-68.

²⁷ Within the context of the notification, Eurostat reviews the data and comprehensive questionnaires are to be completed. To the same end, Eurostat also conducts what are known as "dialogue visits" in EU member states at two-year intervals. During these visits, methodological problems in particular are discussed with the relevant statistical authorities. Eurostat subsequently draws up what are known as "action points" to resolve any outstanding issues. Summaries of mission findings and lists of action points are published on the Eurostat website: <http://ec.europa.eu/eurostat/web/government-finance-statistics/excessive-deficit-procedure/eurostat-edp-visits-to-member-states>

²⁸ Unless otherwise stated, the following remarks relate to the autumn notification.

²⁹ Federal Statistical Office annual debt statistics, Fachserie 14, Reihe 5. In the context of the spring notification, these are not yet available for the current reporting year. The (preliminary) quarterly debt statistics from the Federal Statistical Office (Fachserie 14, Reihe 5.2) have therefore been used at this time.

³⁰ Federal Statistical Office annual financial asset stock statistics, Fachserie 14, Reihe 5.1. For the spring notification for the current reporting year, the financial asset stock statistics are not yet available. For this reason, the values from the previous year have been used in most cases – unchanged – as a provisional measure.

öffentlichen Dienst).³¹ The European statistical requirements have not been fully transposed into accounting practices and cash-related public finance statistics in Germany. For this reason, Maastricht debt is compiled using additional sources.

... in order to capture all liabilities as well as consolidation and "bad banks"

First, liabilities that are not included in the debt statistics but are to be factored into government debt in accordance with ESA are to be captured. Second, the national debt statistics only provide part of the data necessary for consolidating intra-governmental debt relationships. Third, financial assets and liabilities in the balance sheet context are required in particular for state-owned "bad banks" due to their significant financial assets. These informational requirements are, where possible, covered by additional statistics on creditors (counterparties), special statistical surveys, as well as various individual sources. In individual cases, estimates are made to fill gaps in the data.

Calculation of Maastricht debt from national debt statistics

A schematic illustration of how Maastricht debt is compiled is shown in the table on page 70. Based on the debt of core budget and off-budget entities owed to the non-public sector³² according to the national debt statistics, mainly the additions³³ described above are depicted. This reconciliation between the national debt statistics and Maastricht debt is explained in more detail below.

Adjustments due to differing methodologies and delineations as well as missing data

Additions due to devolved transactions

In order to compile Maastricht debt, additions with regard to official cash-related finance statistics are necessary, as ESA allocates additional liabilities to general government in order to better depict economic reality.³⁴ Currently, the most significant additional position is liabilities from lending via the European Financial Stability Facility (EFSF) to euro area members during the sovereign debt crisis. Furthermore, certain liabilities of the Reconstruction Loan Corpor-

ation (Kreditanstalt für Wiederaufbau, KfW) that are based on transactions directly attributable to central government are also added to the government accounts. In this vein, KfW was instructed to issue loans to Greece, to take on shares in Deutsche Post and Deutsche Telekom from central government as part of their privatisations (known as specific holding arrangements), and to acquire EADS shares. The risk and net income of these operations is borne by central government. Such transactions that are to be rerouted to the government sector also occur at a number of state promotional banks, albeit at a considerably lower volume than the KfW transactions.³⁵

As of 2000, issuance of student loans under the Federal Act on the Promotion of Education (*Bundesausbildungsförderungsgesetz*) is no longer captured in the Federal budget.³⁶ Up to and including the 2012 reporting year, the

Addition of student grants and loans

³¹ For the core budget of the Federal Government and its special Investment and Repayment Fund (IRF) as well as its Financial Market Stabilisation Fund (FMS), whose debt is managed by the Federal Republic of Germany – Finance Agency GmbH (Finance Agency), consistent evaluations from the Finance Agency, which are available earlier, are used for the debt statistics.

³² See Federal Statistical Office, Fachserie 14, Reihe 5, Tabellenblatt 2.1. Also included under "Debt in the non-public sector" are debts to public credit institutions, such as savings banks or promotional banks, as well as government securities-based debt in its entirety, as the parties subject to reporting requirements do not know whether the holders are governmental or non-governmental creditors. Credit-equivalent legal transactions that are also accounted for in the debt statistics, such as financial leasing, are to be added. Since these are not captured in the (preliminary) quarterly debt statistics, the values from the previous year as used for the current reporting year in the spring notification.

³³ Alongside those described below, other, less significant additions and adjustments – which are not explained in greater detail here – are necessary. An in-depth description of the methodology is available online: <http://ec.europa.eu/eurostat/web/government-finance-statistics/excessive-deficit-procedure/edp-inventories>

³⁴ See also footnote 11 on p 59.

³⁵ Since 2016, rerouting transactions have been captured by the Federal Statistical Office via a special survey among promotional banks. The liabilities arising from these transactions are factored into Maastricht debt, by assumption, as long-term loans.

³⁶ The Federal budget only shows grants on interest relief provided to KfW and refunds for loan defaults, but not the issued loans and the associated incurrence of liabilities by central government, which would in fact be more appropriate. By contrast, these are captured in central government's wealth accounts, although not explicitly.

financing provided to central government by KfW in this context is to be added separately to Maastricht debt. Since 2013, these transactions have been factored into the official debt statistics and are included in Maastricht debt in that way.³⁷

Euro coins issued by central government

A major liability that is not captured in the debt statistics, and therefore must be added, is euro coins in circulation as legal tender. Legally, German euro coins are issued by the German Federal Government (and not by the Eurosystem, though the European Central Bank is required to approve the volume). Thus, central government is partly financed through the issuance of coins, which – as is the case with Federal securities – represent a claim against it.³⁸ The coin-related liability is captured in Maastricht debt as “currency and deposits”.

Separate recording of certain suspense and advance payment accounts

Also included in the “currency and deposits” category are liabilities arising from funds or similar third-party claims that are fundamentally retrievable and recorded on purely ledger-based accounts of central government, known as suspense and advance payment accounts.³⁹ For example, central government credits the German share of EU own resources to a suspense account for accounting purposes until the EU draws on the funds via a money order. At times, the EU also transfers funds back. This leads to a recording entry on the suspense account, which then functions as a kind of money market account for the EU at the German Federal Government and therefore is to be factored into Maastricht debt. With the exception of the account for cash collateral received from derivative transactions, suspense and advance payment accounts are not captured in the debt statistics. Since these accounts are not generally factored into public budget accounting, they must be added via separate reports as and when necessary. As a result of non-integrated accounting, not all assets and liabilities can be obtained in a consistent balance sheet context from a central accounting system, which would be desirable.⁴⁰

Debts from public-private partnerships (PPPs) are to be recorded in the Maastricht debt if the risks are largely borne by general government. In the national accounts context, the Federal Statistical Office makes use of data from a spe-

Model-based recording of PPPs

37 In order to identify potential similar cases, a systematic inquiry was carried out amongst other government sectors as well. Through the inquiry, needs for corrections were identified in some Federal states, which, on the one hand, concerned cash collateral received from financial derivative transactions that are to be captured as short-term loan liabilities, and, on the other hand – albeit to a more limited extent – liabilities arising from advance financing of student grants and loans by KfW. As of the 2013 reporting year, these positions are now added to Maastricht debt on the basis of individual data reports. This is an example of the difficulties that can arise particularly from non-integrated public accounting systems, which do not fully guarantee adherence to the principle of gross recording and do not ensure a relationship between assets and liabilities.

38 The Bundesbank is responsible for issuance and withdrawal, and, at the same time, is creditor vis-à-vis central government as well as debtor vis-à-vis holders of euro coins in the national accounts. Central government is credited the nominal value of each euro coin brought into circulation (increase in coins in circulation) and debited the nominal value of coins withdrawn from circulation (decrease in coins in circulation) by the Bundesbank. In addition, the Bundesbank credits its coin holdings to central government up to an amount of 10% of coins in circulation (Article 6 of EU Council Regulation (EC) No 3603/93). With regard to return flows or recirculation of euro coins, no distinction is made between German euro coins and those from other member states. Collectors’ coins issued by central government, which are not usually used for payments, are not recorded in the euro coins in circulation as per ESA.

39 These are generally suspense accounts. However, custodies on central government advance payment accounts also occur, for example for cash collateral received from derivatives transactions. Counter-entries on suspense accounts are made for payments received from third parties if these are not to be allocated, or are not yet allocated, to a budgetary item. They are not relevant for Maastricht debt if, for example, they constitute other accounts payable (AF.8) under ESA, which are not included within the scope of Maastricht debt. The same is true if a budgetary expense is recorded as a liability on a suspense account, as long as payment has not yet been made. No central systematic overviews are available for the suspense and advance payment accounts. Instead, recording for Maastricht debt is based on a compilation of accounts which are operated decentrally by the individual account managers.

40 In its audit of the national debt statistics, the Federal Court of Auditors (Bundesrechnungshof, or BRH) has criticised the inconsistent treatment of suspense and advance payment accounts (see BRH, Prüfungsmittteilung – Statistik der Schulden der öffentlichen Haushalte of 10 December 2015).

On the differences between deficit and change in debt (deficit-debt adjustments)

In principle, a close relationship exists between the Maastricht fiscal balance¹ (the government deficit or surplus) and the change in Maastricht debt. Deficits are usually financed by additional debt and surpluses are used to repay debt. Nevertheless, the change in debt often deviates from the fiscal balance. This difference is referred to as a “deficit-debt adjustment” (DDA).² Although most of the DDA can be explained, statistical discrepancies remain which point to inconsistencies in the underlying data.

General government fiscal balance: reflected in both the government non-financial accounts and the government financial accounts

In the context of the national accounts (NA), double-entry bookkeeping is carried out – as is customary in businesses – which means that each transaction is booked twice in one statistical unit. Most of the government transactions relate to both the government non-financial accounts and the government financial accounts.

Government revenue and expenditure are recorded in the government non-financial accounts as resources (eg tax revenue) or as uses (eg personnel expenditure).³ Financial transactions, ie transactions involving financial assets or liabilities, are recorded in the government financial accounts. These often stand in relation to the revenue and expenditure in the government non-financial accounts. For example, the tax revenue recorded in the non-financial accounts may be associated with higher financial assets (eg an increase in government bank deposits) in the financial accounts, whereas personnel expenditure is associated with

payments by government, which reduce the (net) financial assets. The fiscal balance is reflected both in the difference between revenue and expenditure in the non-financial accounts and in the balance of financial transactions in the financial accounts.⁴ Shifts within net financial assets (purely financial transactions) are reflected only in the financial accounts, where they offset each other; they therefore have no impact on the amount of the fiscal balance. For instance, the purchase of shares in the market using bank deposits merely constitutes a change in the composition of financial assets, and the repayment of a loan by reducing bank deposits is likewise a balance sheet reduction that does not affect the fiscal balance.

Explained deficit-debt adjustments

Depending on how a deficit is financed or a surplus is used, or in the event of shifts within the composition of net financial assets, the change in Maastricht debt may deviate from the fiscal balance (DDA). For example, if a surplus leads to an increase in bank deposits, financial assets rise while gross debt, against which assets are not netted, remains unchanged. In this case,

¹ Also referred to as “net lending/net borrowing”.

² The difference is sometimes also referred to as a “stock-flow adjustment”.

³ Revenue and expenditure do not include the sale or purchase of financial assets, which are purely financial transactions and so merely constitute shifts within the financial accounts. The amount of, and the time of recording of transactions in the non-financial accounts are not necessarily in line with the corresponding cash flow. Instead, it is often enough for a claim or a liability to arise for a transaction to be recorded in the reporting period.

⁴ Thus, the fiscal balance corresponds to the transaction-based change in net stocks of financial assets. Moreover, net financial assets may change for reasons that are not transaction-based, for instance as a result of revaluations (eg an increase in share values).

the deficit and the changes in debt do not develop synchronously (positive DDA).⁵ Moreover, a deficit may be financed using financial liabilities, which are not included in Maastricht debt. For example, if short payment terms are used for purchases of goods and services, liabilities in the form of trade credits (AF.8) arise, which are not included in Maastricht debt (negative DDA). In addition, shifts within the composition of net financial assets (purely financial transactions) can give rise to DDAs, for example if available cash reserves are used to repay debt. This leads to a balance sheet reduction and debt declines without the shift producing a change in the fiscal balance (negative DDA).⁶ On the other hand, a balance sheet extension occurs, for instance, when advance payments are made for which purpose loans are taken out, but the expenditure is only attributable in economic terms to the following year's budget. Advance payments already financed at the end of the year lead, on that reporting date, to higher government debt accompanied by higher other accounts receivable (AF.8) on the asset side (positive DDA). When the expenditure is recorded in the government non-financial accounts in the following year, the other accounts receivable that were built up at the end of the previous year (given an unchanged Maastricht debt) are reduced (negative DDA).⁷

In addition to such transaction-based causes, reclassifications or valuation effects can also give rise to DDAs. These are not reflected in the fiscal balance as, according to the ESA, the fiscal balance comprises only transactions which are conducted by mutual agreement between the parties concerned or are based on a legal obligation substantiated by the government. If statistical units are added to or removed from the general government sector (reclassification), this usually leads to a change in debt but not in the fiscal balance of general

government sector. DDAs stemming from valuation effects can arise, for example, as a result of exchange rate fluctuations when foreign currency debt is not hedged, as the amount of debt converted into euro changes without a transaction affecting the fiscal balance.

Unexplained statistical discrepancies

Moreover, differences can arise between the fiscal balance and the change in debt that cannot be traced back to specifically identified DDAs. Such cases are referred to as "statistical discrepancies". These are attributable to the fact that the government non-financial accounts and the financial accounts are not based on a fully integrated accounting system as a single statistical basis. Instead, to determine stocks and flows, different basic statistics must be used which may not always be compatible with the ESA or consistent with each other. For this reason, the implementation of these data in the financial and non-financial government accounts can cause non-financial transactions, financial transactions or stock

⁵ DDAs are positive if the increase in debt exceeds the deficit or if the decrease in debt falls short of the surplus. The opposite is true in the case of negative DDAs. Positive DDAs are generally due to an increase in financial assets and negative DDAs to a reduction of financial assets.

⁶ This also applies when privatisation proceeds from the sale of shares are used to repay debt. The credit-financed purchase of financial assets at market price, for example in the context of a resolution agency ("bad bank"), on the other hand, leads to a positive DDA. Although gross debt rises, the financial assets rise at the same time, leaving the fiscal balance unchanged. However, the fiscal balance falls if financial assets are bought at a price above their market value, or, alternatively, above an independent market value estimate. In such a case, the debt increases more strongly than the financial assets. This gap describes a capital transfer from general government to the previous owner which is recorded in the non-financial government accounts, impacting on the deficit. No DDA therefore arises for this amount.

⁷ Maastricht debt is calculated as at a given reporting date, whereas the fiscal year for many budgetary items has not yet ended by that point in time. Deviations between the fiscal balance and the change in debt are therefore to be expected.

variables (such as the debt) to be incorrectly reported. Discrepancies can arise because, for instance, coverage in a set of basic statistics is incomplete (data gaps), different statistics use diverging definitions or different data sources overlap, leading to double counting. Similarly, reporting entities might classify counterparties under incorrect sectors or make erroneous entries in their statistical reports. In this respect, statistical discrepancies may result in the fiscal balance, the change in debt and/or the identified DDAs being incorrect. As DDAs forge a link between the deficit and debt, Eurostat uses them as a quality control instrument. Persistently high statistical discrepancies can point to data quality issues, potentially also in terms of the Maastricht criteria. This makes it especially important that they are analysed in the context of European budgetary surveillance. For example, in Greece in 2004, high discrepancies with sharply rising government debt on the one hand and comparatively low reported deficits on the other indicated quality issues with the Greek government finance statistics, the full extent of which then became apparent as the financial and economic crisis unfolded.

Deficit-debt adjustments in Germany

Germany faces particular challenges due to its federal structure. Many government entities are not included in budgetary plans and a number of heterogeneous public accounting systems exist which, for the most part, are not integrated. In terms of the European requirements, necessary data cannot always be readily extracted from the existing systems. The statistics of government revenue and expenditure (relevant for calculating the deficit) as well as the debt statistics do, in principle, have a long tradition and are therefore firmly anchored at the reporting government entities. However, the European obligations, which have been extended and expanded upon over

time, partly deviate from the traditional national transmission programme.

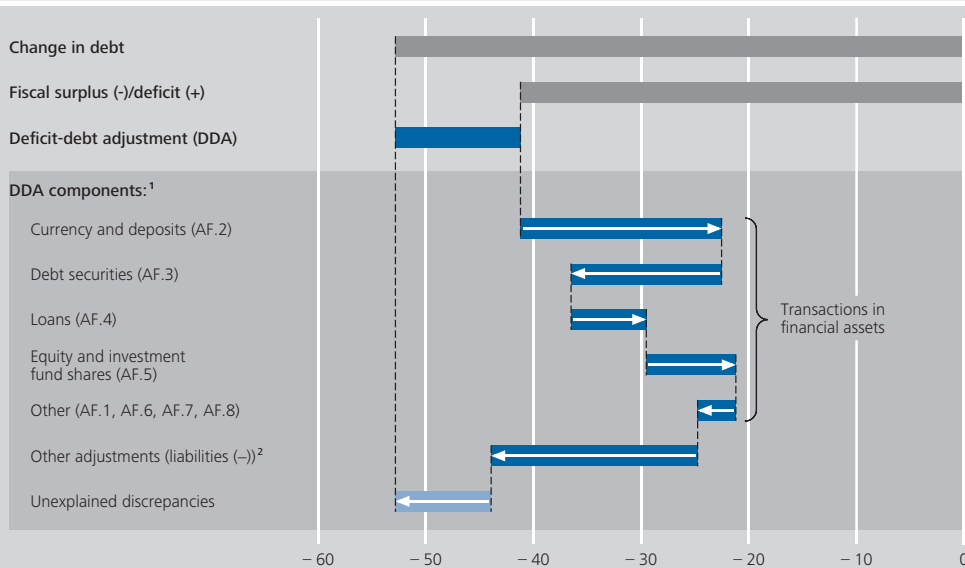
As a result, problems in the consolidation of financial relations within the general government sector arise, for example. It would be necessary here to make a clear distinction in the accounting systems and therefore in the statistics between transactions carried out with units of the general government sector, with public corporations or with private entities.⁸ Although section 49a of the Budget Principles Act (*Haushaltsgrundsätze-gesetz*) stipulates that the accounting standards used by central and state government should also take the requirements of the NA into consideration, the existing general government (and local) budgetary classification systems and accounting frameworks only partially guarantee this.⁹ Additionally, certain transactions in financial assets have to be derived from secondary data sources, such as banking statistics, and thus indirectly from statistical reports submitted by the government's counterparties, since the prevailing single-entry accounting system does not record financial assets in a full and integrated manner. In this context, consistencies may crop up, the causes of which can ultimately only be identified to a limited extent.

⁸ A particular challenge arises from the fact that the sector classification of government entities is reviewed annually, resulting in possible changes in the allocation of transactions to government and non-government counterparties in public accounting. Sometimes, several hundred units change sector in one year. To ensure that transactions are correctly recorded in the statistics at all times, it would have to be possible to keep track of the sector classification of transaction counterparties automatically using a uniform identification code. For more on the consolidation of Germany's Maastricht debt, see pp 69-71.

⁹ In the past, Eurostat has also indicated that it may not always be ensured that account is taken of the requirements with regard to statistics; see Final findings – EDP dialogue visit to Germany, 25-26 February 2016, <http://ec.europa.eu/eurostat/documents/1015035/7756561/Final-findings-EDP-dialogue-visit-DE-25-26-Feb-2016.pdf>

Explanation of change in debt owing to fiscal surplus and deficit-debt adjustments in 2017

€ bn, data as at 23 April 2018



¹ Positive DDA components are indicated by an arrow pointing to the right, negative components by an arrow pointing to the left. Thus, in 2017 there was an increase in financial assets in AF.2, a decrease in AF.3 etc. ² These mainly include transactions in financial liabilities as well as adjustments due to the valuation of change in debt at face value. Central government received €24 bn from nuclear power plant operators in 2017 for the nuclear waste management services it will provide in future. This indemnity increased its deposits (assets) and other liabilities correspondingly. This transaction did not directly affect the debt or the fiscal balance, but was reflected solely in the aforementioned DDA components.

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With its proposal regarding the introduction of harmonised European public sector accounting standards (EPSAS), the European Commission aims to improve the quality of, and harmonise the underlying data basis for European budgetary surveillance. In a special report on this topic, the Federal Court of Auditors (*Bundesrechnungshof* or BRH) points out that the NA financial data should, in principle, come from public accounting systems.¹⁰ Moreover, if the required information is not contained there, it could, in the BRH's view, be derived from other sources.¹¹ But this is precisely what often proves to be very difficult in practice, and the Commission's proposal seeks, among other things, to take account of the fact that other sources are not always complete and of a suitable quality. Regardless of whether the EPSAS or another integrated system is introduced, the quality of statistics likely depends essentially on whether the required data can be directly obtained from the underlying accounts. In the event of a

system changeover, transition costs would arise, and preparing accounts would likely be time-consuming and prone to error for a transition period. Under the present circumstances, however, statistics needed to determine the fiscal balance, the debt and DDAs will be permanently fraught with similar problems.

The DDAs for general government in Germany in the last four years came to between -0.2% and +0.6% of GDP, the unexplained statistical discrepancies to between -0.1% and -0.3% of GDP. Overall, the latter are likely to be primarily the result of ambiguities in transactions in government financial assets based on heterogeneous and sometimes incoherent data sources.

¹⁰ See also Art 3 of Directive 2011/85/EU.

¹¹ See Bundesrechnungshof (2017), Special Report pursuant to Article 99 Federal Budget Code on the intended implementation of harmonised European Public Sector Accounting Standards (EPSAS) in the Member States of the European Union, p 4.

cial project database.⁴¹ As a result, all PPP projects and the associated liabilities derived from model-based compilations are captured in Maastricht debt.

Debts owed to the public sector and consolidation

Alongside liabilities to the non-public sector, the public finance statistics also record debt in

Local government debt relief programmes

Since the beginning of the decade, various German Federal states have launched large-scale debt relief programmes for their local governments. These programmes are set up in varying ways. In Hesse and Lower Saxony, restructured but not yet fully redeemed liabilities are no longer reported in the debt statistics.⁴² By assumption, they are added to Maastricht debt as long-term loan debt.

Loan components from derivative transactions

In addition, loan components from financial derivative transactions as well as their restructurings⁴³ are taken into account, although these play only a minor role in Germany. In this context, individual annual figures from the Federal Ministry of Finance and the state finance ministries are used.⁴⁴

Model-based back calculation for reclassifications

Finally, in addition to the aforementioned liabilities to be added, methodological and valuation adjustments also need to be made. The not insignificant number of reclassifications of entities into and out of the general government sector necessitates conversions and back calculations for previous years.⁴⁵ Since the public finance statistics are generally not revised, most of the calculations are based on estimates.⁴⁶

Capital indexation of inflation-linked securities and nominal value corrections of discount securities

In the case of inflation-linked securities, the regulations on compiling Maastricht debt require that the increase in liabilities resulting from inflation that has already been accrued must also be factored into Maastricht debt. In addition, a correction is made for the discount securities reported at issue price in the debt statistics, as Maastricht debt requires reporting at face value (nominal value correction).

41 The data in the project database originated from PD – Berater der öffentlichen Hand GmbH. This company was founded in 2008 by the Federal Ministry of Finance and what was at the time the Federal Ministry of Transport, Building and Urban Development to provide consultation to public contracting authorities in order to promote PPPs. In addition, data from the central and state government sectors are reconciled with the budget plans. Likewise, further information based on press releases and Internet research is taken into consideration. The debt statistics do also include liabilities from PPPs. However, only the project totals, and not the specific investment volumes in each individual period, are captured. The latter are necessary in order to capture the debt effect of the PPP during the construction phase. Moreover, there is a lack of data regarding the duration of the construction and utilisation phases in order to be able to model the accrual of debt and its gradual repayment. Since the 2016 reporting year, the debt statistics have captured, alongside PPPs, investment volumes for energy performance contracts (EPCs). As is the case for PPPs, the Federal Statistical Office models the influence of these on Maastricht debt.

42 In the case of the safety net for local governments in the state of Hesse, the state-owned Wirtschafts- und Infrastrukturbank Hessen (WI-Bank) has redeemed liabilities, with the state government rather than the respective local governments making repayments. The Lower Saxony debt relief fund provides debt service assistance for financially weak local governments, which sell on the resulting claims against the Norddeutsche Landesbank (NordLB) and use the income to repay their cash advances. The sale of these claims ultimately creates liabilities of the state government vis-à-vis NordLB.

43 Standard financial derivatives at market conditions (AF.7) are not part of Maastricht debt. However, if they are not standard or not at market conditions, resulting in the general government initially receiving payments from the counterparty that de facto need to be repaid during the term of the derivative, the financial derivative contains a loan component. This needs to be separated accordingly and captured as loan debt in Maastricht debt.

44 No information is available for local government, and no additions were made. However, at least in the past, complex financial derivative transactions were concluded to reduce interest expenditure (including in relation to the exchange rate against the Swiss franc).

45 Public entities are reclassified if they pass (reclassification out of the general government sector) or do not pass (reclassification into the general government sector) what is known as the quantitative market test (production cost coverage rate through sales higher than 50%).

46 Generally, the debt of non-financial entities for the past four reporting years is back estimated using these entities' national accounts deficits compiled by the Federal Statistical Office with the assumption of no DDAs (see also the box on pp 65-68). By contrast, back calculations for government holdings are currently based on the development of financial assets according to financial statement data.

Reconciliation of national debt statistics with Maastricht debt

€ million

Position	2012	2013	2014	2015	2016	2017
Debt in the non-public sector according to national debt statistics¹	2,070,268	2,045,466	2,046,010	2,022,602	2,007,487	1,967,329
Credit-equivalent legal transactions ²	1,978	2,122	2,092	1,898	1,846	1,846
Additions	110,121	122,844	128,384	127,416	129,112	124,416
EFSF rerouting	40,802	51,748	54,539	51,361	51,361	51,361
Rerouting of KfW transactions	38,841	38,197	37,260	37,159	36,892	35,771
Rerouting of state promotional bank transactions	10,685	12,579	12,286	11,535	10,305	10,183
Student loans (central government/individual states) and cash collateral (individual states) not otherwise captured in the debt statistics ³	5,333	1,820	3,212	3,496	3,961	1,713
Coins in circulation ⁴	7,686	7,998	8,335	8,732	9,071	9,418
Central government suspense accounts	332	1,197	2,628	4,501	5,763	4,267
Public-private partnerships and energy performance contracts	6,083	6,233	6,308	6,488	6,637	6,926
Local government debt relief programmes for the states of Hesse and Lower Saxony since 2013	.	2,566	3,166	3,499	3,889	3,745
Loan components of derivatives	360	507	650	644	1,233	1,032
Methodological adjustments	18,451	18,281	13,092	3,402	3,866	4,683
Back calculations for reclassifications ⁵	13,068	13,525	7,717	– 2,168	373	–
Capital indexation of inflation-linked securities and nominal value corrections of discount securities	5,384	4,755	5,375	5,570	3,493	4,683
Consolidation adjustments	– 5,757	– 4,012	– 5,716	– 4,381	– 3,460	– 5,670
Debt owed to non-financial, non-governmental public entities	4,164	5,884	5,788	7,304	8,715	7,691
Securities-based debt to be consolidated	– 9,922	– 9,896	– 11,504	– 11,685	– 12,175	– 13,360
Adjustments applied to government-owned bad banks	8,352	7,322	8,835	10,118	6,946	1,425
Other additions and corrections	873	594	1,399	2,618	1,522	460
Maastricht debt	2,202,307	2,190,496	2,192,004	2,161,775	2,145,473	2,092,643

1 Until 2016, Federal Statistical Office annual debt statistics, Fachserie 14, Reihe 5. For 2017, Federal Statistical Office quarterly debt statistics, Fachserie 14, Reihe 5.2. Includes credit-equivalent legal transactions from the annual debt statistics. 2 Value from the previous year also used for 2017. 3 Central government student loans added until 2012; captured in debt statistics thereafter. Cash collateral of various states added from 2013; no prior data available. 4 Excluding collectors' coins. 5 Reclassifications into (+) and out of (–) the general government sector. Back calculations for reclassifications from mid-2017 will be carried out as part of the 2018 autumn notification.

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Loan debt owed to public, but non-governmental entities

the public sector.⁴⁷ These figures comprise only loan debt owed to core budgets, on the one hand, and to public funds, institutions and enterprises, on the other. This second group of creditors, in turn, comprises not only government off-budget entities but also non-governmental other public funds, institutions and enterprises (OPFIEs⁴⁸). While loan debt owed to core budgets and off-budget entities does not form part of Maastricht debt due to consolidation, credit liabilities vis-à-vis non-governmental OPFIEs are included. However, since the debt statistics do not differentiate between off-budget entities and OPFIEs, the financial asset stock statistics are used as assis-

tance, as these record the loan debt of core budgets owed to off-budget entities in their loan portfolios.⁴⁹ Both sets of statistics are, however, only compatible to a limited extent, meaning that individual corrections and estimates are required. With regard to European

⁴⁷ See Federal Statistical Office, Fachserie 14, Reihe 5, Tabellenblatt 2.1. The debts of public institutions, such as savings banks or promotional banks, are, however, included under debt owed to the non-public sector.

⁴⁸ OPFIEs are considered public market producers; see footnote 8 on p 59.

⁴⁹ On the basis of the financial asset stock statistics, loan debt owed by off-budget entities to other off-budget entities cannot be separated from loan debt owed to OPFIEs. By assumption, it is therefore treated in its entirety as loan debt owed to OPFIEs and is not consolidated.

requirements, it would be appropriate here to fully implement the general government sector delineation in the public accounting system.

Consolidation of securities-based debt

Securities-based debt relations between government entities, which are reported under debts owed to the non-public sector in the debt statistics, are also to be consolidated.⁵⁰ Also used for this are the financial asset stock statistics, which report securities-based debt of core budgets owed to other government entities as the latter's securities holdings, and estimates are also necessary here in some cases.⁵¹

Adjustments related to support measures for banks

Adjustments with regard to "bad banks"

Maastricht debt also includes additions and adjustments related to government measures to support the financial market. First, the debt of Sealink Funding (the "bad bank" of the former SachsenLB) and Portigon (legal successor of the former WestLB) are taken into account, as these are, respectively, an institution domiciled abroad and a holder of a banking licence, and are not captured in the public finance statistics. Second, due to their significant financial assets, specific calculations based on individual figures are carried out for all state-owned "bad banks". These aim to ensure consistent compilations of both the debt as well as the financial assets in the balance sheet context, and are therefore used in place of the volumes reported in the debt statistics.⁵²

Developments in Germany's Maastricht debt since 1991

Data on Germany's Maastricht debt available from 1991

Figures for Germany's Maastricht debt are available dating back to 1991.⁵³ During this period, the debt ratio (as a percentage of GDP) rose from its initial level of 39% to reach 81% in 2010, before falling again perceptibly over the last few years to its current level of 64% (64.1%, or €2,093 billion, to be precise).

Developments during the 1990s were heavily influenced by the fallout from German reunification. Between the end of 1991 and the end of 1999, Germany's overall Maastricht debt doubled from €618 billion to €1,239 billion,⁵⁴ causing the debt ratio to rise to 60%. The increase in debt primarily took place at the central government level, with the impact being concentrated mainly on its special funds (off-budget entities). The German Unity Fund and the Debt Processing Fund were established in 1990 and were used, amongst other things, to fund the rebuilding of eastern Germany's economy, to assume liabilities from the state budget of the GDR, and to cover the burdens arising from the currency changeover in eastern Germany.⁵⁵ Both funds were classified as belong-

German reunification generated significant increases in debt until the end of the 1990s

⁵⁰ As the parties subject to reporting requirements are unable to disclose the holders of their securities-based debt, the debt statistics record all of these liabilities in a simplified manner as holdings owed to the non-public sector.

⁵¹ The securities-based debt between the core budgets and off-budget entities of central government are consolidated using individual figures. The financial asset stock statistics do not allow for consolidation of securities-based debt relationships between governmental off-budget entities, as government accounting practices do not entirely delineate the general government sector. Furthermore, the financial asset stock statistics for the current reporting year are not yet available for the spring notification. For the majority of the positions, projections are made based on the values from the previous year and the Bundesbank's securities holdings statistics.

⁵² Annual reports and notifications in the format of the Bundesbank monthly balance sheet statistics are used as a basis for this. The debts compiled on this basis deviate slightly from the liabilities reported within the debt statistics. This could be caused by differences regarding the timeliness of the booking status. The notifications from "bad banks" within the scope of the debt statistics also record accrued interest, which is not captured in Maastricht debt (report at face value, see pp 61-62).

⁵³ For the period from 1950 up to and including 1990, data for West Germany are only available as more narrowly defined in the national public finance statistics. The data presented in this section take into account any revisions (eg methodological changes) in the NA time series. Key figures may therefore differ from earlier data sets.

⁵⁴ Values in DM from the years before the euro was introduced have been converted into euro values at the official conversion rate (DM 1.95583 = EUR 1) here and in the rest of this article.

⁵⁵ Banks were granted equalisation claims via the Currency Conversion Equalisation Fund if their assets and liabilities were affected differently by the changeover to the Deutsche Mark. Corporate loans, for instance, were converted at a different rate to a certain proportion of bank deposits by households. To absorb losses, the fund was assigned claims vis-à-vis the GDR state budget, to which the Debt Processing Fund became the legal successor after German reunification.

ing to the general government sector (the debt of both entities stood at €40 billion at the end of 1991). By contrast, the Treuhand agency, which was established to facilitate the privatisation and restructuring of East German firms, was allocated to the corporate sector as its core business was considered to be a market-based activity. The considerable shortfalls arising from the privatisation of the former GDR state-owned enterprises, which had not originally been expected, led to the accumulation of substantial debts outside the government sector at first. In 1995, the debts accumulated by the Treuhand agency were finally transferred to the Redemption Fund for Inherited Liabilities, which, as a newly created special fund belonging to central government, was included in the government sector.⁵⁶ The debt assumptions, which were recorded in the national accounts as a capital transfer to the corporate sector with an impact on the deficit, amounted to a total of €122 billion (6½% of GDP) in 1995.⁵⁷

Equalisation claims and railway reform: increase in debt without impact on deficit

Until the mid-1990s, the increase in general government debt significantly outstripped deficits, which were already high. One of the main reasons for these (positive) deficit-debt adjustments (DDAs)⁵⁸ was that the equalisation claims allocated in connection with the currency changeover and the subsequent debt relief for enterprises capable of being privatised had no impact on the deficit in the period under review, but did increase the debt level (€33 billion, or 2% of GDP).⁵⁹ In addition, as a result of the railway reform and the creation of Deutsche Bahn AG in 1994, the liabilities of the Federal Railways and the East German Reichsbahn (€34 billion or 2% of GDP), both assigned to the corporate sector, were allocated to the newly established Federal Railways Fund, another central government off-budget entity. This was not reflected in the deficit either, but did lead to an increase in debt.

UMTS auction proceeds curbed rise in debt

In the second half of the 1990s, general government deficits then began to fall gradually and debt levels rose at a slower pace. In 2000, owing to the one-off proceeds of €51 billion

(2½% of GDP) received by general government from the auction of UMTS licences, a surplus was recorded for the first time since German reunification. However, this revenue only had a partial impact on the debt level at first. Instead, part of it was invested temporarily, and it was not used to limit the growth in debt until the following year. Repayments from the UMTS auction proceeds temporarily brought the debt ratio back down to 58% at the end of 2001.⁶⁰

Until the mid-2000s, large general government deficits then consistently continued to be recorded (and the 3% threshold was exceeded), meaning that debt rose more quickly and the 60% threshold was significantly exceeded as of 2003. However, the disposal of financial assets went some way towards slowing the rise in debt.⁶¹

From 2003, large deficits pushed debt ratio above 60%

⁵⁶ In addition, the Redemption Fund for Inherited Liabilities assumed the debts of the Debt Processing Fund, which was already classified in the general government sector, thereby dissolving it.

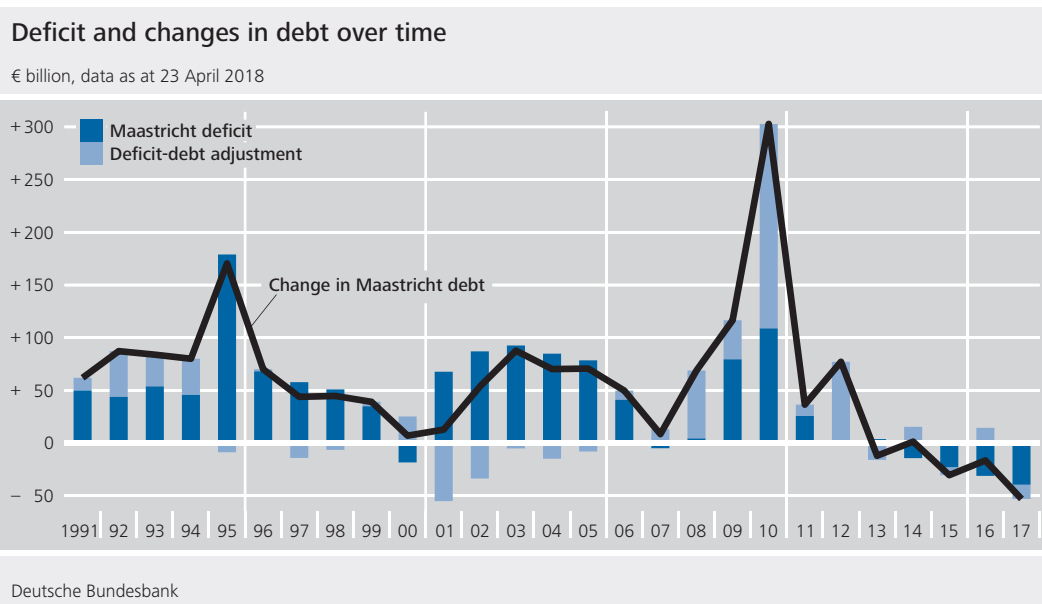
⁵⁷ At the beginning of 1995, the debts from the Treuhand agency assumed by the Redemption Fund for Inherited Liabilities amounted to €105 billion (excluding accrued interest). See: Deutsche Bundesbank, Trends in public sector debt since German unification, Monthly Report, March 1997, pp 17-31. Further capital transfers resulted from the assumption of the debts of East German housing enterprises. These were counterbalanced, to a lesser extent, by relief from capital transfers received through the assumption of the assets of Deutsche Kreditbank. However, these effects were not counted as increasing the deficit in the context of the excessive deficit procedure. The Maastricht deficit recorded in 1995 was therefore around €119 billion lower on balance than the NA figure.

⁵⁸ For an explanation of the DDA, see pp 65-68.

⁵⁹ See: Deutsche Bundesbank, The significance of subsidiary budgets in the context of German unification, Monthly Report, May 1993, pp 43-58, and Deutsche Bundesbank, Function and significance of the equalisation claims granted to east German banks and enterprises, Monthly Report, March 1996, pp 35-53.

⁶⁰ The rules governing how the proceeds from mobile phone licence auctions are to be recorded have recently been amended. The upcoming revision of the national accounts in summer 2019 will mean that proceeds are distributed over the lifetime of the frequency rights.

⁶¹ In several cases, shares owned by central government were transferred to KfW as part of holding arrangements. In this context, privatisation receipts were budgeted for, which prevented the borrowing limits from being breached in the budget planning process. However, since the autumn 2005 notification, these transactions have been classified as central government borrowing from KfW in the national accounts, since no economic transfer of ownership took place.



Economic growth and sharp decline in deficits reduced debt ratio prior to the financial crisis

From the middle of the last decade, absolute debt growth receded in light of a significant improvement in the macroeconomic situation and declining deficits. Between 2005 and 2007, the debt ratio fell from a temporary high of 67% to 64% as a result of the increase in nominal GDP.

From 2008, the crisis led to sharp rise in debt, ...

From 2008 onwards, debt developments were driven by the consequences of the financial and sovereign debt crisis and the government financial market support measures and assistance loans granted to euro area sovereigns in this context. The first of these measures involved shifting toxic assets from WestLB and SachsenLB to the two dedicated special purpose vehicles established for this purpose: Phoenix and Sealink Funding.⁶² As a result of the ring-fencing provided by the state government owners, these “bad banks” and thus their toxic assets and liabilities were recorded as part of the government sector (allocated to the state government level). This caused the Maastricht debt level to rise by €38 billion (1½% of GDP) as early as 2008.⁶³ In addition, a number of institutions were supported by means of capital injections. By the end of 2010, capital injections totalling €47 billion (2% of GDP) had been granted to Commerzbank AG, BayernLB, Hypo Real Estate (HRE), LBBW, WestLB, HSH Nordbank AG, IKB Deutsche Industriebank

AG and Aareal Bank AG. Of these, only a small part – capital injections to HRE, IKB and WestLB – were recorded as capital transfers and thus as having an impact on the deficit.

By far the largest increase in debt was attributable to the assumption of toxic assets belonging to HRE by the state-owned “bad bank” FMS Wertmanagement (FMSW), which contributed €189 billion (7½% of GDP) to the Maastricht debt at the end of 2010. The off-loading of additional toxic assets from WestLB to the Erste Abwicklungsanstalt (EAA) resolution agency caused the debt level for 2010 to rise by a further €21 billion (1% of GDP).⁶⁴

At the end of 2010, the overall debt ratio reached its peak to date at 81%, or €2,088 billion. Of this, €306 billion (12% of GDP) was attributable to measures supporting financial

... which was particularly pronounced in 2010 owing to the support given to HRE

Bank bail-outs reflected less in deficit than in debt

⁶² At the end of 2017, almost all of the remaining assets of Sealink Funding were sold on the capital market, meaning that the corresponding liabilities are likely to be scaled back soon.

⁶³ Furthermore, in 2009, the Federal state of Baden-Württemberg issued a guarantee amounting to roughly €13 billion (½% of GDP) to cover the risk stemming from a reference portfolio belonging to LBBW. The refinancing of the cash deposit held as collateral increased the debt level accordingly.

⁶⁴ Besides this, in 2010, the EAA assumed the assets and liabilities of Phoenix in the original amount of €23 billion. However, Phoenix was already part of the government sector, and thus counted towards Maastricht debt.

institutions.⁶⁵ In this context, developments in deficit and debt levels clearly followed divergent paths. For instance, in cumulative terms, at €39 billion (1½% of GDP), only a fraction of the financial market support measures granted up to that point had a direct impact on the deficit. This was mainly because the toxic assets purchased and the equity capital injected were considered to be recoverable to a large extent, meaning that the increase in debt was thus offset by an acquisition of financial assets.⁶⁶ By the end of 2010, the acquisition of financial assets therefore resulted in positive DDAs of €267 billion (10½% of GDP) in cumulative terms.

Assistance loans to euro area governments overlapped with deleveraging at "bad banks" in some cases

The next few years saw the start of a gradual process in which the financial assets acquired as a result of the crisis were liquidated and the equity injected was repaid. Taken by itself, this caused a decline in the debt level and, mirroring previous developments, DDAs that were now negative. However, the granting of assistance loans to some euro area countries in the aftermath of the sovereign debt crisis,⁶⁷ as well as the assumption of other risk assets by the EAA, in particular, more than offset this debt reduction process.⁶⁸ This resulted in a net increase in debt. Since it was assumed that the assistance loans would be repaid in full at a later date, they were recorded as the purchase of financial assets with no impact on the deficit, thus leading to a positive DDA. The same applied to the paid-in capital provided by Germany to the European Stability Mechanism (ESM), which was used to settle the European assistance loans granted from mid-2012.⁶⁹ The increases in debt were therefore higher than the respective deficits until 2012. In 2012, absolute debt reached an all-time high of €2,202 billion (debt ratio of 80%). At the same time, the impact on debt it contained as a result of the financial and sovereign debt crisis also peaked at a total of €360 billion.⁷⁰

From 2013, the debt level also decreased in absolute terms on the whole, and the debt ratio declined significantly owing to nominal GDP

growth in the ratio's denominator. However, the very favourable budgetary situation, which included surpluses, also contributed to this, although these surpluses were only partially reflected in a decrease in debt. In particular, surpluses generated by local governments and the (largely debt-free) social security funds not only led to debt repayments, but also to a build-up of financial assets in these government subsectors.⁷¹ However, from a general government perspective, this was counterbalanced by the portfolio decrease at the "bad

Decrease in debt since 2013 thanks to economic growth and budget surpluses

65 Indirect effects from financial market support measures, eg assumed funding costs or revenue from guarantee fees, are also taken into account here.

66 For this reason, the bulk of the government's expenditure on the purchase was considered a financial transaction without any impact on the deficit. Any revaluations of assets after a transfer generally have no impact on the deficit because they are not viewed as transactions.

67 Bilateral loans were granted to Greece via KfW on behalf of and for the account of Germany's central government (since 2011: €15 billion or ½% of GDP). In addition, the assistance loans granted via the European Financial Stability Facility (EFSF) to Ireland, Portugal and Greece, as well as the assumed liabilities from their funding, were allocated in economic terms to the guarantor euro area countries according to their share in the ECB's capital key (peaking at €55 billion or almost 2% of GDP for Germany).

68 "Topping up" the EAA increased the debt level by €24 billion in 2012. By contrast, the reclassification of Portigon, the successor to WestLB, to the general government sector increased the debt figure for 2012 by only €3½ billion since the bulk of the assets and liabilities had already been transferred to the EAA.

69 Unlike EFSF loans, for loans granted via the ESM, the corresponding assets and liabilities are not assigned to the creditor countries. In contrast to the EFSF, Eurostat decided that the ESM, as an independent institution, would be classified outside the government sector, as it is evidently assumed that lending and borrowing take place mainly at the ESM's own risk. Nevertheless, from an economic perspective, the creditor countries remain exposed to risk due to the additional callable capital, and ultimately decide on the granting of loans. Between 2012 and 2014, Germany provided paid-in capital to the ESM totalling €22 billion. Loans granted by the EU from its own budget via the European Financial Stabilisation Mechanism (EFSM) are not reflected in the debt levels of the EU member states, either.

70 Germany's share of all European assistance loans and paid-in capital to the ESM increased to €91 billion (or 3% of GDP) by the end of 2014, and, since 2015, has stood at €88 billion (currently 2½% of GDP).

71 For the most part, these were not invested in debt instruments issued by other government sector entities. Otherwise, this would have resulted in consolidation and a lower Maastricht debt level.

banks”,⁷² resulting in negative DDAs on balance.

Maastricht debt likely to decline further as things stand

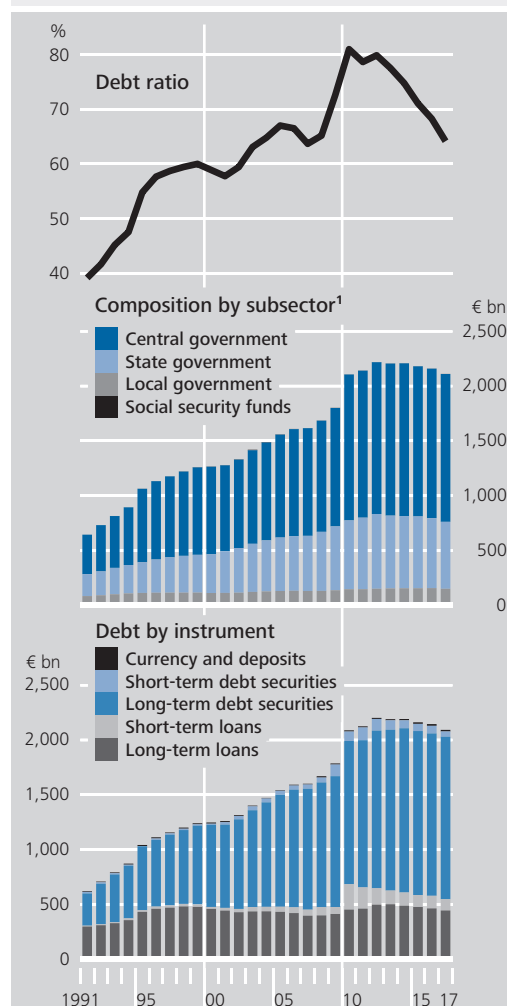
At the end of 2017, the debt level stood at €2,093 billion (64.1% of GDP). Of this, the aforementioned effects from the financial and sovereign debt crisis amounted to €282 billion, or 8½% of GDP. The extent to which Maastricht debt decreases in the future will depend on the pace at which risk assets continue to be effectively liquidated by the “bad banks” and assistance loans granted bilaterally or via the EFSF are repaid. Beyond this, not least in light of the strict borrowing limits under the national debt brake and a continued marked increase in nominal GDP, the Maastricht debt ratio can be expected to further significantly decline over the following years and to fall below the 60% limit by 2019 at the latest.

Borrower structure

Central government debt has risen sharply

Looking at the contribution of the government subsectors to the Maastricht debt level, the share attributable to central government climbed by 7 percentage points to 63% by the mid-1990s on account of the fiscal burdens created by German reunification, while the state government share (despite significant debt increases in absolute terms) fell by 5 percentage points to 26%. Until the beginning of the 2000s, central government’s share remained more or less constant, but then decreased over time as the proceeds from the UMTS auction were used for debt repayment, stabilising at around 60%. However, FMSW’s assumption of HRE’s risk assets caused central government’s share to jump back up by 3 percentage points in 2010, although financial market support measures had also been taken at the state government level. The share at the local government level has fallen constantly since the beginning of the 1990s, from 13% in 1991 to a stable level of 7% since 2010. As a rule, social security funds cannot be debt financed. Although the deficits of the statutory health insurance institutions were partially

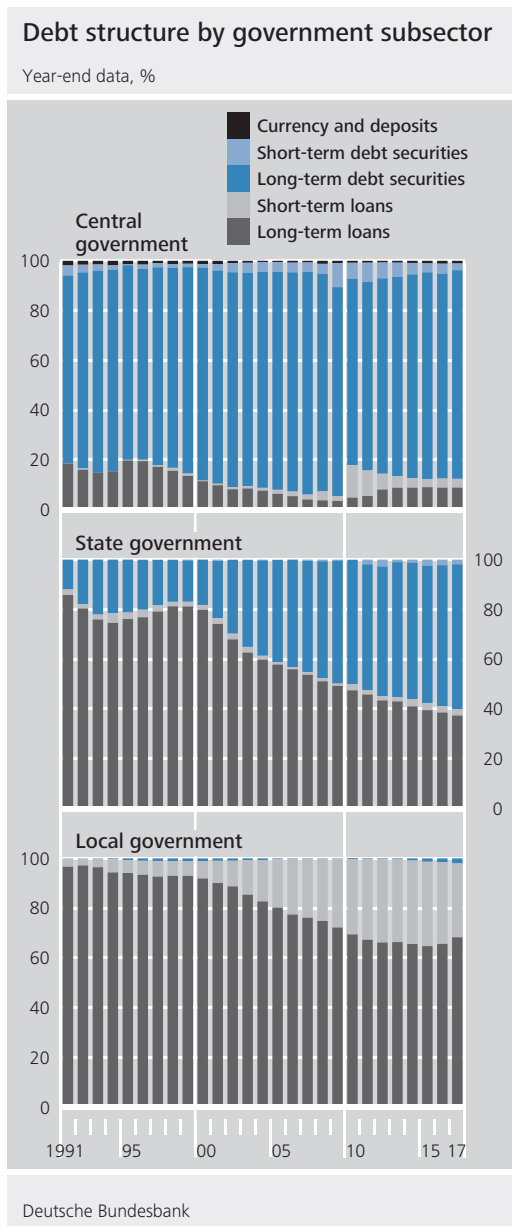
Level and structure of general government debt



¹ This shows the debt of each government subsector consolidated by excluding their debt vis-à-vis other subsectors.
 Deutsche Bundesbank

financed through bank loans in the first half of the 2000s, this took place on a relatively small

⁷² This was by no means a steady process. For instance, changes in market interest rates led to considerable changes in the market value of the derivative positions of FMSW. Although they are not part of the Maastricht debt themselves, cash collateral must normally be provided for derivative liabilities, which generally means that borrowing is required or prevents repayments from being made. For claims arising from derivative positions, cash collateral is received and, at the same time, recorded (enlarging the balance sheet) as a repayable loan on the liabilities side. In addition, FMSW’s purchase of liabilities from the Irish subsidiary Depfa temporarily expanded the balance sheet. Besides this, in 2015, the EAA assumed financial assets belonging to the EAA Covered Bond Bank, albeit to a lesser extent. The establishment of HSH Portfoliomanagement as a state-owned “bad bank” of HSH Nordbank in 2016 also played a small role in the delayed reduction of the debt stemming from the financial market crisis.



scale. Because the social security funds are simultaneously creditors to other levels of government (and these intra-government debts are consolidated), their contribution to the Maastricht debt level – measured as the difference between their own debts minus claims on other levels of government – is negative in most years.⁷³

Structure of debt instruments

In terms of types of debt, a persistent trend towards marketable forms of debt such as money or capital market instruments can be

Trend towards marketable debt continues ...

identified for general government in the period under review. The share of these increased from 50% in 1991 to 73% by 2009. Through the establishment of FMSW, which entailed the transfer of liabilities from HRE in 2010, the weight of loan-based debt went back up significantly for a time. In the following years, however, the trend towards marketable debt instruments resumed from a lower level, reaching a share of almost three-quarters again of late.

Looking at the individual government levels, considerable differences are visible in terms of structure and development. While central government financed around 75% of its borrowing through capital market instruments at the beginning of the 1990s, this share amounted to just 12% for the state governments as they relied more heavily on bank loans. However, apart from a period in the second half of the 1990s which saw greater loan financing, the share of capital market instruments at the aggregate state government level rose steadily to 58% by the end of 2017.⁷⁴ At the central government level, this figure stood at 84% at the end of 2017.

... amongst central government's traditionally strong capital market orientation

Among marketable instruments, money market paper played a noteworthy role for many years primarily at the central government level. In the wake of the financial and economic crisis, central government considerably increased its activity in this sector for a time. In 2009, the outstanding volume more than doubled to 10%, covering a substantial part of the financing requirements. The gradual decline in central government's core budget money market borrowing over the following years was partly offset by issuances by FMSW. At state government level, money market instruments only became more important through issuances made by the EAA. However, at a temporary high of 3% in

Money market debt more important since the crisis

⁷³ See in this report: Statistical Section, X Public finances in Germany, Table 14.

⁷⁴ In this context, the individual Federal states use marketable debt instruments to widely varying degrees.

2012, they accounted for just a small proportion of state government debt.

Bank bail-outs and assistance loans increase loan debt

Turning to loan debt, the share of long-term loans in central government's total debt fell from 20% in the mid-1990s to below 4% at the end of 2009, but then went back up to 9% by 2013. This was due to assistance loans provided by central government to other euro area member states through KfW and the EFSF. Until 2009, central government's share of short-term loans hovered below 4%. When FMSW was set up in 2010, HRE's financing structure, which was geared towards short-term loans in the interbank market, was transferred to central government. The share of short-term loans shot up to 13% as a result, but went back down to below the 4% mark by the end of 2017. At state government level, the share of long-term loans decreased from 86% at the end of 1991 – conversely to the accumulation of long-term debt securities – to 37% at the end of 2017. At local government level, after increasing significantly, long-term loan debt remained virtually unchanged at an absolute level of around €100 billion until the mid-1990s. By contrast, particularly from the beginning of the 2000s, stocks of short-term loans, especially cash advances, rose substantially to over €50 billion in 2015, but fell to €44 billion at the end of 2017, not least on account of favourable budgetary developments.⁷⁵ While the share was still below 4% in 1991, just under one-third of local government debt is now financed through cash advances and short-term loans.⁷⁶ However, there are marked differences between individual municipalities, and their outstanding cash advances are heavily concentrated in just a few Federal states.⁷⁷

■ Outlook

Germany's Maastricht debt is mainly compiled on the basis of the official debt statistics, which, in principle, include all entities allocated to the general government sector. The debt statistics have been the tried and tested survey method

Statisticians facing challenges in light of European obligations

for decades. However, statistical data requirements at the European level have increased significantly over time, mainly owing to negative experiences with the quality of Greece's data and the resulting difficulties in assessing the sustainability of its public finances. This means that Germany's statistical system is facing challenges in general, but also with regard to the Maastricht debt compilations.

It is difficult to satisfy the growing data needs at the European level and the stricter quality requirements for a number of outsourced government activities from several very different – and often unintegrated – public accounting systems, with the single-entry system being by far the largest overall. In this context, the requirements cannot always be readily met by the existing systems of government entities. For instance, it is sometimes necessary to tap indirect data sources that are primarily intended for other purposes and that are potentially inconsistent with the main accounting systems. However, discrepancies can also arise because the necessary consolidation of financial relations within the government sector cannot be fully derived from the accounting system in place.⁷⁸

Stricter requirements to be met by heterogeneous systems ...

... leading to potential inconsistencies

Although, on the whole, Germany's existing budgetary and finance statistics systems are well established and largely provide a reliable picture of the single-entry system, the obliga-

Taking greater account of European requirements

⁷⁵ The heterogeneity in the financial situation of the municipalities can be seen by looking at the simultaneous build-up of municipal financial assets of more than €70 billion, which are likely to reflect investments by wealthy local governments, in particular.

⁷⁶ Cash advances are classified here as short-term loans. In some Federal states, the rules for such loans, which were actually only intended to bridge liquidity shortages, have now been eased significantly, however, meaning that maturities of up to ten years are now permitted and also seem to be in use.

⁷⁷ See also Deutsche Bundesbank, Local government finances: development and selected aspects, Monthly Report, October 2016, pp 13-36.

⁷⁸ Meanwhile, a reform of the particularly important government budgetary planning system is underway to establish clear delineation. However, since an entity's sector classification can be revised, information about the transaction counterparties should also ultimately be retained (automatically) for all units.

tions entered into at the European level have only been partially accompanied by corresponding adjustments to the national public accounting system. The establishment of an expert panel through the Budget Principles Act (*Haushaltsgrundsätze-gesetz*) to ensure that the various government accounting standards also take into account the statistical requirements of the national accounts is a welcome development. However, there is still some catching-up to do in certain areas. For instance, the quality of statistical reporting is heavily dependent on the accounting system on which the required

data is based. Against this backdrop, it would generally make sense to have a far more harmonised accounting system across general government that depicts revenue and expenditure flows with balance sheet stock data in an integrated way. If this aim is not pursued, it is important that the standard-setting bodies responsible at central and state government level, in particular, make efforts to close the current data gaps and address consistency issues through targeted adjustments to the relevant accounting systems.

Statistical Section

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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		
2016 June	8.7	5.1	5.1	5.1	4.0	1.5	- 2.1	- 0.33	- 0.27	0.7	
July	8.7	5.1	5.2	5.1	3.9	1.3	- 2.4	- 0.33	- 0.29	0.6	
Aug	8.6	5.0	5.0	5.1	3.9	1.6	- 2.3	- 0.34	- 0.30	0.5	
Sep	8.3	5.0	5.0	4.8	4.0	1.9	- 2.2	- 0.34	- 0.30	0.6	
Oct	8.0	4.6	4.5	4.7	4.3	2.2	- 1.6	- 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	- 1.6	- 0.35	- 0.32	1.0	
2017 Jan	8.4	4.6	4.7	4.8	4.5	2.4	- 1.4	- 0.35	- 0.33	1.1	
Feb	8.3	4.7	4.6	4.8	4.3	2.3	- 1.0	- 0.35	- 0.33	1.2	
Mar	9.0	5.0	5.1	4.8	4.8	2.8	- 1.1	- 0.35	- 0.33	1.2	
Apr	9.1	5.0	4.8	4.9	4.5	2.6	- 1.4	- 0.36	- 0.33	1.1	
May	9.2	5.1	4.9	4.8	4.3	2.6	- 1.2	- 0.36	- 0.33	1.1	
June	9.6	5.2	4.9	4.8	4.1	2.8	- 1.1	- 0.36	- 0.33	1.0	
July	9.2	5.0	4.5	4.8	3.8	2.6	- 0.9	- 0.36	- 0.33	1.2	
Aug	9.6	5.4	5.0	4.9	3.8	2.3	- 0.8	- 0.36	- 0.33	1.0	
Sep	9.8	5.4	5.2	5.1	3.9	2.4	- 0.8	- 0.36	- 0.33	1.0	
Oct	9.5	5.4	5.0	5.0	3.8	2.5	- 1.3	- 0.36	- 0.33	1.1	
Nov	9.2	5.3	4.9	4.8	3.9	2.9	- 1.3	- 0.35	- 0.33	0.9	
Dec	8.7	5.1	4.6	4.7	3.6	2.6	- 1.2	- 0.34	- 0.33	0.9	
2018 Jan	8.8	5.2	4.5	4.4	3.5	2.8	- 0.8	- 0.36	- 0.33	1.1	
Feb	8.4	4.9	4.2	...	3.2	2.6	- 1.3	- 0.36	- 0.33	1.2	
Mar	...	...	...	...	...	...	...	- 0.36	- 0.33	1.1

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

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

2 External transactions and positions*

Period	Selected items of the euro-area balance of payments r								Euro exchange rates 1		
	Current account		Financial account						Dollar rate	Effective exchange rate 3	
	Balance	of which Goods	Balance	Direct investment	Portfolio investment	Financial derivatives 2	Other investment	Reserve assets		Nominal	Real 4
	€ million								1 EUR = ... USD	Q1 1999 = 100	
2016 June	+ 38,001	+ 38,800	+ 31,760	- 2,564	+ 8,117	- 10,478	+ 36,063	+ 621	1.1229	94.4	89.7
July	+ 36,591	+ 33,851	+ 18,917	+ 14,599	+ 44,375	+ 13,286	- 52,402	- 941	1.1069	94.6	89.8
Aug	+ 26,955	+ 25,238	+ 40,489	+ 37,483	+ 57,106	+ 6,526	- 62,598	+ 1,973	1.1212	94.9	90.0
Sep	+ 38,079	+ 33,606	+ 50,627	+ 60,951	+ 28,222	+ 4,190	- 49,481	+ 6,745	1.1212	95.1	90.1
Oct	+ 34,507	+ 28,476	+ 9,615	+ 23,846	+ 38,372	+ 5,447	- 54,100	- 3,950	1.1026	95.1	90.3
Nov	+ 39,284	+ 34,333	+ 14,421	+ 11,880	- 30,097	+ 2,207	+ 27,886	+ 2,545	1.0799	94.6	89.6
Dec	+ 47,674	+ 33,186	+ 98,106	+ 30,366	+ 53,214	+ 7,094	+ 1,385	+ 6,046	1.0543	93.7	88.9
2017 Jan	- 2,071	+ 7,068	- 5,926	- 29,596	+ 18,304	+ 7,003	+ 3,406	- 5,043	1.0614	93.9	89.1
Feb	+ 19,437	+ 18,911	+ 15,368	+ 10,879	+ 76,200	+ 7,481	- 81,236	+ 2,044	1.0643	93.4	88.9
Mar	+ 45,244	+ 37,942	+ 36,962	+ 8,569	+ 2,597	+ 8,971	+ 16,107	+ 719	1.0685	94.0	89.2
Apr	+ 19,559	+ 24,853	+ 14,776	+ 24,754	+ 15,081	+ 2,698	- 23,614	- 4,142	1.0723	93.7	89.0
May	+ 15,199	+ 29,746	+ 11,552	+ 20,157	- 19,706	+ 4,038	+ 5,931	+ 1,132	1.1058	95.6	90.5
June	+ 28,681	+ 34,446	+ 50,556	- 27,988	+ 26,068	- 7,284	+ 58,196	+ 1,565	1.1229	96.3	91.2
July	+ 42,908	+ 32,530	+ 41,389	- 1,881	+ 25,288	- 2,814	+ 25,990	- 5,194	1.1511	97.6	92.4
Aug	+ 38,920	+ 25,696	+ 6,159	- 14,376	+ 70,842	- 5,623	- 44,002	- 682	1.1807	99.0	93.6
Sep	+ 46,467	+ 34,892	+ 79,315	+ 9,488	+ 38,296	- 1,884	+ 26,995	+ 6,420	1.1915	99.0	93.6
Oct	+ 40,289	+ 30,493	+ 47,797	+ 32,169	+ 53,761	+ 323	- 35,764	- 2,692	1.1756	98.6	93.1
Nov	+ 42,680	+ 36,523	+ 42,381	+ 5,081	+ 8,434	+ 2,565	+ 20,120	+ 6,182	1.1738	98.5	93.0
Dec	+ 50,244	+ 32,210	+ 88,817	+ 13,583	+ 13,028	+ 3,099	+ 60,730	- 1,624	1.1836	98.8	93.3
2018 Jan	+ 12,827	+ 9,416	+ 9,391	+ 27,063	+ 14,754	+ 348	- 35,045	+ 2,270	1.2200	99.4	p 93.9
Feb	...	...	...	...	...	...	...	...	1.2348	99.6	p 93.9
Mar	...	...	...	...	...	...	...	...	1.2336	99.7	vis 94.0

* 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 82-83*. 2 Including employee stock options. 3 Vis-à-vis the currencies of the EER-19 group. 4 Based on consumer price indices.

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}										
2015	2.1	1.4	1.7	1.7	0.1	1.1	- 0.3	25.6	1.0	3.0
2016	1.8	1.5	1.9	2.1	2.1	1.2	- 0.2	5.1	0.9	2.2
2017	2.4	1.7	2.2	4.9	2.6	1.8	1.3	7.8	1.5	4.6
2016 Q3	1.7	1.6	1.7	2.0	2.5	0.7	1.1	2.7	0.6	0.7
Q4	1.9	1.5	1.3	3.1	2.2	1.0	- 1.3	9.9	0.7	3.0
2017 Q1	2.1	1.8	3.4	4.4	3.9	1.6	0.7	5.3	2.0	4.1
Q2	2.4	1.5	1.0	5.7	2.6	1.2	1.4	6.3	1.2	4.0
Q3	2.7	1.6	2.2	4.2	2.0	2.1	1.4	10.9	1.5	5.8
Q4	2.8	1.8	2.3	5.0	2.2	2.5	1.8	8.4	1.3	4.2
Industrial production ^{1,3}										
2015	2.6	- 1.2	0.8	0.1	- 1.1	1.5	1.0	36.9	1.1	3.4
2016	1.7	4.6	1.0	2.6	3.9	0.3	2.6	0.7	1.9	4.9
2017	3.0	3.0	p 3.4	8.0	4.2	2.4	4.8	p - 2.2	3.6	8.4
2016 Q3	0.9	6.2	0.6	4.1	5.0	- 0.5	2.1	- 0.8	1.6	1.4
Q4	3.2	5.3	1.4	9.0	5.2	0.9	3.9	3.2	3.9	9.8
2017 Q1	1.2	1.4	1.0	10.7	5.7	1.0	9.9	- 6.0	2.1	8.6
Q2	2.5	4.2	3.1	12.5	3.2	1.7	3.4	- 1.1	3.8	9.2
Q3	4.0	4.7	4.3	4.4	2.8	3.2	4.5	- 3.4	4.6	11.4
Q4	4.1	1.7	p 5.0	4.9	5.1	4.0	1.9	p 1.6	4.0	4.9
Capacity utilisation in industry ⁴										
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
2017	83.0	81.8	86.5	74.9	82.3	84.7	70.0	-	76.8	74.5
2016 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	84.7	72.0	-	77.0	74.5
Q4	83.8	82.9	87.2	74.8	83.6	85.2	71.2	-	77.6	74.2
2018 Q1	84.5	82.1	88.0	75.5	83.1	86.2	70.4	-	78.3	75.8
Standardised unemployment rate ⁵										
2015	10.9	8.5	4.6	6.2	9.4	10.4	24.9	10.0	11.9	9.9
2016	10.0	7.8	4.1	6.8	8.8	10.1	23.6	8.4	11.7	9.6
2017	9.1	7.1	3.8	5.8	8.6	9.4	21.5	6.7	...	8.7
2017 Oct	8.8	6.6	3.7	5.5	8.5	9.2	20.9	6.5	11.1	8.3
Nov	8.7	6.3	3.5	5.6	8.5	9.0	21.0	6.4	11.1	8.3
Dec	8.6	6.2	3.6	5.7	8.5	9.0	20.8	6.3	10.9	8.2
2018 Jan	8.6	6.3	3.5	6.5	8.5	9.0	...	6.2	11.1	8.3
Feb	8.5	6.4	3.5	...	8.4	8.9	...	6.1	10.9	8.0
Mar	...	...	...	...	...	...	...	6.1	...	...
Harmonised Index of Consumer Prices ¹										
2015	⁶ 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	1.5	2.2	1.7	3.7	0.8	1.2	1.1	0.3	1.3	2.9
2017 Oct	1.4	1.8	1.5	4.0	0.5	1.2	0.5	0.5	1.1	2.7
Nov	1.5	2.1	1.8	4.5	0.9	1.2	1.1	0.5	1.1	2.7
Dec	1.4	2.1	1.6	3.8	0.5	1.2	1.0	0.5	1.0	2.2
2018 Jan	1.3	1.8	1.4	3.6	0.8	1.5	0.2	0.3	1.2	2.0
Feb	1.1	1.5	1.2	3.2	0.6	1.3	0.4	0.7	0.5	1.8
Mar	1.3	1.5	1.5	2.9	0.9	1.7	0.2	0.5	0.9	2.3
General government financial balance ⁷										
2015	- 2.1	- 2.5	0.6	0.1	- 2.7	- 3.6	- 5.7	- 1.9	- 2.6	- 1.2
2016	- 1.5	- 2.5	0.8	- 0.3	- 1.7	- 3.4	0.5	- 0.7	- 2.5	0.0
2017	...	...	1.1	...	...	...	...	...	...	...
General government debt ⁷										
2015	89.9	106.0	71.0	10.0	63.6	95.8	176.8	76.9	131.5	36.9
2016	88.9	105.7	68.2	9.4	63.1	96.5	180.8	72.8	132.0	40.6
2017	...	...	64.1	...	...	...	...	...	...	...

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: Bundesbank 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}										
2.0	2.9	9.9	2.3	1.1	1.8	3.9	2.3	3.4	2.0	2015
2.3	3.1	5.5	2.2	1.4	1.6	3.3	3.1	3.3	3.4	2016
3.8	2.3	6.6	3.2	2.9	2.7	3.4	5.0	3.0	3.9	2017
1.8	5.0	4.9	2.4	1.0	1.8	2.7	3.4	3.3	3.4	2016 Q3
3.6	4.3	5.7	2.4	1.1	2.0	3.2	3.5	2.5	3.9	Q4
4.2	3.1	6.8	3.3	3.1	3.2	3.0	5.0	2.8	3.8	2017 Q1
4.1	1.5	7.6	3.4	2.6	2.7	3.7	4.5	3.4	4.0	Q2
3.2	3.0	7.6	3.0	3.1	2.5	3.4	4.5	2.9	3.8	Q3
3.9	1.7	4.3	2.9	2.9	2.3	3.5	6.0	3.0	3.9	Q4
Industrial production ^{1,3}										
4.2	1.2	6.3	- 3.3	2.2	2.1	6.0	5.1	3.4	3.5	2015
2.8	0.5	- 4.7	2.2	2.8	2.4	3.7	7.7	1.7	7.9	2016
6.8	1.6	4.1	2.0	4.6	3.5	3.0	8.6	3.3	7.9	2017
3.5	- 0.9	- 4.8	3.4	1.8	1.6	2.3	7.9	0.3	6.1	2016 Q3
2.9	0.8	- 2.5	5.5	4.5	1.6	2.8	9.2	1.8	7.0	Q4
5.1	- 1.2	6.8	2.3	2.0	3.4	5.3	6.6	1.9	9.1	2017 Q1
6.2	0.9	3.5	1.4	4.0	2.4	0.3	7.8	2.7	5.3	Q2
8.7	4.1	5.3	2.2	6.3	5.7	2.8	8.8	3.1	7.6	Q3
7.0	2.7	0.9	2.1	5.8	2.6	3.7	11.3	5.3	9.9	Q4
Capacity utilisation in industry ⁴										
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
77.2	81.5	80.3	82.5	86.7	80.4	85.3	85.1	78.7	59.1	2017
76.0	81.3	79.9	82.1	85.1	80.3	85.4	84.1	79.1	59.6	2016 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
77.4	81.1	82.8	83.1	88.0	81.7	83.0	85.2	79.1	59.1	Q4
77.8	83.1	81.1	83.9	88.8	81.6	83.7	85.0	79.7	60.4	2018 Q1
Standardised unemployment rate ⁵										
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
7.1	5.6	4.0	4.9	5.5	9.0	8.1	6.6	17.2	11.1	2017
6.7	5.4	3.8	4.5	5.4	8.4	7.8	6.0	16.7	10.1	2017 Oct
6.7	5.4	3.8	4.4	5.5	8.1	7.7	5.7	16.6	10.4	Nov
6.8	5.4	3.8	4.4	5.4	8.0	7.6	5.6	16.4	10.5	Dec
7.3	5.3	3.6	4.2	5.3	7.9	7.6	5.4	16.2	10.0	2018 Jan
7.3	5.4	3.5	4.1	5.2	7.8	7.5	5.3	16.1	9.6	Feb
...	...	...	...	...	...	...	...	...	...	Mar
Harmonised Index of Consumer Prices ¹										
- 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
3.7	2.1	1.3	1.3	2.2	1.6	1.4	1.6	2.0	0.7	2017
4.2	2.0	1.5	1.3	2.4	1.9	1.8	1.3	1.7	0.4	2017 Oct
4.2	2.0	1.5	1.5	2.4	1.8	2.1	1.4	1.8	0.2	Nov
3.8	1.6	1.3	1.2	2.3	1.6	2.0	1.9	1.2	- 0.4	Dec
3.6	1.3	1.2	1.5	1.9	1.1	2.6	1.7	0.7	- 1.5	2018 Jan
3.2	1.1	1.3	1.3	1.9	0.7	2.2	1.4	1.2	- 0.4	Feb
2.5	1.1	1.3	1.0	2.1	0.8	2.5	1.5	1.3	- 0.4	Mar
General government financial balance ⁷										
- 0.2	1.4	- 1.1	- 2.1	- 1.0	- 4.4	- 2.7	- 2.9	- 5.3	- 1.2	2015
0.3	1.6	1.1	0.4	- 1.6	- 2.0	- 2.2	- 1.9	- 4.5	0.5	2016
...	...	...	...	...	...	...	...	...	...	2017
General government debt ⁷										
42.6	22.0	60.3	64.6	84.3	128.8	52.3	82.6	99.4	107.5	2015
40.1	20.8	57.6	61.8	83.6	130.1	51.8	78.5	99.0	107.1	2016
...	...	...	...	...	...	...	...	...	...	2017

⁶ Including Lithuania from 2015 onwards. ⁷ 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								
2016 July	54.5	29.5	14.7	25.0	24.1	- 84.9	56.9	141.8	- 25.4	- 7.1	- 0.5	- 23.8	6.0
Aug	17.3	16.9	27.1	0.4	9.0	- 39.7	7.8	47.5	2.0	- 4.9	- 0.6	- 0.3	7.9
Sep	41.8	26.6	- 7.3	15.2	19.4	- 16.9	- 69.0	- 52.0	- 22.9	- 12.2	- 0.5	- 19.6	9.4
Oct	84.9	37.3	5.6	47.6	45.1	- 45.5	153.8	199.3	4.7	- 5.6	- 0.6	- 2.6	13.5
Nov	105.8	55.8	16.1	50.0	61.9	7.3	- 21.5	- 28.7	0.3	- 7.9	- 0.8	- 1.1	10.0
Dec	- 57.7	- 50.3	- 8.3	- 7.3	- 0.6	36.3	- 154.3	- 190.6	- 12.3	0.7	- 1.0	- 13.7	1.8
2017 Jan	131.5	43.9	31.3	87.6	69.7	- 12.8	233.5	246.4	- 14.1	- 10.0	- 0.2	- 3.7	- 0.2
Feb	46.0	30.8	4.0	15.2	35.3	- 45.6	53.4	99.0	13.6	- 6.0	- 0.5	- 3.3	23.3
Mar	151.5	92.7	25.3	58.8	62.6	- 8.8	- 51.7	- 43.0	- 13.9	1.6	- 0.5	- 22.2	7.2
Apr	54.8	24.7	20.2	30.1	27.6	- 39.3	77.6	116.9	- 22.6	- 12.2	- 0.3	- 1.1	- 9.0
May	48.4	23.8	16.3	24.6	35.1	- 0.5	- 4.2	- 3.7	15.8	- 7.7	- 2.4	16.6	9.3
June	24.1	29.4	0.4	- 5.3	- 5.3	58.2	- 108.5	- 166.6	- 4.5	- 13.6	- 0.1	- 6.7	15.9
July	7.2	0.1	15.3	7.0	9.4	6.2	105.0	98.8	- 5.6	- 7.8	- 0.9	- 1.5	4.6
Aug	11.9	- 20.5	- 15.0	32.4	38.4	- 28.0	- 2.6	25.4	6.3	- 5.9	- 0.8	- 2.7	15.8
Sep	55.1	43.4	- 13.8	11.7	17.1	6.4	- 35.3	- 41.7	- 23.9	- 12.0	- 0.9	- 30.6	19.6
Oct	64.8	53.2	- 9.4	11.7	11.4	- 71.0	88.5	159.5	- 31.2	- 27.2	- 0.6	- 7.9	4.6
Nov	127.1	98.7	22.1	28.4	34.7	18.5	- 1.1	- 19.6	3.5	4.5	- 0.8	- 2.5	2.3
Dec	- 106.8	- 88.4	- 8.7	- 18.4	- 8.8	13.9	- 153.3	- 167.2	- 2.4	11.5	- 0.6	- 5.7	- 7.6
2018 Jan	120.4	79.3	22.4	41.0	27.8	- 44.1	152.7	196.8	11.1	- 9.0	- 0.1	20.4	- 0.1
Feb	- 2.1	- 3.4	- 5.4	1.3	17.5	- 6.8	47.0	53.7	- 23.9	- 2.2	- 0.9	- 12.6	- 8.2

(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								
2016 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	- 19.0	- 7.3	11.6	9.3	- 3.5	- 0.5	1.3	11.9
May	13.8	13.3	3.5	0.6	7.9	7.1	- 13.0	- 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	18.1	12.8	1.8	5.3	3.5	- 10.3	- 23.0	- 12.7	- 4.0	- 1.3	- 0.8	- 1.4	- 0.5
Aug	13.6	10.2	- 0.6	3.4	8.3	14.7	- 13.8	- 28.5	4.5	0.1	- 0.8	3.5	1.7
Sep	17.8	14.1	- 1.8	3.7	8.0	- 22.3	9.2	31.5	- 5.9	- 0.2	- 0.6	- 7.3	2.3
Oct	15.9	8.6	0.4	7.3	6.5	6.1	- 11.4	- 17.5	- 11.4	- 1.0	- 0.8	- 9.5	- 0.1
Nov	27.2	16.7	6.4	10.5	11.2	23.1	- 2.6	- 25.7	2.6	3.3	- 0.6	0.1	- 0.1
Dec	- 5.4	- 3.5	4.3	- 1.8	1.0	- 48.9	- 8.1	40.8	2.6	- 0.3	- 0.6	- 1.9	5.3
2018 Jan	19.1	21.3	2.0	- 2.2	- 1.3	10.1	28.1	18.0	4.9	- 3.0	- 0.7	14.2	- 5.6
Feb	5.0	10.6	- 1.7	- 5.6	- 0.2	- 21.0	11.7	32.7	- 5.8	- 0.9	- 0.9	- 1.0	- 3.1

* 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							
- 29.0	- 72.4	-	96.5	73.5	66.9	10.1	56.9	6.1	0.5	- 22.7	15.6	5.0	2016 July	
- 54.7	41.2	-	10.9	8.9	5.1	- 3.5	1.6	4.5	0.7	2.4	0.6	- 2.5	Aug	
2.7	42.7	-	2.4	18.3	23.7	2.2	21.5	1.4	- 6.7	- 4.8	- 1.8	- 5.9	Sep	
- 3.0	7.0	-	30.7	14.4	50.2	3.2	47.0	- 29.6	- 6.2	- 16.9	18.0	2.1	Oct	
5.1	20.3	-	87.4	82.7	95.0	1.2	93.7	- 10.3	- 1.9	- 2.2	7.0	1.2	Nov	
- 48.3	- 12.4	-	51.6	72.1	89.8	16.1	73.7	- 24.1	6.4	4.4	- 6.0	- 7.3	Dec	
62.7	41.8	-	28.3	6.7	- 6.5	- 11.9	5.5	3.5	9.7	- 17.4	11.6	- 0.9	2017 Jan	
- 17.4	- 25.6	-	29.8	30.9	31.3	3.0	28.3	- 2.0	1.6	- 8.6	- 4.2	6.5	Feb	
24.2	25.6	-	106.8	92.4	92.8	4.3	88.5	- 5.6	5.2	14.8	12.0	- 0.6	Mar	
- 5.4	- 9.5	-	53.0	72.3	101.8	6.8	95.1	- 31.2	1.7	- 5.9	- 4.3	- 16.8	Apr	
13.4	- 13.1	-	31.9	30.2	42.0	0.5	41.6	- 20.9	9.1	- 11.7	- 4.7	5.1	May	
20.4	21.5	-	44.8	74.0	82.1	9.5	72.7	- 10.5	2.3	- 16.6	- 20.6	- 0.2	June	
- 7.7	- 17.4	-	44.1	31.7	36.0	5.7	30.4	- 6.2	1.8	- 24.1	13.6	- 3.1	July	
- 18.3	- 59.9	-	55.8	45.9	31.3	- 2.0	33.3	8.1	6.4	2.6	9.1	- 5.5	Aug	
41.2	23.9	-	20.3	23.3	47.6	0.6	47.0	- 21.3	- 3.0	7.0	- 4.1	10.3	Sep	
- 43.5	54.8	-	13.7	13.3	23.6	2.9	20.7	- 7.6	- 2.8	19.8	8.9	- 10.6	Oct	
- 8.8	72.5	-	78.4	73.1	81.7	0.9	80.8	- 7.7	- 0.9	17.2	- 3.8	1.2	Nov	
- 21.5	- 88.4	-	19.3	60.9	63.6	16.1	47.5	- 6.7	4.1	- 31.6	- 26.5	- 7.2	Dec	
41.3	20.1	-	3.8	- 2.7	- 20.0	- 15.2	- 4.8	5.6	11.7	- 7.5	19.0	- 15.7	2018 Jan	
13.1	8.8	-	6.9	- 4.8	8.0	0.3	7.7	- 15.9	3.1	- 4.8	- 13.9	8.3	Feb	

(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	Total	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		
					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						
- 31.8	25.0	3.7	2.1	24.5	12.3	4.0	- 0.1	0.9	- 0.2	- 0.2	- 7.6	2016 July		
8.8	- 22.3	2.3	- 0.8	6.2	11.3	- 1.6	- 0.1	- 0.2	- 0.1	- 0.1	- 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	2016 Sep			
- 8.8	18.6	3.2	- 0.5	1.4	12.0	- 10.2	0.2	0.3	- 0.1	- 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	Nov			
- 13.6	30.4	3.3	2.4	- 4.8	- 4.9	- 1.5	2.7	- 0.9	- 0.0	- 0.1	2016 Dec			
- 12.6	- 27.2	1.1	- 2.7	29.2	16.9	8.9	0.7	2.6	- 0.1	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	Feb			
14.2	- 2.7	1.8	1.1	0.5	2.4	3.5	- 1.4	- 1.9	- 0.1	- 2.0	Mar			
- 6.7	- 8.9	3.3	1.6	2.3	10.3	- 7.1	- 0.0	0.9	- 0.0	- 1.8	Apr			
7.7	- 8.7	2.9	- 0.7	19.2	18.3	1.3	- 0.1	- 1.1	- 0.0	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	June			
2.5	14.8	2.1	2.1	- 5.6	- 3.0	- 3.0	- 0.4	1.4	- 0.1	- 0.6	July			
7.4	5.1	3.7	- 1.3	11.2	14.7	- 2.9	- 0.3	0.1	0.2	- 0.5	Aug			
9.6	- 14.2	3.5	- 0.3	5.9	5.6	0.8	0.0	- 0.8	0.0	0.3	Sep			
- 14.2	43.1	2.1	0.8	4.5	14.3	- 9.3	0.5	- 0.3	- 0.3	- 0.5	Oct			
6.2	8.7	1.2	- 0.0	32.7	33.8	- 1.7	0.2	0.3	0.0	0.2	Nov			
10.0	- 58.0	3.8	2.0	- 8.8	- 10.1	0.4	2.4	0.7	- 0.3	- 1.8	Dec			
- 24.3	35.5	- 0.0	- 2.8	13.1	11.5	2.4	0.2	1.0	- 0.0	- 2.0	2018 Jan			
9.2	- 21.0	2.0	- 0.3	1.7	5.2	- 4.4	0.7	- 0.5	0.3	0.4	Feb			

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 Euro-system'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											
2016 Jan	26,414.7	16,689.5	12,731.3	10,656.8	1,307.0	767.5	3,958.2	1,127.1	2,831.2	5,149.6	4,575.6
Feb	26,749.7	16,774.6	12,771.6	10,700.6	1,313.1	757.8	4,003.0	1,118.6	2,884.4	5,228.2	4,746.9
Mar	26,407.2	16,825.5	12,776.4	10,709.9	1,312.1	754.4	4,049.1	1,117.9	2,931.3	5,030.7	4,551.1
Apr	26,557.8	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	4,474.8
May	26,807.3	16,993.9	12,842.6	10,733.4	1,341.4	767.8	4,151.4	1,121.7	3,029.6	5,270.0	4,543.4
June	27,073.1	17,041.4	12,829.3	10,732.4	1,344.2	752.7	4,212.1	1,110.6	3,101.4	5,278.2	4,753.5
July	27,135.2	17,093.7	12,852.6	10,737.7	1,359.7	755.3	4,241.1	1,111.6	3,129.5	5,326.7	4,714.8
Aug	27,038.0	17,105.7	12,866.5	10,723.2	1,365.1	778.2	4,239.1	1,102.9	3,136.2	5,321.4	4,610.8
Sep	26,973.5	17,147.5	12,892.6	10,756.8	1,359.3	776.5	4,255.0	1,098.8	3,156.2	5,266.4	4,559.5
Oct	27,051.8	17,202.6	12,923.2	10,785.2	1,363.1	775.0	4,279.4	1,101.0	3,178.4	5,422.4	4,426.7
Nov	27,160.7	17,295.1	12,983.5	10,830.2	1,383.3	770.0	4,311.6	1,088.9	3,222.7	5,451.6	4,414.0
Dec	26,716.3	17,273.4	12,964.2	10,810.8	1,372.2	781.2	4,309.2	1,079.4	3,229.7	5,208.1	4,234.9
2017 Jan	26,797.3	17,356.6	12,995.7	10,815.8	1,393.4	786.4	4,360.9	1,097.4	3,263.6	5,377.4	4,063.4
Feb	27,059.3	17,417.6	13,033.6	10,846.1	1,398.4	789.0	4,384.1	1,076.2	3,307.8	5,497.8	4,143.9
Mar	27,011.4	17,549.9	13,115.9	10,902.3	1,423.7	789.9	4,434.0	1,072.8	3,361.2	5,418.0	4,043.5
Apr	27,100.4	17,595.0	13,130.7	10,897.8	1,429.8	803.0	4,464.3	1,075.4	3,388.9	5,450.3	4,055.1
May	27,016.5	17,632.5	13,145.4	10,895.9	1,451.1	798.3	4,487.1	1,062.4	3,424.7	5,360.7	4,023.3
June	26,697.1	17,611.1	13,132.8	10,895.2	1,441.3	796.3	4,478.3	1,063.0	3,415.2	5,195.9	3,890.1
July	26,650.2	17,604.1	13,118.8	10,866.0	1,460.1	792.6	4,485.3	1,060.3	3,425.1	5,228.0	3,818.1
Aug	26,683.3	17,610.3	13,087.2	10,853.1	1,444.2	789.9	4,523.2	1,054.5	3,468.6	5,198.8	3,874.1
Sep	26,561.5	17,655.1	13,130.0	10,905.6	1,433.2	791.2	4,525.1	1,045.9	3,479.2	5,170.9	3,735.5
Oct	26,761.0	17,733.1	13,189.5	10,968.4	1,422.8	798.3	4,543.6	1,046.1	3,497.5	5,292.8	3,735.2
Nov	26,791.1	17,846.3	13,272.2	11,037.6	1,430.8	803.8	4,574.1	1,038.2	3,535.9	5,247.3	3,697.5
Dec	26,331.5	17,711.7	13,170.9	10,946.5	1,425.5	798.9	4,540.8	1,028.5	3,512.3	5,064.7	3,555.1
2018 Jan	26,337.3	17,819.1	13,241.0	10,994.4	1,445.1	801.5	4,578.0	1,041.1	3,536.9	5,252.8	3,265.4
Feb	26,300.9	17,815.5	13,236.9	10,998.7	1,454.8	783.4	4,578.6	1,024.8	3,553.8	5,342.1	3,143.4
German contribution (€ billion)											
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	6,069.0	4,135.9	3,176.7	2,731.5	175.2	269.9	959.2	332.6	626.7	1,201.4	731.7
Aug	6,084.5	4,152.3	3,186.3	2,741.6	174.3	270.3	966.1	327.8	638.3	1,185.1	747.2
Sep	6,076.7	4,167.7	3,200.9	2,757.6	174.3	269.1	966.8	323.2	643.6	1,194.6	714.3
Oct	6,082.0	4,185.9	3,210.4	2,766.1	174.6	269.8	975.4	324.0	651.4	1,188.5	707.7
Nov	6,088.7	4,211.0	3,227.4	2,777.0	178.7	271.6	983.6	321.5	662.1	1,177.2	700.5
Dec	6,051.1	4,202.2	3,222.8	2,768.6	180.4	273.8	979.4	318.5	660.9	1,163.4	685.4
2018 Jan	6,074.8	4,214.9	3,242.3	2,786.5	181.6	274.2	972.5	317.0	655.6	1,176.4	683.5
Feb	6,051.9	4,220.1	3,253.3	2,799.4	183.1	270.8	966.8	311.4	655.4	1,195.1	636.7

* 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											End of year/month
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		
			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											
1,037.7	11,611.8	10,852.4	10,953.3	5,365.2	973.3	344.1	2,074.6	2,121.8	74.3	2016 Jan	
1,038.9	11,621.1	10,871.9	10,976.1	5,385.2	967.8	340.6	2,085.3	2,124.1	73.1	Feb	
1,042.5	11,686.5	10,916.7	11,007.2	5,418.9	973.3	339.8	2,076.3	2,126.7	72.3	Mar	
1,047.1	11,715.7	10,978.1	11,072.9	5,504.4	963.0	337.5	2,071.0	2,126.5	70.5	Apr	
1,049.3	11,766.9	11,005.9	11,092.6	5,545.2	945.2	331.9	2,066.3	2,134.0	70.0	May	
1,057.7	11,829.3	11,001.4	11,089.4	5,565.3	944.9	330.2	2,046.5	2,133.1	69.3	June	
1,067.8	11,849.6	11,053.7	11,133.7	5,615.1	952.1	325.6	2,039.3	2,132.9	68.8	July	
1,064.3	11,783.5	11,037.8	11,120.8	5,611.4	952.6	320.7	2,034.0	2,134.1	68.1	Aug	
1,066.5	11,788.9	11,032.4	11,130.6	5,637.1	960.1	315.0	2,021.8	2,129.2	67.4	Sep	
1,069.7	11,797.5	11,047.9	11,134.7	5,680.7	936.8	307.6	2,018.8	2,123.8	67.2	Oct	
1,071.0	11,882.2	11,107.7	11,212.3	5,780.1	926.7	303.3	2,013.9	2,121.8	66.4	Nov	
1,087.1	11,929.4	11,211.4	11,321.3	5,826.7	911.5	294.0	2,050.9	2,172.7	65.6	Dec	
1,075.1	11,985.2	11,191.6	11,306.4	5,824.0	914.4	286.6	2,034.3	2,182.1	65.0	2017 Jan	
1,078.1	11,994.1	11,210.5	11,330.1	5,849.1	919.5	284.5	2,028.8	2,183.6	64.6	Feb	
1,082.4	12,103.6	11,279.9	11,422.6	5,945.0	911.0	285.3	2,029.0	2,188.3	64.1	Mar	
1,089.2	12,141.4	11,323.4	11,456.5	6,022.2	886.9	278.6	2,015.2	2,190.1	63.7	Apr	
1,089.7	12,151.7	11,338.9	11,444.1	6,044.4	861.0	273.0	2,004.8	2,199.0	62.0	May	
1,099.1	12,213.6	11,383.5	11,483.1	6,113.1	854.2	265.6	1,986.8	2,201.6	61.9	June	
1,104.7	12,209.8	11,393.0	11,476.5	6,123.8	848.8	262.8	1,976.5	2,206.2	58.4	July	
1,102.7	12,226.8	11,422.8	11,505.1	6,146.9	857.8	260.6	1,969.6	2,212.6	57.7	Aug	
1,103.3	12,271.6	11,432.3	11,519.7	6,196.9	843.3	256.3	1,956.5	2,210.0	56.8	Sep	
1,106.2	12,217.2	11,420.3	11,507.4	6,217.3	846.5	250.8	1,929.3	2,207.3	56.2	Oct	
1,107.1	12,249.3	11,471.5	11,544.7	6,291.5	832.2	246.3	1,912.4	2,206.7	55.5	Nov	
1,123.2	12,284.3	11,541.7	11,616.4	6,347.9	834.7	242.5	1,925.2	2,211.3	54.9	Dec	
1,108.0	12,315.3	11,525.3	11,607.3	6,339.4	840.5	237.0	1,913.5	2,221.0	55.8	2018 Jan	
1,108.3	12,327.1	11,522.5	11,600.9	6,344.7	832.1	232.6	1,912.9	2,223.5	55.1	Feb	
German contribution (€ billion)											
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	162.6	40.3	619.5	537.9	44.9	July	
250.4	3,600.7	3,483.1	3,338.6	1,938.3	159.0	40.3	619.3	537.5	44.1	Aug	
250.1	3,616.3	3,486.8	3,345.9	1,945.0	162.3	39.6	617.9	537.5	43.5	Sep	
250.9	3,606.4	3,490.8	3,352.9	1,958.5	158.8	38.6	616.2	538.0	42.7	Oct	
250.9	3,646.8	3,521.5	3,383.7	1,990.6	157.1	37.4	618.2	538.3	42.1	Nov	
252.9	3,647.9	3,515.8	3,378.5	1,976.2	162.0	37.7	620.4	540.7	41.5	Dec	
250.1	3,632.5	3,522.3	3,390.7	1,994.6	161.5	36.4	616.5	539.5	42.2	2018 Jan	
249.8	3,642.4	3,523.0	3,388.4	1,995.9	160.2	35.3	615.5	540.0	41.5	Feb	

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.

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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											Repo transactions with non-banks in the euro area		Money market fund shares (net) ³	Debt securities	
End of year/month	Other general government										Total	of which Enterprises and households	Money market fund shares (net) ³	Total	of which denominated in euro
	Central governments	Total	Overnight	With agreed maturities of			At agreed notice of ²								
				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															
2016 Jan	315.1	343.4	160.9	102.3	14.3	39.7	21.0	5.2	294.5	292.9	485.5	2,301.4	1,615.0		
Feb	301.0	344.0	162.6	98.1	14.4	39.9	24.0	5.1	339.1	335.1	484.2	2,288.0	1,597.6		
Mar	333.3	345.9	159.5	102.0	15.1	40.8	23.6	5.0	332.3	329.1	471.7	2,271.4	1,590.3		
Apr	297.6	345.2	161.9	97.2	15.4	42.2	23.5	4.9	327.9	323.1	489.1	2,275.8	1,586.3		
May	317.7	356.6	167.0	102.1	15.5	43.1	24.0	4.9	318.7	312.8	489.2	2,284.5	1,575.9		
June	378.3	361.6	171.3	102.4	15.9	43.7	23.5	4.8	321.3	318.0	479.7	2,281.8	1,569.3		
July	349.2	366.7	174.1	101.6	18.2	43.8	24.2	4.8	298.6	297.4	494.8	2,258.2	1,543.7		
Aug	294.6	368.1	175.7	100.8	18.7	44.3	23.8	4.9	301.0	299.9	495.5	2,253.2	1,534.5		
Sep	297.4	361.0	170.5	99.5	19.4	44.4	22.3	5.0	286.5	285.7	493.7	2,227.1	1,517.1		
Oct	295.3	367.4	182.2	94.3	19.9	44.5	21.3	5.3	266.4	265.7	511.7	2,226.0	1,503.3		
Nov	300.4	369.6	178.7	98.8	21.1	44.2	21.6	5.2	264.5	263.8	518.8	2,244.1	1,506.1		
Dec	253.0	355.1	168.6	93.9	21.5	43.3	22.6	5.1	268.9	268.2	512.8	2,230.4	1,502.6		
2017 Jan	316.7	362.0	169.5	99.5	21.3	43.4	22.9	5.5	250.1	249.5	524.3	2,209.7	1,487.5		
Feb	299.9	364.1	175.0	96.2	20.2	44.1	23.1	5.4	241.7	241.0	520.1	2,221.0	1,493.4		
Mar	324.0	357.0	165.4	96.5	21.5	44.6	23.6	5.4	256.5	255.8	532.1	2,194.0	1,480.5		
Apr	318.6	366.2	176.4	92.4	23.7	44.7	23.5	5.5	250.4	249.7	527.8	2,164.9	1,466.2		
May	332.1	375.5	181.6	94.5	25.3	45.2	24.2	4.7	238.4	237.7	523.0	2,171.8	1,490.1		
June	352.5	378.0	181.2	95.7	26.6	45.8	24.0	4.7	221.7	221.0	502.3	2,154.7	1,478.3		
July	345.0	388.3	191.0	95.2	26.7	46.2	24.4	4.8	197.4	196.8	516.0	2,134.2	1,471.5		
Aug	326.7	395.0	197.1	94.8	27.8	46.2	24.4	4.7	199.6	198.9	525.1	2,119.1	1,465.2		
Sep	362.5	389.5	193.2	91.9	28.1	47.5	24.1	4.7	206.6	205.9	520.9	2,098.6	1,448.2		
Oct	318.9	390.9	197.9	87.6	28.3	48.3	24.1	4.7	226.5	225.8	529.8	2,086.3	1,431.2		
Nov	310.2	394.4	197.6	89.5	29.8	49.0	23.8	4.6	243.4	242.8	526.1	2,099.7	1,446.4		
Dec	288.8	379.1	191.1	81.5	31.5	46.8	23.5	4.6	211.7	211.2	499.7	2,081.4	1,437.3		
2018 Jan	330.0	378.1	186.2	84.3	31.1	47.5	24.1	5.0	203.8	203.3	518.7	2,071.3	1,440.2		
Feb	343.1	383.2	191.4	83.5	30.9	47.8	24.7	4.8	199.3	198.8	504.8	2,077.8	1,436.6		
German contribution (€ billion)															
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	534.5	264.9		
Aug	49.7	212.4	64.0	81.0	23.6	40.1	3.0	0.7	3.4	3.4	2.3	534.4	267.8		
Sep	59.5	210.9	63.2	78.5	24.3	41.2	3.0	0.7	2.6	2.6	2.3	529.1	264.0		
Oct	45.3	208.2	64.4	73.5	24.7	41.9	3.0	0.7	2.3	2.3	2.0	521.8	252.3		
Nov	51.7	211.4	65.5	73.0	26.2	43.1	2.9	0.7	2.6	2.6	2.0	518.3	251.1		
Dec	61.7	207.7	69.3	66.3	27.8	40.6	2.9	0.7	3.3	3.3	1.7	512.7	256.4		
2018 Jan	37.4	204.4	61.6	70.3	27.5	41.4	2.8	0.8	4.3	4.3	1.7	518.8	262.8		
Feb	46.7	207.4	66.3	69.2	26.8	41.5	3.0	0.6	3.8	3.8	2.0	522.3	263.8		

* 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

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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
	Monetary policy operations of the Eurosystem					Deposit facility	Other liquidity-absorbing operations ⁴	Banknotes in circulation ⁵	Central government deposits	Other factors (net) ⁶		
	Net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations ³							
Eurosystem ²												
2015 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	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
2016 Jan	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
Feb	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
Mar	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
Apr	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
May	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
Jun	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
Jul	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
Aug	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
Sep	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
Oct	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
Nov	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
Dec	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
2017 Jan	639.0	5.5	768.6	0.3	2 150.2	611.4	0.0	1 142.5	181.8	385.1	1 242.7	2 996.7
Feb	635.0	6.7	765.3	0.2	2 239.2	648.1	0.0	1 142.8	218.3	383.9	1 253.3	3 044.2
Mar	634.5	3.0	763.7	0.2	2 333.5	682.5	0.0	1 146.6	188.5	407.6	1 309.7	3 138.8
Apr	635.7	2.9	760.6	0.2	2 398.2	689.2	0.0	1 158.2	188.1	487.0	1 275.2	3 122.5
May	630.9	1.5	760.5	0.0	2 435.5	686.3	0.0	1 148.2	203.6	474.9	1 315.6	3 150.1
Deutsche Bundesbank												
2015 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	146.1	3.2	43.3	0.0	156.3	56.1	0.0	249.1	9.3	- 116.3	150.7	455.9
Dec	144.8	3.6	48.4	0.1	174.0	50.0	0.0	252.4	18.0	- 124.0	174.4	476.8
2016 Jan	143.7	1.9	46.3	0.0	193.9	59.8	0.0	250.4	26.1	- 113.3	162.9	473.1
Feb	152.2	3.1	45.0	0.0	214.1	67.6	0.0	252.1	37.3	- 105.1	162.4	482.1
Mar	156.4	3.3	45.3	0.0	237.2	87.3	0.0	254.7	41.1	- 127.2	186.5	528.4
Apr	163.3	2.7	44.7	0.0	263.4	89.8	0.0	257.4	47.2	- 117.0	196.6	543.9
May	168.3	1.9	44.0	0.0	288.2	90.8	0.0	258.7	36.2	- 112.6	229.3	578.9
Jun	168.7	1.5	50.6	0.0	311.9	105.2	0.0	258.6	50.5	- 125.2	243.6	607.4
Jul	167.7	0.9	54.0	0.0	339.2	129.7	0.0	260.3	43.7	- 141.9	270.0	660.0
Aug	163.8	0.9	62.0	0.0	361.5	132.7	0.0	264.2	35.4	- 146.1	302.0	698.9
Sep	159.4	0.8	63.5	0.0	386.6	153.7	0.0	262.3	23.1	- 169.8	341.0	757.0
Oct	164.4	1.0	86.0	0.1	412.4	181.4	0.0	264.1	29.7	- 185.3	374.0	819.5
Nov	165.8	0.3	95.0	0.0	431.8	181.2	0.0	266.2	32.4	- 204.9	418.0	865.4
Dec	159.6	0.5	95.0	0.0	447.9	170.1	0.0	269.0	52.7	- 201.6	412.7	851.9
2017 Jan	155.2	0.3	94.9	0.0	463.2	165.5	0.0	269.9	52.4	- 192.6	418.5	853.9
Feb	154.8	0.3	94.9	0.0	481.5	171.0	0.0	269.4	65.9	- 197.6	422.7	863.2
Mar	154.2	0.5	94.8	0.0	501.4	187.5	0.0	270.3	56.0	- 218.6	455.8	913.6
Apr	155.5	0.9	93.3	0.0	514.7	204.4	0.0	272.8	54.9	- 192.2	424.5	901.7
May	151.5	0.6	93.4	0.0	522.9	207.9	0.0	271.0	56.8	- 221.3	453.9	932.8

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

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Flows

Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current account balances (including minimum reserves) 7	Base money 8	Reserve maintenance period ending in 1
Net assets in gold and foreign currency	Monetary policy operations of the Eurosystem				Deposit facility	Other liquidity-absorbing operations 4	Banknotes in circulation 5	Central government deposits	Other factors (net) 6			
	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations 3								
Eurosystem ²												
- 8.3	- 2.2	- 0.1	- 0.5	+ 92.4	+ 4.8	± 0.0	- 2.9	+ 31.8	+ 10.8	+ 36.9	+ 38.7	2015 Oct
- 6.9	- 4.1	- 2.8	± 0.0	+ 87.5	+ 20.3	± 0.0	+ 4.1	- 1.7	+ 22.6	+ 28.5	+ 52.9	Nov
- 0.6	+ 5.5	+ 7.6	+ 0.1	+ 81.1	+ 23.5	± 0.0	+ 16.3	- 11.0	+ 1.7	+ 63.3	+ 103.1	Dec
- 3.8	- 8.7	- 5.2	- 0.1	+ 95.8	+ 33.9	± 0.0	- 9.4	+ 33.1	+ 20.7	- 0.6	+ 23.9	2016 Jan
+ 19.5	- 4.8	- 0.9	+ 0.1	+ 92.5	+ 31.5	± 0.0	+ 5.9	+ 31.8	+ 23.8	+ 13.5	+ 50.9	Feb
+ 13.0	- 4.2	- 4.5	± 0.0	+ 105.2	+ 47.0	± 0.0	+ 7.3	- 23.5	+ 25.1	+ 53.8	+ 108.1	Mar
+ 25.8	- 6.3	+ 15.3	- 0.1	+ 121.8	+ 14.1	± 0.0	+ 10.5	+ 51.6	+ 46.6	+ 33.7	+ 58.3	Apr
+ 18.9	- 4.1	+ 12.1	- 0.1	+ 112.6	+ 32.0	± 0.0	+ 9.1	- 37.7	+ 44.6	+ 91.3	+ 132.5	May
+ 2.8	- 6.1	+ 19.8	+ 0.1	+ 107.3	+ 32.2	± 0.0	- 1.5	+ 30.5	+ 34.0	+ 28.6	+ 59.2	June
- 0.4	- 3.4	+ 8.3	+ 0.1	+ 123.2	+ 52.1	± 0.0	+ 8.4	- 8.6	+ 29.6	+ 46.5	+ 106.9	July
- 12.7	+ 0.6	+ 37.1	± 0.0	+ 100.6	- 5.0	± 0.0	+ 16.0	- 16.6	+ 36.0	+ 95.1	+ 106.3	Aug
- 12.3	- 5.6	+ 5.4	+ 0.1	+ 116.7	+ 44.8	± 0.0	- 8.3	+ 17.2	+ 8.6	+ 41.9	+ 78.3	Sep
+ 16.2	- 10.5	+ 153.1	± 0.0	+ 117.8	+ 70.8	± 0.0	+ 7.6	+ 21.7	+ 56.6	+ 120.2	+ 198.5	2017 Oct
+ 4.5	- 4.8	+ 60.0	- 0.1	+ 89.7	+ 43.7	± 0.0	+ 7.6	- 18.4	+ 18.6	+ 97.6	+ 149.1	Nov
- 26.2	- 4.3	± 0.0	± 0.0	+ 81.1	+ 1.6	± 0.0	+ 10.3	+ 66.2	- 18.0	- 9.5	+ 2.3	Dec
- 17.9	- 3.9	+ 1.2	+ 0.1	+ 74.1	+ 16.1	± 0.0	+ 6.2	- 48.0	+ 5.7	+ 73.5	+ 95.9	2018 Jan
- 4.0	+ 1.2	- 3.3	- 0.1	+ 89.0	+ 36.7	± 0.0	+ 0.3	+ 36.5	- 1.2	+ 10.6	+ 47.5	Feb
- 0.5	- 3.7	- 1.6	± 0.0	+ 94.3	+ 34.4	± 0.0	+ 3.8	- 29.8	+ 23.7	+ 56.4	+ 94.6	Mar
+ 1.2	- 0.1	- 3.1	± 0.0	+ 64.7	+ 6.7	± 0.0	+ 11.6	- 0.4	+ 79.4	- 34.5	- 16.3	Apr
- 4.8	- 1.4	- 0.1	- 0.2	+ 37.3	- 2.9	± 0.0	- 10.0	+ 15.5	- 12.1	+ 40.4	+ 27.6	May
Deutsche Bundesbank												
- 2.9	+ 0.9	+ 0.8	- 0.0	+ 19.1	- 1.5	± 0.0	- 0.6	+ 2.3	+ 2.4	+ 15.4	+ 13.2	2015 Oct
- 2.3	+ 0.4	+ 2.5	- 0.0	+ 18.1	+ 15.2	± 0.0	+ 0.3	+ 4.1	- 0.4	- 0.6	+ 15.0	Nov
- 1.3	+ 0.5	+ 5.1	+ 0.1	+ 17.7	- 6.0	± 0.0	+ 3.3	+ 8.7	- 7.6	+ 23.7	+ 21.0	Dec
- 1.0	- 1.7	- 2.1	- 0.0	+ 19.9	+ 9.8	± 0.0	- 2.1	+ 8.1	+ 10.7	- 11.5	- 3.8	2016 Jan
+ 8.4	+ 1.1	- 1.3	+ 0.0	+ 20.3	+ 7.8	± 0.0	+ 1.7	+ 11.3	+ 8.2	- 0.4	+ 9.0	Feb
+ 4.3	+ 0.3	+ 0.4	- 0.0	+ 23.1	+ 19.7	± 0.0	+ 2.6	+ 3.8	- 22.1	+ 24.1	+ 46.3	Mar
+ 6.9	- 0.6	- 0.6	- 0.0	+ 26.2	+ 2.6	± 0.0	+ 2.8	+ 6.1	+ 10.2	+ 10.1	+ 15.4	Apr
+ 5.1	- 0.8	- 0.7	- 0.0	+ 24.8	+ 1.0	± 0.0	+ 1.3	- 11.0	+ 4.4	+ 32.7	+ 35.0	May
+ 0.4	- 0.5	+ 6.6	+ 0.0	+ 23.7	+ 14.4	± 0.0	- 0.1	+ 14.3	- 12.6	+ 14.2	+ 28.5	June
- 0.9	- 0.5	+ 3.3	+ 0.0	+ 27.3	+ 24.4	± 0.0	+ 1.7	- 6.8	- 16.7	+ 26.5	+ 52.6	July
- 4.0	- 0.1	+ 8.1	- 0.0	+ 22.3	+ 3.0	± 0.0	+ 3.9	- 8.3	- 4.3	+ 31.9	+ 38.8	Aug
- 4.4	- 0.0	+ 1.4	+ 0.0	+ 25.1	+ 21.0	± 0.0	- 1.9	- 12.2	- 23.6	+ 39.0	+ 58.1	Sep
+ 4.9	+ 0.1	+ 22.6	+ 0.0	+ 25.9	+ 27.7	± 0.0	+ 1.8	+ 6.6	- 15.6	+ 33.0	+ 62.5	2017 Oct
+ 1.5	- 0.7	+ 9.0	- 0.1	+ 19.4	- 0.2	± 0.0	+ 2.1	+ 2.6	- 19.6	+ 44.0	+ 45.9	Nov
- 6.2	+ 0.2	+ 0.0	+ 0.0	+ 16.1	- 11.1	± 0.0	+ 2.8	+ 20.3	+ 3.3	- 5.3	- 13.6	Dec
- 4.4	- 0.2	- 0.1	+ 0.0	+ 15.4	- 4.6	± 0.0	+ 0.9	- 0.2	+ 9.0	+ 5.8	+ 2.1	2018 Jan
- 0.4	- 0.1	- 0.1	- 0.0	+ 18.3	+ 5.5	± 0.0	- 0.5	+ 13.5	- 5.0	+ 4.2	+ 9.2	Feb
- 0.6	+ 0.2	- 0.0	- 0.0	+ 19.9	+ 16.5	± 0.0	+ 0.9	- 9.9	- 21.0	+ 33.1	+ 50.4	Mar
+ 1.3	+ 0.4	- 1.6	- 0.0	+ 13.3	+ 16.9	± 0.0	+ 2.5	- 1.1	+ 26.4	- 31.3	- 11.9	Apr
- 4.0	- 0.3	+ 0.1	+ 0.0	+ 8.2	+ 3.5	± 0.0	- 1.7	+ 1.9	- 29.1	+ 29.4	+ 31.1	May

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	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 ¹										
2017 Sep	15	4,308.9	379.1	302.9	74.5	228.4	31.0	16.6	16.6	–
	22	4,328.2	379.1	302.5	74.5	228.0	33.4	16.8	16.8	–
	29	4,318.6	379.0	296.9	73.0	223.8	30.8	17.7	17.7	–
Oct	6	4,337.7	379.0	295.9	73.0	222.8	33.4	16.9	16.9	–
	13	4,371.6	379.0	297.2	73.0	224.2	32.1	16.7	16.7	–
	20	4,363.4	379.0	297.4	73.0	224.4	32.8	17.3	17.3	–
	27	4,371.2	379.0	295.5	72.9	222.5	34.6	15.5	15.5	–
Nov	3	4,373.2	379.0	296.4	72.9	223.5	33.9	15.0	15.0	–
	10	4,387.7	379.0	297.4	72.7	224.6	32.4	14.8	14.8	–
	17	4,411.9	379.0	297.6	72.2	225.3	34.6	15.7	15.7	–
	24	4,427.5	379.0	298.3	72.2	226.1	33.0	15.8	15.8	–
	Dec	1	4,440.8	379.0	299.9	72.3	227.5	32.9	16.0	16.0
2018 Jan	8	4,456.6	379.0	300.5	72.3	228.2	33.1	16.2	16.2	–
	15	4,471.9	379.0	299.9	72.1	227.8	31.8	17.7	17.7	–
	22	4,487.3	379.0	300.6	70.7	230.0	39.4	16.5	16.5	–
	29	4,471.7	376.5	296.2	70.2	226.0	38.1	19.4	19.4	–
	5	4,466.0	376.3	294.6	70.2	224.4	38.6	16.1	16.1	–
Feb	12	4,472.7	376.3	295.5	70.2	225.3	28.9	14.5	14.5	–
	19	4,484.0	376.3	297.6	70.2	227.4	29.9	15.8	15.8	–
	26	4,493.1	376.3	296.4	70.1	226.3	29.1	15.7	15.7	–
	2	4,491.2	376.3	295.9	70.0	225.9	32.7	16.1	16.1	–
Mar	9	4,493.7	376.3	297.1	69.9	227.3	32.5	16.8	16.8	–
	16	4,504.8	376.3	296.8	69.9	226.9	34.7	17.4	17.4	–
	23	4,511.5	376.3	296.2	69.9	226.3	35.4	17.4	17.4	–
	2	4,519.4	376.3	297.1	69.9	227.2	34.5	16.6	16.6	–
	9	4,530.1	376.3	299.6	69.9	229.7	32.5	18.7	18.7	–
Apr	16	4,532.6	376.3	300.2	69.8	230.4	29.6	17.8	17.8	–
	23	4,539.1	376.3	304.6	69.8	234.7	26.5	18.5	18.5	–
	30	4,529.6	374.1	299.6	69.3	230.3	26.6	17.7	17.7	–
	6	4,531.5	374.1	297.2	69.3	227.9	25.7	17.1	17.1	–
Deutsche Bundesbank										
2017 Sep	15	1 606.9	118.2	52.3	19.9	32.4	0.0	2.6	2.6	–
	22	1 619.4	118.2	52.6	19.9	32.6	0.0	2.8	2.8	–
	29	1 663.9	118.2	51.7	19.6	32.2	1.4	3.1	3.1	–
Oct	6	1 631.2	118.2	51.9	19.6	32.3	0.0	2.5	2.5	–
	13	1 600.3	118.2	52.7	19.6	33.1	0.0	2.7	2.7	–
	20	1 608.3	118.2	53.4	19.6	33.9	0.0	3.1	3.1	–
	27	1 620.3	118.2	53.6	19.5	34.0	0.0	2.0	2.0	–
	Nov	3	1 625.1	118.2	52.8	19.5	33.3	0.0	2.1	2.1
Dec	10	1 637.2	118.2	53.1	19.4	33.7	0.0	1.6	1.6	–
	17	1 661.7	118.2	53.3	19.3	34.0	0.0	2.0	2.0	–
	24	1 655.7	118.2	52.7	19.3	33.4	0.0	2.3	2.3	–
	1	1 658.7	118.2	52.4	19.3	33.1	0.0	2.2	2.2	–
	8	1 676.5	118.2	51.8	19.3	32.6	0.0	2.2	2.2	–
2018 Jan	15	1 676.3	118.2	51.5	19.1	32.4	0.0	3.0	3.0	–
	22	1 721.8	118.2	50.3	18.4	31.9	7.2	1.4	1.4	–
	29	1 727.7	117.3	49.5	18.3	31.2	7.2	4.4	4.4	–
	5	1 690.6	117.3	49.6	18.3	31.3	7.2	1.5	1.5	–
	12	1 673.4	117.3	49.6	18.3	31.3	0.1	1.4	1.4	–
Feb	19	1 682.7	117.3	50.0	18.3	31.7	0.1	1.8	1.8	–
	26	1 653.8	117.3	49.5	18.2	31.3	0.1	2.0	2.0	–
	2	1 710.7	117.3	49.5	18.2	31.3	0.0	2.3	2.3	–
	9	1 712.9	117.3	49.5	18.1	31.4	0.0	2.2	2.2	–
	16	1 731.0	117.3	49.8	18.1	31.6	0.0	2.0	2.0	–
Mar	23	1 712.4	117.3	50.2	18.1	32.0	0.0	1.9	1.9	–
	2	1 738.6	117.3	49.9	18.1	31.8	0.0	1.1	1.1	–
	9	1 720.8	117.3	49.3	18.1	31.2	0.0	3.4	3.4	–
	16	1 713.8	117.3	49.1	18.1	31.0	0.0	1.8	1.8	–
	23	1 725.0	117.3	49.8	18.1	31.6	–	2.1	2.1	–
Apr	30	1 756.2	116.6	49.2	18.0	31.2	0.0	1.5	1.5	–
	6	1 717.4	116.6	48.9	18.0	30.8	0.0	1.5	1.5	–

* 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	
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				
Eurosystem¹														
772.5	4.0	768.4	–	–	0.1	–	61.5	2 484.1	2 200.0	284.2	25.7	235.3	2017 Sep	15
773.6	5.1	768.4	–	–	0.1	–	59.4	2 498.5	2 214.1	284.3	25.7	239.1		22
768.5	4.2	764.1	–	–	0.2	–	53.3	2 504.4	2 221.3	283.1	25.7	242.3		29
767.5	3.2	764.1	–	–	0.2	–	54.9	2 521.9	2 238.9	283.0	25.7	242.5	Oct	6
785.5	21.3	764.1	–	–	0.1	–	55.0	2 537.6	2 254.4	283.2	25.7	242.7		13
768.2	3.8	764.1	–	–	0.3	–	56.7	2 547.4	2 265.1	282.3	25.7	238.9		20
769.4	5.3	763.7	–	–	0.3	–	55.4	2 560.0	2 278.4	281.6	25.7	236.2		27
766.9	3.0	763.7	–	–	0.2	–	52.6	2 568.1	2 287.7	280.4	25.7	235.7	Nov	3
766.5	2.7	763.7	–	–	0.1	–	52.7	2 583.9	2 303.2	280.7	25.1	235.9		10
766.8	2.8	763.7	–	–	0.2	–	56.7	2 599.0	2 318.3	280.7	25.1	237.4		17
767.1	3.0	763.7	–	–	0.4	–	55.6	2 614.0	2 333.4	280.6	25.1	239.6		24
768.9	5.0	763.7	–	–	0.2	–	50.7	2 627.3	2 347.3	279.9	25.1	241.1	Dec	1
766.1	2.3	763.7	–	–	0.1	–	52.2	2 643.1	2 364.8	278.3	25.1	241.3		8
765.7	1.9	763.7	–	–	0.1	–	54.9	2 655.8	2 380.3	275.5	25.1	241.9		15
764.3	3.4	760.6	–	–	0.3	–	43.1	2 668.3	2 393.3	275.0	25.1	250.9		22
764.3	3.4	760.6	–	–	0.3	–	37.6	2 660.7	2 386.0	274.7	25.0	254.0		29
763.6	2.9	760.6	–	–	0.1	–	35.2	2 662.4	2 388.9	273.5	25.0	254.2	2018 Jan	5
763.7	3.0	760.6	–	–	0.1	–	46.2	2 672.9	2 399.0	273.9	25.0	249.7		12
763.3	2.4	760.6	–	–	0.2	–	47.7	2 679.3	2 406.6	272.7	25.0	249.1		19
762.8	2.2	760.6	–	–	0.1	–	49.5	2 688.7	2 415.3	273.4	25.0	249.5		26
762.6	1.9	760.7	–	–	0.0	–	51.5	2 685.3	2 416.1	269.1	25.0	245.7	Feb	2
762.2	1.6	760.7	–	–	0.0	–	45.5	2 694.9	2 425.2	269.7	25.0	243.3		9
762.1	1.3	760.7	–	–	0.1	–	47.0	2 703.0	2 433.3	269.7	25.0	242.6		16
762.2	1.5	760.7	–	–	0.0	–	48.5	2 708.4	2 438.4	270.0	25.0	242.2		23
762.0	1.7	760.3	–	–	0.0	–	49.1	2 715.6	2 445.2	270.4	25.0	243.1	Mar	2
761.4	1.1	760.3	–	–	–	–	49.0	2 725.1	2 454.6	270.5	25.0	242.7		9
761.3	1.0	760.3	–	–	–	–	48.7	2 731.2	2 461.0	270.2	25.0	242.6		16
761.9	1.5	760.3	–	–	0.1	–	50.2	2 738.0	2 468.6	269.4	25.0	238.1		23
761.9	2.4	759.3	–	–	0.2	–	48.5	2 732.7	2 464.6	268.1	24.9	243.5		30
761.6	2.3	759.3	–	–	–	–	44.9	2 742.4	2 474.5	268.0	24.9	243.5	Apr	6
Deutsche Bundesbank														
95.1	0.2	94.9	–	–	0.0	–	5.3	474.4	474.4	–	4.4	854.4	2017 Sep	15
95.2	0.2	94.9	–	–	0.1	–	5.2	476.9	476.9	–	4.4	864.0		22
95.1	0.2	94.8	–	–	0.0	–	3.7	478.3	478.3	–	4.4	908.1		29
95.1	0.2	94.8	–	–	–	–	4.5	481.0	481.0	–	4.4	873.7	Oct	6
95.1	0.3	94.8	–	–	0.0	–	3.6	483.4	483.4	–	4.4	840.1		13
95.3	0.4	94.8	–	–	–	–	3.1	486.3	486.3	–	4.4	844.5		20
95.2	0.3	94.8	–	–	0.0	–	3.5	489.4	489.4	–	4.4	854.0		27
95.1	0.3	94.8	–	–	–	–	3.9	491.8	491.8	–	4.4	856.8	Nov	3
95.1	0.3	94.8	–	–	–	–	3.0	494.9	494.9	–	4.4	866.8		10
95.1	0.3	94.8	–	–	–	–	2.8	498.6	498.6	–	4.4	887.3		17
95.1	0.3	94.8	–	–	0.0	–	3.1	501.7	501.7	–	4.4	878.1		24
96.3	1.4	94.8	–	–	–	–	2.8	504.4	504.4	–	4.4	878.1	Dec	1
95.3	0.5	94.8	–	–	–	–	2.9	508.0	508.0	–	4.4	893.6		8
95.1	0.3	94.8	–	–	–	–	3.8	510.8	510.8	–	4.4	889.5		15
94.3	1.0	93.3	–	–	0.0	–	3.8	513.7	513.7	–	4.4	928.3		22
94.3	1.0	93.3	–	–	–	–	0.5	512.1	512.1	–	4.4	937.9		29
94.2	0.9	93.3	–	–	–	–	1.8	512.7	512.7	–	4.4	901.9	2018 Jan	5
94.3	1.0	93.3	–	–	0.0	–	3.5	515.1	515.1	–	4.4	887.8		12
94.0	0.7	93.3	–	–	0.0	–	3.5	516.8	516.8	–	4.4	894.9		19
94.1	0.8	93.3	–	–	–	–	3.7	517.7	517.7	–	4.4	865.0		26
94.0	0.6	93.4	–	–	0.0	–	3.3	518.5	518.5	–	4.4	921.4	Feb	2
93.8	0.5	93.4	–	–	–	–	3.8	521.6	521.6	–	4.4	920.0		9
93.8	0.5	93.4	–	–	–	–	3.4	522.7	522.7	–	4.4	937.4		16
94.0	0.6	93.4	–	–	–	–	3.7	522.7	522.7	–	4.4	918.2		23
94.2	0.8	93.4	–	–	–	–	3.9	524.9	524.9	–	4.4	942.8	Mar	2
93.8	0.5	93.4	–	–	–	–	4.3	526.8	526.8	–	4.4	921.3		9
93.8	0.4	93.4	–	–	0.0	–	4.4	527.3	527.3	–	4.4	915.6		16
93.9	0.5	93.4	–	–	0.0	–	3.9	529.7	529.7	–	4.4	923.8		23
94.7	1.2	93.3	–	–	0.1	–	5.1	529.0	529.0	–	4.4	955.7		30
94.6	1.3	93.3	–	–	–	–	4.4	531.2	531.2	–	4.4	915.7	Apr	6

end of the quarter. 1 Source: ECB.

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 ²	Intra-Eurosystem liability related to euro banknote issue ¹	Revaluation accounts	Capital and reserves	On reporting date
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
Eurosystem ³										
175.5	7.7	9.8	9.8	–	56.7	224.1	–	371.9	102.3	2017 Sep 15
173.6	8.7	10.8	10.8	–	56.7	225.9	–	371.9	102.3	22
231.1	5.9	10.4	10.4	–	55.6	218.9	–	364.9	102.3	29
177.8	9.0	10.8	10.8	–	55.6	221.5	–	364.9	102.3	Oct 6
176.5	8.6	11.4	11.4	–	55.6	222.7	–	364.9	102.3	13
175.1	8.9	12.4	12.4	–	55.6	223.5	–	364.9	102.3	20
171.6	9.5	11.3	11.3	–	55.6	224.3	–	364.9	102.3	27
186.8	9.8	10.9	10.9	–	55.6	226.5	–	364.9	102.3	Nov 3
186.4	8.2	11.8	11.8	–	55.6	227.7	–	364.9	102.3	10
174.4	10.1	11.6	11.6	–	55.6	234.3	–	364.9	102.3	17
170.2	8.7	11.2	11.2	–	55.6	235.0	–	364.9	102.3	24
185.5	9.2	11.4	11.4	–	55.6	230.9	–	364.9	102.3	Dec 1
198.2	8.5	12.8	12.8	–	55.6	232.7	–	364.9	102.3	8
219.5	7.5	12.0	12.0	–	55.6	233.9	–	364.9	102.3	15
286.1	6.5	11.9	11.9	–	55.6	233.6	–	364.9	102.3	22
354.6	3.8	11.3	11.3	–	55.2	225.5	–	358.0	102.3	29
291.1	3.9	11.4	11.4	–	55.2	227.7	–	357.9	102.3	2018 Jan 5
253.3	5.3	11.2	11.2	–	55.2	230.2	–	357.9	102.1	12
252.1	7.0	12.1	12.1	–	55.2	231.6	–	357.9	102.2	19
220.8	5.4	11.5	11.5	–	55.2	234.6	–	357.9	102.2	26
239.1	8.4	11.9	11.9	–	55.2	237.9	–	357.9	102.7	Feb 2
237.9	7.5	12.7	12.7	–	55.2	230.8	–	357.9	102.7	9
245.8	8.6	12.9	12.9	–	55.2	232.7	–	357.9	102.6	16
251.9	9.0	12.4	12.4	–	55.2	232.5	–	357.9	102.6	23
260.4	8.5	12.7	12.7	–	55.2	234.1	–	357.9	102.7	Mar 2
258.1	9.8	11.6	11.6	–	55.2	233.6	–	357.9	102.7	9
270.4	7.7	11.4	11.4	–	55.2	235.7	–	357.9	102.7	16
266.5	7.3	12.9	12.9	–	55.2	236.1	–	357.9	103.5	23
339.8	5.1	12.3	12.3	–	54.9	231.3	–	351.2	104.0	30
258.6	6.3	11.7	11.7	–	54.9	225.4	–	351.2	104.3	Apr 6
Deutsche Bundesbank										
110.3	0.0	0.9	0.9	–	14.7	26.8	348.6	115.8	5.6	2017 Sep 15
109.4	0.0	1.1	1.1	–	14.7	26.9	348.6	115.8	5.6	22
140.9	0.0	1.7	1.7	–	14.4	27.1	352.1	114.6	5.6	29
110.8	0.0	1.6	1.6	–	14.4	27.1	352.1	114.6	5.6	Oct 6
107.0	0.0	2.0	2.0	–	14.4	27.1	352.1	114.6	5.6	13
104.6	0.0	2.7	2.7	–	14.4	27.2	352.1	114.6	5.6	20
101.4	0.0	2.8	2.8	–	14.4	27.2	352.1	114.6	5.6	27
118.4	0.0	2.1	2.1	–	14.4	27.6	354.2	114.6	5.6	Nov 3
115.2	0.0	2.5	2.5	–	14.4	27.6	354.2	114.6	5.6	10
107.0	0.0	2.8	2.8	–	14.4	27.6	354.2	114.6	5.6	17
101.4	0.0	2.2	2.2	–	14.4	27.7	354.2	114.6	5.6	24
94.5	0.0	2.0	2.0	–	14.4	27.7	355.5	114.6	5.6	Dec 1
104.1	0.0	1.5	1.5	–	14.4	27.8	355.5	114.6	5.6	8
122.4	0.0	1.6	1.6	–	14.4	27.8	355.5	114.6	5.6	15
165.4	0.0	1.0	1.0	–	14.4	28.1	355.5	114.6	5.6	22
199.8	0.0	1.0	1.0	–	14.3	27.9	359.3	113.1	5.6	29
161.5	0.0	1.1	1.1	–	14.3	28.0	359.3	113.1	5.6	2018 Jan 5
152.9	0.0	1.3	1.3	–	14.3	28.0	359.3	113.1	5.6	12
153.0	0.0	1.6	1.6	–	14.3	28.4	359.3	113.1	5.6	19
126.1	0.0	1.2	1.2	–	14.3	28.1	359.7	113.1	5.6	26
144.5	0.0	1.1	1.1	–	14.3	28.3	359.3	113.1	5.6	Feb 2
139.0	0.0	1.2	1.2	–	14.3	28.3	359.3	113.1	5.6	9
144.2	0.0	1.3	1.3	–	14.3	28.4	359.3	113.1	5.6	16
149.6	0.0	1.8	1.8	–	14.3	28.6	359.3	113.1	5.6	23
154.3	0.0	1.5	1.5	–	14.3	26.8	361.3	113.1	5.7	Mar 2
151.9	0.0	0.9	0.9	–	14.3	26.8	361.3	113.1	5.7	9
155.3	0.0	0.8	0.8	–	14.3	27.0	361.3	113.1	5.7	16
157.1	0.0	1.3	1.3	–	14.3	27.0	361.3	113.1	5.7	23
198.2	0.0	1.8	1.8	–	14.2	27.0	368.2	111.5	5.7	30
150.0	0.0	1.4	1.4	–	14.2	27.2	368.2	111.5	5.7	Apr 6

euro banknote issue". The 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 bank-

notes 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". ² For the Deutsche Bundesbank: including DM banknotes still in circulation. ³ Source: ECB.

IV Banks

1 Assets and liabilities of monetary financial institutions (excluding the Bundesbank) in Germany *

Assets

€ billion

Period	Balance sheet total ¹	Cash in hand	Lending to banks (MFIs) in the euro area						Lending to non-banks (non-MFIs) in the					
			Total	to banks in the home country			to banks in other member states			Total	to non-banks in the home country			
				Total	Loans	Secur-ities issued by banks	Total	Loans	Secur-ities issued by banks		Total	Total	Enterprises and house-holds	
													Total	Loans
End of year or month														
2009	7,436.1	17.2	2,480.5	1,813.2	1,218.4	594.8	667.3	449.5	217.8	3,638.3	3,187.9	2,692.9	2,357.5	
2010	8,304.8	16.5	2,361.6	1,787.8	1,276.9	510.9	573.9	372.8	201.0	3,724.5	3,303.0	2,669.2	2,354.7	
2011	8,393.3	16.4	2,394.4	1,844.5	1,362.2	482.2	550.0	362.3	187.7	3,673.5	3,270.5	2,709.4	2,415.1	
2012	8,226.6	19.2	2,309.0	1,813.2	1,363.8	449.4	495.9	322.2	173.7	3,688.6	3,289.4	2,695.5	2,435.7	
2013	7,528.9	18.7	2,145.0	1,654.8	1,239.1	415.7	490.2	324.6	165.6	3,594.3	3,202.1	2,616.3	2,354.0	
2014	7,802.3	19.2	2,022.8	1,530.5	1,147.2	383.3	492.3	333.9	158.4	3,654.5	3,239.4	2,661.2	2,384.8	
2015	7,665.2	19.5	2,013.6	1,523.8	1,218.0	305.8	489.8	344.9	144.9	3,719.9	3,302.5	2,727.4	2,440.0	
2016	7,792.6	26.0	2,101.4	1,670.9	1,384.2	286.7	430.5	295.0	135.5	3,762.9	3,344.5	2,805.6	2,512.0	
2017	7,710.8	32.1	2,216.3	1,821.1	1,556.3	264.8	395.2	270.1	125.2	3,801.7	3,400.7	2,918.8	2,610.1	
2016 May	7,817.2	18.7	2,070.3	1,587.2	1,284.7	302.4	483.1	342.8	140.4	3,759.2	3,334.1	2,762.8	2,476.2	
June	7,920.6	19.3	2,072.8	1,592.2	1,292.9	299.3	480.6	338.2	142.4	3,745.9	3,321.4	2,759.7	2,473.7	
July	7,942.1	19.7	2,086.0	1,604.7	1,308.1	296.6	481.2	341.4	139.8	3,758.8	3,333.6	2,766.6	2,479.7	
Aug	7,908.5	19.7	2,086.1	1,611.7	1,317.0	294.7	474.4	336.0	138.5	3,758.4	3,335.4	2,774.3	2,486.3	
Sep	7,863.9	21.0	2,074.5	1,636.4	1,343.9	292.5	438.2	300.7	137.5	3,766.0	3,343.0	2,785.6	2,497.3	
Oct	7,868.7	22.8	2,079.5	1,641.2	1,349.4	291.8	438.3	301.6	136.7	3,773.0	3,349.9	2,793.6	2,502.5	
Nov	7,911.6	22.9	2,154.7	1,712.1	1,421.7	290.5	442.6	306.3	136.2	3,785.7	3,361.6	2,810.0	2,518.4	
Dec	7,792.6	26.0	2,101.4	1,670.9	1,384.2	286.7	430.5	295.0	135.5	3,762.9	3,344.5	2,805.6	2,512.0	
2017 Jan	7,889.3	24.6	2,210.1	1,777.0	1,490.7	286.3	433.1	299.8	133.3	3,769.9	3,347.6	2,813.5	2,519.3	
Feb	7,944.8	23.9	2,225.4	1,783.3	1,497.9	285.4	442.1	307.6	134.5	3,774.5	3,347.6	2,819.5	2,525.6	
Mar	7,926.1	23.6	2,237.5	1,797.8	1,513.2	284.6	439.7	306.9	132.7	3,776.8	3,351.3	2,828.1	2,533.8	
Apr	7,954.6	24.7	2,276.6	1,847.6	1,563.1	284.6	428.9	298.2	130.8	3,780.1	3,357.1	2,836.6	2,541.1	
May	7,947.0	25.6	2,286.5	1,864.4	1,579.4	285.0	422.1	290.1	132.0	3,782.1	3,360.7	2,847.3	2,552.6	
June	7,849.7	27.3	2,245.7	1,830.9	1,548.9	282.1	414.8	284.2	130.6	3,780.7	3,364.7	2,859.4	2,559.7	
July	7,818.7	26.6	2,258.5	1,840.3	1,560.2	280.0	418.2	289.0	129.2	3,787.1	3,370.5	2,867.1	2,567.3	
Aug	7,807.7	27.5	2,243.1	1,828.2	1,553.7	274.5	415.0	286.9	128.0	3,792.2	3,377.0	2,876.6	2,576.3	
Sep	7,811.3	28.4	2,262.7	1,847.3	1,578.3	269.0	415.4	288.4	127.0	3,799.4	3,385.3	2,890.2	2,589.5	
Oct	7,825.7	28.4	2,285.3	1,873.3	1,604.0	269.2	412.1	285.1	127.0	3,804.7	3,393.5	2,899.1	2,598.2	
Nov	7,849.9	28.0	2,312.8	1,901.5	1,633.0	268.5	411.3	285.5	125.8	3,818.1	3,411.2	2,919.0	2,612.6	
Dec	7,710.8	32.1	2,216.3	1,821.1	1,556.3	264.8	395.2	270.1	125.2	3,801.7	3,400.7	2,918.8	2,610.1	
2018 Jan	7,817.2	29.2	2,296.1	1,891.0	1,624.5	266.5	405.1	280.3	124.9	3,813.9	3,407.5	2,930.5	2,622.5	
Feb	7,790.7	29.6	2,298.1	1,892.3	1,627.0	265.2	405.9	280.6	125.2	3,814.0	3,406.5	2,938.1	2,633.4	
Changes ³														
2010	- 136.3	- 0.7	- 111.6	- 15.6	58.5	- 74.1	- 95.9	- 80.9	- 15.1	96.4	- 126.0	- 13.7	0.7	
2011	54.1	- 0.1	32.6	58.7	91.7	- 33.0	- 26.0	- 12.1	- 13.9	- 51.8	- 35.3	38.7	56.7	
2012	- 129.2	2.9	- 81.9	- 28.4	3.0	- 31.4	- 53.5	- 39.7	- 13.8	27.5	- 27.7	17.0	28.8	
2013	- 703.6	- 0.5	- 257.1	- 249.2	- 216.5	- 32.7	- 7.9	1.6	- 9.5	13.6	16.6	23.6	21.6	
2014	206.8	0.4	- 126.2	- 128.6	- 95.3	- 33.4	2.4	7.2	- 4.8	55.1	40.0	52.3	36.8	
2015	- 191.4	0.3	- 18.2	- 12.1	66.1	- 78.2	- 6.1	6.6	- 12.8	64.8	64.1	68.1	56.6	
2016	184.3	6.5	120.3	178.4	195.3	- 16.8	- 58.1	- 49.2	- 8.8	57.5	53.4	88.8	81.0	
2017	8.0	6.1	135.9	165.0	182.6	- 17.6	- 29.1	- 19.6	- 9.5	51.3	63.5	114.8	101.1	
2016 June	108.2	0.7	3.7	5.6	8.2	- 2.6	- 1.9	- 4.2	2.3	- 10.4	- 11.4	- 1.7	- 1.2	
July	23.5	0.4	13.1	12.4	15.2	- 2.8	0.7	3.4	- 2.7	14.5	13.4	8.2	7.3	
Aug	- 31.5	- 0.0	0.4	7.1	9.0	- 1.9	- 6.7	- 5.3	- 1.4	0.2	2.1	8.0	6.8	
Sep	- 42.7	1.3	- 11.3	24.9	26.9	- 2.0	- 36.3	- 35.2	- 1.1	8.3	8.3	11.7	11.4	
Oct	- 0.5	1.8	4.8	5.2	5.6	- 0.4	- 0.3	0.5	- 0.9	6.5	7.1	7.9	5.2	
Nov	25.9	0.1	72.2	69.4	71.4	- 2.0	2.8	3.4	- 0.5	11.6	11.3	15.8	15.2	
Dec	- 121.7	3.1	- 53.6	- 41.3	- 37.8	- 3.5	- 12.3	- 11.7	- 0.6	- 23.1	- 17.0	- 4.4	- 6.1	
2017 Jan	108.8	- 1.4	110.7	107.1	107.1	0.0	3.5	5.7	- 2.2	9.4	4.6	9.3	8.5	
Feb	47.4	- 0.7	14.0	5.6	6.8	- 1.2	8.4	7.1	1.2	4.3	0.3	6.3	6.5	
Mar	- 13.0	- 0.3	13.1	14.9	15.5	- 0.6	- 1.8	- 0.0	- 1.8	3.2	4.3	9.0	8.9	
Apr	40.0	1.1	41.0	50.7	50.5	0.2	- 9.7	- 7.8	- 1.9	4.7	6.8	9.4	8.2	
May	8.8	0.9	12.6	18.0	17.1	0.9	- 5.4	- 6.8	1.4	4.0	4.6	9.0	9.9	
June	- 85.4	1.7	- 38.0	- 31.5	- 29.2	- 2.3	- 6.5	- 5.2	- 1.4	0.5	5.3	13.2	8.0	
July	- 14.3	- 0.7	14.5	10.5	12.2	- 1.7	4.0	5.2	- 1.2	8.6	7.1	8.9	8.6	
Aug	- 4.7	0.9	- 14.3	- 11.6	- 6.3	- 5.3	- 2.8	- 1.6	- 1.2	5.6	6.8	9.9	9.3	
Sep	4.8	0.9	21.8	21.5	26.0	- 4.5	0.3	1.2	- 0.9	6.9	7.1	12.0	13.5	
Oct	8.6	0.1	21.9	25.5	25.4	0.1	- 3.7	- 3.7	0.1	4.6	8.0	8.6	8.6	
Nov	33.4	- 0.4	28.9	28.8	29.4	- 0.6	0.0	1.2	- 1.1	14.8	18.7	19.0	13.5	
Dec	- 126.4	4.1	- 90.1	- 74.7	- 72.0	- 2.7	- 15.4	- 15.0	- 0.4	- 15.2	- 10.0	0.1	- 2.4	
2018 Jan	124.2	- 2.9	82.2	70.9	68.7	- 2.2	11.3	11.5	- 0.2	14.7	- 8.2	12.4	13.0	
Feb	15.6	0.3	2.0	1.3	2.5	- 1.2	0.7	0.3	0.4	1.0	- 0.2	8.2	11.2	

* This table serves to supplement the "Overall monetary survey" in section II. Unlike the other tables in section IV, this table includes – in addition to the figures reported

by banks (including building and loan associations) – data from money market funds. ¹ See footnote 1 in Table IV.2. ² Including debt securities arising from the

IV Banks

euro area										Claims on non-euro-area residents		Other assets ¹	Period
General government			to non-banks in other member states						General government				
Secur-ities	Total	Loans	Secur-ities ²	Total	Enterprises and households		Total	Loans	Secur-ities	Total	of which	Other assets ¹	
					Total	Loans							
End of year or month													
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
308.7	481.9	284.3	197.6	401.0	271.8	158.3	129.1	29.8	99.3	991.9	745.3	668.9	2017
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	2016 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
299.8	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
300.4	500.4	293.4	207.0	415.2	283.8	165.2	131.4	30.0	101.4	1,011.0	765.3	733.9	Aug
300.7	495.1	289.0	206.1	414.1	283.0	167.9	131.1	29.8	101.3	1,021.2	776.3	699.6	Sep
301.0	494.4	289.2	205.3	411.2	281.6	167.7	129.6	30.4	99.2	1,014.2	768.9	693.0	Oct
306.4	492.2	287.3	205.0	406.8	276.8	164.2	130.0	29.8	100.2	1,005.3	759.4	685.6	Nov
308.7	481.9	284.3	197.6	401.0	271.8	158.3	129.1	29.8	99.3	991.9	745.3	668.9	Dec
308.0	477.0	282.8	194.2	406.4	278.6	163.9	127.8	29.7	98.0	1,009.1	758.2	668.9	2018 Jan
304.7	468.4	277.4	191.0	407.5	280.4	165.8	127.1	29.6	97.5	1,026.6	776.0	622.4	Feb
Changes ³													
- 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
13.7	- 51.3	- 22.8	- 28.5	- 12.2	- 3.4	4.0	- 8.7	0.1	- 8.9	- 12.3	- 6.7	- 173.1	2017
- 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	2016 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	- 8.2	- 7.4	1.4	Apr
- 0.8	- 4.4	- 6.4	2.0	- 0.6	2.3	- 0.1	- 3.0	- 1.0	- 2.0	- 12.7	- 13.1	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
0.3	- 1.7	2.0	- 3.7	1.4	2.4	2.4	- 1.0	- 0.2	- 0.8	- 24.4	- 24.9	- 12.3	July
0.6	- 3.0	- 4.9	1.9	- 1.2	- 0.8	1.5	- 0.4	0.0	- 0.4	- 12.9	- 11.3	16.0	Aug
- 1.5	- 4.9	- 4.2	- 0.7	- 0.2	0.2	2.4	- 0.4	- 0.2	- 0.2	8.3	9.0	- 33.1	Sep
0.1	- 0.7	0.2	- 0.9	- 3.4	- 1.8	- 0.4	- 1.6	0.6	- 2.2	- 11.3	- 11.3	- 6.6	Oct
5.6	- 0.4	- 0.1	- 0.3	- 3.9	- 4.3	- 3.1	0.4	- 0.6	1.0	- 2.5	- 3.6	- 7.3	Nov
2.5	- 10.1	- 2.8	- 7.2	- 5.2	- 4.3	- 5.4	- 0.8	0.0	- 0.9	- 8.3	- 9.5	- 16.9	Dec
- 0.6	- 4.1	- 0.8	- 3.3	6.5	7.7	6.3	- 1.2	- 0.1	- 1.2	29.4	24.6	0.7	2018 Jan
- 3.0	- 8.4	- 5.2	- 3.2	1.3	1.9	2.0	- 0.7	- 0.2	- 0.5	17.7	17.8	- 5.4	Feb

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

IV Banks

1 Assets and liabilities of monetary financial institutions (excluding the Bundesbank) in Germany *

Liabilities

€ billion

Period	Deposits of banks (MFIs) in the euro area				Deposits of non-banks (non-MFIs) in the euro area							Deposits of non-banks		
	Balance sheet total 1	of banks			Total	Deposits of non-banks in the home country			With agreed maturities		At agreed notice		Total	Over-night
		Total	in the home country	in other member states		Total	Total	Over-night	Total	of which up to 2 years	Total	of which up to 3 months		
End of year or month														
2009	7,436.1	1,589.7	1,355.6	234.0	2,818.0	2,731.3	997.8	1,139.1	356.4	594.4	474.4	63.9	17.7	
2010	8,304.8	1,495.8	1,240.1	255.7	2,925.8	2,817.6	1,089.1	1,110.3	304.6	618.2	512.5	68.4	19.3	
2011	8,393.3	1,444.8	1,210.3	234.5	3,033.4	2,915.1	1,143.3	1,155.8	362.6	616.1	515.3	78.8	25.9	
2012	8,226.6	1,371.0	1,135.9	235.1	3,091.4	2,985.2	1,294.9	1,072.8	320.0	617.6	528.4	77.3	31.2	
2013	7,528.9	1,345.4	1,140.3	205.1	3,130.5	3,031.5	1,405.3	1,016.2	293.7	610.1	532.4	81.3	33.8	
2014	7,802.3	1,324.0	1,112.3	211.7	3,197.7	3,107.4	1,514.3	985.4	298.1	607.7	531.3	79.7	34.4	
2015	7,665.2	1,267.8	1,065.9	201.9	3,307.1	3,215.1	1,670.2	948.4	291.5	596.4	534.5	80.8	35.3	
2016	7,792.6	1,205.2	1,033.2	172.0	3,411.3	3,318.5	1,794.8	935.3	291.2	588.5	537.0	84.2	37.2	
2017	7,710.8	1,233.6	1,048.6	184.9	3,529.1	3,411.1	1,936.6	891.7	274.2	582.8	541.0	108.6	42.5	
2016 May	7,817.2	1,230.3	1,027.5	202.8	3,348.6	3,253.7	1,717.2	945.3	292.6	591.1	535.0	84.9	41.7	
June	7,920.6	1,241.7	1,039.1	202.6	3,350.9	3,250.2	1,718.1	942.1	290.9	590.0	534.5	89.4	44.9	
July	7,942.1	1,226.7	1,023.7	203.0	3,362.7	3,267.1	1,733.1	945.0	295.2	589.1	534.5	85.5	40.7	
Aug	7,908.5	1,211.5	1,016.5	195.0	3,369.5	3,274.0	1,744.5	941.2	292.8	588.4	534.6	85.5	40.4	
Sep	7,863.9	1,194.8	1,029.1	165.7	3,372.1	3,274.9	1,743.8	944.0	297.4	587.1	534.0	88.0	41.4	
Oct	7,868.7	1,186.8	1,025.4	161.3	3,378.8	3,286.5	1,763.9	936.0	288.5	586.6	534.3	83.7	37.1	
Nov	7,911.6	1,205.6	1,042.2	163.4	3,420.0	3,320.5	1,795.0	939.3	292.8	586.1	534.4	89.8	43.4	
Dec	7,792.6	1,205.2	1,033.2	172.0	3,411.3	3,318.5	1,794.8	935.3	291.2	588.5	537.0	84.2	37.2	
2017 Jan	7,889.3	1,237.0	1,053.4	183.6	3,433.4	3,337.5	1,807.5	941.6	300.1	588.4	537.7	88.4	42.2	
Feb	7,944.8	1,245.6	1,055.3	190.3	3,435.3	3,336.9	1,812.7	935.8	295.0	588.5	538.3	89.6	41.7	
Mar	7,926.1	1,259.8	1,077.3	182.5	3,433.9	3,334.5	1,813.5	934.4	296.4	586.6	537.0	91.2	39.6	
Apr	7,954.6	1,254.1	1,075.4	178.8	3,452.0	3,352.3	1,840.8	925.4	290.7	586.2	536.9	91.2	41.7	
May	7,947.0	1,259.3	1,079.9	179.4	3,463.2	3,360.6	1,848.6	926.4	292.7	585.7	536.8	93.5	44.2	
June	7,849.7	1,235.2	1,054.2	181.0	3,477.7	3,362.0	1,865.6	911.8	290.3	584.6	536.2	107.1	44.8	
July	7,818.7	1,239.8	1,062.3	177.5	3,470.9	3,353.4	1,862.3	907.6	287.9	583.4	538.2	107.5	45.8	
Aug	7,807.7	1,243.3	1,065.8	177.4	3,486.1	3,368.4	1,880.5	905.5	285.7	582.4	537.9	108.3	47.5	
Sep	7,811.3	1,256.2	1,071.9	184.3	3,494.8	3,371.4	1,886.8	902.8	284.3	581.8	537.9	114.7	50.7	
Oct	7,825.7	1,272.0	1,081.9	190.1	3,505.8	3,388.0	1,912.7	893.9	277.3	581.5	538.4	109.2	46.3	
Nov	7,849.9	1,275.5	1,081.0	194.5	3,542.9	3,417.4	1,939.9	896.5	276.9	581.0	538.6	113.6	52.1	
Dec	7,710.8	1,233.6	1,048.6	184.9	3,529.1	3,411.1	1,936.6	891.7	274.2	582.8	541.0	108.6	42.5	
2018 Jan	7,817.2	1,249.4	1,060.8	188.6	3,539.8	3,419.1	1,944.5	892.2	276.8	582.4	539.7	110.6	46.4	
Feb	7,790.7	1,246.9	1,058.2	188.8	3,536.8	3,416.5	1,945.4	888.9	273.3	582.1	540.4	109.7	47.1	

	Changes 4												
2010	- 136.3	- 75.2	- 99.4	- 24.2	72.3	59.7	88.7	- 53.0	- 52.2	24.0	38.3	- 4.4	2.2
2011	54.1	- 48.4	- 28.8	- 19.6	102.1	97.4	52.4	- 47.6	58.8	- 2.6	1.3	- 4.8	6.5
2012	- 129.2	- 68.7	- 70.0	- 1.3	57.8	67.1	156.1	- 90.4	- 50.2	1.5	14.1	- 1.4	5.4
2013	- 703.6	- 106.2	- 73.9	- 32.3	39.1	47.8	111.5	- 56.3	- 26.6	- 7.3	4.0	- 2.6	3.3
2014	206.8	- 28.4	- 32.2	- 3.9	62.7	71.6	106.0	- 32.1	3.1	- 2.4	- 2.4	- 2.5	0.0
2015	- 191.4	- 62.1	- 50.3	- 11.9	104.1	104.8	153.2	- 37.0	- 10.1	- 11.3	4.2	- 0.4	0.3
2016	184.3	- 31.6	- 2.2	- 29.4	105.7	105.2	124.3	- 11.1	1.4	- 8.0	2.4	2.7	1.9
2017	8.0	30.6	14.8	15.8	124.2	107.7	145.8	- 32.5	- 15.3	- 5.6	1.5	16.4	5.8
2016 June	108.2	13.0	12.4	0.6	2.2	- 3.0	1.0	- 2.9	- 1.5	- 1.1	- 0.4	3.9	3.2
July	23.5	- 14.9	- 15.4	0.5	11.9	17.1	15.1	- 2.9	4.3	- 0.9	- 0.1	- 3.9	4.2
Aug	- 31.5	- 15.0	- 7.1	- 7.9	7.0	7.0	11.5	- 3.8	- 2.4	- 0.7	0.1	- 0.1	0.3
Sep	- 42.7	- 16.5	12.7	- 29.2	2.7	1.0	- 0.6	2.9	4.6	- 1.2	- 0.5	2.5	1.1
Oct	- 0.5	- 8.4	- 3.7	- 4.7	6.2	11.2	19.8	- 8.1	- 8.9	- 0.6	0.2	- 4.3	4.4
Nov	25.9	17.3	15.9	1.4	39.7	32.7	30.1	3.0	4.0	- 0.4	0.1	5.8	6.1
Dec	- 121.7	- 0.9	- 9.3	8.4	- 9.0	- 2.2	- 0.4	- 4.1	- 1.3	2.3	2.7	- 5.7	6.2
2017 Jan	108.8	32.8	20.7	12.1	23.0	19.7	13.3	- 6.4	9.1	- 0.0	0.7	4.4	5.1
Feb	47.4	7.6	1.6	6.1	1.2	0.7	4.7	- 5.5	- 4.8	0.1	0.7	1.1	0.5
Mar	- 13.0	14.8	22.2	- 7.4	- 1.0	- 2.1	1.1	- 1.3	1.5	- 1.9	- 1.4	1.6	- 2.1
Apr	40.0	- 4.4	- 1.3	- 3.1	19.1	18.7	27.8	- 8.7	- 5.5	- 0.5	- 0.0	0.2	2.2
May	8.8	6.7	5.3	1.5	12.7	9.5	8.7	1.3	2.2	- 0.5	- 0.1	2.5	2.6
June	- 85.4	- 22.2	- 24.3	2.1	15.3	11.1	17.5	- 5.4	- 2.3	- 1.0	- 0.7	4.7	0.7
July	- 14.3	5.3	8.9	- 3.5	- 5.3	- 7.4	- 2.4	- 3.9	- 2.1	- 1.2	- 0.4	0.7	1.1
Aug	- 4.7	4.1	3.8	0.3	15.8	15.5	18.5	- 1.9	- 2.1	- 1.1	- 0.3	0.9	1.7
Sep	4.8	3.0	- 3.8	6.7	8.4	2.9	6.1	- 2.6	- 1.5	- 0.6	0.0	6.4	3.2
Oct	8.6	15.2	9.8	5.5	10.3	16.0	25.5	- 9.1	- 7.1	- 0.3	0.5	- 5.6	4.4
Nov	33.4	4.6	- 0.3	4.9	37.9	30.2	27.9	2.8	- 0.2	- 0.5	0.2	4.6	5.9
Dec	- 126.4	- 36.9	- 27.7	- 9.2	- 13.1	- 5.7	- 3.0	- 4.6	- 2.6	1.9	2.4	- 4.9	- 9.6
2018 Jan	124.2	- 17.6	- 13.1	4.5	12.2	9.1	8.7	- 0.9	3.2	- 0.5	0.2	- 2.4	4.0
Feb	15.6	- 2.5	- 2.7	0.2	- 3.0	- 2.7	0.9	- 3.3	- 3.5	- 0.2	0.7	- 0.9	0.8

* This table serves to supplement the "Overall monetary survey" in section II. Unlike the other tables in section IV, this table includes – in addition to the figures reported

by banks (including building and loan associations) – data from money market funds. 1 See footnote 1 in Table IV.2. 2 Excluding deposits of central

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				
Total	of which up to 2 years	Total	of which up to 3 months										
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
63.2	19.7	2.9	2.6	9.4	8.7	3.3	2.1	994.5	37.8	603.4	686.0	658.8	2017
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	2016 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	19.1	3.0	2.6	10.0	7.9	3.3	2.2	1,029.2	43.9	684.2	606.2	782.9	July
57.8	18.3	3.0	2.6	9.4	7.9	3.4	2.4	1,024.7	42.6	643.1	608.1	796.7	Aug
61.0	20.5	2.9	2.6	8.7	8.0	2.6	2.4	1,015.2	42.2	669.5	612.4	758.2	Sep
59.9	18.3	2.9	2.6	8.6	7.9	2.3	2.2	1,008.9	40.7	667.9	612.7	753.9	Oct
58.6	16.7	2.9	2.6	11.8	8.3	2.6	2.2	1,004.7	40.1	664.4	609.8	747.9	Nov
63.2	19.7	2.9	2.6	9.4	8.7	3.3	2.1	994.5	37.8	603.4	686.0	658.8	Dec
61.3	18.9	2.9	2.6	10.0	8.9	4.3	2.1	1,002.6	35.4	682.4	666.5	670.0	2018 Jan
59.7	18.2	2.9	2.6	10.7	8.8	3.8	2.1	1,005.9	35.7	690.3	678.8	626.0	Feb
Changes ⁴													
- 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
10.8	4.2	- 0.1	- 0.0	- 2.2	- 1.2	- 0.3	- 1.1	8.6	- 1.3	116.1	26.4	- 39.5	2016
0.7	0.8	- 0.0	- 0.0	- 0.0	- 0.0	1.1	- 0.3	- 3.3	- 8.5	- 16.1	34.1	- 162.3	2017
0.3	- 0.3	- 0.0	- 0.0	1.3	0.7	- 1.0	0.0	- 5.0	0.3	8.4	3.9	86.7	2016 June
0.4	0.8	- 0.0	- 0.0	- 1.3	- 0.7	0.9	- 0.2	- 1.2	6.6	38.6	- 8.9	- 2.7	July
1.5	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
0.1	- 1.3	- 0.1	- 0.0	- 0.8	0.1	- 0.3	- 0.1	8.1	- 0.8	- 7.0	12.0	- 25.5	Sep
- 0.3	- 0.7	- 0.0	- 0.0	- 0.7	- 0.5	0.3	- 0.1	5.3	- 1.3	52.6	- 2.9	- 53.5	Oct
0.5	- 0.2	- 0.0	- 0.0	1.2	0.6	- 0.2	0.1	7.3	- 2.6	- 5.1	- 6.2	- 27.0	Nov
- 0.6	- 0.1	- 0.0	- 0.0	- 1.1	- 1.0	2.6	- 0.1	6.8	- 1.3	- 69.7	- 0.2	- 34.3	Dec
1.6	2.3	0.0	0.0	- 1.1	- 1.0	- 0.1	17.9	- 17.9	0.5	76.7	- 5.1	- 38.9	2017 Jan
3.7	2.0	- 0.0	- 0.0	0.8	0.3	- 0.3	- 0.1	3.4	0.3	14.4	2.4	18.7	Feb
- 1.9	- 1.6	- 0.0	0.0	- 0.6	0.3	- 1.9	- 0.1	- 2.8	- 2.0	- 2.2	6.2	- 26.1	Mar
- 0.1	- 1.0	0.0	0.0	0.2	- 0.3	0.9	- 0.0	1.4	- 1.8	22.7	5.6	- 5.3	Apr
4.0	2.9	- 0.0	- 0.0	0.6	0.2	- 1.1	- 0.0	7.8	0.9	- 18.5	7.0	- 5.7	May
- 0.5	- 0.9	- 0.0	- 0.0	- 0.5	0.1	- 0.6	0.1	1.0	0.3	- 31.9	8.9	- 56.0	June
- 0.9	- 0.8	- 0.0	- 0.0	1.4	- 0.0	1.4	- 0.0	- 3.1	- 0.7	- 0.1	- 1.9	- 10.6	July
3.2	2.2	- 0.0	- 0.0	- 0.6	- 0.1	0.1	0.2	- 1.7	- 1.2	- 39.0	2.7	13.0	Aug
- 1.2	- 2.2	- 0.0	0.0	- 0.8	0.0	- 0.7	0.0	- 10.2	- 0.5	25.3	4.7	- 25.6	Sep
- 1.3	- 1.5	- 0.0	- 0.0	- 0.1	- 0.2	- 0.3	- 0.3	- 9.6	- 1.6	- 3.8	- 0.5	- 2.6	Oct
4.7	3.0	0.0	0.0	3.0	0.3	0.3	0.0	- 0.2	- 0.5	- 0.6	- 1.5	- 7.1	Nov
- 1.5	- 0.8	- 0.0	- 0.0	- 2.4	0.3	0.7	- 0.0	- 7.3	- 2.3	- 59.2	5.6	- 16.1	Dec
- 1.7	- 0.7	- 0.0	- 0.0	0.6	0.2	- 1.0	- 0.0	15.8	- 2.2	84.0	- 17.5	11.0	2018 Jan
				0.6	- 0.1	- 0.5	- 0.0	4.7	1.7	7.8	11.0	- 1.9	Feb

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			Securities issued by non-banks		
					Balances and loans	Securities issued by banks		Loans		Bills			
							for up to and including 1 year	for more than 1 year					
All categories of banks													
2017 Sep	1,651	7,857.6	462.5	2,423.1	1,948.3	471.5	4,060.9	352.9	2,982.9	0.6	717.2	113.1	798.0
Oct	1,639	7,871.8	526.4	2,375.2	1,900.0	472.3	4,066.0	351.5	2,993.2	0.5	713.6	113.0	791.2
Nov	1,634	7,895.7	508.7	2,410.5	1,936.0	472.2	4,080.2	351.9	3,002.4	0.5	717.8	113.0	783.3
Dec	1,631	7,755.3	447.7	2,371.3	1,901.6	468.4	4,056.5	333.6	3,002.4	0.6	715.0	112.6	767.1
2018 Jan	1,627	7,861.7	500.8	2,407.1	1,934.0	470.6	4,074.4	353.7	3,001.5	0.6	712.2	112.5	766.8
Feb	1,627	7,836.3	513.0	2,408.7	1,936.1	469.6	4,080.8	357.4	3,012.0	0.5	703.6	112.5	721.4
Commercial banks ⁶													
2018 Jan	264	3,203.5	340.0	1,011.4	934.2	76.5	1,251.3	200.4	823.4	0.5	225.0	50.7	550.1
Feb	264	3,160.4	344.1	1,007.4	929.9	76.9	1,254.1	203.2	826.7	0.4	220.5	50.6	504.1
Big banks ⁷													
2018 Jan	4	1,724.3	158.8	513.3	483.6	29.7	495.8	109.0	292.2	0.1	93.4	44.9	511.4
Feb	4	1,694.1	165.5	519.4	489.3	30.2	499.9	112.5	293.1	0.1	92.0	44.4	464.9
Regional banks and other commercial banks													
2018 Jan	153	1,049.5	95.7	257.7	213.6	43.9	660.8	64.6	474.7	0.2	120.6	5.0	30.3
Feb	153	1,038.1	95.7	248.8	204.7	43.8	657.4	62.8	476.4	0.2	117.1	5.3	30.9
Branches of foreign banks													
2018 Jan	107	429.7	85.6	240.3	237.0	2.9	94.7	26.8	56.5	0.1	11.0	0.8	8.3
Feb	107	428.1	83.0	239.2	235.9	2.9	96.8	27.9	57.2	0.1	11.4	0.8	8.4
Landesbanken													
2018 Jan	8	893.6	58.0	275.7	207.8	67.0	460.3	49.3	339.8	0.1	69.9	9.9	89.7
Feb	8	898.5	53.9	280.9	213.2	66.7	463.6	52.3	340.6	0.1	69.5	9.9	90.1
Savings banks													
2018 Jan	386	1,196.4	37.9	173.9	60.6	113.2	953.1	48.2	746.9	0.0	157.8	14.1	17.5
Feb	386	1,201.0	39.0	174.2	61.6	112.6	955.7	48.3	749.4	0.0	158.0	14.1	17.9
Credit cooperatives													
2018 Jan	917	889.1	18.4	166.5	61.2	104.9	668.6	31.8	527.3	0.0	109.4	16.8	18.8
Feb	917	893.0	19.9	165.0	59.3	105.1	672.5	32.7	529.5	0.0	110.2	16.8	18.8
Mortgage banks													
2018 Jan	13	225.9	2.4	32.3	21.4	10.9	185.0	3.1	157.5	–	24.4	0.1	6.2
Feb	13	225.4	2.6	31.7	20.9	10.8	184.6	3.0	157.6	–	24.0	0.1	6.3
Building and loan associations													
2018 Jan	20	230.2	1.1	57.2	41.3	15.9	167.1	1.2	140.7	.	25.2	0.3	4.5
Feb	20	231.0	1.6	56.8	40.9	16.0	167.7	1.2	141.1	.	25.4	0.3	4.6
Banks with special, development and other central support tasks													
2018 Jan	19	1,223.0	43.2	690.2	607.6	82.2	389.2	19.8	266.0	–	100.4	20.5	80.0
Feb	19	1,227.1	51.9	692.6	610.4	81.6	382.5	16.8	267.1	–	95.9	20.6	79.6
Memo item: Foreign banks ⁸													
2018 Jan	142	1,149.0	147.8	421.5	382.6	38.3	489.4	75.9	308.1	0.4	103.1	4.1	86.3
Feb	142	1,138.1	144.4	413.8	374.6	38.6	489.9	75.1	309.9	0.3	102.5	4.1	85.9
of which: Banks majority-owned by foreign banks ⁹													
2018 Jan	35	719.3	62.2	181.2	145.6	35.4	394.7	49.1	251.6	0.3	92.1	3.3	77.9
Feb	35	710.0	61.5	174.6	138.7	35.7	393.1	47.2	252.7	0.2	91.2	3.3	77.5

* 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														
1,763.0	550.7	1,212.3	3,659.8	2,025.2	296.3	695.5	71.5	589.4	544.6	53.5	1,116.1	511.3	807.4	2017 Sep
1,768.6	556.3	1,212.2	3,679.3	2,049.1	294.0	694.0	78.4	589.0	545.1	53.1	1,110.1	511.2	802.6	Oct
1,774.0	554.7	1,219.3	3,711.1	2,084.5	287.5	698.0	74.5	588.5	545.2	52.6	1,103.1	511.2	796.4	Nov
1,707.1	500.3	1,206.8	3,662.1	2,050.4	269.1	700.3	46.0	590.3	547.6	52.0	1,097.0	511.1	777.9	Dec
1,772.0	566.8	1,205.1	3,703.9	2,079.8	287.2	697.6	75.0	589.9	546.3	49.4	1,090.7	510.5	784.6	2018 Jan
1,772.3	551.4	1,220.9	3,705.4	2,084.4	288.9	695.3	84.4	589.6	546.9	47.2	1,107.4	511.4	739.8	Feb
Commercial banks 6														
882.4	412.7	469.7	1,492.6	926.0	167.0	277.0	58.9	101.1	93.5	21.5	158.6	179.4	490.4	2018 Jan
884.9	406.9	478.0	1,489.0	924.4	169.6	274.2	66.0	101.0	93.5	19.7	159.0	180.0	447.5	Feb
Big banks 7														
410.6	163.3	247.3	644.1	383.6	102.3	90.8	58.8	61.6	60.4	5.9	121.7	103.7	444.1	2018 Jan
420.8	165.6	255.2	646.7	386.9	104.4	89.6	65.8	61.5	60.3	4.3	122.1	103.8	400.6	Feb
Regional banks and other commercial banks														
220.7	73.8	146.9	688.6	431.7	41.1	160.8	0.1	39.3	32.9	15.6	36.7	67.6	36.0	2018 Jan
213.1	67.0	146.1	684.2	429.3	41.2	159.1	0.1	39.3	32.9	15.4	36.7	68.0	36.2	Feb
Branches of foreign banks														
251.1	175.5	75.5	159.9	110.7	23.5	25.4	–	0.2	0.2	0.0	0.2	8.2	10.3	2018 Jan
251.1	174.4	76.7	158.1	108.2	24.1	25.5	–	0.2	0.2	0.0	0.2	8.2	10.6	Feb
Landesbanken														
256.8	65.4	191.4	294.4	131.4	58.1	91.6	13.1	12.6	11.9	0.7	196.7	50.9	94.7	2018 Jan
258.9	62.3	196.6	295.6	132.1	58.7	91.6	14.8	12.5	12.3	0.7	196.5	51.1	96.4	Feb
Savings banks														
131.4	5.3	126.1	899.5	560.2	14.4	15.0	–	290.1	264.6	19.9	14.3	108.2	43.1	2018 Jan
131.9	5.0	127.0	902.8	563.4	14.6	15.1	–	290.1	264.8	19.6	14.4	108.2	43.7	Feb
Credit cooperatives														
114.6	2.1	112.5	659.5	421.3	32.6	14.4	–	185.6	175.9	5.6	8.7	74.4	31.8	2018 Jan
114.4	1.4	113.0	662.7	423.9	33.3	14.4	–	185.5	175.9	5.6	9.4	74.5	32.0	Feb
Mortgage banks														
43.9	2.7	41.3	79.8	2.9	3.8	73.1	–	–	–	–	85.4	8.9	7.9	2018 Jan
44.4	2.9	41.5	80.0	3.0	3.9	73.1	–	–	–	–	84.5	8.9	7.6	Feb
Building and loan associations														
26.4	3.9	22.5	178.5	3.4	1.4	173.1	–	0.4	0.4	0.1	3.0	11.0	11.3	2018 Jan
26.7	4.1	22.6	178.9	3.3	1.4	173.5	–	0.4	0.4	0.1	3.1	11.0	11.4	Feb
Banks with special, development and other central support tasks														
316.4	74.8	241.6	99.4	34.6	9.9	53.4	3.0	–	–	–	624.0	77.7	105.4	2018 Jan
311.1	68.8	242.3	96.5	34.3	7.3	53.4	3.6	–	–	–	640.5	77.7	101.2	Feb
Memo item: Foreign banks 8														
427.9	258.0	170.0	557.5	388.6	56.0	84.6	9.6	21.1	20.6	7.2	22.7	49.5	91.3	2018 Jan
424.9	250.5	174.3	550.8	383.5	55.6	83.6	9.8	21.1	20.6	7.1	22.8	49.5	90.0	Feb
of which: Banks majority-owned by foreign banks 9														
176.9	82.4	94.4	397.6	277.9	32.5	59.2	9.6	20.9	20.4	7.2	22.5	41.4	81.0	2018 Jan
173.8	76.2	97.6	392.8	275.3	31.5	58.1	9.8	20.8	20.4	7.1	22.6	41.4	79.4	Feb

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 *													
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
2017	31.9	392.5	1,407.5	1,163.4	0.0	0.7	243.4	1.9	3,332.6	2,894.0	0.4	0.7	437.5
2016 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	436.0
Aug	27.3	421.3	1,384.2	1,131.4	0.0	1.4	251.3	1.7	3,308.9	2,869.4	0.2	0.8	438.5
Sep	28.1	409.2	1,416.1	1,168.3	0.0	1.3	246.5	1.7	3,317.6	2,878.2	0.3	0.7	438.4
Oct	28.1	472.7	1,378.5	1,130.6	0.0	0.9	247.0	1.7	3,326.1	2,887.0	0.3	0.8	438.0
Nov	27.7	457.1	1,422.2	1,175.1	0.0	0.8	246.3	1.8	3,343.7	2,899.6	0.2	1.2	442.6
Dec	31.9	392.5	1,407.5	1,163.4	0.0	0.7	243.4	1.9	3,332.6	2,894.0	0.4	0.7	437.5
2018 Jan	29.0	448.1	1,421.7	1,176.0	0.0	0.7	245.1	2.5	3,339.3	2,904.9	0.3	1.0	433.1
Feb	29.3	460.7	1,409.5	1,165.3	0.0	0.8	243.3	2.9	3,338.3	2,910.5	0.2	1.2	426.4
Changes *													
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
2017	+ 6.1	+108.4	+ 50.3	+ 70.4	– 0.0	+ 0.0	– 20.1	– 0.1	+ 57.0	+ 70.2	+ 0.0	+ 0.4	– 13.6
2016 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	–	+ 5.6	+ 9.4	+ 0.0	– 0.2	– 3.6
Aug	+ 0.9	+ 1.3	– 13.8	– 8.0	–	+ 0.0	– 5.9	+ 0.0	+ 6.4	+ 4.1	– 0.0	– 0.2	+ 2.6
Sep	+ 0.8	– 12.1	+ 34.1	+ 38.3	– 0.0	– 0.1	– 4.1	– 0.0	+ 7.3	+ 8.8	+ 0.1	– 0.0	– 1.5
Oct	+ 0.1	+ 63.5	– 37.6	– 37.6	+ 0.0	– 0.4	+ 0.5	+ 0.0	+ 8.6	+ 8.8	– 0.0	+ 0.0	– 0.3
Nov	– 0.4	– 15.6	+ 43.7	+ 44.4	–	– 0.0	– 0.7	+ 0.1	+ 17.7	+ 12.7	– 0.0	+ 0.4	+ 4.6
Dec	+ 4.1	– 64.6	– 10.3	– 7.3	– 0.0	– 0.2	– 2.9	+ 0.1	– 11.1	– 5.6	+ 0.1	– 0.5	– 5.1
2018 Jan	– 2.9	+ 55.6	+ 13.7	+ 12.1	–	+ 0.0	+ 1.7	+ 0.6	+ 6.9	+ 11.0	– 0.1	+ 0.3	– 4.4
Feb	+ 0.3	+ 12.7	– 12.3	– 10.7	+ 0.0	+ 0.1	– 1.7	+ 0.4	– 1.0	+ 5.6	– 0.1	+ 0.2	– 6.7

* 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

						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	
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	2016 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	
700.9	211.2	41.1	185.7	410.4	48.3	1,182.2	945.4	236.7	170.4	8.9	14.6	3.7	Sep	
709.0	214.9	42.3	186.4	411.2	47.7	1,192.3	954.3	237.9	171.6	8.6	14.8	3.7	Dec	
													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	
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	2016 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	
50.2	9.6	6.7	10.0	23.7	5.5	29.4	2.9	26.5	1.7	8.9	0.5	0.0	Sep	
50.9	10.1	6.8	10.3	23.3	5.0	29.3	2.9	26.4	1.6	8.6	0.5	0.0	Dec	
													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	
72.1	11.1	8.2	19.3	32.9	3.6	77.3	21.1	56.2	51.0	-	0.5	0.0	2016 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	
72.2	11.9	9.1	18.3	32.9	3.6	78.9	20.2	58.6	54.0	-	0.5	0.0	Sep	
73.5	12.1	9.3	18.3	32.7	3.6	79.9	20.0	59.9	55.2	-	0.6	0.0	Dec	
													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	
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	2016 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	
578.5	189.8	25.3	157.4	353.8	39.3	1,073.8	922.3	151.6	114.8	-	13.6	3.7	Sep	
584.6	192.6	26.2	157.8	355.3	39.2	1,083.1	931.4	151.6	114.8	-	13.7	3.7	Dec	
Change during quarter *													Lending, total	
+ 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	2016 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	
+ 8.9	+ 3.0	+ 1.7	+ 2.7	+ 2.2	- 0.1	+ 14.9	+ 12.1	+ 2.8	+ 2.5	- 0.0	+ 0.1	- 0.0	Q3	
+ 8.5	+ 3.7	+ 1.2	+ 1.0	+ 0.8	- 0.6	+ 9.8	+ 8.6	+ 1.1	+ 1.1	- 0.3	+ 0.1	- 0.0	Q4	
													Short-term lending	
- 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	2016 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	
+ 0.1	+ 0.6	+ 0.2	+ 0.3	- 0.9	- 0.2	- 0.3	- 0.2	- 0.1	- 0.1	- 0.0	- 0.0	- 0.0	Q3	
+ 0.7	+ 0.5	+ 0.1	+ 0.4	- 0.4	- 0.5	- 0.2	- 0.1	- 0.1	- 0.1	- 0.3	+ 0.0	+ 0.0	Q4	
													Medium-term lending	
+ 1.7	+ 0.2	+ 1.0	- 0.0	- 0.1	- 0.1	+ 0.2	- 0.3	+ 0.5	+ 0.6	-	- 0.0	- 0.0	2016 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	
+ 0.1	+ 0.3	+ 0.3	- 0.3	+ 0.1	- 0.0	+ 0.9	- 0.1	+ 1.0	+ 1.0	-	+ 0.0	+ 0.0	Q3	
+ 1.4	+ 0.3	+ 0.2	- 0.0	- 0.3	+ 0.0	+ 1.0	- 0.2	+ 1.2	+ 1.2	-	+ 0.0	- 0.0	Q4	
													Long-term lending	
+ 6.8	+ 3.1	+ 0.8	+ 1.3	+ 1.1	- 0.1	+ 9.1	+ 9.0	+ 0.0	+ 0.4	-	+ 0.1	+ 0.0	2016 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	
+ 8.6	+ 2.0	+ 1.2	+ 2.7	+ 3.0	+ 0.1	+ 14.3	+ 12.4	+ 1.9	+ 1.6	-	+ 0.2	- 0.0	Q3	
+ 6.5	+ 2.9	+ 0.9	+ 0.7	+ 1.5	- 0.1	+ 8.9	+ 8.9	- 0.0	- 0.1	-	+ 0.0	- 0.0	Q4	

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

IV Banks

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

€ billion

Period	Sight deposits						Time deposits 1,2						
	Deposits of domestic households and non-profit institutions, total	by creditor group					Total	by creditor group					
		Total	Domestic households					Domestic non-profit institutions	Total	Domestic households			
			Self-employed persons	Employees	Other individuals	Domestic non-profit institutions				Self-employed persons	Employees	Other individuals	
													End of year or month*
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	2,179.7	1,323.1	1,286.6	223.4	907.6	155.7	36.5	257.5	243.5	23.4	182.9	37.1	
2017 Sep	2,142.2	1,286.6	1,250.8	216.0	880.5	154.3	35.8	256.5	241.8	23.7	181.4	36.7	
Oct	2,150.4	1,295.9	1,260.1	221.4	884.8	153.9	35.7	256.1	241.6	23.6	181.4	36.6	
Nov	2,168.7	1,315.8	1,280.3	222.9	902.2	155.2	35.5	255.4	241.4	23.4	181.4	36.7	
Dec	2,179.7	1,323.1	1,286.6	223.4	907.6	155.7	36.5	257.5	243.5	23.4	182.9	37.1	
2018 Jan	2,175.4	1,320.4	1,284.1	226.0	903.3	154.8	36.3	257.1	243.3	22.9	183.3	37.1	
Feb	2,184.7	1,330.0	1,293.1	226.1	911.8	155.2	36.9	257.7	243.8	22.7	183.9	37.3	
													Changes*
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	+ 84.7	+ 101.1	+ 99.8	+ 17.5	+ 77.8	+ 4.5	+ 1.3	- 5.0	- 5.1	- 1.8	- 2.1	- 1.3	
2017 Sep	+ 6.0	+ 7.5	+ 7.2	- 3.0	+ 9.2	+ 1.0	+ 0.3	- 0.5	- 0.3	- 0.1	- 0.0	- 0.3	
Oct	+ 8.3	+ 9.2	+ 9.4	+ 5.4	+ 4.3	- 0.3	- 0.1	- 0.3	- 0.3	- 0.2	- 0.1	- 0.1	
Nov	+ 18.3	+ 19.9	+ 20.2	+ 1.5	+ 17.4	+ 1.3	- 0.2	- 0.7	- 0.1	- 0.2	+ 0.0	+ 0.1	
Dec	+ 10.9	+ 7.4	+ 6.3	+ 0.5	+ 5.2	+ 0.6	+ 1.0	+ 2.1	+ 2.1	+ 0.0	+ 1.5	+ 0.5	
2018 Jan	- 4.3	- 2.7	- 2.6	+ 2.6	- 4.2	- 0.9	- 0.2	- 0.4	- 0.2	- 0.5	+ 0.4	- 0.1	
Feb	+ 9.3	+ 9.6	+ 9.0	+ 0.1	+ 8.5	+ 0.4	+ 0.6	+ 0.5	+ 0.5	- 0.3	+ 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 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*
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	201.7	8.7	4.3	1.5	2.8	0.1	12.9	37.5	11.9	9.9	14.5	1.3	12.7
2017 Sep	210.5	8.0	4.1	1.3	2.6	0.1	13.2	49.8	11.7	19.2	17.7	1.2	12.7
Oct	207.6	7.9	4.0	1.3	2.4	0.1	13.2	46.9	11.8	16.1	17.7	1.2	12.6
Nov	211.1	8.3	4.2	1.3	2.7	0.1	13.2	44.8	12.0	13.9	17.7	1.3	12.6
Dec	201.7	8.7	4.3	1.5	2.8	0.1	12.9	37.5	11.9	9.9	14.5	1.3	12.7
2018 Jan	202.1	8.9	4.6	1.2	2.9	0.1	12.9	40.1	10.3	13.9	14.6	1.3	13.1
Feb	204.3	8.8	4.4	1.4	2.9	0.1	12.9	40.3	10.3	14.2	14.6	1.3	13.1
													Changes*
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	- 1.0	- 0.0	+ 0.7	- 1.0	+ 0.2	- 0.0	- 0.6	- 5.1	- 1.4	- 1.4	- 2.5	+ 0.2	- 0.5
2017 Sep	- 3.8	+ 0.0	+ 0.2	- 0.1	- 0.1	+ 0.0	- 0.0	- 0.2	+ 0.6	- 0.7	- 0.1	+ 0.0	- 0.0
Oct	- 3.5	- 0.2	- 0.1	+ 0.0	- 0.1	+ 0.0	+ 0.0	- 3.0	+ 0.1	- 3.0	- 0.0	+ 0.0	- 0.1
Nov	+ 4.1	+ 0.3	+ 0.2	+ 0.0	+ 0.1	- 0.0	+ 0.0	- 1.9	+ 0.2	- 2.2	+ 0.1	+ 0.1	- 0.0
Dec	- 11.1	+ 0.3	+ 0.1	+ 0.1	+ 0.1	+ 0.0	- 0.3	- 7.5	- 0.1	- 4.0	- 3.4	+ 0.1	+ 0.1
2018 Jan	+ 0.4	+ 0.2	+ 0.3	- 0.2	+ 0.0	+ 0.0	+ 2.6	- 1.6	+ 4.0	+ 0.1	+ 0.0	+ 0.0	+ 0.4
Feb	+ 2.2	- 0.1	- 0.2	+ 0.2	+ 0.0	- 0.0	+ 0.0	+ 0.2	+ 0.3	+ 0.0	- 0.1	- 0.0	+ 0.2

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

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

IV Banks

					Savings deposits ³				Memo item				Period
by maturity					Total	Domestic households	Domestic non-profit institutions	Bank savings bonds ⁴	Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities) ⁵	Liabilities arising from repos		
Domestic non-profit institutions	up to and including 1 year	more than 1 year ²											
		Total	of which										
		up to and including 2 years	more than 2 years										
End of year or month*													
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	
14.0	49.0	208.5	12.7	195.8	572.4	564.6	7.9	26.6	1.7	2.4	–	2017	
14.7	50.3	206.2	12.5	193.7	571.2	563.1	8.0	27.9	1.3	2.5	–	2017 Sep	
14.6	50.1	206.0	12.3	193.7	571.0	563.0	8.0	27.5	1.3	2.5	–	Oct	
14.0	49.5	205.9	12.2	193.6	570.5	562.8	7.8	27.0	1.4	2.4	–	Nov	
14.0	49.0	208.5	12.7	195.8	572.4	564.6	7.9	26.6	1.7	2.4	–	Dec	
13.8	48.3	208.8	12.7	196.1	571.9	564.0	7.8	26.0	1.8	2.4	–	2018 Jan	
13.8	48.7	209.0	12.7	196.3	571.5	563.8	7.7	25.5	2.2	2.4	–	Feb	
Changes*													
+ 0.6	– 1.0	+ 3.4	+ 0.7	+ 2.7	– 7.9	– 7.3	– 0.5	– 5.8	+ 0.1	– 0.9	–	2016	
+ 0.1	– 5.9	+ 0.9	– 0.5	+ 1.4	– 5.3	– 4.7	– 0.6	– 6.1	+ 0.8	– 0.4	–	2017	
– 0.1	– 0.6	+ 0.2	– 0.0	+ 0.2	– 0.7	– 0.7	– 0.0	– 0.3	– 0.0	– 0.0	–	2017 Sep	
– 0.0	– 0.2	– 0.1	– 0.1	+ 0.0	– 0.2	– 0.2	– 0.0	– 0.4	+ 0.0	– 0.0	–	Oct	
– 0.6	– 0.6	– 0.2	– 0.1	– 0.1	– 0.4	– 0.2	– 0.2	– 0.5	+ 0.1	– 0.0	–	Nov	
– 0.0	– 0.5	+ 2.6	+ 0.5	+ 2.1	+ 1.9	+ 1.8	+ 0.1	– 0.4	+ 0.3	– 0.0	–	Dec	
– 0.2	– 0.7	+ 0.3	+ 0.0	+ 0.3	– 0.5	– 0.5	– 0.0	– 0.6	+ 0.1	– 0.0	–	2018 Jan	
+ 0.0	+ 0.3	+ 0.2	– 0.0	+ 0.2	– 0.4	– 0.2	– 0.1	– 0.5	+ 0.4	– 0.0	–	Feb	

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*												
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
61.6	33.2	8.8	14.1	5.5	0.0	93.8	9.5	45.6	37.6	1.1	–	2017
55.5	28.0	9.0	12.7	5.8	0.0	97.1	15.0	48.0	33.0	1.2	–	2017 Sep
54.1	27.0	8.7	12.8	5.7	0.0	98.8	17.2	46.4	34.1	1.1	–	Oct
57.0	30.0	9.1	12.5	5.4	0.0	101.0	14.9	47.9	37.0	1.0	–	Nov
61.6	33.2	8.8	14.1	5.5	0.0	93.8	9.5	45.6	37.6	1.1	–	Dec
54.0	26.2	8.3	14.0	5.5	0.0	99.2	14.0	46.1	38.0	1.1	–	2018 Jan
57.4	29.6	8.3	14.1	5.5	0.0	97.8	14.6	44.8	37.2	1.2	–	Feb
Changes*												
+ 3.7	+ 2.4	– 0.8	+ 1.6	+ 0.5	– 0.0	+ 2.4	– 2.6	– 2.8	+ 7.7	+ 0.2	–	2016
+ 4.5	+ 2.1	+ 0.1	+ 2.3	– 0.0	– 0.0	– 0.3	+ 0.2	– 11.8	+11.6	– 0.4	–	2017
– 2.5	– 3.2	+ 0.2	+ 0.4	+ 0.0	–	– 1.2	– 0.1	– 2.2	+ 1.0	+ 0.0	–	2017 Sep
– 1.4	– 1.1	– 0.3	+ 0.0	– 0.1	–	+ 1.1	+ 2.2	– 1.6	+ 0.5	– 0.0	–	Oct
+ 3.5	+ 3.4	+ 0.4	– 0.2	– 0.1	–	+ 2.1	– 2.2	+ 1.5	+ 2.9	– 0.1	–	Nov
+ 3.2	+ 3.3	– 0.3	+ 0.1	+ 0.1	+ 0.0	– 7.1	– 5.4	– 2.3	+ 0.6	+ 0.0	–	Dec
– 7.6	– 7.0	– 0.5	– 0.1	– 0.0	– 0.0	+ 5.3	+ 4.5	+ 0.5	+ 0.4	– 0.0	–	2018 Jan
+ 3.5	+ 3.4	– 0.0	+ 0.1	– 0.0	– 0.0	– 1.4	+ 0.6	– 1.3	– 0.8	+ 0.1	–	Feb

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*													
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	590.3	582.9	541.0	348.3	41.9	30.3	7.4	6.5	2.7	52.0	43.7	31.4	8.2
2017 Oct	589.0	581.5	538.5	349.7	43.0	31.9	7.5	6.6	0.1	53.1	44.8	32.2	8.3
Nov	588.5	581.0	538.6	349.8	42.4	31.2	7.5	6.5	0.2	52.6	44.3	31.9	8.3
Dec	590.3	582.9	541.0	348.3	41.9	30.3	7.4	6.5	1.2	52.0	43.7	31.4	8.2
2018 Jan	589.9	582.4	539.8	346.2	42.7	31.2	7.4	6.5	0.2	49.4	42.9	30.9	6.5
Feb	589.6	582.2	540.5	343.9	41.7	30.7	7.4	6.5	0.1	47.2	42.3	30.5	4.9
Changes*													
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	- 6.2	- 5.6	+ 1.5	- 13.1	- 7.1	- 7.4	- 0.6	- 0.4	.	- 7.2	- 6.7	- 4.4	- 0.5
2017 Oct	- 0.4	- 0.3	+ 0.5	- 0.9	- 0.8	- 0.8	- 0.1	- 0.0	.	- 0.4	- 0.5	- 0.3	+ 0.1
Nov	- 0.5	- 0.5	+ 0.2	+ 0.1	- 0.6	- 0.7	- 0.1	- 0.0	.	- 0.5	- 0.5	- 0.3	- 0.0
Dec	+ 1.8	+ 1.9	+ 2.4	- 1.5	- 0.5	- 0.9	- 0.0	- 0.0	.	- 0.6	- 0.6	- 0.5	- 0.1
2018 Jan	- 0.5	- 0.4	+ 0.2	- 2.1	- 0.7	+ 0.9	- 0.0	- 0.0	.	- 0.9	- 0.8	- 0.5	- 0.1
Feb	- 0.3	- 0.3	+ 0.4	- 2.3	- 0.6	- 0.5	- 0.0	- 0.0	.	- 2.2	- 0.6	- 0.4	- 1.6

* 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				Certificates of deposit	with maturities of				Total	of which with maturities of more than 2 years	negotiable securities	non-negotiable securities	
		Floating rate bonds ¹	Zero coupon bonds ^{1,2}	Foreign currency bonds ^{3,4}	Total		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*															
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	1,066.5	147.2	26.0	370.4	89.8	107.4	4.1	32.9	6.4	926.2	0.4	0.2	30.5	0.5	
2017 Oct	1,079.1	149.6	28.0	383.2	86.6	106.4	5.1	35.5	6.5	937.1	0.3	0.2	31.1	0.5	
Nov	1,072.3	148.0	25.9	377.3	84.9	103.4	5.0	35.1	6.7	933.8	0.3	0.2	30.7	0.5	
Dec	1,066.5	147.2	26.0	370.4	89.8	107.4	4.1	32.9	6.4	926.2	0.4	0.2	30.5	0.5	
2018 Jan	1,060.2	143.6	24.4	355.1	76.5	92.3	4.2	31.2	6.8	936.7	0.4	0.2	30.5	0.5	
Feb	1,076.8	143.6	26.1	371.5	86.2	104.0	4.4	33.2	7.3	939.6	0.3	0.2	30.6	0.5	
Changes*															
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	- 30.8	- 29.7	- 2.1	- 36.7	- 0.5	- 3.9	- 0.0	- 4.6	+ 0.6	- 22.3	- 0.2	+ 0.0	- 3.2	- 0.0	
2017 Oct	- 4.9	- 11.9	- 0.1	+ 4.4	+ 2.1	+ 0.5	+ 0.1	- 1.5	+ 0.0	- 3.9	- 0.0	+ 0.0	- 1.0	-	
Nov	- 6.7	- 1.6	- 2.1	- 5.9	- 1.2	- 3.1	- 0.1	- 0.3	+ 0.2	- 3.3	- 0.0	- 0.0	- 0.3	-	
Dec	- 5.8	- 0.8	+ 0.1	- 6.9	+ 5.0	+ 4.0	- 0.9	- 2.3	- 0.2	- 7.6	+ 0.1	- 0.0	- 0.2	- 0.0	
2018 Jan	- 6.3	- 3.6	- 1.7	- 15.2	- 13.3	- 15.1	+ 0.2	- 1.7	+ 0.4	+ 10.4	+ 0.0	+ 0.0	+ 0.0	- 0.0	
Feb	+ 16.6	+ 0.0	+ 1.7	+ 16.3	+ 9.7	+ 11.6	+ 0.2	+ 2.0	+ 0.4	+ 2.9	- 0.0	- 0.0	+ 0.1	-	

* See Table IV.2, footnote*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. ¹ 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																
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	20	229.2	41.8	0.0	15.8	12.3	104.4	24.8	25.1	2.6	23.0	168.6	9.5	3.0	11.0	83.6
2017 Dec	20	229.2	41.8	0.0	15.8	12.3	104.4	24.8	25.1	2.6	23.0	168.6	9.5	3.0	11.0	8.1
2018 Jan	20	230.2	42.4	0.0	15.9	12.3	104.7	25.0	25.2	2.6	23.7	169.2	9.4	3.0	11.0	6.3
Feb	20	231.0	42.4	0.0	16.0	12.2	104.9	25.2	25.4	2.6	24.0	169.6	9.3	3.1	11.0	6.6
Private building and loan associations																
2017 Dec	12	160.5	26.1	–	6.9	9.3	81.0	21.9	11.6	1.7	21.1	110.0	9.2	3.0	7.4	5.1
2018 Jan	12	161.1	26.5	–	6.9	9.2	81.2	22.0	11.6	1.7	21.6	110.3	9.1	3.0	7.4	4.0
Feb	12	161.6	26.6	–	6.9	9.2	81.3	22.0	11.7	1.7	21.8	110.5	9.0	3.1	7.4	4.2
Public building and loan associations																
2017 Dec	8	68.7	15.8	0.0	8.8	3.1	23.4	2.9	13.5	0.9	1.9	58.7	0.3	–	3.6	3.0
2018 Jan	8	69.1	15.9	0.0	9.0	3.0	23.5	3.0	13.6	0.9	2.1	58.9	0.3	–	3.6	2.4
Feb	8	69.5	15.8	0.0	9.0	3.0	23.5	3.2	13.8	0.9	2.2	59.1	0.3	–	3.6	2.4

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			Newly granted interim and bridging loans and other building loans	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							
							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																
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	26.7	2.3	7.6	45.3	26.0	39.6	16.4	4.1	4.5	3.4	18.7	16.4	7.4	7.1	6.2	0.2
2017 Dec	2.2	1.9	0.6	3.3	1.9	3.1	1.3	0.3	0.3	0.2	1.5	16.4	7.4	0.6	1.5	0.0
2018 Jan	2.5	0.0	0.6	3.8	2.2	3.2	1.3	0.4	0.4	0.3	1.5	16.6	7.5	0.5		0.0
Feb	2.2	0.0	0.6	3.9	2.1	2.9	1.2	0.3	0.4	0.3	1.3	17.2	7.6	0.5		0.0
Private building and loan associations																
2017 Dec	1.5	1.2	0.3	2.3	1.3	2.4	0.9	0.2	0.2	0.1	1.2	11.9	4.4	0.4	1.1	0.0
2018 Jan	1.6	0.0	0.3	2.9	1.6	2.4	1.0	0.3	0.3	0.2	1.2	12.1	4.5	0.4		0.0
Feb	1.5	0.0	0.3	2.7	1.3	2.3	0.9	0.3	0.3	0.2	1.1	12.3	4.4	0.4		0.0
Public building and loan associations																
2017 Dec	0.8	0.7	0.3	0.9	0.6	0.7	0.3	0.1	0.1	0.1	0.3	4.4	3.0	0.1	0.4	0.0
2018 Jan	0.9	0.0	0.3	0.9	0.6	0.7	0.3	0.1	0.1	0.1	0.3	4.5	3.0	0.1		0.0
Feb	0.8	0.0	0.3	1.2	0.8	0.6	0.3	0.1	0.1	0.1	0.3	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.

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
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	12,415.8	124.2	123.8	1,275.2	1,151.4	0.0
2018 Jan	12,426.8	124.3	123.9	1,315.6	1,191.8	0.0
Feb	.	.	.	.	.	.
Mar ^P	12,481.1	124.8	124.4	...	...	...

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
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	3,456,192	27.8	34,562	34,404	424,547	390,143	2
2018 Jan	3,488,989	28.1	34,890	34,732	435,922	419,190	20
Feb	.	.	.	.	.	.	.
Mar ^P	3,489,204	28.0	34,892	34,734	...	...	...

(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
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	6,366	5,678	3,110	11,163	6,256	132	1,699
2018 Jan	6,461	5,717	3,164	11,261	6,314	127	1,688
Feb	.	.	.	.	.	.	.
Mar	6,393	5,770	3,299	11,275	6,323	107	1,579

(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
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	2,338,161	628	415,084	581,416	120,894
2018 Jan	2,371,175	681	418,244	580,982	117,899
Feb	.	.	.	.	.
Mar	2,365,021	2,770	436,143	581,215	105,190

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	Dec 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	Nov 10	–0.20	0.05	–	0.30
Oct 8	2.75	–	3.75	4.75	2015 Dec 9	–0.30	0.05	–	0.30
Oct 9	3.25	3.75	–	4.25	2016 Mar 16	–0.40	0.00	–	0.25
Nov 12	2.75	3.25	–	3.75					
Dec 10	2.00	2.50	–	3.00					
2009 Jan 21	1.00	2.00	–	3.00					
Mar 11	0.50	1.50	–	2.50					
Apr 8	0.25	1.25	–	2.25					
May 13	0.25	1.00	–	1.75					

1 Pursuant to section 247 of the Civil Code.

2 Base rates

% per annum

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

3 Eurosystem monetary policy operations allotted through tenders *

Date of settlement	Bid amount € million	Allotment amount	Fixed rate tenders		Variable rate tenders		Running for ... days
			Fixed rate	Minimum bid rate	Marginal rate 1	Weighted average rate	
			% per annum				
Main refinancing operations							
2018 Mar 7	1,146	1,146	0.00	–	–	–	7
Mar 14	1,021	1,021	0.00	–	–	–	7
Mar 21	1,542	1,542	0.00	–	–	–	7
Mar 28	2,428	2,428	0.00	–	–	–	7
Apr 4	2,308	2,308	0.00	–	–	–	7
Apr 11	1,674	1,674	0.00	–	–	–	7
Apr 18	1,637	1,637	0.00	–	–	–	7
Long-term refinancing operations							
2018 Feb 1	2,518	2,518	2 ...	–	–	–	84
Mar 1	2,810	2,810	2 ...	–	–	–	91
Mar 29	2,359	2,359	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 Sep	–0.36	–0.38	–0.37	–0.33	–0.27	–0.22	–0.17
Oct	–0.36	–0.38	–0.37	–0.33	–0.27	–0.22	–0.18
Nov	–0.35	–0.38	–0.37	–0.33	–0.27	–0.22	–0.19
Dec	–0.34	–0.38	–0.37	–0.33	–0.27	–0.22	–0.19
2018 Jan	–0.36	–0.38	–0.37	–0.33	–0.27	–0.22	–0.19
Feb	–0.36	–0.38	–0.37	–0.33	–0.27	–0.22	–0.19
Mar	–0.36	–0.38	–0.37	–0.33	–0.27	–0.22	–0.19

* 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
2017 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
Aug	0.31	69,014	1.37	215,909	0.09	78,517	1.30	22,146
Sep	0.31	67,904	1.36	215,817	0.08	77,405	1.25	22,356
Oct	0.30	67,393	1.35	215,503	0.08	76,092	1.18	23,093
Nov	0.30	66,679	1.34	215,034	0.08	77,669	1.12	24,421
Dec	0.29	66,585	1.34	216,841	0.06	78,428	1.07	25,136
2018 Jan	0.29	66,589	1.32	216,681	0.05	78,112	1.05	26,055
Feb	0.28	65,984	1.31	216,585	0.04	75,362	1.03	26,887

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
2017 Feb	2.41	4,256	2.09	26,274	2.94	1,095,552	7.24	49,472	4.02	83,530	4.11	310,467
Mar	2.47	4,286	2.07	26,208	2.91	1,099,530	7.32	50,294	4.01	83,834	4.09	310,342
Apr	2.45	4,241	2.05	26,175	2.88	1,104,580	7.10	49,177	3.99	84,077	4.08	309,887
May	2.44	4,304	2.04	26,188	2.85	1,108,805	7.13	49,165	3.96	84,813	4.06	311,334
June	2.44	4,200	2.03	26,206	2.83	1,115,307	7.17	50,307	3.95	85,111	4.04	310,769
July	2.46	4,076	2.01	26,017	2.80	1,120,699	7.15	49,247	3.93	85,513	4.03	311,617
Aug	2.45	4,035	2.00	25,937	2.77	1,125,823	7.17	48,525	3.92	85,972	4.01	313,025
Sep	2.42	3,934	2.00	25,996	2.75	1,131,500	7.12	49,521	3.91	86,239	4.00	312,467
Oct	2.38	4,208	1.99	25,925	2.73	1,135,284	7.14	48,762	3.89	86,683	3.98	312,869
Nov	2.44	3,898	1.98	25,924	2.71	1,139,714	7.00	48,352	3.87	87,393	3.96	312,973
Dec	2.44	3,851	1.97	25,850	2.68	1,143,333	6.98	48,885	3.87	87,210	3.95	311,861
2018 Jan	2.33	3,906	1.96	25,566	2.66	1,144,088	7.07	48,461	3.85	87,632	3.93	312,287
Feb	2.32	3,867	1.95	25,468	2.65	1,147,305	7.07	48,470	3.84	87,848	3.92	312,888

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
2017 Feb	2.55	130,095	1.99	132,565	2.41	637,765
Mar	2.54	130,479	1.98	133,300	2.39	638,362
Apr	2.51	130,949	1.98	133,720	2.37	642,920
May	2.45	131,174	1.97	134,474	2.35	649,087
June	2.51	132,255	1.95	134,974	2.33	645,396
July	2.45	131,691	1.95	135,710	2.31	650,498
Aug	2.44	130,333	1.94	136,527	2.30	654,312
Sep	2.45	135,493	1.93	135,872	2.28	654,806
Oct	2.39	136,523	1.92	136,647	2.26	657,911
Nov	2.42	137,523	1.91	138,041	2.25	664,018
Dec	2.47	133,105	1.90	137,708	2.22	664,374
2018 Jan	2.34	141,326	1.88	138,344	2.20	668,281
Feb	2.39	142,819	1.88	138,735	2.19	672,418

* 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
2017 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
Aug	0.03	1,278,289	0.14	5,198	0.41	492	0.65	716	0.19	537,173	0.30	44,119
Sep	0.03	1,285,601	0.15	3,992	0.31	598	0.65	636	0.19	537,108	0.30	43,509
Oct	0.03	1,294,797	0.18	3,750	0.28	800	0.65	696	0.19	537,700	0.28	42,721
Nov	0.03	1,314,663	0.17	4,022	0.39	696	0.72	747	0.18	537,935	0.27	42,074
Dec	0.03	1,322,096	0.13	4,043	0.35	880	0.59	627	0.18	540,332	0.28	41,475
2018 Jan	0.03	1,319,368	0.19	4,348	0.31	866	0.71	780	0.18	539,145	0.28	42,193
Feb	0.03	1,328,779	0.26	4,181	0.31	652	0.80	737	0.17	539,604	0.27	41,465

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
2017 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
Aug	- 0.02	409,698	- 0.04	9,710	0.21	185	0.52	666
Sep	- 0.02	414,461	- 0.08	10,040	0.09	351	0.37	704
Oct	- 0.02	425,806	- 0.10	9,134	0.04	412	0.26	1,456
Nov	- 0.02	428,784	- 0.08	9,337	0.09	897	0.22	1,237
Dec	- 0.02	425,477	- 0.07	13,102	0.09	351	0.28	1,477
2018 Jan	- 0.02	429,587	- 0.07	11,368	0.01	520	0.30	1,271
Feb	- 0.02	419,428	- 0.09	8,751	0.11	186	0.32	932

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	
2017 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	
Aug	5.88	5.86	8,827	7.20	1,724	6.51	312	4.54	3,703	6.84	4,812	
Sep	5.67	5.65	8,212	7.11	1,465	6.09	305	4.31	3,579	6.72	4,328	
Oct	5.67	5.65	8,338	7.07	1,495	6.06	302	4.30	3,758	6.81	4,278	
Nov	5.63	5.61	8,216	7.10	1,410	6.09	306	4.31	3,827	6.80	4,083	
Dec	5.39	5.37	6,701	6.83	1,004	5.81	297	4.15	3,315	6.63	3,089	
2018 Jan	5.85	5.83	9,288	7.26	1,729	6.04	328	4.32	3,860	6.96	5,100	
Feb	5.69	5.67	8,324	7.09	1,451	6.15	258	4.27	3,506	6.72	4,560	

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											
2017 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	
Aug	1.99	5,667	1.74	1,625	1.81	2,171	2.66	814	1.92	2,682	
Sep	1.99	5,275	1.80	1,455	1.79	2,341	2.60	804	1.99	2,130	
Oct	2.08	5,682	1.91	1,915	1.91	2,646	2.64	854	2.07	2,182	
Nov	1.98	5,587	1.84	1,569	1.76	2,471	2.63	873	1.96	2,243	
Dec	2.00	6,193	1.80	1,624	1.80	2,705	2.76	958	1.92	2,530	
2018 Jan	2.01	6,017	1.94	2,035	1.85	2,693	2.62	888	1.97	2,436	
Feb	1.97	5,054	1.77	1,470	1.77	2,161	2.52	745	1.99	2,148	
<i>of which: loans to sole proprietors</i>											
2017 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	
Aug	2.08	3,640	.	.	1.95	1,445	2.79	629	1.92	1,566	
Sep	2.04	3,411	.	.	1.84	1,436	2.81	598	1.90	1,377	
Oct	2.13	3,707	.	.	1.98	1,694	2.82	628	2.00	1,385	
Nov	2.07	3,725	.	.	1.94	1,592	2.80	662	1.88	1,471	
Dec	2.09	4,266	.	.	2.00	1,822	2.83	753	1.85	1,691	
2018 Jan	2.07	4,146	.	.	1.99	1,817	2.72	679	1.89	1,650	
Feb	2.08	3,404	.	.	2.01	1,390	2.63	556	1.93	1,458	

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													
2017 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
Aug	1.94	1.87	20,228	2.00	3,743	2.05	2,340	1.89	1,888	1.67	7,199	1.98	8,801
Sep	1.92	1.86	17,363	1.91	3,289	2.04	2,025	1.71	1,571	1.71	5,950	1.96	7,817
Oct	1.90	1.85	18,128	1.90	3,955	2.08	2,134	1.70	1,634	1.68	6,611	1.96	7,749
Nov	1.90	1.84	18,793	1.89	3,525	2.04	2,170	1.72	1,640	1.68	6,550	1.94	8,433
Dec	1.86	1.79	17,473	1.87	3,242	2.04	2,150	1.69	1,553	1.65	6,084	1.86	7,686
2018 Jan	1.88	1.82	19,643	1.90	4,529	2.03	2,354	1.69	1,798	1.65	6,864	1.92	8,627
Feb	1.90	1.84	18,839	1.95	3,687	2.07	2,090	1.73	1,624	1.68	6,400	1.92	8,725
<i>of which: collateralised loans 11</i>													
2017 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
Aug	.	1.79	8,461	.	.	1.96	821	1.87	996	1.59	3,204	1.92	3,440
Sep	.	1.78	7,701	.	.	1.97	711	1.53	797	1.63	2,707	1.92	3,486
Oct	.	1.77	8,217	.	.	1.97	780	1.53	782	1.62	3,095	1.92	3,560
Nov	.	1.76	8,464	.	.	1.93	771	1.53	796	1.60	3,031	1.90	3,866
Dec	.	1.69	7,644	.	.	1.97	685	1.51	740	1.57	2,733	1.77	3,486
2018 Jan	.	1.75	9,069	.	.	2.00	837	1.57	946	1.59	3,283	1.88	4,003
Feb	.	1.76	8,579	.	.	2.02	702	1.53	803	1.61	2,946	1.86	4,128

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			
	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
2017 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		
Aug	8.48	38,663	8.47	30,914	15.12	4,364	3.48	66,012	3.49	65,718		
Sep	8.44	39,630	8.48	31,635	15.09	4,393	3.52	67,886	3.54	67,559		
Oct	8.47	39,133	8.48	31,101	15.10	4,493	3.41	67,481	3.42	67,162		
Nov	8.30	38,672	8.35	30,489	15.11	4,386	3.45	67,793	3.46	67,457		
Dec	8.21	39,538	8.35	31,187	14.94	4,303	3.47	65,936	3.49	65,625		
2018 Jan	8.33	39,136	8.38	31,128	14.92	4,369	3.36	68,733	3.37	68,418		
Feb	8.36	39,233	8.39	31,380	14.92	4,334	3.40	70,798	3.42	70,488		

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		
Total loans																
2017 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
Aug	1.38	59,046	1.52	13,769	2.39	7,401	2.58	1,441	1.82	1,335	1.08	37,547	1.38	2,627	1.57	8,695
Sep	1.38	66,182	1.52	19,843	2.50	8,124	2.60	1,446	1.86	1,236	1.08	43,731	1.24	2,419	1.63	9,226
Oct	1.35	66,679	1.47	19,173	2.48	8,209	2.59	1,490	1.81	1,214	1.05	45,005	1.25	2,354	1.59	8,407
Nov	1.40	63,110	1.49	16,676	2.50	8,257	2.57	1,582	1.87	1,423	1.09	41,581	1.32	2,565	1.58	7,702
Dec	1.43	78,501	1.52	21,693	2.45	8,207	2.55	1,862	1.82	1,628	1.15	49,208	1.51	5,166	1.63	12,430
2018 Jan	1.22	69,664	1.49	18,190	2.48	8,321	2.53	1,607	1.92	1,361	0.89	50,613	1.72	2,238	1.55	5,524
Feb	1.32	53,864	1.48	13,341	2.47	7,503	2.57	1,392	1.97	1,123	0.94	36,050	1.40	1,844	1.68	5,952
<i>of which: collateralised loans ¹¹</i>																
2017 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
Aug	1.47	9,188	.	.	1.99	480	2.39	153	1.69	431	1.30	4,961	1.94	560	1.50	2,603
Sep	1.52	9,811	.	.	1.83	535	2.50	132	1.77	351	1.41	5,743	1.64	370	1.62	2,680
Oct	1.46	9,398	.	.	1.90	557	2.61	131	1.77	349	1.25	5,480	2.19	304	1.64	2,577
Nov	1.60	8,531	.	.	1.95	545	2.41	147	1.74	414	1.40	5,212	2.68	423	1.74	1,790
Dec	1.59	13,235	.	.	1.92	627	2.65	167	1.75	426	1.44	7,644	2.33	1,098	1.56	3,273
2018 Jan	1.53	7,387	.	.	1.92	627	2.36	148	1.90	426	1.32	4,529	1.93	357	1.73	1,300
Feb	1.55	6,463	.	.	1.96	430	2.77	134	1.79	324	1.30	3,638	1.54	457	1.88	1,480

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 statistics, a loan is considered to be secured if collateral (among others financial collateral, real estate collateral, debt securities) in at least the same value as the loan amount has been posted, pledged or assigned. 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 effected 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	Total	Currency and deposits ²	Debt securities	Loans ³	Shares and other equity	Investment funds shares/units	Financial derivatives	Insurance technical reserves	Non-financial assets	Remaining assets
Insurance corporations										
2013	1,742.1	386.3	262.0	257.1	211.1	462.3	6.0	59.8	46.4	51.0
2014	1,892.0	371.6	321.0	271.4	215.9	542.3	6.4	63.9	49.3	50.2
2015	1,954.1	344.4	344.7	278.9	228.7	578.3	4.5	71.9	51.8	50.8
2016 Q1	2,007.8	343.6	374.1	280.2	230.0	596.3	5.2	73.7	53.1	51.7
Q2	2,034.6	336.1	395.8	281.9	229.6	607.7	4.8	73.5	53.2	52.0
2016 Q3 ¹	2,219.9	383.5	397.0	389.6	280.8	605.0	5.3	47.3	31.8	79.7
Q4	2,186.1	361.5	370.9	374.6	308.6	620.1	3.3	44.1	32.4	70.6
2017 Q1	2,189.3	347.1	391.7	364.9	298.5	631.6	2.8	50.4	32.5	69.7
Q2	2,177.9	335.5	392.3	362.3	302.3	641.2	3.1	49.1	32.6	59.6
Q3	2,187.4	322.2	399.0	367.8	305.2	649.6	3.1	49.5	32.7	58.3
Q4	2,210.1	310.6	401.1	349.4	332.8	671.0	2.8	48.5	34.3	59.6
Life insurance										
2013	956.9	247.8	131.4	148.7	31.5	329.1	3.0	17.7	28.3	19.5
2014	1,044.1	237.2	161.2	153.4	32.3	390.3	3.2	17.8	29.7	19.1
2015	1,063.7	219.7	169.8	158.0	34.9	414.6	2.2	16.3	30.7	17.4
2016 Q1	1,095.7	219.1	187.0	159.2	35.3	428.0	2.5	15.6	31.9	17.2
Q2	1,116.7	214.5	201.7	160.7	35.6	438.0	2.4	14.9	32.0	16.9
2016 Q3 ¹	1,247.0	246.6	204.2	243.2	47.5	437.3	4.1	11.3	19.1	33.8
Q4	1,194.2	231.3	182.7	223.0	50.7	453.8	2.1	9.6	19.1	21.9
2017 Q1	1,170.4	217.6	196.1	215.1	38.6	458.6	1.8	8.2	19.1	15.3
Q2	1,172.7	209.4	199.6	215.3	39.3	464.7	2.0	8.0	19.1	15.3
Q3	1,177.4	201.0	203.3	218.0	39.0	471.2	1.9	7.9	19.1	16.0
Q4	1,192.1	191.8	203.2	222.2	41.6	487.0	1.8	8.5	19.9	16.0
Non-life insurance										
2013	448.1	126.0	70.9	51.1	42.8	105.9	1.6	25.1	12.7	12.0
2014	486.4	122.8	89.4	53.9	44.3	122.5	1.8	26.5	13.7	11.5
2015	511.0	113.9	97.6	55.6	48.5	134.8	1.3	32.9	14.5	11.9
2016 Q1	527.6	113.2	108.2	55.5	49.6	140.6	1.5	32.8	14.5	11.8
Q2	532.8	109.4	113.6	55.8	49.3	144.5	1.4	32.8	14.4	11.7
2016 Q3 ¹	592.3	125.0	101.7	94.0	50.9	153.9	0.5	28.7	8.7	29.0
Q4	583.3	118.9	98.5	91.8	56.8	152.0	0.5	26.8	9.0	29.0
2017 Q1	606.5	118.0	105.8	91.4	56.9	156.8	0.3	34.0	9.1	34.2
Q2	603.3	114.5	107.1	90.6	58.5	159.9	0.4	33.2	9.1	30.1
Q3	602.5	109.5	109.2	92.3	58.5	162.6	0.4	32.5	9.2	28.4
Q4	606.0	108.5	111.4	81.8	68.9	165.5	0.4	31.7	9.7	28.1
Reinsurance ⁴										
2013	337.1	13.3	59.0	57.4	136.8	27.2	1.4	17.1	5.4	19.5
2014	361.4	12.4	69.7	64.1	139.2	29.5	1.4	19.6	5.9	19.6
2015	379.4	10.8	77.3	65.3	145.4	28.9	1.1	22.7	6.5	21.4
2016 Q1	376.0	11.2	78.5	64.0	145.1	27.3	1.1	20.4	6.4	21.9
Q2	373.7	11.9	79.8	62.8	144.8	25.8	1.0	18.8	6.4	22.4
2016 Q3 ¹	380.7	12.0	91.0	52.5	182.4	13.8	0.8	7.3	4.0	16.9
Q4	408.6	11.3	89.7	59.7	201.0	14.3	0.7	7.7	4.3	19.7
2017 Q1	412.5	11.5	89.9	58.4	203.0	16.2	0.8	8.1	4.3	20.2
Q2	401.9	11.6	85.6	56.4	204.4	16.6	0.8	7.9	4.4	14.2
Q3	407.5	11.7	86.4	57.4	207.7	15.9	0.9	9.2	4.4	13.9
Q4	412.1	10.2	86.5	45.5	222.3	18.5	0.7	8.3	4.7	15.5
Pension funds ⁵										
2013	494.6	154.3	42.5	27.6	13.0	216.2	-	4.4	25.1	11.7
2014	552.5	151.7	57.1	29.1	16.7	247.8	-	4.9	27.8	17.4
2015	579.5	145.5	60.2	28.8	19.1	268.5	-	5.4	31.5	20.4
2016 Q1	588.8	143.1	66.0	29.0	19.4	273.4	-	5.5	31.9	20.5
Q2	601.7	142.7	69.1	29.2	20.0	281.9	-	5.5	32.5	20.7
Q3	611.6	144.4	69.2	29.3	20.1	289.0	-	5.6	33.2	20.9
Q4	613.5	144.7	67.8	29.8	20.6	288.9	-	5.7	34.5	21.4
2017 Q1	619.9	146.2	66.1	30.3	21.2	293.9	-	5.8	34.9	21.6
Q2	623.7	143.7	69.0	30.7	21.4	295.3	-	6.8	35.3	21.5
Q3	632.5	141.8	70.7	30.8	21.7	303.3	-	6.9	35.5	21.8
Q4	647.0	141.3	75.3	31.2	22.4	310.1	-	7.0	37.3	22.3

¹ Data as of 2016 Q3 are based on Solvency II supervisory data, valuation of listed securities at the corresponding consistent price from the ESCB's securities database. Up to and including 2016 Q2 data are based on Solvency I supervisory data from the Federal Financial Supervisory Authority (BaFin), supplemented by estimates and own calculations. ² Accounts receivable to monetary financial institutions, including registered bonds, borrowers' note loans and registered Pfandbriefe. ³ Including deposits retain-

ed on assumed reinsurance as well as registered bonds, borrowers' note loans and registered Pfandbriefe. ⁴ Not including the reinsurance business conducted by primary insurers, which is included there. ⁵ The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes 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	Total	Debt securities issued	Loans ²	Shares and other equity	Insurance technical reserves			Financial derivatives	Remaining liabilities	Net worth ⁷
					Total	Life / Claims on pension funds reserves ³	Non-life ⁴			
Insurance corporations										
2013	1,742.1	16.9	77.7	188.7	1,340.7	1,061.4	279.3	0.0	68.8	49.2
2014	1,892.0	17.3	84.3	193.0	1,411.6	1,113.8	297.8	0.0	70.5	115.3
2015	1,954.1	18.3	91.7	214.8	1,474.7	1,160.6	314.1	0.0	70.2	84.4
2016 Q1	2,007.8	17.7	92.9	220.4	1,501.0	1,179.8	321.2	0.0	71.5	104.3
Q2	2,034.6	17.6	93.0	191.1	1,508.4	1,188.4	320.1	0.0	71.6	152.9
2016 Q3 ¹	2,219.9	30.7	73.7	383.0	1,579.4	1,396.9	182.5	1.5	151.5	–
Q4	2,186.1	30.7	70.3	441.0	1,494.4	1,313.3	181.1	2.3	147.4	–
2017 Q1	2,189.3	30.5	57.2	448.5	1,511.7	1,309.5	202.2	1.8	139.5	–
Q2	2,177.9	28.6	57.0	450.7	1,505.2	1,308.4	196.8	2.1	134.3	–
Q3	2,187.4	28.5	58.4	455.4	1,512.8	1,317.1	195.7	2.3	130.1	–
Q4	2,210.1	28.2	62.6	461.7	1,522.3	1,334.0	188.3	2.2	133.2	–
Life insurance										
2013	956.9	0.0	23.8	20.2	853.2	839.4	13.8	0.0	34.1	25.6
2014	1,044.1	0.0	24.7	21.6	891.8	877.4	14.4	0.0	32.8	73.3
2015	1,063.7	0.0	24.5	24.6	926.0	911.0	15.0	0.0	30.9	57.7
2016 Q1	1,095.7	0.0	26.0	23.6	938.7	923.4	15.2	0.0	30.7	76.8
Q2	1,116.7	0.0	27.8	22.3	943.1	927.8	15.3	0.0	30.2	93.3
2016 Q3 ¹	1,247.0	3.8	25.9	96.0	1,066.2	1,066.2	–	0.7	54.4	–
Q4	1,194.2	4.1	25.0	116.3	993.7	993.7	–	1.2	53.9	–
2017 Q1	1,170.4	4.1	12.5	116.3	991.7	991.7	–	0.9	44.8	–
Q2	1,172.7	4.0	12.1	119.8	989.5	989.5	–	1.0	46.2	–
Q3	1,177.4	4.1	12.3	121.5	993.9	993.9	–	1.1	44.5	–
Q4	1,192.1	4.1	12.8	122.4	1,006.2	1,006.2	–	1.1	45.5	–
Non-life insurance										
2013	448.1	0.0	9.2	55.9	351.6	222.0	129.6	0.0	15.3	16.1
2014	486.4	0.0	10.5	58.2	369.8	236.5	133.4	0.0	15.6	32.3
2015	511.0	0.0	14.2	63.7	390.5	249.6	140.9	0.0	17.1	25.5
2016 Q1	527.6	0.0	14.6	62.0	399.6	253.8	145.9	0.0	17.5	33.9
Q2	532.8	0.0	14.5	57.7	401.6	256.8	144.9	0.0	17.2	41.9
2016 Q3 ¹	592.3	0.9	6.6	120.0	407.4	310.1	97.3	0.0	57.3	–
Q4	583.3	1.1	6.3	130.4	390.1	300.5	89.7	0.2	55.3	–
2017 Q1	606.5	1.1	7.3	134.0	408.9	300.8	108.2	0.1	55.0	–
Q2	603.3	1.1	6.8	135.6	406.7	302.4	104.2	0.1	53.0	–
Q3	602.5	1.1	6.9	137.3	406.6	305.7	100.9	0.1	50.6	–
Q4	606.0	1.1	6.7	138.3	406.3	310.0	96.3	0.1	53.5	–
Reinsurance ⁵										
2013	337.1	16.9	44.7	112.7	135.9	–	135.9	0.0	19.4	7.5
2014	361.4	17.3	49.1	113.3	150.0	–	150.0	0.0	22.1	9.6
2015	379.4	18.3	53.0	124.8	158.2	–	158.2	0.0	22.2	2.8
2016 Q1	376.0	17.7	52.5	118.3	157.3	–	157.3	0.0	22.5	7.7
Q2	373.7	17.6	51.7	111.2	156.6	–	156.6	0.0	22.9	13.6
2016 Q3 ¹	380.7	26.0	41.3	167.0	105.8	20.5	85.3	0.8	39.8	–
Q4	408.6	25.5	39.0	194.3	110.5	19.1	91.4	0.9	38.3	–
2017 Q1	412.5	25.3	37.4	198.2	111.1	17.0	94.1	0.8	39.7	–
Q2	401.9	23.5	38.1	195.2	109.1	16.4	92.6	1.1	35.0	–
Q3	407.5	23.3	39.3	196.6	112.3	17.5	94.8	1.1	35.0	–
Q4	412.1	23.1	43.1	201.0	109.7	17.7	92.0	1.0	34.3	–
Pension funds ⁶										
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	579.5	–	4.9	11.3	518.3	517.9	0.4	–	6.1	38.9
2016 Q1	588.8	–	5.0	11.4	522.7	522.2	0.5	–	5.8	44.1
Q2	601.7	–	5.0	10.0	529.6	529.1	0.5	–	5.8	51.3
Q3	611.6	–	5.1	10.3	535.2	535.2	–	–	5.8	55.3
Q4	613.5	–	5.2	11.3	544.7	544.7	–	–	6.0	46.4
2017 Q1	619.9	–	5.2	11.9	552.4	552.4	–	–	6.0	44.3
Q2	623.7	–	6.1	11.6	554.3	554.3	–	–	6.2	45.5
Q3	632.5	–	6.3	11.6	561.5	561.5	–	–	3.5	49.7
Q4	647.0	–	6.4	12.0	574.2	574.2	–	–	3.5	50.8

¹ Data as of 2016 Q3 are based on Solvency II supervisory data. Up to and including 2016 Q2 data are based on Solvency I supervisory data from the Federal Financial Supervisory Authority (BaFin), supplemented by estimates and own calculations. ² Including deposits retained on ceded business as well as registered bonds, borrowers' note loans and registered Pfandbriefe. ³ As of 2016 Q3 insurance technical reserves "life" pursuant to Solvency II taking account of transitional measures. Up to and including 2016 Q2: Long-term net equity of households in life insurance (including ageing provisions of health insurance schemes and premium reserves of accident insurance schemes with guaranteed premium refund) and pension fund reserves pursuant to

ESA 1995. ⁴ As of 2016 Q3 insurance technical reserves "non-life" pursuant to Solvency II. Up to and including 2016 Q2 unearned premiums and reserves for outstanding claims pursuant to ESA 1995. ⁵ Not including the reinsurance business conducted by primary insurers, which is included there. ⁶ The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes and occupational pension schemes for the self-employed. Social security funds are not included. ⁷ Own funds correspond to the sum of net worth and the liability item „Shares and other equity“.

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	Foreign debt securities ³	Total ⁴	Credit institutions including building and loan associations ⁵	Deutsche Bundesbank	Other sectors ⁶	Non-residents ⁷
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	64,774	- 31,962	- 47,404	- 1,330	16,776	96,737	50,409	- 12,124	- 11,951	74,484	14,366
2015	32,609	- 36,010	- 65,778	26,762	3,006	68,620	119,379	- 66,330	121,164	64,546	- 86,770
2016	72,270	27,429	19,177	18,265	- 10,012	44,840	174,162	- 58,012	187,500	44,674	- 101,894
2017	54,930	11,563	1,096	7,112	3,356	43,368	145,410	- 71,454	161,012	55,852	- 90,477
2017 Apr	- 12,740	- 15,170	- 5,909	- 276	- 8,985	2,430	3,482	- 5,737	12,817	- 3,598	- 16,221
May	39,221	28,463	10,800	1,096	16,567	10,759	14,678	3,906	12,751	- 1,979	24,543
June	3,424	- 1,090	2,876	- 5,769	1,802	4,514	10,686	- 11,745	12,871	9,560	- 7,262
July	- 7,748	- 17,251	- 7,196	8,174	- 18,228	9,503	9,578	- 6,471	11,565	4,484	- 17,325
Aug	13,342	12,771	- 1,814	- 1,581	16,166	571	6,897	- 8,730	9,902	5,725	6,445
Sep	- 13,756	- 18,254	- 8,577	- 3,456	- 6,221	4,497	1,838	- 8,357	12,865	- 2,670	- 15,594
Oct	- 12,129	- 10,152	- 9,775	- 2,760	2,383	- 1,977	9,642	- 4,841	12,199	2,284	- 21,771
Nov	28,537	22,066	893	6,338	14,835	6,471	25,664	3,359	13,355	8,950	2,873
Dec	- 20,490	- 18,944	- 5,802	- 952	- 12,190	- 1,546	3,495	- 12,058	10,057	5,496	- 23,985
2018 Jan	14,802	- 2,330	1,183	530	- 4,043	17,132	19,710	1,164	6,138	12,408	- 4,908
Feb	5,657	5,264	12,736	2,054	- 9,526	393	1,814	- 5,019	5,725	1,108	3,843

€ million

Period	Shares						
	Sales = total purchases	Sales		Purchases			
		Domestic shares ⁸	Foreign shares ⁹	Residents			
				Total ¹⁰	Credit institutions ⁵	Other sectors ¹¹	Non-residents ¹²
2006	26,276	9,061	17,214	7,528	11,323	- 3,795	18,748
2007	- 5,009	10,053	- 15,062	- 62,308	- 6,702	- 55,606	57,299
2008	- 29,452	11,326	- 40,778	2,743	- 23,079	- 25,822	32,194
2009	35,980	23,962	12,018	30,496	- 8,335	38,831	5,484
2010	37,767	20,049	17,719	36,406	7,340	29,066	1,361
2011	25,833	21,713	4,120	40,804	670	40,134	14,971
2012	15,061	5,120	9,941	14,405	10,259	4,146	656
2013	20,187	10,106	10,081	17,336	11,991	5,345	2,851
2014	43,501	18,778	24,723	43,950	17,203	26,747	449
2015	40,488	7,668	32,820	30,568	- 5,421	35,989	9,920
2016	33,491	4,409	29,082	31,261	- 5,143	36,404	2,230
2017	48,645	15,570	33,075	47,482	7,031	40,451	1,163
2017 Apr	- 1,276	95	- 1,371	4,520	- 2,589	- 1,931	3,244
May	3,715	107	3,608	2,423	475	1,948	1,292
June	- 5,765	920	- 6,685	1,372	5,220	6,592	4,393
July	2,889	509	2,380	4,140	- 690	4,830	1,251
Aug	2,276	155	2,121	4,782	- 603	5,385	2,506
Sep	5,766	1,482	4,284	4,296	- 1,738	6,034	1,470
Oct	2,242	572	1,670	- 535	735	- 1,270	2,777
Nov	3,310	110	3,200	4,121	1,198	2,923	811
Dec	13,617	484	13,133	15,596	2,898	12,698	1,979
2018 Jan	7,746	153	7,593	9,297	867	8,430	1,551
Feb	15,097	1,122	13,975	15,446	- 3,709	19,155	349

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 Net purchases or net sales (-) of foreign debt securities by residents; transaction values. ⁴ Domestic and foreign debt securities. ⁵ Book values; statistically adjusted. ⁶ Residual; also including purchases of domestic and foreign securities by domestic mutual funds. Up to end-2008, data comprise Deutsche Bundesbank. ⁷ Net purchases or net sales (-) of domestic debt securities by non-residents; transaction

values. ⁸ Excluding shares of public limited investment companies; at issue prices. ⁹ Net purchases or net sales (-) of foreign shares (including direct investment) by residents; transaction values. ¹⁰ Domestic and foreign shares. ¹¹ Residual; also including purchases of domestic and foreign securities by domestic mutual funds. ¹² 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

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		
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 1	3,090,708	1,170,920	141,273	58,004	651,211	320,432	302,543	1,617,244
2017 Aug	3,088,852	1,193,654	141,603	59,939	662,196	329,917	279,992	1,615,207
Sep	3,097,730	1,187,589	140,854	57,980	662,975	325,780	298,123	1,612,018
Oct	3,096,229	1,187,768	142,196	58,210	661,809	325,553	296,171	1,612,290
Nov	3,118,910	1,187,744	142,640	58,333	660,338	326,433	303,012	1,628,153
Dec	3,090,708	1,170,920	141,273	58,004	651,211	320,432	302,543	1,617,244
2018 Jan	3,081,726	1,173,984	142,916	57,006	654,514	319,549	302,565	1,605,177
Feb	3,083,510	1,184,139	143,460	57,149	665,177	318,354	303,790	1,595,582

Breakdown by remaining period to maturity ³

	1,014,960	460,376	40,520	23,687	289,613	106,556	61,311	493,274
less than 2	1,014,960	460,376	40,520	23,687	289,613	106,556	61,311	493,274
2 to less than 4	634,742	263,239	35,633	11,719	144,184	71,701	53,174	318,329
4 to less than 6	438,571	173,579	27,049	8,068	93,664	44,798	39,152	225,841
6 to less than 8	298,568	110,863	20,042	6,586	56,339	27,897	30,248	157,457
8 to less than 10	264,568	86,323	16,507	4,213	41,544	24,060	14,250	163,996
10 to less than 15	128,407	38,692	2,704	1,276	20,739	13,973	23,568	66,147
15 to less than 20	79,310	18,227	263	1,151	12,753	4,060	6,954	54,128
20 and more	224,384	32,841	743	450	6,340	25,308	75,133	116,409

Position at end-February 2018

* Including debt securities temporarily held in the issuers' portfolios. 1 Sectoral reclassification of debt securities. 2 Increase due to change in issuers' country of residence. 3 Calculated from month under review until final maturity for debt

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

4 Shares in circulation issued by residents *

€ million nominal value

Period	Share capital = circulation at end of period under review	Net increase or net decrease (-) during period under review	Change in domestic public limited companies' capital due to							Memo item Share circulation at market values (market 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	
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	178,828	2,471	3,894	776	533	-	457	661	1,615	1,933,733
2017 Aug	179,207	260	155	2	6	-	167	173	83	1,787,670
Sep	179,448	241	165	18	119	-	13	7	41	1,888,218
Oct	179,294	154	230	0	121	-	1	1	504	1,957,699
Nov	179,426	132	109	-	-	-	0	58	35	1,947,204
Dec	178,828	598	128	-	1	-	140	363	224	1,933,733
2018 Jan	178,752	75	102	-	1	-	0	118	61	1,981,815
Feb	179,778	1,026	1,094	7	19	-	0	28	66	1,887,325

* 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

Yields on debt securities outstanding issued by residents ¹								Price indices ^{2,3}				
Period	Public debt securities				Bank debt securities			Debt securities		Shares		
	Total	Listed Federal securities			Total	With a residual maturity of 9 and including 10 years ⁴	With a residual maturity of more than 9 and including 10 years	Corporate bonds (non-MFIs)	German bond index (REX)	iBoxx € Germany price index	CDAX share price index	German share index (DAX)
		Total	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	0.3	0.2	0.2	0.3	0.4	0.9	1.7	140.53	109.03	595.45	12,917.64	
2017 Oct	0.3	0.3	0.2	0.4	0.4	0.9	1.6	141.63	109.70	603.37	13,229.57	
2017 Nov	0.3	0.2	0.2	0.3	0.4	0.8	1.6	141.23	109.62	597.74	13,023.98	
2017 Dec	0.3	0.2	0.2	0.3	0.4	0.8	1.7	140.53	109.03	595.45	12,917.64	
2018 Jan	0.5	0.4	0.4	0.5	0.6	0.9	1.8	139.19	107.24	608.72	13,189.48	
2018 Feb	0.6	0.5	0.5	0.7	0.7	1.2	2.1	139.24	107.33	577.02	12,435.85	
2018 Mar	0.5	0.4	0.4	0.5	0.7	1.0	2.1	140.36	108.53	561.97	12,096.73	

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								Purchases					
	Open-end domestic mutual funds ¹ (sales receipts)								Residents					
	Sales = total purchases	Total	Mutual funds open to the general public			Special-ised funds	Foreign funds ⁴	Total	Total	Credit institutions including building and loan associations ²		Other sectors ³		Non-residents ⁵
Total			Money market funds	Securities-based funds	Real estate funds					Total	of which Foreign mutual fund shares	Total	of which Foreign mutual fund shares	
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	140,233	97,711	3,998	- 473	862	1,000	93,713	42,522	144,075	819	- 1,745	143,256	44,266	- 3,841
2015	181,888	146,136	30,420	318	22,345	3,636	115,716	35,750	174,529	7,362	494	167,167	35,257	7,357
2016	155,511	119,369	21,301	- 342	11,131	7,384	98,068	36,142	162,429	2,877	- 3,172	159,552	39,315	- 6,919
2017	142,669	94,921	29,560	- 235	21,970	4,406	65,361	47,747	146,108	4,938	1,048	141,170	46,700	- 3,441
2017 Aug	9,863	6,458	408	238	1,450	- 1,493	6,050	3,405	9,885	517	- 47	9,368	3,452	- 22
2017 Sep	6,145	3,246	3,996	31	2,849	709	- 750	2,899	6,370	102	- 224	6,268	3,123	- 225
2017 Oct	18,187	10,973	906	- 285	501	322	10,068	7,213	17,170	- 414	- 176	16,756	7,389	1,016
2017 Nov	10,536	8,591	2,614	11	2,316	256	5,978	1,945	15,290	- 43	- 285	15,333	2,230	- 4,755
2017 Dec	15,285	9,757	1,665	- 7	585	774	8,092	5,528	14,441	- 656	53	15,097	5,475	844
2018 Jan	24,773	15,003	6,014	- 5	4,152	756	8,989	9,771	23,890	- 876	- 713	23,014	9,058	- 883
2018 Feb	7,220	8,628	1,860	- 22	955	520	6,768	- 1,408	7,227	- 92	- 1,141	7,319	- 267	- 8

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	2015	2016	2017	2016		2017			
				Q3	Q4	Q1	Q2	Q3	Q4
Acquisition of financial assets									
Currency and deposits	30.93	40.40	48.54	23.37	- 0.57	6.96	19.02	- 0.75	23.30
Debt securities	- 1.20	- 3.40	- 5.66	0.13	- 0.98	- 0.95	- 0.65	- 1.05	- 3.02
short-term debt securities	- 0.84	- 0.58	- 2.26	- 0.03	- 0.83	0.23	- 1.89	- 0.26	- 0.34
long-term debt securities	- 0.36	- 2.81	- 3.40	0.15	- 0.15	- 1.18	1.24	- 0.78	- 2.67
Memo item									
Debt securities of domestic sectors	0.64	- 2.68	- 2.80	- 0.06	- 0.54	- 0.54	- 0.04	- 1.07	- 1.16
Non-financial corporations	- 0.80	0.67	- 0.56	- 0.00	0.15	0.85	- 0.72	- 0.56	- 0.14
Financial corporations	1.86	- 2.53	- 0.41	- 0.54	- 0.49	- 0.35	0.67	- 0.14	- 0.59
General government	- 0.42	- 0.82	- 1.82	0.47	- 0.20	- 1.03	0.01	- 0.37	- 0.43
Debt securities of the rest of the world	- 1.83	- 0.72	- 2.85	0.19	- 0.44	- 0.41	- 0.61	0.02	- 1.86
Loans	27.14	9.96	39.45	- 0.96	20.17	25.43	5.50	2.73	5.79
short-term loans	34.68	2.59	20.00	- 5.77	18.33	14.28	- 0.61	- 0.45	6.79
long-term loans	- 7.54	7.38	19.45	4.80	1.83	11.15	6.11	3.18	- 1.00
Memo item									
to domestic sectors	6.25	- 4.75	18.10	- 4.16	7.55	9.04	- 0.01	- 1.43	10.49
Non-financial corporations	1.26	- 11.78	9.53	- 4.40	6.12	0.23	2.88	- 0.28	6.70
Financial corporations	4.80	6.89	8.27	0.20	1.39	8.74	- 2.97	- 1.22	3.72
General government	0.18	0.15	0.29	0.04	0.04	0.07	0.07	0.07	0.07
to the rest of the world	20.89	14.71	21.36	3.20	12.62	16.38	5.52	4.16	- 4.70
Equity and investment fund shares	54.82	75.44	50.24	9.25	47.92	17.16	- 0.56	15.96	17.68
Equity	38.43	69.61	41.68	5.17	45.87	18.40	1.62	13.70	7.96
Listed shares of domestic sectors	- 10.40	22.91	- 3.82	6.73	20.70	- 4.34	- 2.05	1.91	0.65
Non-financial corporations	- 8.04	22.59	- 3.76	6.83	20.62	- 4.25	- 2.26	1.96	0.80
Financial corporations	- 2.36	0.31	- 0.06	- 0.11	0.08	- 0.09	0.21	- 0.04	- 0.14
Listed shares of the rest of the world	4.95	12.69	7.40	0.90	8.56	1.68	10.53	- 5.34	0.53
Other equity ¹	43.88	34.02	38.10	- 2.45	16.61	21.05	- 6.85	17.12	6.78
Investment fund shares	16.40	5.83	8.56	4.08	2.05	- 1.24	- 2.18	2.26	9.72
Money market fund shares	0.21	0.36	- 0.46	- 0.03	0.79	- 0.28	0.00	- 1.07	0.89
Non-MMF investment fund shares	16.19	5.47	9.02	4.10	1.26	- 0.96	- 2.19	3.34	8.83
Insurance technical reserves	2.94	1.12	1.00	0.30	0.31	0.06	0.50	0.43	0.02
Financial derivatives	- 1.42	22.74	25.11	6.52	6.53	4.76	7.03	8.04	5.29
Other accounts receivable	41.69	- 6.05	102.91	- 3.25	- 7.45	77.45	- 18.60	25.89	18.18
Total	154.90	140.21	261.60	35.35	65.92	130.86	12.24	51.26	67.24
External financing									
Debt securities	7.78	23.71	8.56	2.88	5.82	7.57	- 0.52	0.96	0.55
short-term securities	1.96	- 0.15	0.60	- 0.57	- 1.79	5.47	- 0.42	- 2.62	- 1.83
long-term securities	5.82	23.85	7.95	3.45	7.61	2.11	- 0.10	3.58	2.37
Memo item									
Debt securities of domestic sectors	- 1.70	10.83	7.08	- 1.57	3.08	3.31	- 1.24	- 0.78	1.75
Non-financial corporations	- 0.80	0.67	- 0.56	- 0.00	0.15	0.85	- 0.72	- 0.56	- 0.14
Financial corporations	2.05	10.07	9.08	1.54	2.99	3.18	2.08	1.50	2.32
General government	0.02	0.01	0.01	0.01	0.00	- 0.01	0.02	0.00	0.00
Households	0.42	0.08	- 1.45	0.01	- 0.06	- 0.71	- 0.14	- 0.16	- 0.43
Debt securities of the rest of the world	6.08	12.88	1.47	1.31	2.75	4.26	- 1.76	0.18	- 1.21
Loans	54.61	32.67	105.37	16.07	- 10.52	49.54	12.39	20.04	23.39
short-term loans	40.97	0.89	26.05	0.77	- 4.54	11.15	3.21	8.58	3.11
long-term loans	13.64	31.78	79.32	15.30	- 5.99	38.39	9.18	11.46	20.29
Memo item									
from domestic sectors	23.93	14.40	67.01	9.38	- 4.39	27.19	8.39	11.88	19.55
Non-financial corporations	1.26	- 11.78	9.53	- 4.40	6.12	0.23	2.88	- 0.28	6.70
Financial corporations	29.69	23.43	48.60	16.01	- 6.57	20.15	5.61	13.97	8.88
General government	- 7.03	2.75	8.87	- 2.23	- 3.95	6.81	- 0.10	- 1.80	3.97
from the rest of the world	30.68	18.28	38.35	6.70	- 6.14	22.36	4.00	8.16	3.84
Equity	16.67	11.18	17.86	2.21	2.47	3.23	6.06	5.69	2.88
Listed shares of domestic sectors	7.42	27.31	6.93	4.38	17.00	- 4.55	2.68	3.43	5.36
Non-financial corporations	- 8.04	22.59	- 3.76	6.83	20.62	- 4.25	- 2.26	1.96	0.80
Financial corporations	11.70	- 2.10	9.53	- 2.25	- 2.12	- 0.78	6.21	0.26	3.83
General government	0.11	0.07	0.51	0.01	- 0.02	0.07	0.13	0.16	0.15
Households	3.66	6.74	0.65	- 0.22	- 1.48	0.41	- 1.39	1.05	0.59
Quoted shares of the rest of the world	- 1.40	- 25.79	- 2.59	- 4.15	- 16.17	4.88	- 1.28	- 1.47	- 4.71
Other equity ¹	10.65	9.66	13.53	1.98	1.64	2.91	4.66	3.74	2.23
Insurance technical reserves	5.60	3.60	3.60	0.90	0.90	0.90	0.90	0.90	0.90
Financial derivatives and employee stock options	- 10.81	- 0.13	7.89	8.05	- 7.81	2.60	2.23	3.14	- 0.07
Other accounts payable	23.15	28.84	- 0.28	- 1.92	23.45	28.87	- 25.48	- 7.52	3.85
Total	97.00	99.87	142.99	28.19	14.31	92.72	- 4.43	23.21	31.50

¹ Including unlisted shares.

IX Financial accounts

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

€ billion

Item	2015	2016	2017	2016		2017			
				Q3	Q4	Q1	Q2	Q3	Q4
Acquisition of financial assets									
Currency and deposits	96.67	114.98	103.59	24.75	52.40	12.35	30.16	18.03	43.05
Currency	25.51	21.30	17.15	7.11	6.32	3.63	5.57	2.46	5.49
Deposits	71.16	93.68	86.45	17.63	46.09	8.72	24.59	15.58	37.57
Transferable deposits	100.96	105.26	99.72	23.41	46.52	13.26	29.95	20.65	35.86
Time deposits	- 9.22	1.28	- 4.03	- 1.73	0.02	- 1.59	- 2.32	- 2.47	2.34
Savings deposits (including savings certificates)	- 20.58	- 12.87	- 9.24	- 4.05	- 0.45	- 2.96	- 3.04	- 2.61	- 0.64
Debt securities	- 18.40	- 12.80	- 8.17	- 3.27	- 3.32	- 1.36	- 1.49	- 2.28	- 3.04
short-term debt securities	0.75	- 0.16	- 0.21	0.08	0.31	0.37	0.18	- 0.34	- 0.42
long-term debt securities	- 19.15	- 12.63	- 7.96	- 3.35	- 3.62	- 1.72	- 1.67	- 1.94	- 2.63
Memo item									
Debt securities of domestic sectors	- 10.06	- 4.14	- 5.12	- 1.81	- 1.65	0.01	- 0.67	- 1.88	- 2.58
Non-financial corporations	0.36	- 0.01	- 1.43	0.03	- 0.10	- 0.66	- 0.22	- 0.14	- 0.40
Financial corporations	- 7.42	- 2.48	- 2.70	- 1.36	- 1.37	1.01	- 0.17	- 1.55	- 1.99
General government	- 2.99	- 1.65	- 0.99	- 0.49	- 0.18	- 0.33	- 0.28	- 0.18	- 0.19
Debt securities of the rest of the world	- 8.34	- 8.66	- 3.05	- 1.46	- 1.67	- 1.37	- 0.82	- 0.41	- 0.46
Equity and investment fund shares	47.95	45.78	54.89	10.81	4.54	12.11	12.32	14.08	16.38
Equity	16.62	21.65	14.46	3.86	- 0.90	3.40	2.21	5.11	3.74
Listed Shares of domestic sectors	4.17	9.37	0.90	0.29	- 3.03	0.15	- 0.18	0.89	0.04
Non-financial corporations	3.88	6.09	0.54	- 0.26	- 1.70	0.48	- 1.42	1.01	0.47
Financial corporations	0.28	3.28	0.36	0.55	- 1.33	- 0.33	1.24	- 0.12	- 0.43
Quoted shares of the rest of the world	8.00	6.94	9.46	2.47	1.69	2.25	1.69	2.94	2.58
Other equity ¹	4.45	5.35	4.10	1.10	0.44	1.00	0.70	1.28	1.12
Investment fund shares	31.34	24.13	40.43	6.95	5.44	8.70	10.11	8.97	12.65
Money market fund shares	- 0.57	- 0.53	- 0.28	0.10	- 0.17	- 0.22	0.04	- 0.16	0.05
Non-MMF investment fund shares	31.90	24.66	40.71	6.85	5.61	8.92	10.08	9.12	12.59
Non-life insurance technical reserves and provision for calls under standardised guarantees	20.09	19.58	11.38	3.79	8.01	2.85	2.87	2.82	2.83
Life insurance and annuity entitlements	31.69	24.82	30.62	5.64	5.65	13.34	10.72	4.94	1.63
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	30.85	20.63	29.44	5.40	1.63	7.64	4.32	7.06	10.42
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	- 17.31	- 12.41	- 11.12	- 3.83	- 22.13	15.17	- 6.16	2.89	- 23.02
Total	191.54	200.58	210.63	43.28	46.78	62.10	52.73	47.54	48.26
External financing									
Loans	38.20	47.23	55.44	15.98	9.44	7.86	16.60	18.53	12.45
short-term loans	- 3.17	- 4.31	- 2.19	- 0.93	- 2.05	- 0.35	- 0.34	- 1.09	- 0.40
long-term loans	41.36	51.53	57.63	16.92	11.49	8.22	16.94	19.62	12.85
Memo item									
Mortgage loans	35.63	41.69	47.30	14.30	11.00	6.08	13.28	15.80	12.15
Consumer loans	5.44	9.78	11.25	2.86	0.88	2.41	3.25	3.41	2.19
Entrepreneurial loans	- 2.88	- 4.24	- 3.11	- 1.17	- 2.44	- 0.62	0.07	- 0.68	- 1.89
Memo item									
Loans from monetary financial institutions	39.35	42.87	49.99	15.74	8.08	7.10	15.54	16.93	10.42
Loans from other financial institutions	- 1.16	4.36	5.45	0.25	1.37	0.77	1.06	1.60	2.03
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	- 1.14	- 0.73	0.19	- 0.13	- 0.45	0.12	0.07	0.02	- 0.01
Total	37.06	46.50	55.63	15.85	9.00	7.98	16.67	18.54	12.45

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	2015	2016	2017	2016		2017			
				Q3	Q4	Q1	Q2	Q3	Q4
Financial assets									
Currency and deposits	2,094.8	2,208.9	2,311.3	2,157.6	2,208.9	2,221.9	2,252.1	2,270.1	2,311.3
Currency	153.2	174.5	191.6	168.2	174.5	178.1	183.7	186.2	191.6
Deposits	1,941.6	2,034.4	2,119.6	1,989.5	2,034.4	2,043.8	2,068.4	2,084.0	2,119.6
Transferable deposits	1,082.4	1,188.0	1,287.7	1,141.5	1,188.0	1,201.2	1,231.2	1,251.8	1,287.7
Time deposits	246.8	248.7	245.4	248.7	248.7	247.9	245.6	243.1	245.4
Savings deposits (including savings certificates)	612.4	597.7	586.5	599.3	597.7	594.7	591.7	589.1	586.5
Debt securities	139.8	127.4	120.5	130.6	127.4	126.7	125.4	123.6	120.5
short-term debt securities	2.9	2.7	2.5	2.4	2.7	3.1	3.2	2.9	2.5
long-term debt securities	136.9	124.7	118.0	128.3	124.7	123.6	122.2	120.7	118.0
Memo item									
Debt securities of domestic sectors	89.4	85.6	82.5	87.1	85.6	86.1	86.2	85.1	82.5
Non-financial corporations	13.4	13.9	12.5	14.1	13.9	13.3	13.0	12.9	12.5
Financial corporations	69.5	66.7	66.1	67.8	66.7	68.2	68.9	68.1	66.1
General government	6.5	5.0	3.9	5.2	5.0	4.6	4.3	4.1	3.9
Debt securities of the rest of the world	50.3	41.8	37.9	43.5	41.8	40.6	39.3	38.5	37.9
Equity and investment fund shares	1,040.7	1,107.9	1,218.2	1,068.8	1,107.9	1,155.7	1,158.4	1,193.2	1,218.2
Equity	555.9	590.0	642.1	563.7	590.0	614.8	611.2	632.5	642.1
Listed Shares of domestic sectors	188.9	200.8	226.4	187.9	200.8	213.0	211.1	223.7	226.4
Non-financial corporations	158.7	169.8	190.3	160.6	169.8	180.4	177.5	188.4	190.3
Financial corporations	30.3	31.0	36.1	27.3	31.0	32.6	33.6	35.4	36.1
Quoted shares of the rest of the world	74.8	86.8	101.0	80.7	86.8	93.1	92.7	96.5	101.0
Other equity ¹	292.2	302.5	314.7	295.1	302.5	308.7	307.4	312.2	314.7
Investment fund shares	484.8	517.8	576.2	505.1	517.8	540.9	547.2	560.7	576.2
Money market fund shares	3.4	2.8	2.7	3.0	2.8	2.7	2.8	2.6	2.7
Non-MMF investment fund shares	481.4	515.0	573.5	502.1	515.0	538.2	544.4	558.1	573.5
Non-life insurance technical reserves and provision for calls under standardised guarantees	324.3	339.9	351.2	332.8	339.9	342.7	345.6	348.4	351.2
Life insurance and annuity entitlements	919.5	947.8	978.9	941.4	947.8	961.3	972.1	977.1	978.9
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	786.6	814.4	843.9	802.6	814.4	822.1	826.4	833.4	843.9
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	37.1	32.6	33.4	34.1	32.6	32.8	33.2	33.3	33.4
Total	5,342.8	5,578.8	5,857.4	5,468.0	5,578.8	5,663.2	5,713.1	5,779.2	5,857.4
Liabilities									
Loans	1,606.6	1,654.5	1,711.6	1,645.0	1,654.5	1,662.3	1,680.2	1,698.8	1,711.6
short-term loans	60.9	56.6	54.4	58.6	56.6	56.3	55.9	54.8	54.4
long-term loans	1,545.8	1,597.8	1,657.1	1,586.3	1,597.8	1,606.1	1,624.3	1,643.9	1,657.1
Memo item									
Mortgage loans	1,153.8	1,195.6	1,247.1	1,184.6	1,195.6	1,201.7	1,218.0	1,234.4	1,247.1
Consumer loans	191.9	201.8	211.8	200.9	201.8	204.2	207.4	210.6	211.8
Entrepreneurial loans	260.9	257.0	252.7	259.5	257.0	256.4	254.8	253.8	252.7
Memo item									
Loans from monetary financial institutions	1,514.9	1,558.3	1,610.0	1,550.2	1,558.3	1,565.4	1,582.3	1,599.2	1,610.0
Loans from other financial institutions	91.8	96.1	101.6	94.8	96.1	96.9	98.0	99.6	101.6
Loans from general government and rest of the world	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial derivatives	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts payable	15.1	14.9	15.0	16.0	14.9	16.0	15.6	15.8	15.0
Total	1,621.7	1,669.4	1,726.6	1,661.0	1,669.4	1,678.3	1,695.8	1,714.5	1,726.6

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

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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							
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	804.1	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	843.3	251.3	320.5	43.4	49.0	11.8	+ 18.8	601.5	594.6	+ 6.9	1,354.7	1,329.0	+ 25.7
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	207.1	169.3	2.9	210.9	62.0	79.3	14.5	12.3	2.4	- 3.8	148.3	149.7	- 1.4	328.2	333.4	- 5.2
Q4 P	233.1	189.2	2.1	232.3	68.0	82.3	7.7	17.2	4.8	+ 0.9	160.1	152.2	+ 7.8	365.8	357.1	+ 8.7
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
Q2 P	217.9	177.3	1.2	206.7	63.9	83.6	6.6	8.8	3.6	+ 11.3	156.4	154.3	+ 2.1	346.1	332.8	+ 13.4
Q3 P	292.6	180.4	3.5	221.0	64.4	78.6	14.5	13.4	4.2	+ 71.6	154.8	155.7	- 0.9	419.1	348.4	+ 70.6

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
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	372.4	+ 8.8	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	104.4	- 0.0	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
Q2 P	81.5	80.1	+ 1.4	96.3	93.6	+ 2.7	65.0	59.5	+ 5.5
Q3 P	88.6	93.6	- 5.0	98.9	91.4	+ 7.5	136.4	66.6	+ 69.7

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.

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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			
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	
2017	...	629,458	336,730	271,046	21,682	...	...	27,390
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	177,090	149,915	76,391	66,605	6,918	27,631	- 456	6,825	
Q3	180,407	155,250	82,576	66,718	5,957	25,517	- 361	7,467	
Q4	...	170,139	92,507	71,019	6,613	...	...	6,493
2017 Jan	..	43,321	26,142	19,611	-2,431	..	..	2,202
Feb	..	48,934	26,081	20,132	2,720	..	..	2,202
2018 Jan	..	44,363	23,285	20,388	691	..	..	2,133
Feb	..	52,743	27,156	21,606	3,980	..	..	2,133

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. **1** Before deducting or adding supplementary central government grants, regionalisation funds (local public transport), compensation for the transfer of motor vehicle tax to central government and consolidation assistance, 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							
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		
2017	674,598	312,462	195,524	59,428	29,259	28,251	226,355	170,498	55,856	8,580	99,934	22,205	5,063	45,141		
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		
Q3	165,923	75,218	47,253	12,720	6,034	9,211	56,481	42,571	13,911	2,214	25,114	5,580	1,315	10,673		
Q4	182,288	82,077	54,707	14,873	6,843	5,654	58,128	43,846	14,282	3,868	31,587	5,384	1,243	12,149		
2017 Jan	46,576	20,360	16,435	977	318	2,629	18,771	14,599	4,172	207	4,984	1,892	362	3,255		
Feb	52,019	17,496	14,747	1,040	365	1,343	22,807	18,040	4,766	220	9,243	1,785	469	3,085		
2018 Jan	47,874	21,863	17,305	985	773	2,800	19,073	14,865	4,207	85	4,552	1,959	343	3,511		
Feb	56,241	19,520	15,732	1,287	486	2,015	24,142	18,811	5,331	186	10,109	1,808	476	3,499		

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 2017: 50.7:46.6:2.7. The EU share is deducted from central government's share. **6** Respective percentage share of central and state government for 2017: 22.6:77.4. **7** For the breakdown, see Table X. 7.

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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	Alcohol 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
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
2017	41,022	17,953	14,399	13,269	8,948	6,944	2,094	-4,695	13,139	6,114	1,837	1,115	...	...	...
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	18,113	13,881	3,832
Q3	10,497	4,144	3,867	2,669	2,132	1,628	502	-324	3,394	1,497	417	273	16,698	12,443	3,824
Q4	15,622	4,677	4,261	2,070	1,906	1,786	538	727	3,257	1,438	456	233	...	...	...
2017 Jan	277	1,129	432	1,361	883	526	214	163	1,106	521	192	75	.	.	.
Feb	1,463	1,033	971	4,094	733	498	239	213	1,093	474	149	70	.	.	.
2018 Jan	279	1,222	332	834	905	586	221	174	1,223	486	174	76	.	.	.
Feb	1,436	1,138	991	4,820	739	546	228	211	1,131	453	150	74	.	.	.

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 Administrative assets
	Total	of which		Total	of which			Total	Deposits ⁵	Securities	Equity interests, mortgages and other loans ⁶	Real estate	
		Contributions ³	Payments from central government		Pension payments	Pensioners' health insurance							
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
2017 ^p	299,134	211,411	86,875	298,927	255,601	18,022	+ 207	35,362	33,750	1,335	224	53	4,045
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
Q3	73,295	51,374	21,738	75,569	64,628	4,560	- 2,274	30,801	28,831	1,701	214	54	4,115
Q4	79,956	57,910	21,790	75,842	64,694	4,562	+ 4,114	35,362	33,750	1,335	224	53	4,045

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 generally differ from the total of the reported provisional quarterly figures as the latter are not revised sub-

sequently. ² Including financial compensation payments. Excluding 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.

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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			
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	-
2017	37,819	32,501	882	-	31,867	14,055	769	7,043	.	687	6,444	+	5,952	-
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	-
Q3	9,159	7,897	210	-	7,281	3,360	63	1,646	.	171	1,402	+	1,878	-
Q4	10,446	8,929	241	-	7,789	3,193	55	1,823	.	215	1,717	+	2,657	-

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	
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
2017 P	233,618	216,221	14,500	230,947	72,285	37,411	38,970	14,113	14,736	12,276	10,929	+	2,671
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	18,632	9,215	9,807	3,559	3,516	3,173	2,514	-	1,907
Q2	57,801	53,621	3,625	57,502	17,973	9,239	9,822	3,614	3,748	3,043	2,589	+	298
Q3	57,617	53,442	3,625	57,202	17,802	9,330	9,629	3,374	3,679	2,980	2,731	+	415
Q4	62,391	57,526	3,625	58,527	17,878	9,627	9,712	3,566	3,792	3,080	3,095	+	3,865

Source: Federal Ministry of Health. ¹ The final annual figures generally differ from the total of the reported provisional quarterly figures as the latter are not revised subsequently. Excluding revenue and expenditure as part of the risk structure compensation scheme. ² Including contributions from subsidised low-paid part-time employ-

ment. 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		
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
2017 P	36,101	36,043	38,525	4,495	12,999	9,994	1,529	1,601	-	2,424
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
Q3	8,945	8,932	9,944	1,210	3,289	2,562	422	411	-	999
Q4	9,620	9,610	10,110	1,158	3,285	2,731	470	387	-	490

Source: Federal Ministry of Health. * Including transfers to the long-term care provident fund. ¹ The final annual figures generally differ from the total of the reported provisional quarterly figures as the latter are not revised subsequently. 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
2017	+ 171,906	+ 4,531	+ 11,823	+ 2,897
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
Q3	+ 44,338	+ 3,495	+ 587	+ 941
Q4	+ 36,878	+ 1,455	+ 4,741	+ 95
2018 Q1	+ 42,934	- 4,946	- 5,138	+ 3,569

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	2,125,099	11,785	605,907	206,631	53,974	1,246,801
2012	2,202,307	12,126	629,513	199,132	60,140	1,301,397
2013	2,190,496	12,438	639,922	190,555	43,969	1,303,612
2014	2,192,004	12,774	610,509	190,130	44,915	1,333,675
2015	2,161,775	85,952	597,515	186,661	44,977	1,246,670
2016	2,145,543	205,391	574,727	179,755	41,352	1,144,248
2017 P	2,092,643	319,159	522,427	175,618	39,207	1,036,232
2015 Q1	2,198,049	20,802	619,047	189,048	44,414	1,324,738
Q2	2,163,452	42,807	599,029	187,280	44,792	1,289,545
Q3	2,165,441	63,558	604,195	188,165	44,785	1,264,738
Q4	2,161,775	85,952	597,515	186,661	44,977	1,246,670
2016 Q1	2,170,197	108,746	612,193	183,160	41,334	1,224,764
Q2	2,173,554	142,139	600,804	181,372	39,529	1,209,709
Q3	2,166,995	172,567	587,282	179,359	38,827	1,188,959
Q4	2,145,473	205,391	574,727	179,755	41,352	1,144,248
2017 Q1 P	2,118,194	239,495	559,898	178,219	39,505	1,101,077
Q2 P	2,112,479	265,130	546,493	176,810	38,785	1,085,262
Q3 P	2,105,556	290,214	533,924	176,646	39,130	1,065,643
Q4 P	2,092,643	319,159	522,427	175,618	39,207	1,036,232

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

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14. Maastricht debt by instrument (cont'd)

€ million

Period (End of year or quarter)	Currency and deposits ¹	Debt securities by original maturity		Loans by original maturity		Memo item ²		
		Short-term debt securities (up to one year)	Long-term debt securities (more than one year)	Short-term loans (up to one year)	Long-term loans (more than one year)	Debt vis-à-vis other government sub-sectors	Claims vis-à-vis other government sub-sectors	
Social security funds								
2011	1,331	–	–	–	237	1,094	–	2,743
2012	1,171	–	–	–	195	976	–	2,661
2013	1,287	–	–	–	360	927	–	3,872
2014	1,430	–	–	–	387	1,043	–	2,122
2015 Q1	1,365	–	–	–	329	1,036	–	2,457
Q2	1,391	–	–	–	355	1,036	–	2,428
Q3	1,460	–	–	–	450	1,010	–	2,578
Q4	1,411	–	–	–	446	965	–	2,685
2016 Q1	1,211	–	–	–	458	753	–	2,828
Q2	1,147	–	–	–	443	704	–	2,948
Q3	1,025	–	–	–	334	691	–	3,002
Q4	1,143	–	–	–	473	670	–	3,044
2017 Q1 P	1,150	–	–	–	504	646	–	3,380
Q2 P	895	–	–	–	290	605	–	3,333
Q3 P	750	–	–	–	184	566	–	3,396
Q4 P	792	–	–	–	247	545	–	4,025

Sources: Bundesbank calculations based on data from the Federal Statistical Office and the Federal Republic of Germany – Finance Agency. ¹ Particularly liabilities resulting from coins in circulation. ² Besides direct loan relationships claims and debt

vis-à-vis other government sub-sectors also comprise securities holdings purchased on the market. No entry for general government as debt and claims are consolidated between different government sub-sectors.

15. Maastricht debt of central government by instrument and category

€ million

Period (End of year or quarter)	Currency and deposits ²		Debt securities										Loans ¹
	Total ¹	Total ¹	of which ³	of which ³									
			Federal Day Bond	Total ¹	Federal bonds (Bunds)	Federal notes (Boblis)	Inflation- linked Federal bonds (Bunds) ⁴	Inflation- linked Federal notes (Boblis) ⁴	Capital indexation of inflation- linked securities	Federal Treasury notes (Schätze) ⁵	Treasury discount paper (Bubills) ⁶	Federal savings notes	
2007	984,256	6,675	–	917,584	564,137	173,949	10,019	3,444	506	102,083	37,385	10,287	59,997
2008	1,016,364	12,466	3,174	928,754	571,913	164,514	12,017	7,522	1,336	105,684	40,795	9,649	75,144
2009	1,082,644	9,981	2,495	1,013,072	577,798	166,471	16,982	7,748	1,369	113,637	104,409	9,471	59,592
2010	1,334,021	10,890	1,975	1,084,019	602,624	185,586	25,958	9,948	2,396	126,220	85,867	8,704	239,112
2011	1,344,082	10,429	2,154	1,121,331	615,200	199,284	29,313	14,927	3,961	130,648	58,297	8,208	212,322
2012	1,387,857	9,742	1,725	1,177,168	631,425	217,586	35,350	16,769	5,374	117,719	56,222	6,818	200,947
2013	1,390,440	10,592	1,397	1,192,025	643,200	234,759	41,105	10,613	4,730	110,029	50,004	4,488	187,822
2014	1,396,496	12,150	1,187	1,206,203	653,823	244,633	48,692	14,553	5,368	103,445	27,951	2,375	178,144
2015	1,372,626	14,303	1,070	1,188,572	663,296	232,387	59,942	14,553	5,607	96,389	18,536	1,305	169,750
2016	1,366,847	15,845	1,010	1,179,659	670,245	221,551	51,879	14,585	3,602	95,727	23,609	737	171,343
2017 P	1,351,622	14,651	966	1,168,919	693,687	203,899	58,365	14,490	4,720	91,013	10,037	289	168,053
2015 Q1	1,397,998	10,652	1,155	1,196,655	653,801	235,849	52,507	14,583	4,211	102,203	26,495	2,271	190,691
Q2	1,380,556	10,546	1,133	1,201,068	664,278	228,755	56,437	14,543	5,626	101,090	27,535	2,031	168,943
Q3	1,374,737	10,727	1,106	1,195,185	655,574	242,085	58,192	14,528	5,308	98,087	24,157	1,677	168,825
Q4	1,372,626	14,303	1,070	1,188,572	663,296	232,387	59,942	14,553	5,607	96,389	18,536	1,305	169,750
2016 Q1	1,382,491	11,976	1,051	1,187,099	666,565	225,678	61,893	14,603	4,395	98,232	20,526	1,205	183,417
Q2	1,391,145	12,181	1,033	1,189,287	675,794	220,840	49,675	14,550	3,099	99,417	28,369	1,108	189,677
Q3	1,381,065	15,370	1,021	1,195,744	664,034	231,375	50,869	14,570	3,097	102,053	30,626	922	169,950
Q4	1,366,847	15,845	1,010	1,179,659	670,245	221,551	51,879	14,585	3,602	95,727	23,609	737	171,343
2017 Q1 P	1,350,991	12,891	995	1,169,945	674,049	213,371	53,838	14,535	3,362	95,148	14,910	619	168,155
Q2 P	1,353,598	15,196	986	1,172,916	687,278	205,203	55,842	14,465	4,507	93,795	14,431	487	165,486
Q3 P	1,352,969	16,161	977	1,171,094	684,134	215,029	56,905	14,490	4,092	91,893	11,851	398	165,715
Q4 P	1,351,622	14,651	966	1,168,919	693,687	203,899	58,365	14,490	4,720	91,013	10,037	289	168,053

Sources: Federal Republic of Germany – Finance Agency, Federal Statistical Office, and Bundesbank calculations. ¹ Comprises all of central government, i.e. all extra-budgetary units in addition to core central government, including government-owned bad bank "FMS Wertmanagement" and liabilities attributed to central government from an economic perspective under the European System of Accounts

(ESA) 2010. ² Particularly liabilities resulting from coins in circulation. ³ Issuances by the Federal Republic of Germany. Excluding issuers' holdings of own securities but including those held by other government entities. ⁴ Excluding inflation-induced indexation of capital. ⁵ Including medium-term notes issued by the Treuhand agency (expired in 2011). ⁶ Including Federal Treasury financing papers (expired in 2014).

XI Economic conditions in Germany

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

Item							2016			2017			
	2015	2016	2017	2015	2016	2017	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Index 2010=100			Annual percentage change									
At constant prices, chained													
I Origin of domestic product													
Production sector (excluding construction)	112.8	114.9	117.9	2.2	1.9	2.7	4.5	1.2	0.6	4.5	- 0.3	2.8	3.9
Construction	102.9	104.9	107.1	0.0	1.9	2.1	5.3	1.7	- 0.4	5.7	0.1	1.6	1.6
Wholesale/retail trade, transport and storage, hotel and restaurant services	108.5	111.1	114.3	0.7	2.4	2.9	4.2	1.6	2.5	4.7	2.0	2.9	2.1
Information and communication	128.5	132.0	137.2	2.6	2.7	3.9	2.7	3.5	1.6	4.4	3.5	3.7	4.2
Financial and insurance activities	104.3	107.4	107.2	- 0.7	3.0	- 0.3	3.7	4.1	2.3	0.5	- 0.7	- 0.7	- 0.1
Real estate activities	103.3	103.9	105.2	0.2	0.6	1.3	0.9	0.4	0.5	1.4	0.6	1.5	1.6
Business services ¹	108.1	110.0	112.9	1.9	1.8	2.6	3.1	1.7	1.5	3.7	0.7	2.9	2.9
Public services, education and health	105.3	107.7	109.9	2.2	2.2	2.1	2.6	2.3	2.4	2.6	1.9	2.2	1.7
Other services	99.3	100.2	101.3	0.7	0.9	1.1	1.9	1.2	1.0	2.5	- 0.0	1.0	0.7
Gross value added	108.3	110.4	112.9	1.5	1.9	2.3	3.3	1.7	1.4	3.5	0.8	2.4	2.5
Gross domestic product ²	108.6	110.7	113.1	1.7	1.9	2.2	3.3	1.7	1.3	3.4	1.0	2.2	2.3
II Use of domestic product													
Private consumption ³	106.1	108.3	110.4	1.7	2.1	1.9	2.9	1.7	1.7	2.3	2.1	2.0	1.2
Government consumption	108.0	111.9	113.7	2.9	3.7	1.6	4.3	3.4	3.0	1.7	1.4	1.6	1.6
Machinery and equipment	111.1	113.4	118.0	3.9	2.2	4.0	6.4	1.4	- 2.6	3.6	1.7	4.5	6.0
Premises	108.3	111.3	114.2	- 1.4	2.7	2.7	5.4	2.1	0.4	5.6	1.4	2.8	1.3
Other investment ⁴	117.3	123.8	128.0	5.5	5.5	3.5	6.8	6.1	2.6	3.9	3.4	3.2	3.4
Changes in inventories ^{5, 6}	.	.	.	- 0.3	- 0.2	0.1	- 0.7	0.2	0.4	- 0.1	0.4	0.2	- 0.1
Domestic demand	106.1	108.7	111.1	1.6	2.4	2.2	3.2	2.4	1.9	2.5	2.3	2.4	1.7
Net exports ⁶	.	.	.	0.2	- 0.3	0.2	0.4	- 0.5	- 0.5	1.1	- 1.1	0.0	0.8
Exports	124.7	128.0	133.9	5.2	2.6	4.7	4.9	1.3	2.6	7.0	1.3	4.9	5.6
Imports	120.5	125.2	131.6	5.6	3.9	5.1	5.1	2.8	4.3	5.4	4.5	5.8	4.8
Gross domestic product ²	108.6	110.7	113.1	1.7	1.9	2.2	3.3	1.7	1.3	3.4	1.0	2.2	2.3
At current prices (€ billion)													
III Use of domestic product													
Private consumption ³	1,630.5	1,674.4	1,735.0	2.3	2.7	3.6	3.2	2.2	2.8	4.2	3.8	3.7	2.9
Government consumption	587.1	615.4	638.7	4.1	4.8	3.8	5.4	4.5	4.1	3.5	3.4	3.9	4.2
Machinery and equipment	200.8	205.8	214.6	4.7	2.5	4.3	6.7	1.7	- 2.3	3.8	2.0	4.8	6.3
Premises	291.0	304.5	322.7	0.4	4.6	6.0	7.3	4.1	2.5	8.4	4.5	6.2	5.1
Other investment ⁴	112.5	119.7	125.4	7.0	6.4	4.8	7.4	6.9	3.7	4.9	4.8	4.7	4.7
Changes in inventories ⁵	- 21.5	- 26.4	- 21.3	.	.	.	.	.	.	.	.	.	.
Domestic use	2,800.3	2,893.4	3,015.0	2.6	3.3	4.2	3.9	3.2	3.2	4.3	4.4	4.5	3.6
Net exports	243.3	250.6	248.3	.	.	.	.	.	.	.	.	.	.
Exports	1,426.7	1,450.0	1,542.1	6.4	1.6	6.3	3.1	- 0.0	2.3	8.7	3.5	6.4	6.9
Imports	1,183.4	1,199.4	1,293.7	4.1	1.4	7.9	1.0	0.2	3.9	9.6	8.0	7.5	6.5
Gross domestic product ²	3,043.7	3,144.1	3,263.4	3.8	3.3	3.8	4.7	2.9	2.5	4.3	2.6	4.3	4.0
IV Prices (2010=100)													
Private consumption	106.2	106.9	108.7	0.6	0.6	1.7	0.3	0.5	1.1	1.8	1.6	1.7	1.6
Gross domestic product	108.7	110.1	111.8	2.0	1.3	1.5	1.3	1.2	1.2	0.9	1.6	2.0	1.7
Terms of trade	102.1	103.7	102.7	2.7	1.5	- 1.0	2.2	1.3	0.2	- 2.3	- 1.2	- 0.0	- 0.4
V Distribution of national income													
Compensation of employees	1,542.3	1,600.3	1,669.9	3.9	3.8	4.3	3.4	3.7	3.9	4.3	4.4	4.5	4.2
Entrepreneurial and property income	722.6	737.7	764.5	3.8	2.1	3.6	9.5	- 0.2	- 1.2	4.0	- 1.0	6.3	5.1
National income	2,264.9	2,338.0	2,434.4	3.8	3.2	4.1	5.2	2.3	2.5	4.2	2.7	5.1	4.5
Memo item: Gross national income	3,099.8	3,197.2	3,323.5	3.7	3.1	3.9	4.7	2.4	2.5	4.1	2.9	4.6	4.2

Source: Federal Statistical Office; figures computed in February 2018. 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	
2015=100												
% of total ¹	100.00	14.04	6.37	79.60	29.44	36.96	2.28	10.92	10.27	9.95	12.73	14.14
Period												
2014	98.8	101.9	95.2	99.3	99.9	98.8	97.5	100.1	99.7	99.0	100.0	99.8
2015	99.8	99.6	100.1	99.7	99.8	99.7	99.7	99.8	99.8	99.7	99.7	99.7
2016	101.6	105.3	98.7	101.2	100.9	101.3	102.7	101.0	101.6	101.0	99.6	102.1
2017 x	104.9	108.7	98.8	104.8	104.9	105.0	107.0	103.2	106.2	106.9	104.2	105.3
2016 Q4	105.1	118.4	104.4	102.8	98.6	105.7	106.4	103.8	101.0	104.0	108.2	99.3
2017 Q1	98.8	84.7	104.5	100.8	102.1	99.9	106.1	99.4	103.2	102.3	95.8	105.1
Q2	104.5	111.2	93.8	104.2	105.5	104.1	105.8	100.4	107.1	104.7	101.8	106.1
Q3	106.4	116.7	92.5	105.7	107.3	104.6	106.2	105.2	107.7	109.4	103.0	105.1
Q4 x	110.1	122.3	104.5	108.4	104.8	111.5	109.7	107.6	106.9	111.2	116.1	105.0
2017 Feb	96.7	84.1	99.8	98.7	99.0	99.1	104.9	95.3	100.7	99.1	94.8	105.8
Mar	109.4	105.7	102.7	110.6	109.8	112.2	114.4	106.8	112.2	111.8	109.5	115.1
Apr	103.2	109.3	95.4	102.7	105.2	101.7	105.9	98.7	105.6	103.1	97.5	107.0
May	103.0	109.4	94.8	102.5	104.3	101.6	103.2	100.4	106.4	101.9	98.6	104.5
June	107.3	114.8	91.3	107.3	107.0	109.0	108.3	102.2	109.3	109.2	109.3	106.7
July ²	106.4	119.0	91.3	105.5	108.3	103.9	101.4	104.5	108.4	109.0	101.7	103.7
Aug ²	101.3	112.7	93.0	99.9	103.5	96.3	98.3	102.7	102.2	104.3	94.9	95.6
Sep	111.4	118.3	93.1	111.7	110.1	113.6	119.0	108.4	112.4	115.0	112.4	116.1
Oct x	109.7	121.3	102.8	108.2	109.8	106.4	113.9	109.0	112.0	109.0	102.9	108.1
Nov x	116.4	124.1	104.0	116.1	112.0	119.9	118.1	113.7	115.4	117.3	116.4	123.2
Dec x	104.2	121.6	106.8	101.0	92.5	108.3	97.0	100.0	93.2	107.4	128.9	83.8
2018 Jan x	95.9	76.1	106.1	98.5	102.4	94.0	103.1	102.6	101.0	102.0	88.3	99.6
Feb x,p	99.2	86.3	101.7	101.3	102.7	100.6	105.4	99.3	104.1	104.5	95.4	106.4
Annual percentage change												
2014	+ 1.5	+ 2.9	- 3.8	+ 2.0	+ 1.8	+ 2.3	+ 0.4	+ 1.5	+ 2.9	+ 2.5	+ 1.2	+ 4.1
2015	+ 1.0	- 2.3	+ 5.1	+ 0.4	- 0.1	+ 0.9	+ 2.3	- 0.3	+ 0.1	+ 0.7	- 0.3	- 0.1
2016	+ 1.8	+ 5.7	- 1.4	+ 1.5	+ 1.1	+ 1.6	+ 3.0	+ 1.2	+ 1.8	+ 1.3	- 0.1	+ 2.4
2017 x	+ 3.2	+ 3.2	+ 0.1	+ 3.6	+ 4.0	+ 3.7	+ 4.2	+ 2.2	+ 4.5	+ 5.8	+ 4.6	+ 3.1
2016 Q4	+ 2.1	+ 4.9	+ 0.8	+ 1.6	+ 1.4	+ 1.6	+ 3.9	+ 1.8	+ 2.3	+ 2.8	+ 1.4	+ 1.1
2017 Q1	+ 0.9	+ 0.8	- 0.3	+ 1.0	+ 1.2	+ 0.9	+ 2.8	+ 0.4	+ 1.9	+ 3.6	+ 1.6	+ 0.1
Q2	+ 3.4	+ 5.2	+ 2.7	+ 3.1	+ 3.4	+ 3.3	+ 4.8	+ 1.4	+ 4.0	+ 6.0	+ 4.3	+ 2.1
Q3	+ 4.1	+ 3.3	- 1.7	+ 4.7	+ 5.1	+ 4.7	+ 6.1	+ 3.0	+ 6.3	+ 6.7	+ 4.7	+ 4.9
Q4 x	+ 4.8	+ 3.4	+ 0.2	+ 5.4	+ 6.3	+ 5.5	+ 3.0	+ 3.6	+ 5.8	+ 6.9	+ 7.2	+ 5.7
2017 Feb	+ 1.2	+ 1.9	+ 0.2	+ 1.1	+ 0.4	+ 1.6	+ 2.5	+ 0.8	+ 1.9	+ 2.5	+ 3.4	+ 0.9
Mar	+ 1.8	+ 3.2	- 2.0	+ 1.8	+ 2.0	+ 1.5	+ 2.9	+ 2.1	+ 2.7	+ 4.1	+ 0.1	+ 1.4
Apr	+ 3.0	+ 6.3	+ 1.9	+ 2.4	+ 3.5	+ 1.9	+ 4.2	+ 0.3	+ 3.0	+ 6.7	+ 3.2	- 0.3
May	+ 4.7	+ 5.1	+ 2.9	+ 4.7	+ 3.4	+ 6.4	+ 9.8	+ 1.9	+ 5.8	+ 7.2	+ 6.4	+ 7.7
June	+ 2.7	+ 4.3	+ 3.3	+ 2.4	+ 3.3	+ 2.0	+ 0.9	+ 1.9	+ 3.2	+ 4.2	+ 3.4	- 0.7
July ²	+ 3.8	+ 2.9	- 2.7	+ 4.6	+ 5.4	+ 4.2	+ 5.3	+ 3.7	+ 6.7	+ 8.0	+ 5.5	+ 1.8
Aug ²	+ 4.5	+ 3.2	± 0.0	+ 5.0	+ 5.2	+ 5.6	+ 7.5	+ 2.3	+ 6.0	+ 6.8	+ 3.3	+ 9.1
Sep	+ 3.9	+ 3.9	- 2.5	+ 4.4	+ 4.9	+ 4.4	+ 5.6	+ 2.9	+ 6.1	+ 5.4	+ 5.3	+ 4.5
Oct x	+ 2.3	+ 3.9	+ 0.7	+ 2.2	+ 4.5	+ 0.7	+ 2.3	+ 1.6	+ 5.1	+ 3.0	+ 3.7	- 2.6
Nov x	+ 5.7	+ 3.8	- 1.0	+ 6.6	+ 6.8	+ 7.1	+ 4.6	+ 4.3	+ 4.8	+ 7.1	+ 5.1	+ 11.8
Dec x	+ 6.3	+ 2.4	+ 0.8	+ 7.8	+ 7.9	+ 8.7	+ 2.0	+ 5.0	+ 8.1	+ 11.0	+ 12.3	+ 9.1
2018 Jan x	+ 6.3	+ 18.2	- 4.5	+ 5.8	+ 5.0	+ 6.3	+ 4.1	+ 6.8	+ 4.4	+ 6.4	+ 6.1	+ 5.6
Feb x,p	+ 2.6	+ 2.6	+ 1.9	+ 2.6	+ 3.7	+ 1.5	+ 0.5	+ 4.2	+ 3.4	+ 5.4	+ 0.6	+ 0.6

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 2015. ² Influenced by

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

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
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
2017	1,370.3	4.5	905.9	4.2	444.1	3.2	1,349.9	3.9	1,924.8	3.8	189.8	5.6	9.9
2016 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	319.3	4.5	211.7	4.6	112.9	4.2	324.6	4.4	477.5	4.5	62.4	6.7	13.1
Q2	333.9	4.5	215.9	4.0	109.9	3.7	325.8	3.9	479.9	3.7	44.8	2.9	9.3
Q3	338.5	4.7	228.9	4.7	111.7	2.6	340.6	4.0	480.2	4.0	40.2	6.7	8.4
Q4	378.6	4.3	249.3	3.7	109.6	2.4	358.9	3.3	487.2	3.1	42.3	6.0	8.7

Source: Federal Statistical Office; figures computed in February 2018. * 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	
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	101.8	1.8	101.8	1.8	101.8	1.8	103.4	3.4
2012	104.4	2.7	104.4	2.6	104.7	2.8	104.7	2.9	106.2	2.7
2013	107.0	2.4	106.9	2.4	107.3	2.5	107.2	2.4	108.4	2.1
2014	110.1	2.9	109.9	2.8	110.1	2.7	110.1	2.7	111.4	2.8
2015	112.6	2.3	112.4	2.2	112.6	2.3	112.7	2.3	114.5	2.8
2016	114.9	2.1	114.7	2.1	115.0	2.1	115.2	2.2	117.3	2.4
2017	117.4	2.1	117.1	2.1	117.5	2.2	117.8	2.3	120.5	2.7
2016 Q3	117.6	2.1	117.3	2.1	117.7	2.2	115.8	2.2	115.4	2.4
Q4	128.0	2.2	127.8	2.2	128.2	2.2	116.1	2.3	128.4	2.5
2017 Q1	109.1	2.6	108.8	2.5	109.1	2.5	116.8	2.5	113.7	2.8
Q2	110.1	2.1	109.9	2.1	110.2	2.4	117.6	2.4	117.8	2.8
Q3	120.0	2.1	119.7	2.0	120.1	2.0	118.3	2.1	118.7	2.9
Q4	130.4	1.9	130.1	1.8	130.5	1.9	118.6	2.1	131.7	2.5
2017 Aug	110.4	2.1	110.1	2.1	110.5	2.1	118.3	2.2	.	.
Sep	110.5	2.1	110.2	2.1	110.6	2.1	118.4	2.1	.	.
Oct	111.0	2.1	110.7	2.0	111.1	2.0	118.5	2.1	.	.
Nov	167.8	1.6	167.4	1.6	168.0	1.6	118.7	2.2	.	.
Dec	112.5	2.0	112.2	2.0	112.6	2.1	118.6	2.1	.	.
2018 Jan	111.2	2.0	110.9	2.0	111.3	2.2	119.2	2.3	.	.
Feb	111.3	2.1	111.0	2.1	111.3	2.0	119.2	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 February 2018.

XII External sector

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

€ million

Item	2015 r	2016 r	2017 r	2017 r					2018
				Q2	Q3	Q4	Nov	Dec	Jan P
A Current account	+ 339,804	+ 388,042	+ 387,557	+ 63,439	+ 128,295	+ 133,213	+ 42,680	+ 50,244	+ 12,827
1 Goods									
Exports	2,138,202	2,130,057	2,283,085	565,841	563,975	594,543	208,752	187,805	184,011
Imports	1,779,019	1,754,756	1,937,775	476,796	470,857	495,317	172,229	155,595	174,595
Balance	+ 359,184	+ 375,300	+ 345,310	+ 89,045	+ 93,118	+ 99,226	+ 36,523	+ 32,210	+ 9,416
2 Services									
Receipts	771,662	784,711	847,793	208,334	225,109	223,223	69,554	80,670	66,259
Expenditure	708,219	745,202	753,136	188,706	188,871	195,987	63,476	68,969	60,531
Balance	+ 63,444	+ 39,509	+ 94,656	+ 19,628	+ 36,237	+ 27,235	+ 6,077	+ 11,701	+ 5,729
3 Primary income									
Receipts	654,888	637,064	664,841	169,916	162,745	177,627	52,190	73,059	46,546
Expenditure	598,912	524,924	573,098	179,510	130,711	138,488	40,975	56,640	37,394
Balance	+ 55,975	+ 112,142	+ 91,743	- 9,594	+ 32,034	+ 39,139	+ 11,215	+ 16,419	+ 9,152
4 Secondary income									
Receipts	112,149	105,041	108,220	29,340	25,554	29,039	8,314	12,561	7,416
Expenditure	250,950	243,952	252,374	64,980	58,647	61,428	19,451	22,647	18,886
Balance	- 138,799	- 138,910	- 144,153	- 35,640	- 33,094	- 32,388	- 11,136	- 10,086	- 11,470
B Capital account	- 11,548	+ 1,035	- 20,096	- 11,005	- 1,240	+ 2,361	+ 470	+ 1,255	+ 1,043
C Financial account (Increase: +)	+ 267,248	+ 347,103	+ 429,146	+ 76,884	+ 126,863	+ 178,995	+ 42,381	+ 88,817	+ 9,391
1 Direct investment	+ 248,833	+ 169,006	+ 50,839	+ 16,923	- 6,769	+ 50,833	+ 5,081	+ 13,583	+ 27,063
By resident units abroad	+1,075,532	+ 425,381	+ 135,522	+ 32,419	- 153,105	+ 74,415	+ 12,688	- 12,775	+ 34,759
By non-resident units in the euro area	+ 826,697	+ 256,376	+ 84,686	+ 15,496	- 146,335	+ 23,583	+ 7,607	- 26,357	+ 7,696
2 Portfolio investment	+ 71,869	+ 499,308	+ 328,193	+ 21,443	+ 134,426	+ 75,223	+ 8,434	+ 13,028	+ 14,754
By resident units abroad	+ 386,724	+ 394,649	+ 638,227	+ 171,964	+ 188,234	+ 102,270	+ 62,052	+ 9,710	+ 87,484
Equity and investment fund shares	+ 11,280	+ 21,350	+ 176,556	+ 57,596	+ 57,759	+ 37,279	+ 19,681	- 10,736	+ 51,186
Long-term debt securities	+ 367,161	+ 365,565	+ 396,703	+ 127,353	+ 112,099	+ 55,236	+ 49,943	- 2,188	+ 40,212
Short-term debt securities	+ 8,281	+ 7,735	+ 64,968	- 12,985	+ 18,375	+ 9,755	- 7,572	+ 22,634	- 3,915
By non-resident units in the euro area	+ 314,853	- 104,655	+ 310,035	+ 150,522	+ 53,807	+ 27,047	+ 53,618	- 3,318	+ 72,730
Equity and investment fund shares	+ 207,409	+ 98,539	+ 476,418	+ 171,052	+ 101,989	+ 129,642	+ 26,718	+ 53,551	+ 13,990
Long-term debt securities	+ 141,691	- 258,262	- 164,362	- 21,965	- 48,190	- 53,283	+ 23,708	- 33,899	+ 41,216
Short-term debt securities	- 34,248	+ 55,067	- 2,023	+ 1,433	+ 7	- 49,311	+ 3,192	- 22,970	+ 17,524
3 Financial derivatives and employee stock options	+ 87,029	+ 17,694	+ 18,573	- 548	- 10,321	+ 5,987	+ 2,565	+ 3,099	+ 348
4 Other investment	- 151,157	- 354,604	+ 32,859	+ 40,513	+ 8,983	+ 45,086	+ 20,120	+ 60,730	- 35,045
Eurosysteem	- 25,393	- 151,292	- 172,184	- 8,922	- 10,057	- 123,423	+ 3,510	- 159,993	+ 106,709
General government	+ 18,920	+ 9,063	+ 17,312	- 4,219	- 4,400	+ 23,745	+ 2,627	+ 21,368	+ 4,088
MFIs (excluding the Eurosysteem)	- 123,682	- 149,026	+ 124,452	+ 19,829	+ 20,687	+ 107,027	+ 1,587	+ 189,472	- 134,095
Enterprises and households	- 21,004	- 63,350	+ 63,276	+ 33,825	+ 2,753	+ 37,737	+ 12,396	+ 9,883	- 11,746
5 Reserve assets	+ 10,671	+ 15,700	- 1,315	- 1,445	+ 544	+ 1,866	+ 6,182	- 1,624	+ 2,270
D Net errors and omissions	- 61,007	- 41,975	+ 61,685	+ 24,450	- 192	+ 43,421	- 769	+ 37,318	- 4,479

* 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

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

€ million

Period	Services 1								Primary income		
	Total	<i>of which</i>							Compensation of employees	Investment income	Other primary income 4
	Transport	Travel 2	Financial services	Charges for the use of intellectual property	Tele-communications, computer and information services	Other business services	Government goods and services 3				
2013	- 41,376	- 9,881	- 37,713	+ 8,056	+ 3,656	- 870	- 5,518	+ 3,073	+ 541	+ 60,681	+ 1,223
2014	- 24,491	- 6,902	- 37,653	+ 7,002	+ 3,549	+ 2,666	- 702	+ 2,971	+ 1,184	+ 54,473	+ 891
2015	- 16,918	- 5,258	- 36,595	+ 9,583	+ 4,831	+ 4,052	- 2,483	+ 3,160	+ 1,521	+ 66,048	- 347
2016	- 19,948	- 6,185	- 38,247	+ 9,856	+ 6,203	+ 3,224	- 3,004	+ 3,094	+ 750	+ 60,943	- 1,054
2017	- 16,123	- 4,047	- 38,832	+ 10,683	+ 6,494	+ 3,252	- 1,686	+ 2,092	- 36	+ 68,622	- 1,229
2016 Q2	- 3,707	- 1,116	- 8,631	+ 2,343	+ 1,110	+ 1,235	- 694	+ 827	+ 70	+ 2,350	- 2,294
Q3	- 11,309	- 1,449	- 15,946	+ 2,038	+ 1,554	+ 523	- 25	+ 828	- 469	+ 17,826	- 1,182
Q4	- 1,889	- 1,888	- 7,385	+ 3,241	+ 2,366	+ 1,236	- 1,605	+ 596	+ 307	+ 21,418	+ 3,015
2017 Q1	- 2,545	- 1,257	- 5,956	+ 2,207	+ 1,029	+ 377	- 855	+ 551	+ 589	+ 21,868	- 1,162
Q2	- 3,290	- 407	- 9,179	+ 2,655	+ 1,538	+ 893	- 608	+ 625	- 203	+ 5,303	- 2,042
Q3	- 10,737	- 1,134	- 16,110	+ 2,746	+ 1,433	+ 512	+ 54	+ 545	- 620	+ 19,690	- 1,148
Q4	+ 448	- 1,249	- 7,587	+ 3,076	+ 2,494	+ 1,470	- 277	+ 370	+ 197	+ 21,761	+ 3,123
2017 Apr	- 518	- 109	- 1,760	+ 908	+ 690	- 390	- 388	+ 248	- 77	+ 6,373	- 444
May	- 1,449	- 144	- 3,049	+ 958	+ 261	+ 225	- 393	+ 238	- 67	- 3,572	- 1,657
June	- 1,323	- 154	- 4,371	+ 789	+ 587	+ 1,058	+ 172	+ 139	- 59	+ 2,501	+ 58
July	- 3,594	- 214	- 4,879	+ 892	+ 730	- 106	- 576	+ 172	- 219	+ 6,747	- 369
Aug	- 4,736	- 473	- 6,429	+ 1,193	+ 435	+ 70	- 224	+ 244	- 203	+ 5,773	- 412
Sep	- 2,407	- 447	- 4,801	+ 661	+ 268	+ 548	+ 853	+ 129	- 199	+ 7,170	- 366
Oct	- 3,429	- 453	- 5,365	+ 775	+ 1,240	- 5	- 272	+ 231	+ 52	+ 6,979	- 504
Nov	+ 225	- 400	- 1,641	+ 1,353	+ 586	+ 162	- 367	+ 174	+ 57	+ 7,151	- 340
Dec	+ 3,652	- 396	- 582	+ 948	+ 668	+ 1,312	+ 362	- 35	+ 88	+ 7,632	+ 3,968
2018 Jan	- 549	- 301	- 1,649	+ 842	+ 161	- 365	- 48	+ 191	+ 188	+ 7,806	- 393
Feb P	+ 652	- 195	- 1,577	+ 681	+ 736	+ 665	- 218	+ 211	+ 209	+ 5,684	- 236

1 Including freight and insurance costs of foreign trade. 2 Since 2001, the sample results of a household survey have been used on the expenditure side. 3 Domestic public authorities' receipts from and expenditure on services, not included elsewhere;

including the receipts from foreign military bases. 4 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)

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

€ million

Period	General government				All sectors excluding general government 2				Total	Non-produced non-financial assets	Capital transfers		
	Total	Total	<i>of which</i>		Total	<i>of which</i>		Total				Total	Total
			Current international cooperation 1	Current taxes on income, wealth etc.		Personal transfers between resident and nonresident households 3	<i>of which</i> Workers' remittances						
2013	- 43,639	- 28,923	- 4,733	+ 6,174	- 14,715	- 3,250	- 3,229	- 563	+ 1,105	- 1,668			
2014	- 41,283	- 28,146	- 6,419	+ 8,105	- 13,137	- 3,477	- 3,451	+ 2,936	+ 2,841	+ 95			
2015	- 40,044	- 23,965	- 6,805	+ 10,638	- 16,079	- 3,540	- 3,523	+ 534	+ 2,366	- 1,832			
2016	- 39,879	- 24,870	- 11,523	+ 10,994	- 15,009	- 4,214	- 4,196	+ 3,468	+ 3,372	+ 96			
2017	- 54,120	- 23,689	- 11,496	+ 10,584	- 30,431	- 4,632	- 4,613	- 254	+ 3,021	- 3,275			
2016 Q2	- 3,370	+ 296	- 2,070	+ 6,570	- 3,666	- 1,053	- 1,049	+ 1,009	+ 2,216	- 1,206			
Q3	- 10,610	- 6,813	- 2,583	+ 1,782	- 3,797	- 1,053	- 1,049	+ 307	+ 887	- 579			
Q4	- 12,579	- 8,362	- 3,186	+ 1,325	- 4,217	- 1,055	- 1,049	+ 2,356	+ 791	+ 1,565			
2017 Q1	- 16,781	- 7,604	- 2,995	+ 1,796	- 9,176	- 1,158	- 1,153	+ 616	+ 734	- 118			
Q2	- 11,841	- 1,706	- 1,500	+ 6,239	- 10,135	- 1,159	- 1,153	- 727	+ 384	- 1,111			
Q3	- 11,035	- 5,432	- 1,557	+ 1,755	- 5,603	- 1,157	- 1,153	+ 904	+ 1,531	- 627			
Q4	- 14,463	- 8,946	- 5,444	+ 794	- 5,517	- 1,159	- 1,153	- 1,047	+ 372	- 1,419			
2017 Apr	- 8,336	- 1,796	- 423	+ 824	- 6,540	- 385	- 384	- 321	- 68	- 253			
May	- 872	+ 895	- 199	+ 3,236	- 1,768	- 387	- 384	+ 85	+ 202	- 117			
June	- 2,632	- 805	- 878	+ 2,178	- 1,827	- 387	- 384	- 491	+ 250	- 741			
July	- 4,420	- 2,562	- 933	+ 492	- 1,859	- 386	- 384	+ 525	+ 703	- 178			
Aug	- 3,476	- 1,441	- 395	+ 465	- 2,035	- 386	- 384	+ 174	+ 334	- 160			
Sep	- 3,139	- 1,430	- 229	+ 799	- 1,709	- 386	- 384	+ 204	+ 494	- 290			
Oct	- 4,224	- 2,939	- 1,036	+ 108	- 1,285	- 387	- 384	- 206	- 6	- 200			
Nov	- 5,260	- 2,807	- 1,685	+ 70	- 2,453	- 386	- 384	- 536	+ 78	- 614			
Dec	- 4,979	- 3,201	- 2,723	+ 615	- 1,778	- 386	- 384	- 305	+ 300	- 605			
2018 Jan	- 5,052	- 3,518	- 1,332	+ 230	- 1,534	- 430	- 429	+ 489	+ 118	+ 371			
Feb P	- 5,394	- 3,679	- 558	+ 814	- 1,715	- 429	- 429	+ 17	- 267	+ 284			

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.

XII External sector

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

€ million

Item	2015	2016	2017	2017				2018	
				Q2	Q3	Q4	Dec	Jan	Feb P
I Net domestic investment abroad (Increase: +)	+ 270,235	+ 397,043	+ 358,805	+ 41,375	+ 56,779	+ 32,754	+ 24,917	+ 65,665	+ 64,263
1 Direct investment	+ 116,141	+ 82,985	+ 111,797	+ 19,250	+ 20,572	+ 27,372	+ 7,973	+ 7,791	+ 13,582
Equity of which	+ 75,292	+ 70,623	+ 71,205	+ 13,586	+ 16,953	+ 22,786	+ 10,668	+ 8,372	+ 16,384
Reinvestment of earnings 1	+ 16,804	+ 10,867	+ 23,779	+ 6,006	+ 8,291	+ 3,009	- 3,673	+ 2,748	+ 5,111
Debt instruments	+ 40,849	+ 12,362	+ 40,592	+ 5,664	+ 3,620	+ 4,585	- 2,695	- 581	- 2,802
2 Portfolio investment	+ 124,062	+ 98,236	+ 105,157	+ 20,014	+ 30,407	+ 23,329	+ 7,106	+ 33,149	+ 2,923
Shares 2	+ 19,692	+ 17,254	+ 14,042	- 2,388	+ 5,116	+ 5,695	+ 3,124	+ 6,247	+ 3,937
Investment fund shares 3	+ 35,750	+ 36,142	+ 47,747	+ 4,699	+ 10,718	+ 14,687	+ 5,528	+ 9,771	- 1,408
Long-term debt securities 4	+ 74,342	+ 51,037	+ 47,101	+ 19,249	+ 15,231	+ 7,636	+ 1,577	+ 14,594	+ 1,537
Short-term debt securities 5	- 5,723	- 6,196	- 3,733	- 1,546	- 658	- 4,689	- 3,123	+ 2,537	- 1,143
3. Financial derivatives and employee stock options 6	+ 26,026	+ 32,535	+ 8,937	+ 2,623	+ 2,064	+ 4,038	+ 118	- 450	+ 2,386
4. Other investment 7	+ 6,219	+ 181,602	+ 134,183	- 897	+ 3,584	- 20,539	+ 12,072	+ 25,295	+ 44,789
Monetary financial institutions 8	- 90,288	+ 18,627	- 21,008	- 26,653	- 16,029	- 50,588	- 30,091	+ 42,030	+ 12,458
Long-term	- 2,804	+ 44,980	+ 19,619	+ 2,603	- 1,400	+ 5,438	+ 6,610	- 1,342	+ 241
Short-term	- 87,484	- 26,353	- 40,627	- 29,255	- 14,629	- 56,026	- 36,701	+ 43,372	+ 12,217
Enterprises and households 9	- 14,618	- 6,248	+ 3,708	- 3,300	+ 3,174	- 267	- 10,580	+ 7,876	+ 3,689
Long-term	+ 19,127	+ 1,725	- 3,372	- 1,022	- 818	- 1,290	- 830	+ 567	+ 219
Short-term	- 33,744	- 7,974	+ 7,080	- 2,277	+ 3,991	+ 1,023	- 9,750	+ 7,308	+ 3,470
General government	- 12,239	- 1,268	- 5,154	- 2,365	+ 2,690	+ 991	- 1,034	+ 2,629	- 3,108
Long-term	- 7,591	- 7,595	- 3,730	- 1,040	- 425	- 489	- 342	+ 112	- 23
Short-term	- 4,648	+ 6,327	- 1,424	- 1,325	- 2,265	+ 1,480	- 692	+ 2,517	- 3,085
Bundesbank	+ 123,364	+ 170,491	+ 156,637	+ 31,420	+ 19,129	+ 29,324	+ 53,777	- 27,240	+ 31,750
5. Reserve assets	- 2,213	+ 1,686	- 1,269	+ 385	+ 152	- 1,446	- 2,353	- 121	+ 583
II Net foreign investment in the reporting country (Increase: +)	+ 30,817	+ 139,350	+ 83,057	- 30,686	+ 1,799	- 48,638	- 13,865	+ 39,631	+ 45,935
1 Direct investment	+ 48,606	+ 51,816	+ 69,548	+ 6,752	+ 21,377	+ 12,040	- 2,776	+ 3,592	+ 9,115
Equity of which	+ 10,567	+ 11,894	+ 24,077	+ 1,362	+ 6,047	+ 10,118	+ 4,509	+ 53	+ 1,822
Reinvestment of earnings 1	- 1,524	+ 3,935	+ 9,216	+ 574	+ 3,331	+ 2,107	- 145	+ 346	+ 1,561
Debt instruments	+ 38,039	+ 39,921	+ 45,471	+ 5,390	+ 15,330	+ 1,922	- 7,285	+ 3,539	+ 7,293
2 Portfolio investment	- 68,808	- 108,471	- 95,045	- 140	- 28,130	- 46,598	- 25,813	- 5,574	+ 3,466
Shares 2)	+ 10,605	+ 342	- 1,126	+ 108	- 2,311	- 821	- 2,671	- 1,550	- 369
Investment fund shares 3	+ 7,357	- 6,919	- 3,441	- 1,308	+ 656	- 2,894	+ 844	+ 883	- 8
Long-term debt securities 4	- 96,048	- 97,281	- 70,559	+ 3,057	- 21,125	- 40,436	- 23,105	+ 11,325	- 3,819
Short-term debt securities 5	+ 9,278	- 4,613	- 19,919	- 1,997	- 5,349	- 2,447	- 880	- 16,233	+ 7,662
3. Other investment 7	+ 51,019	+ 196,006	+ 108,554	- 37,298	+ 8,552	- 14,080	+ 14,724	+ 41,613	+ 33,354
Monetary financial institutions 8	- 41,165	+ 86,742	+ 17,476	- 19,099	- 3,551	- 67,367	- 75,626	+ 92,805	+ 4,080
Long-term	- 19,535	+ 5,774	+ 7,541	+ 180	- 1,325	+ 5,550	+ 3,387	- 1,827	- 2,848
Short-term	- 21,630	+ 80,968	+ 9,935	- 19,279	- 2,226	- 72,917	- 79,013	+ 94,632	+ 6,929
Enterprises and households 9	+ 18,920	+ 3,716	+ 17,557	- 17,944	+ 6,933	+ 16,752	+ 9,609	- 4,637	+ 2,683
Long-term	+ 23,006	+ 8,579	+ 3,339	- 698	+ 3,252	- 328	- 2,730	+ 1,807	+ 585
Short-term	- 4,085	- 4,863	+ 14,218	- 17,246	+ 3,681	+ 17,079	+ 12,339	- 6,444	+ 2,098
General government	- 11,105	- 5,309	- 6,313	- 1,304	+ 6,057	- 12,219	- 10,944	+ 1,777	+ 4,063
Long-term	- 3,941	- 4,682	- 3,290	- 847	+ 244	+ 170	+ 52	+ 36	- 36
Short-term	- 7,164	- 626	- 3,023	- 457	+ 5,813	- 12,389	- 10,995	+ 1,741	+ 4,099
Bundesbank	+ 84,369	+ 110,857	+ 79,834	+ 1,048	- 886	+ 48,754	+ 91,685	- 48,333	+ 22,527
III Net financial account (Net lending: + / net borrowing: -)	+ 239,418	+ 257,693	+ 275,748	+ 72,061	+ 54,979	+ 81,392	+ 38,781	+ 26,034	+ 18,328

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

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

EUR 1 = currency units ...

Yearly or monthly average	Australia AUD	Canada CAD	China CNY	Denmark DKK	Japan JPY	Norway NOK	Sweden SEK	Switzerland CHF	United Kingdom GBP	United States USD
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
2017	1.4732	1.4647	7.6290	7.4386	126.71	9.3270	9.6351	1.1117	0.87667	1.1297
2016 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
Sep	1.4946	1.4639	7.8257	7.4401	131.92	9.3275	9.5334	1.1470	0.89470	1.1915
Oct	1.5099	1.4801	7.7890	7.4429	132.76	9.3976	9.6138	1.1546	0.89071	1.1756
Nov	1.5395	1.4978	7.7723	7.4420	132.39	9.6082	9.8479	1.1640	0.88795	1.1738
Dec	1.5486	1.5108	7.8073	7.4433	133.64	9.8412	9.9370	1.1689	0.88265	1.1836
2018 Jan	1.5340	1.5167	7.8398	7.4455	135.25	9.6464	9.8200	1.1723	0.88331	1.2200
Feb	1.5684	1.5526	7.8068	7.4457	133.29	9.6712	9.9384	1.1542	0.88396	1.2348
Mar	1.5889	1.5943	7.7982	7.4490	130.86	9.5848	10.1608	1.1685	0.88287	1.2336

* 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.

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	

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

- Return on private financial assets taking into account inflation and taxes

■ Financial Stability Review

- The danger posed to the global economy by protectionist tendencies
- Changes to the MFI interest rate statistics

■ Monthly Report

For information on the articles published between 2000 and 2017 see the index attached to the January 2018 Monthly Report.

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

Monthly Report articles

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

October 2017

- Global liquidity, foreign exchange reserves and exchange rates of emerging market economies
- The natural rate of interest
- The supervisory review and evaluation process for smaller institutions and proportionality considerations
- The Eurosystem's new money market statistical reporting – initial results for Germany
- The new ESCB insurance statistics – integrated reporting flow and initial results

November 2017

- The current economic situation in Germany

December 2017

- Outlook for the German economy – macro-economic projections for 2018 and 2019 and an outlook for 2020
- German enterprises' profitability and financing in 2016
- Mark-ups of firms in selected European countries
- The Eurosystem's financial market infrastructure – origin and future set-up

January 2018

- The impact of the internationalisation of German firms on domestic investment
- The importance of bank profitability and bank capital for monetary policy
- Developments in corporate financing in the euro area since the financial and economic crisis
- Finalising Basel III

February 2018

- The current economic situation in Germany

March 2018

- German balance of payments in 2017
- The demand for euro banknotes at the Bundesbank
- Contingent convertible bonds: design, regulation, usefulness

April 2018

- Wage growth in Germany: assessment and determinants of recent developments
- Germany's external position: new statistical approaches and results since the financial crisis
- Current regulatory developments in the field of payments and in the settlement of securities and derivatives
- Maastricht debt: methodological principles, compilation and development in Germany

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, January 2018^{2, 4}
- 2 Banking statistics customer classification, January 2018²
- 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 2018^{1, 2}
- 11 Balance of payments by region, July 2013
- 12 Technologische Dienstleistungen in der Zahlungsbilanz, June 2011³

■ Discussion Papers*

- 36/2017
 Liquidity provision as a monetary policy tool: the ECB's non-standard measures after the financial crisis
- 37/2017
 A stress test framework for the German residential mortgage market – methodology and application
- 38/2017
 Changes in education, wage inequality and working hours over time
- 39/2017
 Appropriate monetary policy and forecast disagreement at the FOMC
- 01/2018
 An analysis of non-traditional activities at German savings banks – Does the type of fee and commission income matter?
- 02/2018
 Mixed frequency models with MA components
- 03/2018
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- 04/2018
 Financial cycles in euro area economies: a cross-country perspective
- 05/2018
 Global liquidity and exchange market pressure in emerging market economies
- 06/2018
 Banks' equity stakes and lending: evidence from a tax reform

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 88*.

■ 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.