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Contents

Abbreviations and symbols

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 Data unknown, not to be published or not meaningful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

Discrepancies in the totals are due to rounding.

Commentaries

Economic conditions

Underlying trends

German economic upswing essentially still intact, but may have come to a temporary halt in Q3

Although the economic upswing in Germany is essentially still intact, it may have come to a temporary halt in the third quarter of 2018. This was probably due to considerable difficulties in the automotive sector in certifying vehicles according to a new emission test procedure, the WLTP (Worldwide harmonized Light vehicles Test Procedure). The associated temporary production losses severely dampened industrial output. In addition, the booming construction sector is expected to slow down after the strong growth in the second quarter. According to the information available to date, retail sales were also relatively subdued. However, the pause in growth is unlikely to continue for very long and the difficulties in the automotive sector should soon be over. This is indicated by the business expectations in this sector, which again rose significantly of late. According to the ifo Institute, the business climate in Germany also brightened noticeably in the third quarter as a whole, which means that a significant expansion in economic output is to be expected in the current three-month period.

Industry

Industrial activity dampened by one-off effect in the automotive sector

Seasonally adjusted industrial output in August 2018 largely remained at the low level of the previous month. It therefore decreased strongly on an average of July and August compared with the second quarter (-1½%). The main reason for this was a very significant drop in output in the automotive sector (-9%). This is probably due to ongoing difficulties with the certification of model variants in connection with the new WLTP measuring procedure for exhaust emissions, which has been mandatory since September for all first-time registrations of passenger cars and light-duty commercial vehicles. According to the data of the German Association of the Automotive Industry already available for September on the number of manufactured motor vehicles, these problems persisted up until the end of the quarter. Excluding the automotive sector, however, industrial output on an average of July and August remained at the level of the previous quarter, although other sectors were also affected by the slump in the automotive sector via supply chains. Producers of intermediate goods, for example, reported significant production cutbacks (-1¼%). Although the production of capital goods declined at an above-average rate on the whole (-2¾%), strong growth was still recorded if the automotive sector is excluded (+1½%). Production in the consumer goods sector rose significantly (+¾%), with the production of pharmaceutical products, in particular, continuing to soar (+6%).

Strong rise in new orders

Seasonally adjusted new orders in German industry rose sharply in August 2018 on the month (+2%). On an average of July and August, industrial firms received considerably fewer new orders than in the second quarter (-1¾%). This was due primarily to the weak demand for German products from abroad. The inflow of new orders from non-euro area countries fell substantially (-2½%). New orders from other euro area countries dropped even more sharply (-4¼%). The automotive sector in particular saw a slump in demand (-9¾%). This, too, is probably attributable to the certification problems in connection with the WLTP standard. By contrast, industrial enterprises received noticeably more new orders from German customers (+½%). However, the rather irregular inflow of large orders from manufacturers of other transport equipment was the decisive factor behind the increase. Excluding these, domestic orders would also have been significantly lower (-1%). Although the overall inflow of new orders has been tending to de-

Economic conditions in Germany*

Seasonally adjusted

Period	Orders received (volume)			
	Industry; 2015 = 100			Main construction; 2010 = 100
	Total	of which:		
		Domestic	Foreign	
2017 Q4	111.8	107.4	115.2	140.7
2018 Q1	109.3	104.8	112.6	138.5
Q2	107.5	102.9	111.1	132.9
June	105.5	102.3	108.0	131.0
July	104.6	104.8	104.4	133.5
Aug.	106.7	101.8	110.5	…

Period	Output; 2015 = 100			
	Industry			
	Total	of which:		Construction
		Intermediate goods	Capital goods	
2017 Q4	106.7	107.3	107.0	109.3
2018 Q1	106.8	106.4	107.0	109.4
Q2	107.6	106.6	107.8	112.3
June	107.9	107.0	107.9	112.0
July	105.9	105.3	105.2	113.3
Aug.	105.8	105.4	104.5	111.3

Period	Foreign trade; € billion			Memo item: Current account balance in € billion
	Exports	Imports	Balance	
2017 Q4	328.91	265.67	63.24	68.00
2018 Q1	328.09	265.61	62.48	72.36
Q2	331.78	272.14	59.64	68.72
June	111.27	91.98	19.29	23.26
July	110.36	94.52	15.84	16.55
Aug.	110.27	91.98	18.29	19.98

Period	Labour market			
	Employment	Vacancies[1]	Unemployment	Unemployment rate %
	Number in thousands			
2018 Q1	44,707	784	2,398	5.4
Q2	44,797	793	2,357	5.2
Q3	…	807	2,322	5.1
July	44,876	804	2,336	5.2
Aug.	44,907	805	2,326	5.2
Sep.	…	811	2,303	5.1

Period	Prices; 2015 = 100			
	Import prices	Producer prices of industrial products	Construction prices[2]	Harmonised consumer prices
2018 Q1	100.9	102.4	108.3	103.1
Q2	102.4	103.2	109.4	103.8
Q3	…	…	111.0	104.3
July	103.3	103.8	.	104.1
Aug.	103.5	104.1	.	104.2
Sep.	…	…	.	104.7

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

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cline for quite some time now, the order situation of German enterprises is probably still favourable. This is indicated, amongst other things, by the order backlog, which up until August was still pointing upwards.

Industrial sales rose perceptibly in August, value of exports unchanged

Seasonally adjusted industrial sales in August 2018 rose perceptibly on the month (+½%). Taking July and August together, however, they fell significantly short of the average of the spring months at 1%. This development took its cue from weak industrial production, driven mainly by the sharp slump in sales in the automotive sector, which was, moreover, broadly based in regional terms. Overall sales consequently declined in all major economic regions and, broken down by sector, among capital goods manufacturers in particular. By contrast, sales of intermediate goods declined only slightly and consumer goods sales stagnated at the prior-quarter level. In August 2018, seasonally adjusted nominal exports of goods remained at the level of the previous month. On an average of July and August, they fell slightly on the previous quarter (-¼%). Exports fell more sharply in real terms, however (-1%). The difficulties in the automotive sector probably played a role here, too. Nominal imports of goods receded sharply in August 2018 compared with the previous month (-2¾%). Taking the average of July and August, however, imports increased considerably compared with the second quarter (+2¾%). Even after adjustment for price effects, the increase was still strong (+1¾%).

Construction

Construction output significantly lower in August

Construction output in August 2018 declined sharply (-1¾%) on the month in seasonally adjusted terms. On an average of July and August, it saw scarcely any change compared with the strong second-quarter figures. A substantial increase in activity in the finishing trades (+1¼%) compensated for the sharp decline in output in the main construction sector (-1½%). At the same time, the intake of new

orders in the main construction sector in July – figures are available up to then – was noticeably higher than in the second quarter (+½%). The fact that the construction boom in Germany is continuing is also indicated by the assessment of the business situation in the main construction sector, where, according to the ifo Institute, new record highs were achieved multiple times in the third quarter.

Labour market

Growth in employment as jobs subject to social security contributions develop strongly

The seasonally adjusted number of persons in employment increased comparatively moderately in August. The total number of persons in work in Germany rose by 31,000 on the month. Compared with August 2017, the number of employed persons went up by 565,000, or 1.3%. This is primarily due to the ongoing sharp increase in the number of jobs subject to social security contributions, which rose much more strongly (by 704,000 persons, or 2.2%) year on year than total employment. By contrast, there was a substantial contraction in the low-paid part-time employment segment and in the number of self-employed persons. The willingness of enterprises to recruit new staff appears set to stay at a high level in the coming months. Despite a slight decline, the ifo employment barometer remains at an exceptionally high level. The Federal Employment Agency's BA-X job index has even climbed to a new record high.

Unemployment down more sharply than of late, slight expansion in labour market policy measures

Seasonally adjusted unemployment declined more sharply in September than in the summer months. There were 2.30 million persons registered as unemployed with the Federal Employment Agency, 23,000 fewer than in the previous month. The unemployment rate dropped by 0.1 percentage point to 5.1%. The number of unemployed persons fell by 192,000 on the year. The rather sharp decrease in unemployment in September could also be attributable in part to the expansion of labour market policy measures at the end of the summer holiday period. This is consistent with the fact that overall underemployment fell somewhat less strongly than registered unemployment. The heads of the regional employment agencies, who are surveyed by the Institute for Employment Research on the future development of unemployment, are somewhat more optimistic for the coming months than they were recently, with the result that registered unemployment could continue to decline for the time being.

Prices

Crude oil significantly more expensive

Crude oil prices rose noticeably against the backdrop of possible production losses and robust global demand. They went up by just under 8% compared with August and exceeded the previous year's level by almost 43%. In the first half of October, prices were again markedly above the average of the previous month. As this report went to press, the price of a barrel of Brent crude oil stood at US$79. The discount on crude oil futures was around US$1 for deliveries six months ahead and US$2¾ for deliveries 12 months ahead.

Import and producer prices higher

Import prices picked up in August. While energy did not become more expensive, prices for other goods went up slightly. In the case of commercial producer prices, however, both energy and other goods grew more expensive. The year-on-year rate of increase remained at just under 5% in the case of imports and expanded to 3.1% in the case of producer prices.

Steep rise in consumer prices in September

Consumer prices (HICP) rose substantially in September by a seasonally adjusted 0.5%. Energy prices went up again perceptibly as a result of the higher crude oil and food prices. The prices of industrial goods excluding energy also increased noticeably, as they did in the previous month. Services also became significantly more expensive again after the discontinuation of charges for day care facilities for small children in a number of federal states had shortly before dampened the upward pressure on service prices. Rents continued to rise mod-

erately. Consumer prices advanced by a total of 2.2% year on year, compared with 1.9% in August (CPI 2.3%, after 2.0%). Inflation excluding energy and food went up from 1.1% to 1.2%. From today's perspective, headline rates of over 2% can be expected in the coming months.

Public finances[1]

Local government finances

Slightly higher surplus in Q2: growth in revenue …

Local government finances saw a slight year-on-year improvement in the second quarter of 2018. The surplus posted by the core budgets and off-budget entities rose to €6 billion. Revenue grew strongly overall, by 5½%, with tax receipts continuing to increase dynamically (4½%). This was particularly true of shares in income tax and VAT. In the case of VAT, local government's effective revenue share increased due to a transfer from central government. (Net) income from local business tax grew only moderately. Growth was also recorded for transfers from public administrations (5½%) and, in particular, receipts from fees (7½%). The latter indicates that additional entities were once again added to the reporting group.

… outweighs strong rise in expenditure

Expenditure grew at an only marginally lower rate than revenue. The largest expenditure category, staff costs, saw a renewed rise of 4%. The even stronger increase in other operating expenditure (6%) could, like the growth in fee income, be connected with an expansion of the reporting group. Growth in spending on social benefits (3%) was dampened because of a significant decrease (25%) in benefits for asylum seekers. Payments for the accommodation costs of unemployment benefit II recipients also declined (3%). However, spending on social assistance (6%) and other social benefits rose steeply. In addition, fixed asset formation also increased strongly again in the second quarter (9%).

High surplus for year as a whole and very bright medium-term outlook

At the end of the first half of the year, local government's surplus of just over €½ billion was slightly higher than the previous year's figure. For the year as a whole, another very high surplus is on the cards (2017: €11 billion), despite the increase in expenditure. The medium-term outlook for local government budgets also appears very bright overall. The expected macroeconomic environment remains positive. Furthermore, the Federal Cabinet also resolved to provide relief to state and local governments going beyond 2018 for the reception and integration of refugees. As in the preceding years, central government will also assume the costs of accommodating recognised asylum seekers in 2019. Beginning in 2020, local government will benefit from the additional revenue of state government thanks to the reform of the tax revenue-sharing scheme. In addition, the higher share of local business tax to be transferred to state government is set to lapse, which will provide considerable added relief to local governments in western Germany. In sum, it is likely that scope will be available for increased investment and additional staff requirements.

Outstanding cash advances declining moderately, but still high in some cases

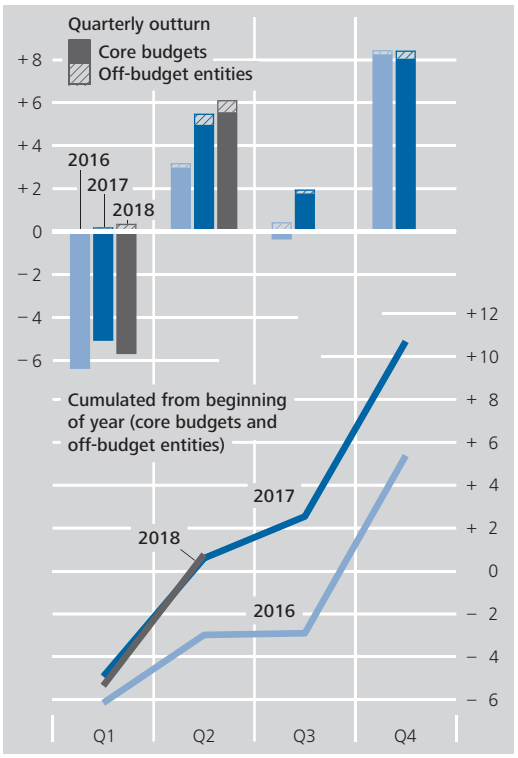
Local government debt decreased by €1 billion in mid-2018 as against the level at the end of March. Including liabilities to the public sector, the debt level thus came to just over €141 billion. Credit market debt remained virtually unchanged at €93 billion, while cash advances dropped to just under €45 billion. The latter are actually intended simply to bridge liquidity shortfalls. The high levels of outstanding cash advances in Saarland, Rhineland-Palatinate, North Rhine-Westphalia and Hesse over many years now point to structural budgetary imbalances in numerous local governments, particularly in those federal states. In some cases, these problems evidently still exist, even in the

1 The short commentaries on public finances present recent outturns that were not yet available when the regular quarterly reports on public finances (published in the February, May, August and November editions of the Monthly Report) went to press. For detailed data on budgetary developments and public debt, see the statistical section of this report.

wake of nationwide financial surpluses over multiple years. In order to tackle the issue, many state governments have already established partial debt relief and consolidation programmes. The "Equivalent living conditions" commission since convened by the Federal Government is also set to draft related proposals. The state of Hesse has set up a new special fund called "Hessenkasse", which this year is pumping €5 billion into assuming almost all cash advances accrued by its local governments. In return, the local governments in question pay a fixed annual amount towards the associated burdens over a period of up to 30 years. Hesse has also implemented tighter budgetary rules designed to prevent local government slipping back towards non-temporary cash advances.

Local government fiscal deficit/surplus

€ billion



Source: Federal Statistical Office.
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Securities markets

Bond market

Net issuance in the German bond market

At €106.4 billion, gross issuance in the German bond market in August 2018 was slightly down on the figure for the previous month. After deducting redemptions, which were considerably lower, and taking account of changes in issuers' holdings of their own debt securities, the outstanding volume of domestic bonds rose by €10.9 billion, compared with a drop of €9.9 billion in July. The outstanding volume of foreign debt securities in the German bond market also increased by €5.4 billion.

Rise in public sector capital market debt

In the reporting month, the public sector raised €12.1 billion net in the capital market. On balance, the greatest part of this was attributable to central government (€9.1 billion), which issued predominantly ten-year Federal bonds (Bunds) totalling €4.6 billion, two-year Federal Treasury notes (Schätze) worth €4.3 billion and five-year Federal notes (Bobls) amounting to €3.0 billion. By contrast, it mainly redeemed Treasury discount paper (Bubills), with redemptions totalling €3.6 billion on balance. State and local government increased their capital market debt by €3.0 billion net.

Net issuance by credit institutions

Domestic credit institutions issued bonds totalling €2.6 billion net in August. On balance, there was mainly an increase in the outstanding volume of other bank debt securities which can be structured flexibly (€3.6 billion), while mortgage Pfandbriefe also rose (€1.0 billion). Specialised credit institutions, meanwhile, redeemed debt securities to the tune of €1.4 billion net, while redemptions of public Pfandbriefe totalled €0.5 billion net.

Fall in enterprises' capital market debt

Domestic enterprises reduced their capital market debt by €3.9 billion in August, compared with net issuance of €3.6 billion in July. On balance, redemptions were almost exclusively long-term paper.

Purchases of debt securities

Foreign investors were the main net buyers in August, acquiring bonds for a net €10.8 billion. For its part, the Bundesbank added a net €4.6

Sales and purchases of debt securities

€ billion

Item	2017 August	2018 July	2018 August
Sales			
Domestic debt securities[1]	12.8	– 9.9	10.9
of which:			
Bank debt securities	– 1.8	– 7.1	2.6
Public debt securities	16.2	– 6.4	12.1
Foreign debt securities[2]	0.6	6.3	5.4
Purchases			
Residents	6.9	12.2	5.5
Credit institutions[3]	– 8.7	– 3.1	– 1.6
Deutsche Bundesbank	9.9	5.8	4.6
Other sectors[4]	5.7	9.5	2.5
of which:			
Domestic debt securities	0.3	2.8	0.5
Non-residents[2]	6.4	– 15.7	10.8
Total sales/purchases	13.3	– 3.5	16.3

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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billion worth of paper to its balance sheet, mainly under the Eurosystem's asset purchase programmes. Domestic non-banks expanded their bond portfolios by €2.5 billion net, while domestic credit institutions divested themselves of bonds worth €1.6 billion net.

Equity market

Little net issuance in the German equity market

In the month under review, domestic enterprises placed €0.2 billion net worth of new shares in the German equity market, most of which emanated from non-listed companies. At the same time, the outstanding volume of foreign shares in the German market rose by €4.5 billion. Domestic non-banks were virtually the only buyers of equities on balance (€5.8 billion). Domestic credit institutions added shares totalling €0.5 billion net to their portfolios, while non-resident investors offloaded equities worth €1.5 billion net.

Mutual funds

German mutual funds record inflows

Domestic mutual funds recorded net inflows of €8.4 billion in August (€5.5 billion in July). Specialised funds reserved for institutional investors were the main beneficiaries of these inflows. Among the various asset classes, mixed securities funds were the chief sellers of shares in the market (€4.4 billion), while funds of funds (€1.9 billion), open-end real estate funds (€1.4 billion), equity funds (€1.3 billion), and bond funds (€1.1 billion) also recorded inflows. The outstanding volume of foreign mutual fund shares distributed in the German market decreased by €0.6 billion during the reporting month. German non-banks were virtually the sole net buyers of investment fund units (€8.0 billion). Non-resident investors increased their German holdings by €0.1 billion on balance, while domestic credit institutions sold mutual fund shares to the tune of €0.2 billion net.

Balance of payments

Slight rise in current account surplus

Germany's current account recorded a surplus of €15.3 billion in August 2018, putting it €0.2 billion above the level of the previous month. The surplus in the goods account fell slightly, while the deficit in invisible current transactions – which comprise the services account as well as primary and secondary income – narrowed to a somewhat greater extent by comparison.

Slight fall in goods account surplus

In the reporting month, the surplus in the goods account decreased by €0.3 billion on the month to €18.2 billion. Goods imports in foreign trade fell more sharply than goods exports. However, in net terms, this was more than offset by the decreased exports and increased imports of supplementary trade items in particular.

Deficit in invisible current transactions somewhat narrower

In August, the deficit in invisible current transactions narrowed by €0.5 billion to €2.9 billion. This was due to a rise in net receipts in primary income and a decline in net expenditure in secondary income, which outweighed the increase

in the services account deficit. Net receipts on primary income grew by €0.9 billion to €6.5 billion. This had much to do with the fact that expenditure on non-residents' direct investment declined more sharply than residents' corresponding receipts and that there was a reduction in expenditure for income from investment fund shares. In the secondary income account, the deficit narrowed by €0.9 billion to €3.8 billion, with lower payments from non-government sectors to non-residents playing a significant role. Conversely, the deficit in the services account grew by €1.3 billion to €5.6 billion, largely on account of the usual seasonal increase in travel expenditure.

Inflows in portfolio investment

Against the backdrop of sharp drops in exchange rates and share prices in some emerging market economies, cross-border portfolio investment in Germany recorded net capital imports of €0.6 billion in August, compared with net capital exports of €26.6 billion in July. Foreign investors purchased German securities in the amount of €9.2 billion net, adding €10.9 billion of – mostly public sector – bonds to their portfolios and disposing of shares to the tune of €1.7 billion. During the same period, domestic investors purchased foreign securities worth €8.5 billion. These encompassed bonds (€5.0 billion), shares (€3.7 billion) and money market paper (€0.4 billion). At the same time, they disposed of mutual fund shares to the amount of €0.6 billion.

Direct investment sees capital exports

In August, direct investment generated net capital exports totalling €2.9 billion, compared with net capital exports of €7.3 billion one month earlier. This was driven by German enterprises' direct investment abroad, which amounted to €3.0 billion. They bolstered their equity capital (€8.6 billion) and scaled back intra-group lending (€5.6 billion), with foreign affiliates paying their existing trade credits back to their German parent companies in particular. At €0.1 billion, German enterprises received only limited net funds from abroad in the form of direct investment. In this context, they boosted their equity capital (€0.7 billion), while

Major items of the balance of payments

€ billion

Item	2017 Aug.	2018 July	2018 Aug.p
I Current account	+ 17.8	+ 15.1	+ 15.3
1 Goods[1]	+ 21.5	+ 18.4	+ 18.2
Exports (fob)	102.6	110.2	104.1
Imports (fob)	81.1	91.8	85.9
Memo item:			
Foreign trade[2]	+ 20.0	+ 16.5	+ 17.2
Exports (fob)	103.0	111.0	105.2
Imports (cif)	83.0	94.5	88.1
2 Services[3]	– 5.4	– 4.3	– 5.6
Receipts	22.6	23.8	23.4
Expenditure	28.0	28.1	29.0
3 Primary income	+ 5.2	+ 5.6	+ 6.5
Receipts	15.3	16.2	15.5
Expenditure	10.2	10.6	9.0
4 Secondary income	– 3.5	– 4.7	– 3.8
II Capital account	+ 0.2	– 0.2	+ 0.1
III Financial account (increase: +)	+ 8.1	+ 7.6	+ 14.5
1 Direct investment	– 2.1	+ 7.3	+ 2.9
Domestic investment abroad	+ 5.5	+ 10.9	+ 3.0
Foreign investment in the reporting country	+ 7.6	+ 3.6	+ 0.1
2 Portfolio investment	+ 1.2	+ 26.6	– 0.6
Domestic investment in foreign securities	+ 5.1	+ 11.1	+ 8.5
Shares[4]	+ 1.1	+ 2.6	+ 3.7
Investment fund shares[5]	+ 3.4	+ 2.2	– 0.6
Long-term debt securities[6]	+ 0.1	+ 4.4	+ 5.0
Short-term debt securities[7]	+ 0.5	+ 1.9	+ 0.4
Foreign investment in domestic securities	+ 3.9	– 15.5	+ 9.2
Shares[4]	– 2.5	– 0.1	– 1.7
Investment fund shares	– 0.0	+ 0.3	+ 0.1
Long-term debt securities[6]	+ 9.9	– 17.8	+ 10.9
Short-term debt securities[7]	– 3.4	+ 2.0	– 0.1
3 Financial derivatives[8]	+ 1.0	+ 1.4	+ 4.5
4 Other investment[9]	+ 8.9	– 28.0	+ 8.3
Monetary financial institutions[10]	+ 27.1	– 1.5	– 8.0
of which: Short-term	+ 29.3	– 5.6	– 12.5
Enterprises and households[11]	– 4.1	+ 5.9	– 0.7
General government	– 1.1	– 2.4	– 2.6
Bundesbank	– 12.9	– 30.0	+ 19.6
5 Reserve assets	– 0.9	+ 0.3	– 0.6
IV Errors and omissions[12]	– 9.9	– 7.3	– 1.0

1 Excluding freight and insurance costs of foreign trade. **2** Special trade according to the official foreign trade statistics (source: Federal Statistical Office). **3** Including freight and insurance costs of foreign trade. **4** Including participation certificates. **5** Including reinvestment of earnings. **6** Long-term: original maturity of more than one year or unlimited. **7** Short-term: original maturity of up to one year. **8** Balance of transactions arising from options and financial futures contracts as well as employee stock options. **9** Includes in particular loans and trade credits as well as currency and deposits. **10** Excluding the Bundesbank. **11** Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households. **12** 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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foreign shareholders reduced their intra-group lending (€0.6 billion).

Outflows in other investment

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 €8.3 billion in August, down from €28.0 billion one month previously. Outflows of funds in the banking system (€11.6 billion), with the Bundesbank accounting for the largest share (€19.6 billion), were of key importance in this regard. In particular, foreign counterparties' deposits with the Bundesbank decreased (€20.3 billion), while TARGET2 claims saw a slight decline (€0.8 billion). Monetary financial institutions (excluding the Bundesbank) experienced inflows of funds to the amount of €8.0 billion. Non-banks also recorded net capital imports of €3.2 billion in August. These arose from inflows of funds to general government (€2.6 billion) as well as to enterprises and households (€0.7 billion).

Reserve assets

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

State government finances: comparison of developments, debt brakes and fiscal surveillance

German state government finances have improved considerably in the current decade. This has been driven mainly by strong growth in tax revenue and the extremely low interest rates. Almost all federal states (or Länder), including their local governments, achieved structural surpluses last year. Although there are still considerable differences, the various states' financial situations have converged over time. By contrast, debt levels have continued to move in different directions and now exhibit a large spread. This is currently less of an issue given the very low level of interest rates, and further savings will initially probably be possible as debt is rolled over. However, the current low interest rate environment should not be regarded as permanent. A normalisation has a particularly strong impact when debt levels are high. Highly indebted federal states, in particular, would therefore be well advised to pursue an ambitious budgetary policy.

The federal states' spending on civil servants' pensions will increase considerably for some time to come. As things currently stand, existing reserves for civil servants' pensions are not large enough to cover this. The size of both the financial burden and the provisions made differs from state to state. Hence, it would be desirable for all Länder to disclose details of both items regularly at certain dates in a transparent and harmonised manner. As is being discussed for the statutory pension insurance system, it would make sense to also gradually raise the retirement age for civil servants in the future in line with rising life expectancy.

Central government will make a larger contribution to the state government revenue-sharing scheme from 2020. In addition, it is to co-finance state government tasks on a much larger scale. Whereas the states' individual responsibility was strengthened in the last decade, responsibilities are now increasingly being blurred again. This would not appear to promote an efficient use of funds. What would, in fact, be important is a clear link between government tasks, spending and funding. By strengthening the responsibility of the individual state governments, it would also be easier to take account of different preferences in terms of the organisation and extent of government activity. Increased freedom of scope regarding some taxes and transparent comparisons of public services and their cost would strengthen federalism.

From 2020, the debt brake will apply to all federal states. In terms of its concrete implementation, the individual states are pursuing different approaches. What matters is that the concrete rules successfully guarantee that the objective of the debt brake is met: to ensure that there are no permanent deficits in the future. Alongside the national fiscal rules, the European rules, which target the general government deficit, must also be met. Here, stringent and transparent fiscal surveillance is of central importance. In this, the Stability Council has a key role. However, the information based on which budgetary surveillance takes place does not currently appear adequate. Significant improvements are needed in terms of the scope, information value and comparability of the information provided by the individual federal states.

Role of the federal states in the federal system

Federal states have special position in the federal system

The federal states have a special role to play within the federal system. The state governments have a say in national law-making through their representation in the Bundesrat. They are individually responsible for all areas not explicitly assigned to central government in Germany's Basic Law *(Grundgesetz)*. This includes, in particular, primary, secondary and tertiary education, general internal security, general legal protection and important parts of the public administration, such as the tax offices. The federal states are funded primarily through joint taxes raised uniformly at the national level, which they share with central government and (to a smaller extent) local government. A revenue-sharing scheme is in place to avoid excessive differences in terms of the financial capacities of the federal states and thus ultimately the public services they provide. Municipal tasks are the responsibility of local government, and are, in part, funded by local government taxes to which local multipliers apply. Nonetheless, the federal states are partly responsible for ensuring that their local governments have adequate funding and pursue sustainable fiscal policies.

Although the Basic Law strengthens individual responsibility of state governments, …

The federal states' individual responsibility has been strengthened over the past decade. Since the 2006 reform of the federal structure, for instance, the individual states have determined civil servants' pay and the real estate acquisition tax rate, amongst others. In addition, mixed financing, where central government co-finances certain state government projects, was reduced significantly.[1] This applies to the construction of social housing and of universities, say. The state governments are freer in terms of how they use the lump-sum payments they now receive. In addition, the debt brake was passed in 2009.

In recent years, the state governments' individual responsibility in terms of resolving problems has taken something of a backseat, however. It is difficult, for instance, to make detailed comparisons of federal state outcomes, for example in education.[2] In addition, plans to increase the scope of decision-making on tax legislation were not pursued – say through state-specific surcharges or discounts on income tax. Instead, the state governments have repeatedly sought additional central government funds to finance their tasks.[3] In return, central government is demanding a greater say. Decisions are thus becoming increasingly centralised again and responsibilities are being blurred.

… mixed financing and blurred responsibilities are increasing again

Development of state government finances – an overview[4]

Federal states as a whole with rising surpluses since 2014 following many years of budget deficits

Looking at the federal states in aggregate, budgets were almost continuously in deficit from reunification to 2013. In 2003, a year of economic weakness, the deficit peaked at €34½ billion (1½% of gross domestic product (GDP)) (see the chart on p. 15). In 2007, a surplus was achieved for the first time, partly as a result of the strong economy. However, the financial and economic crisis then resulted in considerable deficits again. This was partly due to the economic downturn as well as, not least, spending on economic stimulus packages. After that, the situation improved gradually, however. Since 2014, surpluses have been recorded and climbed to €8½ billion by last year.

1 Ultimately, any central government involvement in schools was even banned.
2 As a case in point, when the Pisa surveys were conducted, the state governments did not release more detailed datasets on the state results for publication.
3 One result was, for instance, the Federal Government's draft law intended to reform the Basic Law and expand mixed financing in education, in particular.
4 This overview is based on the national accounts. It includes not only core budgets, but also off-budget government entities such as the federal states' universities and construction agencies. By contrast, public enterprises such as university hospitals are not included in the government sector. The national accounts are better than the government financial statistics at ensuring a consistent comparison over time. For more on trends in the federal states' core budgets according to the government financial statistics in the period 2005 to 2011, see Deutsche Bundesbank, The development of state government finances in Germany since 2005, Monthly Report, October 2012, pp. 29-49.

This was ultimately primarily due to strong tax growth and the falling interest burden. Even after cyclical adjustment, a surplus has been recorded since 2014.[5] The fact that it has continued to rise in recent years is largely due to shrinking interest expenditure.

Spending trends

Clear increase in expenditure

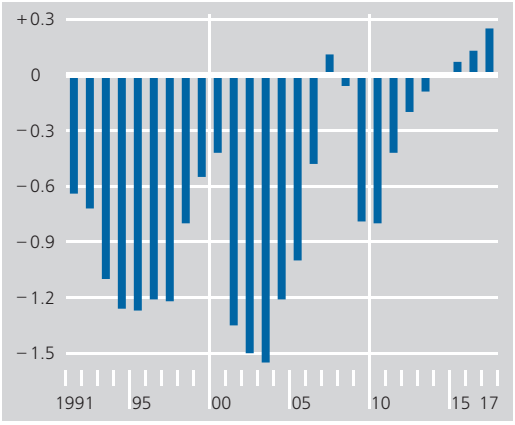
State governments account for just over one-third of spending by central, state and local government. In addition, they make large transfers to their local governments to help them fund the tasks conferred upon them. Since 2007, the year before the crisis, overall spending by the Länder has risen by 3½% a year on average (see the table on p. 16). The increase was therefore perceptibly more pronounced than in the preceding decade and also as compared to nominal GDP growth of just over 2½% a year. Primary expenditure – in other words, excluding interest spending – actually increased by almost 4% on average. There was relatively strong growth in spending on, for instance, civil servants' pensions, investment and intermediate consumption. In some instances, however, higher spending was also related to additional revenue already earmarked for this purpose. For example, there was a rise in the proportion of transfers to local government that were funded by central government. Additionally, television licence fees have, since 2013, been passed through the state government budgets for statistical purposes.[6] However, even excluding these two factors, primary expenditure still rose by a distinct 3½%.

Sharp decline in average interest rates lowers interest expenditure

Lower interest rates were a key factor in the favourable development in government finances (see the chart on p. 17). This is evident, for example, when one compares the average interest rate on state government debt in 2017 (2%) with the interest charged before the crisis. If the federal states had had to pay the average interest rate of 2007, namely just shy of 4½%, their interest expenditure would have been

The federal states' fiscal balance*

As a percentage of GDP



Sources: Federal Statistical Office and Bundesbank calculations.
* National accounts data.

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€13½ billion higher. Instead of a surplus, the Länder would have recorded a deficit of €5 billion last year. In actual fact, interest expenditure is less and less of a burden. Whereas interest spending accounted for 7% of overall expenditure in 2007, it represented a share of just 3% at last count. In relation to GDP, this translates into a halving to just under ½%.

Debt ratio has declined perceptibly since 2012 following previous rise

While average interest rates have been falling since as far back as 2008, debt initially continued to rise noticeably (as defined by the Maastricht Treaty, see the chart on p. 17). This was due both to the support provided to Landesbanken during the financial crisis[7] and to a spike in deficits. The state government debt

5 Cyclical adjustment is carried out based on the Bundesbank's estimate of May 2018 using the Bundesbank's disaggregated cyclical adjustment method. Cyclical effects for the individual taxes were allocated to the individual federal states based on their tax revenue shares.

6 In 2013, television licence fees were switched to a flat-rate fee per household. In the national accounts, they have since then been recorded as tax revenue of the federal states, which is transferred to the broadcasters on the expenditure side.

7 Several institutions – in particular BayernLB (which received €10 billion) – received capital injections. Others, such as LBBW, were additionally supported with a guarantee portfolio (€12½ billion), which pushed up debt. Spin-offs of portfolios guaranteed by state governments had the largest effect, accounting for more than €50 billion in total. These related to SachsenLB and WestLB and the latter's later bad bank, the First Winding-up Agency (Erste Abwicklungsanstalt). These debts have now been partially repaid, however.

Expenditure and revenue in federal states' budgets in the years 2007 to 2017

Item	2007	2010	2014	2015	2016	2017	Change
	€ bn						% p.a.
Revenue	309.3	317.8	383.2	399.8	423.7	436.7	3.5
of which:							
Sales	23.7	28.1	35.8	37.1	38.1	40.4	5.5
Taxes	205.2	193.8	244.9	259.1	279.3	289.8	3.5
Transfers (from general government)	44.3	54.7	55.8	57.7	59.3	61.4	3.3
Expenditure	306.4	338.4	383.1	397.6	419.5	428.4	3.4
of which:							
Intermediate consumption	29.7	36.3	43.9	47.0	48.6	48.4	5.0
Personnel expenditure	121.6	133.8	150.0	154.3	159.5	165.5	3.1
of which:							
Compensation of employees	100.0	108.6	119.3	121.8	125.2	129.3	2.6
Pension benefits	21.7	25.2	30.7	32.5	34.4	36.2	5.3
Interest	21.4	22.0	16.8	15.1	13.6	12.8	– 5.0
Social benefits[1]	20.5	23.5	23.5	24.1	27.2	26.7	2.7
Transfers (to general government)	65.2	69.7	84.9	91.8	100.5	104.5	4.8
Gross investment	13.9	17.8	20.0	22.3	23.5	24.9	6.0
Memo item: net investment	0.6	2.8	1.8	3.4	3.8	4.2	20.9
Memo item: primary expenditure[2]	285.0	316.4	366.3	382.5	405.9	415.5	3.8
Fiscal balance	2.8	– 20.6	0.1	2.2	4.2	8.3	
Structural balance[3]	– 1.2	– 16.8	1.7	4.0	5.0	7.6	
Memo item: incl. local government	3.4	– 23.6	2.4	9.0	10.3	16.7	
Structural primary balance[2]	20.2	5.2	18.6	19.1	18.5	20.5	
	As a percentage of GDP						Percentage points
Revenue	12.3	12.3	13.0	13.1	13.4	13.3	1.0
of which:							
Sales	0.9	1.1	1.2	1.2	1.2	1.2	0.3
Taxes	8.2	7.5	8.3	8.5	8.8	8.8	0.7
Transfers (from general government)	1.8	2.1	1.9	1.9	1.9	1.9	0.1
Expenditure	12.2	13.1	13.0	13.0	13.3	13.1	0.9
of which:							
Intermediate consumption	1.2	1.4	1.5	1.5	1.5	1.5	0.3
Personnel expenditure	4.8	5.2	5.1	5.1	5.0	5.1	0.2
of which:							
Compensation of employees	4.0	4.2	4.1	4.0	4.0	3.9	0.0
Pension benefits	0.9	1.0	1.0	1.1	1.1	1.1	0.2
Interest	0.9	0.9	0.6	0.5	0.4	0.4	– 0.5
Social benefits[1]	0.8	0.9	0.8	0.8	0.9	0.8	0.0
Transfers (to general government)	2.6	2.7	2.9	3.0	3.2	3.2	0.6
Gross investment	0.6	0.7	0.7	0.7	0.7	0.8	0.2
Memo item: net investment	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Memo item: primary expenditure[2]	11.3	12.3	12.5	12.5	12.8	12.7	1.3
Fiscal balance	0.1	– 0.8	0.0	0.1	0.1	0.3	0.1
Structural balance[3]	– 0.0	– 0.7	0.1	0.1	0.2	0.2	0.3
Memo item: incl. local government	0.1	– 0.9	0.1	0.3	0.3	0.5	0.4
Structural primary balance[2]	0.8	0.2	0.6	0.6	0.6	0.6	– 0.2

Sources: Federal Statistical Office, national accounts, as at August 2018. Bundesbank calculations. **1** Monetary social benefits (excluding civil servants' pensions and healthcare subsidies) as well as social transfers in kind. **2** After deduction of interest expenditure. **3** Fiscal balance adjusted for the calculated influence of cyclical factors on tax revenue (Bundesbank method, data as at May 2018).

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ratio rose from 20% in 2007 to almost 25% in 2012. Since then, it has fallen steadily to 18½% at the end of 2017 (€611 billion).

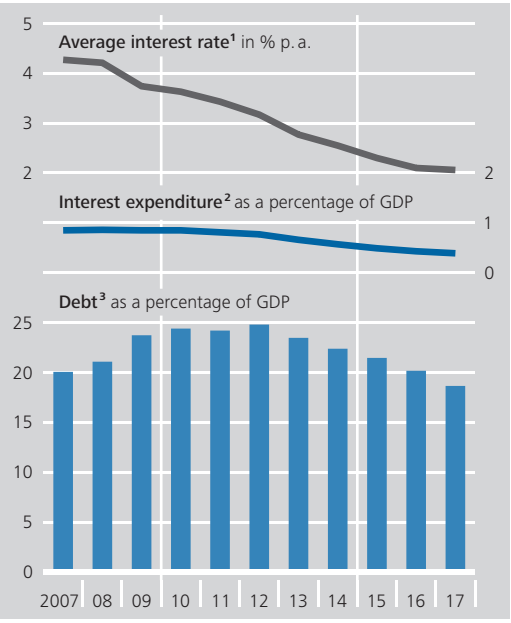
Moderate additional costs for current staff, but strong increase in civil servants' pensions

The federal states are responsible for particularly personnel-intensive functions of government. As a consequence, personnel expenditure accounts for by far the largest share of spending, at almost 40%. Spending on current salaried staff and civil servants has grown by an average of 2½% a year since 2007. Besides a slight increase in staffing levels, this mainly reflects changes in negotiated wages and civil servants' pay. Pay rises roughly matched the moderately increased negotiated wages in the economy as a whole. Spending on retired civil servants rose much more strongly (+5½% per year) as there was a sharp rise in the number of recipients.

Strong increase in transfers to local government supported by federal aid

The federal states make large current and capital transfers to other government levels, particularly local governments. Accounting for one-quarter of expenditure, the latter represent the second-largest expense item and exhibited above-average growth (+5% a year). Payments under the local government revenue-sharing scheme, which largely depend on how the states' tax revenue develops, grew considerably. However, the central government funds that flow to local governments through the federal state budgets grew much more still. For instance, central government has, since 2014, fully reimbursed the cost of the basic allowance for the elderly. In addition, it has incrementally increased how much it contributes to the accommodation costs of those receiving unemployment benefit II. Since 2015, central government has also made lump-sum payments to deal with the influx of refugees. Finally, federal funds for local government investment which pass through the federal states' budgets also rose. Alongside earlier economic stimulus packages, these include payments for the expansion of day care facilities for children and payments from the fund to promote municipal investment.

The federal states' debt and interest expenditure



Sources: Federal Statistical Office and Bundesbank calculations. **1** Interest expenditure (according to the national accounts) for the year under review in relation to mean Maastricht debt levels at the end of the reporting year and of the respective previous year. **2** As defined in the national accounts. **3** Maastricht debt.
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Similar increase in other operating expenditure

Intermediate consumption also grew strongly. This item includes, in particular, other operating expenditure such as the purchase of services and payment of rent. As a result of refugee migration, it temporarily increased particularly sharply. This is evident in high growth in 2015 and, more recently, a more muted development.

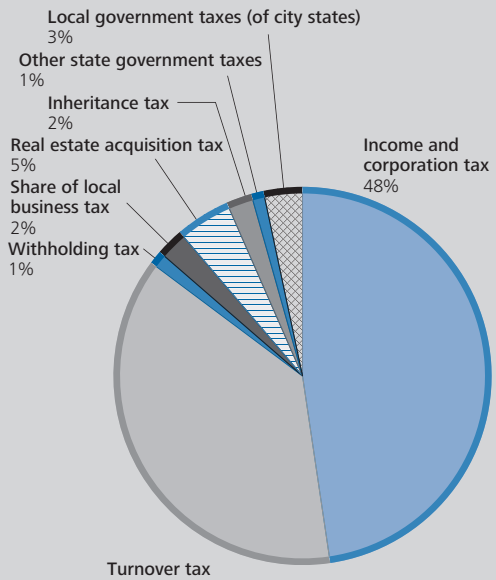
Strong expansion in investment

Investment expenditure by the state governments varied considerably. The strong overall increase (6% per year on average) reflects, in part, the favourable budgetary situation over the past few years. Net investment was positive throughout – in other words, investment expenditure exceeded depreciation.

Revenue trends

The federal states' revenue growth has slightly exceeded expenditure since 2007. Tax revenue expanded by 3½% a year on average, the same

The federal states' tax revenue in 2017 by type of tax*



Sources: Federal Statistical Office and Bundesbank calculations. * According to government finance statistics. Inheritance tax, which is recorded in the national accounts as a capital transfer, is included here, though the television licence fee, in particular, is not. In the government finance statistics (unlike in the national accounts), child benefits are deducted in full from tax revenue.
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Ample tax revenue meant revenue slightly outpaced expenditure growth

as total revenue, and made up two-thirds and thus the largest share of revenue. Although, the allocation or distribution of various taxes among central, state and local governments changed, the effects on state governments' tax revenue roughly cancelled each other out overall.[8] Changes in tax legislation dampened tax revenue in the first couple of years. Amongst other things, income tax cuts were introduced to cushion the effects of the financial crisis. In subsequent years, the strong underlying trend was the dominant factor, and clear revenue growth was recorded, particularly for profit-related taxes. Progressive taxation also had a markedly positive effect on revenue.

Bulk of tax revenue stems from joint taxes

Almost 90% of the federal states' tax revenue stems from joint taxes,[9] with income tax and corporation tax making the largest contribution ahead of turnover tax (see the chart above). In addition, federal states levy state government taxes.[10] These are largely regulated by national legislation, with the exception of real estate acquisition tax. Since the autumn of 2006, the individual states have set this tax rate autonomously. During the interim period, this rate has been raised in almost all states (except Bavaria and Saxony) – from originally 3.5% to up to 6.5%. The importance of this tax has thus increased, but it still represents just 4½% of the federal states' total tax revenue.

Clear increase in central government transfers

The second-largest revenue category are the transfers received from other public administrations, the vast majority from central government. These grew at a pace only slightly slower than tax revenue. This reflected the fact that additional federal funds were transferred to local government, as outlined above. Another significant factor was the transfer of funds from central government by way of compensation for motor vehicle tax, which has, since 2009, been passed to central government. These two items mask the fact that special-needs supplementary central government grants to help reconstruct the infrastructure in eastern Germany are gradually coming to an end.

Sharp increase in receipts from fees

There was significantly stronger growth in revenue from sales (+5½% per annum). This includes, in particular, receipts from fees, many of which are now received by off-budget entities. They fund public services for which staff and other operating costs, in particular, are generally incurred on the expenditure side. The federal states have meanwhile abolished the

8 In mid-2009, motor vehicle tax was transferred to central government. Since then, the federal states have received a transfer from central government (€9 billion a year) by way of compensation, which does not count as tax revenue. On top of that, the television licence fee has, since 2013, passed through the state government budgets for statistical purposes (€8 billion). In addition, central government ceded turnover tax funds to the federal states in connection with the spike in refugees entering the country.
9 For more information on the distribution of tax revenue, see Table X.6 in the Statistical Section of this report.
10 State government taxes comprise, first and foremost, real estate acquisition tax and inheritance tax. From 2013 onwards, they also include the television licence fee. However, in this definition, state government taxes also include local government taxes raised by the city states (where the local government level is not reported separately).

general tuition fees for students that many had previously introduced.

The budgetary situation of individual federal states

Methodological adjustments for better comparability

Enhancing the comparability of government financial statistics by …

The aggregate outcome for the federal states masks differences, in some cases large, between the individual federal states. Since the national accounts contain no individual state-level data, the government financial statistics are used here for a state-by-state breakdown. The available data material is further processed to ensure that key figures are as meaningful as possible.

… including off-budget entities …

The starting point for budgetary analyses is usually the core budget. However, in some federal states, the core budget does not include a large part of activities. Consequently, the federal states' off-budget entities included in the government sector are factored in – bringing the procedure more into line with the national accounts.[11] This neutralises the circumstance that some entities (such as universities) have, in many federal states, been moved off the core budgets and that reserves (such as pension funds) are used in different ways. For instance, high transfers to provisions weighed on the core budget in North Rhine-Westphalia in 2017. While the core budget had a deficit, this was balanced out by a surplus in the relevant off-budget entity. It is easier to compare the outcome for North Rhine-Westphalia with other federal states' results if the pension reserves and the core budget are analysed together.

… and local governments, …

Local governments are also included. This allows a comparison of non-city states with city states, which do not report local government-level data separately.[12] In addition, tasks are distributed differently between the federal state and the local government level in the non-city states. For a consolidated analysis, it would not matter if a federal state were to reduce its payments under the local government revenue-sharing scheme. This would merely shift the financial problems to the local governments, for which the federal state ultimately bears joint responsibility.[13]

… adjusting for financial transactions, …

As in the national accounts, financial transactions are also excluded.[14] These influence the fiscal balances recorded in the government financial statistics in individual federal states and years, significantly so in some cases. In principle, however, they merely reallocate financial assets. In a privatisation, for example, (net) financial assets remain unchanged: there is an inflow of cash, but equity holdings decline. By excluding transactions of this nature, the objective is to paint a more precise picture of the financial situation.

… recording the state government revenue-sharing scheme on an accruals basis, and …

In addition, payments under the state government revenue-sharing scheme are recorded on an accruals basis. Settlements that are not made and recorded in the government financial statistics until the following year are accounted for in the reporting year.[15]

… adjusting for cyclical effects

Finally, cyclical influences are stripped out in order to better depict the structural budgetary position. While these influences have a largely uniform impact on the individual federal states owing to the state government revenue-

11 The relevant entities are reported by the Federal Statistical Office: Liste der Extrahaushalte, 2018, available at www.destatis.de
12 The city states' population is given a 35% higher weighting in the state government revenue-sharing scheme in order to compensate for the fact that central areas have higher financial requirements than the surrounding areas.
13 See also Deutsche Bundesbank, Major budgetary differences between the federal states, Monthly Report, October 2012, pp. 36 ff.
14 However, adjustments are made in the national accounts if the budget shows a financial transaction but the national accounts criteria are not met. This would be the case, say, for an injection of capital without the prospect of profit distribution or to compensate for a loss. Such adjustments cannot be reconstructed for this article.
15 The adjustments incorporate the provisional annual settlement transactions for the reporting year and the preceding year.

Budgetary figures for the federal states (including local government) in 2017*

Item	BW	BY	BB	HE	MV	NI	NW	RP
Derivation of adjusted structural balances	in € million							
Fiscal balance (1)	1,377	5,571	908	1,585	1,062	1,851	2,683	1,527
Financial transactions (net) (2)	– 1,126	388	– 109	– 632	– 27	– 393	– 1,264	17
Settlement of payments under the state government revenue-sharing scheme (3)	163	345	– 22	183	– 6	91	109	– 355
Adjusted balance (4) = (1) – (2) + (3)	2,666	5,528	994	2,400	1,083	2,335	4,056	1,154
Cyclical component (5)	145	174	30	87	19	100	234	50
Adjusted structural balance (6) = (4) – (5)	2,521	5,354	964	2,313	1,063	2,235	3,822	1,104
Memo item: after deduction of consolidation assistance	.	.	.	.	.	.	.	.
Net interest burden[1] (7)	1,560	783	320	1,350	194	1,312	3,395	916
Adjusted structural primary balance (8) = (6) + (7)	4,081	6,136	1,284	3,663	1,258	3,547	7,217	2,020
	in € per inhabitant							
Fiscal balance (1)	125	429	363	254	659	232	150	375
Financial transactions (net) (2)	– 102	30	– 44	– 102	– 17	– 49	– 71	4
Settlement of payments under the state government revenue-sharing scheme (3)	15	27	– 9	29	– 4	11	6	– 87
Adjusted balance (4) = (1) – (2) + (3)	243	426	398	385	672	293	227	284
Cyclical component (5)	13	13	12	14	12	13	13	12
Adjusted structural balance (6) = (4) – (5)	229	413	386	371	660	281	214	271
Memo item: net of consolidation assistance	.	.	.	.	.	.	.	.
Net interest burden[1] (7)	142	60	128	217	121	165	190	225
Adjusted structural primary balance (8) = (6) + (7)	371	473	514	588	781	445	403	496
Expenditure, revenue and debt	in € per inhabitant							
Total expenditure	6,400	6,487	6,311	7,082	5,872	5,720	6,690	5,838
of which:								
Personnel expenditure	2,628	2,510	2,537	2,680	2,454	2,520	2,535	2,544
of which: pension benefits[2]	678	643	381	645	413	637	665	642
Other operating expenditure	1,041	1,035	1,208	1,348	1,224	979	1,489	1,225
Interest expenditure	168	83	145	241	168	199	250	284
Transfers to households	646	709	789	995	888	940	1,044	796
Fixed asset formation	693	734	395	407	535	371	316	371
Adjusted total expenditure[3]	6,010	5,922	6,134	6,491	5,463	5,640	6,517	5,744
Memo item: less fees	5,579	5,474	5,522	5,774	4,974	5,261	5,624	5,201
Memo item: less fees and interest expenditure	5,411	5,391	5,378	5,533	4,806	5,062	5,374	4,917
Total revenue	6,522	6,916	6,673	7,337	6,532	5,953	6,840	6,213
of which:								
Tax revenue[4]	4,742	4,739	4,375	4,910	4,326	4,401	4,691	4,524
Fees	432	448	612	717	490	379	893	544
Interest income	26	22	17	24	47	35	60	59
Transfers from central government[5]	379	396	949	509	1,011	443	472	433
Adjusted total revenue[3]	6,249	6,348	6,531	6,877	6,135	5,933	6,744	6,028
Memo item: less fees	5,818	5,900	5,919	6,160	5,646	5,554	5,850	5,484
Debt	5,400	2,442	7,818	9,988	7,210	9,567	13,209	12,825
Tax rates and multipliers								
Real estate acquisition tax (%)	5.0	3.5	6.5	6.0	5.0	5.0	6.5	5.0
Real estate tax B (%)[6]	396	392	406	470	424	427	567	400
Local business tax (%)[6]	368	373	321	410	377	403	452	382

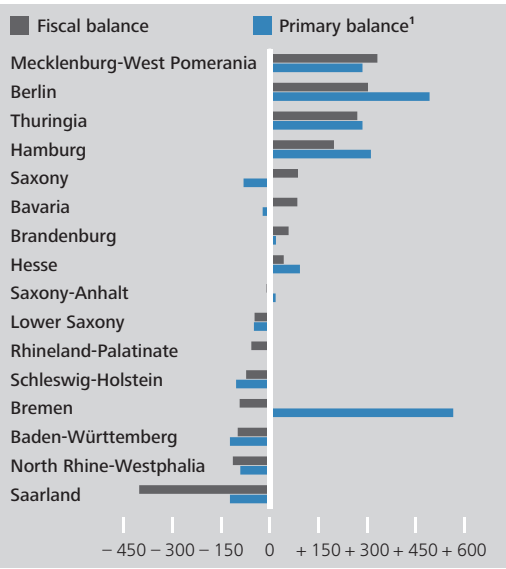
Sources: Federal Statistical Office, quarterly cash statistics (including post-bookings); Bundesbank calculations. * Core budgets and off-budget entities. **1** Interest expenditure less interest income. **2** Including healthcare subsidies for civil servants and refunds to central government for legacy claims for pension benefits in eastern Germany. **3** Excluding financial transactions and payments under the state government revenue-sharing scheme made by states providing contributions. Payments under the state government revenue-sharing scheme are settled on the revenue side. **4** Taxes and compensation for motor vehicle tax, state government

SL	SN	ST	SH	TH	BE	HB	HH	Total	Item
								in € million	**Derivation of adjusted structural balances**
– 90	1,136	680	– 106	1,324	2,437	83	74	22,101	Fiscal balance (1)
– 22	– 678	– 86	– 996	15	– 26	– 29	– 959	– 5,927	Financial transactions (net) (2)
5	– 73	– 29	– 117	4	– 136	59	– 42	174	Settlement of payments under the state government revenue-sharing scheme (3)
– 62	1,740	737	773	1,313	2,327	172	991	28,202	Adjusted balance (4) = (1) – (2) + (3)
12	49	27	36	26	60	12	33	1,097	Cyclical component (5)
– 75	1,691	709	736	1,287	2,267	160	958	27,106	Adjusted structural balance (6) = (4) – (5)
– 335	.	629	656	.	2,187	– 140	.	.	Memo item: after deduction of consolidation assistance
445	– 3	435	392	357	1,281	560	511	13,808	Net interest burden[1] (7)
370	1,689	1,144	1,128	1,644	3,548	720	1,469	40,914	Adjusted structural primary balance (8) = (6) + (7)
								in € per inhabitant	
– 90	279	305	– 37	615	679	123	41	267	Fiscal balance (1)
– 22	– 166	– 39	– 345	7	– 7	– 43	– 527	– 72	Financial transactions (net) (2)
5	– 18	– 13	– 41	2	– 38	87	– 23	2	Settlement of payments under the state government revenue-sharing scheme (3)
– 63	427	330	268	610	648	253	544	341	Adjusted balance (4) = (1) – (2) + (3)
12	12	12	13	12	17	18	18	13	Cyclical component (5)
– 75	415	318	255	598	631	235	526	328	Adjusted structural balance (6) = (4) – (5)
– 336	.	282	227	.	609	– 206	.	.	Memo item: net of consolidation assistance
447	– 1	195	136	166	357	825	281	167	Net interest burden[1] (7)
372	414	513	391	763	988	1,060	807	495	Adjusted structural primary balance (8) = (6) + (7)
								in € per inhabitant	**Expenditure, revenue and debt**
6,133	6,122	6,475	6,482	5,671	7,621	9,105	10,564	6,404	Total expenditure
									of which:
2,728	2,477	2,517	2,361	2,439	2,873	3,143	3,414	2,581	Personnel expenditure
759	350	400	612	367	667	867	963	622	of which: pension benefits[2]
1,359	1,097	1,492	1,013	981	2,389	2,147	3,096	1,301	Other operating expenditure
460	62	225	227	211	364	999	490	211	Interest expenditure
671	729	600	920	711	814	1,014	788	841	Transfers to households
307	574	398	471	448	205	400	1,062	489	Fixed asset formation
5,999	5,867	6,401	6,097	5,618	7,504	8,956	9,884	6,238	Adjusted total expenditure[3]
5,584	5,413	5,967	5,616	5,240	6,848	8,255	7,833	5,627	Memo item: less fees
5,123	5,352	5,742	5,389	5,030	6,484	7,255	7,343	5,416	Memo item: less fees and interest expenditure
6,042	6,395	6,780	6,445	6,286	8,299	9,228	10,605	6,670	Total revenue
									of which:
4,446	4,339	4,202	4,517	4,311	5,905	6,050	6,451	4,722	Tax revenue[4]
415	454	434	481	378	656	701	2,050	612	Fees
14	62	30	91	45	8	174	210	44	Interest income
774	795	1,263	611	863	956	1,166	662	558	Transfers from central government[5]
5,936	6,288	6,732	6,364	6,228	8,151	9,209	10,428	6,579	Adjusted total revenue[3]
5,521	5,834	6,298	5,883	5,850	7,495	8,508	8,377	5,967	Memo item: less fees
18,165	2,822	10,741	12,230	8,989	16,731	34,043	19,894	9,396	Debt
									Tax rates and multipliers
6.5	3.5	5.0	6.5	6.5	6.0	5.0	4.5	5.4	Real estate acquisition tax (%)
418	495	415	390	436	810	686	540	470	Real estate tax B (%)[6]
441	422	361	378	407	410	460	470	402	Local business tax (%)[6]

revenue-sharing scheme and general supplementary central government grants according to provisional figures. **5** Excluding general supplementary central government grants and compensation for motor vehicle tax. **6** Revenue-weighted average local government multipliers for 2017. Abbreviations: BW – Baden-Württemberg, BY – Bavaria, BB – Brandenburg, HE – Hesse, MV – Mecklenburg-West Pomerania, NI – Lower Saxony, NW – North Rhine-Westphalia, RP – Rhineland-Palatinate, SL – Saarland, SN – Saxony, ST – Saxony-Anhalt, SH – Schleswig-Holstein, TH – Thuringia, BE – Berlin, HB – Bremen, HH – Hamburg.

Deviation of adjusted structural balances of state and local governments from the national average*

Data in € per inhabitant in 2017



Sources: Federal Statistical Office and Bundesbank calculations. * Balances adjusted for financial transactions, calculated cyclical effects and settlement under the state government revenue-sharing scheme. Figures from the government financial statistics (cash statistics including post-bookings). **1** Additionally after deduction of net interest burden (interest expenditure less interest income).

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sharing scheme,[16] such an adjustment makes sense for a comparison over time.

The budget situation in 2017[17]

Structural surpluses virtually nationwide in 2017

The surpluses of the federal states as a whole climbed to an all-time high (€27 billion, or 0.8% of GDP) in 2017, even in terms of the methodological adjustments outlined above.[18] With the exception of Saarland, all federal states posted a surplus (see the table on pp. 20 and 21). Per capita, Mecklenburg-West Pomerania recorded the highest amount (€660), which was twice the national average.[19]

Major differences in debt level and interest expenditure, …

Debt servicing has a significant impact on the budget situation of the individual federal states (see the box on p. 23 focusing on Bremen and Saarland). This is predominantly due to different debt levels.[20] For instance, at the end of 2017, the per capita debt level in Bremen was more than three and a half times higher than the national reference figure (see the chart on p. 24). The level in Hamburg and Saarland was still around twice as high. As a result, per capita interest expenditure[21] was highest in Bremen – almost five times the national reference figure of €210 (see the chart on p. 26). But interest costs were also just over twice as high in Hamburg and Saarland. By contrast, Bavaria and Saxony recorded particularly low levels.

… but some large differences in interest income, too

However, in many cases, debt is also offset by sizeable financial assets.[22] These can be included in the calculations, at least in part, by deducting interest income from interest expenditure (net interest burden).[23] In these net terms, Saxony no longer had a burden and Hamburg's high interest costs fell by almost half. Bremen's interest income was also way above average.

16 The cyclical effect for the federal states as a whole (see footnote 5 on p. 15) is allocated to the individual federal states based on the previous year's tax revenue shares (as in the consolidation assistance procedure). The same is done for the local governments. The individual federal states apply various methods for their debt brakes, and the estimation results differ considerably in some cases.
17 To improve comparability among the federal states, the relevant figures are shown in relation to the population size (per capita analysis).
18 The surpluses thus significantly exceeded the cyclically adjusted national accounts balance of state government and local government combined (€16½ billion). One contributory factor was that the financial support provided by Hamburg and Schleswig-Holstein to HSH Nordbank is classed as a loan (financial transaction) in the government financial statistics. However, in the national accounts, it is booked as a capital transfer, thus lowering the surplus.
19 An average weighted by the share of the population is used for the national reference figure. Larger states thus have a greater impact.
20 This includes debt in the non-public and in the public sector. It is not possible to rule out errors in consolidation using the figures available for the individual federal states.
21 As with the similar definition of debt, this includes interest expenditure to areas of the non-public sector and other public sector entities.
22 According to the Federal Statistical Office's financial asset stock statistics, the total stock of state and local government financial assets amounted to €580 billion at the end of 2017. However, this figure has not been adjusted for loans to other public sector entities and is thus overstated. As a result, it is not directly comparable with the consolidated debt level of state and local government as defined under the Maastricht Treaty (around €760 billion at the end of 2017).
23 It is not possible to additionally adjust for profit distributions from equity holdings using the aggregated government financial statistics data available.

The significance of special assistance for Bremen and Saarland

With the debt brake, consolidation assistance was introduced for particularly highly indebted federal states. The costs are split between central government and state governments. An annual volume of €800 million has been earmarked for this purpose for the 2011 to 2019 fiscal years. The lion's share of this sum goes to two small states: Saarland (€260 million, or €260 per capita) and Bremen (€300 million, or €440 per capita).[1] The disbursement of assistance is conditional on progress in consolidation.[2] It has taken place every year thus far.

Last year, Bremen achieved an adjusted surplus (i.e. including interest burden and consolidation assistance) of €240.[3] Saarland, meanwhile, was still running a deficit (€70). Despite the extraordinarily low level of interest rates, high debt levels have still been weighing particularly heavily on both states: Saarland's net interest burden[4] was €280 higher than the national average, and that of Bremen €660 higher. This was partly compensated for by consolidation assistance, however, which nearly fully offset the additional burden in Saarland and knocked off as much as two-thirds of the additional burden in Bremen. Bremen's basic fiscal position (in turn, excluding net interest burden and consolidation assistance) was recently markedly better than the national average, whereas Saarland still fell perceptibly short of the national average.

As from 2020, both states will receive new, higher special payments from central government. Each state will receive €400 million in budgetary recovery assistance annually (€400 per capita in Saarland and €590 per capita in Bremen). Based on figures for 2017, the funds almost completely cover Bremen's additional interest burden, while they even overcompensate Saarland's by a wide margin. This puts these two states in a better position than other states with above-average debt levels.

There is no formal time limit on the budgetary recovery assistance, which appears to be assured for well over a decade.[5] Virtually no repayment conditions are attached to these funds. This assistance is therefore not specifically pushing states to bring their budgetary outturns (net of the assistance) perceptibly closer to the federal state average. There is therefore a risk of structural dependency on budgetary recovery assistance. If efforts to scale back debt levels considerably do not succeed, both states will, in the medium to long term, also be more vulnerable to rising interest rates. It is therefore advisable to initially use only a smaller portion of the new funds for additional expenditure. A more expedient course of action would be to defuse the debt situation, something for which the henceforth expanded special assistance would provide a sound financial basis. That would help Bremen and Saarland, and not just in terms of complying with the debt brake. A federal structure which is based more strongly on individual responsibility of the federal states should then be seen as an opportunity.

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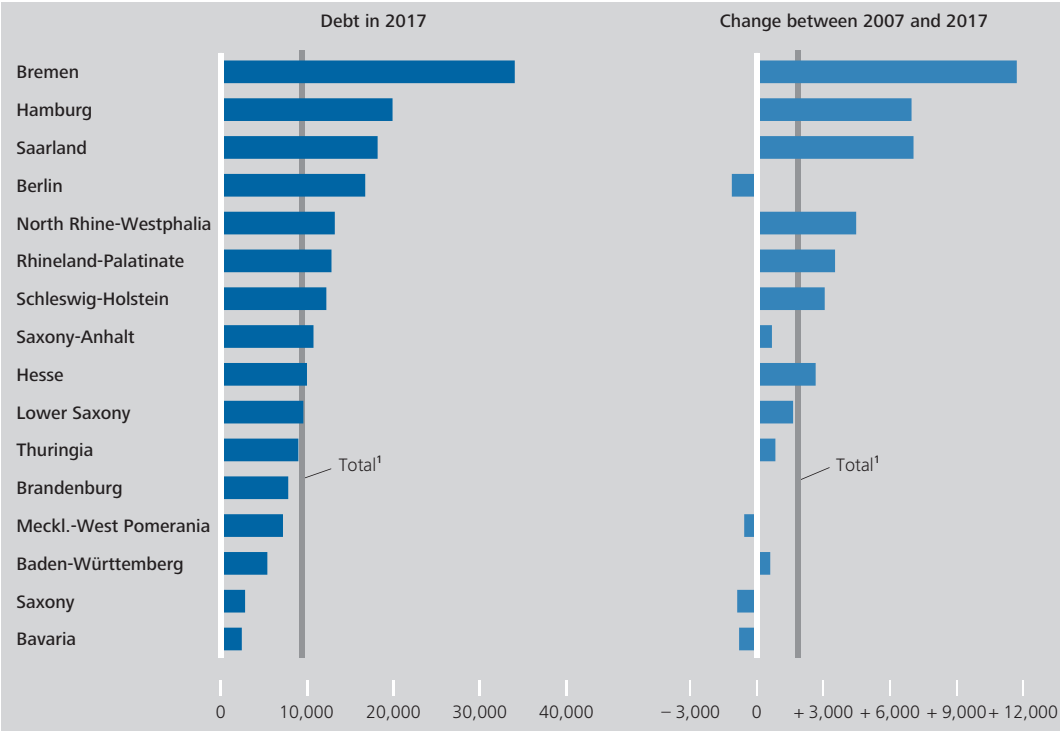
1 In 1992, the Federal Constitutional Court ruled that these states were in extreme budgetary hardship. In order to overcome this state of affairs, they received extensive special assistance up until 2004, which was progressively reduced towards the end.
2 When identifying progress, no account is taken of this assistance, as the idea behind it is not to directly create any additional fiscal leeway. Instead, it is designed to ensure that a sound budgetary position is achieved and that the recipient can independently comply with the debt brake as of 2020.
3 The description below is based on adjusted data from the government finance statistics; the method used to calculate them (including cyclical adjustment) is described on p. 19. For ease of comparability, the data below, unless mentioned otherwise, are expressed in per capita terms and include consolidation assistance.
4 I.e. interest expenditure less interest income.
5 Pursuant to Article 143 f. of the Basic Law *(Grundgesetz),* three or more federal states, for instance, can, as of 2031, jointly demand renegotiations on the revenue-sharing scheme and thus also on budgetary recovery assistance. The assistance would then expire unless new arrangements are agreed within five years.

Debt of state and local governments*

€ per inhabitant



Sources: Federal Statistical Office and Bundesbank calculations. * Figures from the government financial statistics. Debt in the non-public and the public sector (non-consolidated). 1 All state and local governments.

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Budget situation excluding net interest burden also shows larger differences

The budgetary position excluding the net interest burden (adjusted structural primary balance) was most favourable in the city states (see the chart on p. 27). Of the non-city states, Mecklenburg-West Pomerania and Thuringia recorded by far the highest surpluses. Without the net interest burden, Saarland, in particular, came much closer to the state average, closely followed by Baden-Württemberg.

Changes since 2007

Clear improvement in budget outturns since 2007 due to …

State governments' underlying budgetary position has improved immensely over the last ten years. The differences among the states have also eased considerably. In 2007, in addition to the five eastern states, only Bavaria, Baden-Württemberg and Hamburg had noteworthy surpluses (according to the definition and adjustments outlined above). Calculated in this way, the per capita deficits in 2007 were at their highest in Bremen (€1,250).

… fall in net interest burden and …

The favourable development is attributable, on the one hand, to the net interest burden, which has fallen significantly in all federal states, in particular due to the favourable borrowing conditions (see the chart on p. 26). Yet, there has been almost no change in the range of interest burdens among the federal states. The fall in interest rates provided particularly great relief for some highly indebted states, but it was largely outweighed by less favourable debt movements (see also the box on p. 25).

… improvement in structural budgetary position

On the other hand, the structural budgetary position (after deduction of the net interest burden) improved. This was due to extremely positive developments in those states that had been running a deficit at that time. By contrast, some states whose structural budgets were already in surplus eased their budgetary position. This was the case for Saxony, in particular, but also Baden-Württemberg and Saxony-Anhalt (see the chart on p. 27).

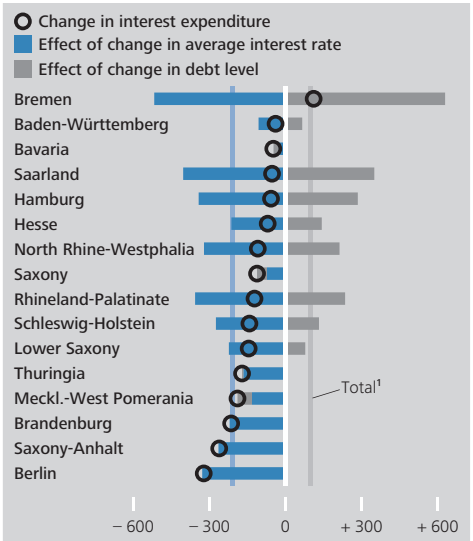
Interest expenditure: impact of debt levels and average interest rates

The amount of (gross) interest expenditure is determined by the level of debt and the average rate of interest. All the federal states have benefited from the dramatic improvement in borrowing conditions. For instance, the average interest rate calculated from the cash statistics for state government as a whole (including local government and off-budget entities) is half as high as it was in 2007, at just over 2%.[1] This decline has had a particularly positive effect on highly indebted federal states. On a national average, the receding average interest rates have translated into per capita relief of €210 compared with 2007 levels (€17 billion in total). Bremen and Saarland have benefited the most, their relief coming to €520 and €400 per capita, respectively.

Debt levels in the individual federal states have continued to diverge, not least on account of the varying budget outturns they have registered since 2007 (see the chart on p. 24).[2] They receded in the federal states of Bavaria, Berlin, Mecklenburg-West Pomerania and Saxony, but climbed elsewhere. Bremen experienced the strongest per capita growth, followed by Saarland and Hamburg some way behind. Interest expenditure contracted only marginally on balance in Saarland, and it even saw another increase in Bremen. In some cases, though, these contrasting fortunes have been driven in part by one-off factors. Furthermore, debt levels may have risen, but so, too, has the stock of financial assets and interest income.[3]

How state and local government interest expenditure evolved between 2007 and 2017*

Data in € per inhabitant in 2017



Sources: Federal Statistical Office (government financial statistics) and Bundesbank calculations. * Owing to gaps in the financial assets data, it is not possible to include the interest income offsetting some of the interest expenditure in the calculations of the average interest rate and the year-on-year comparison. **1** All state and local governments.

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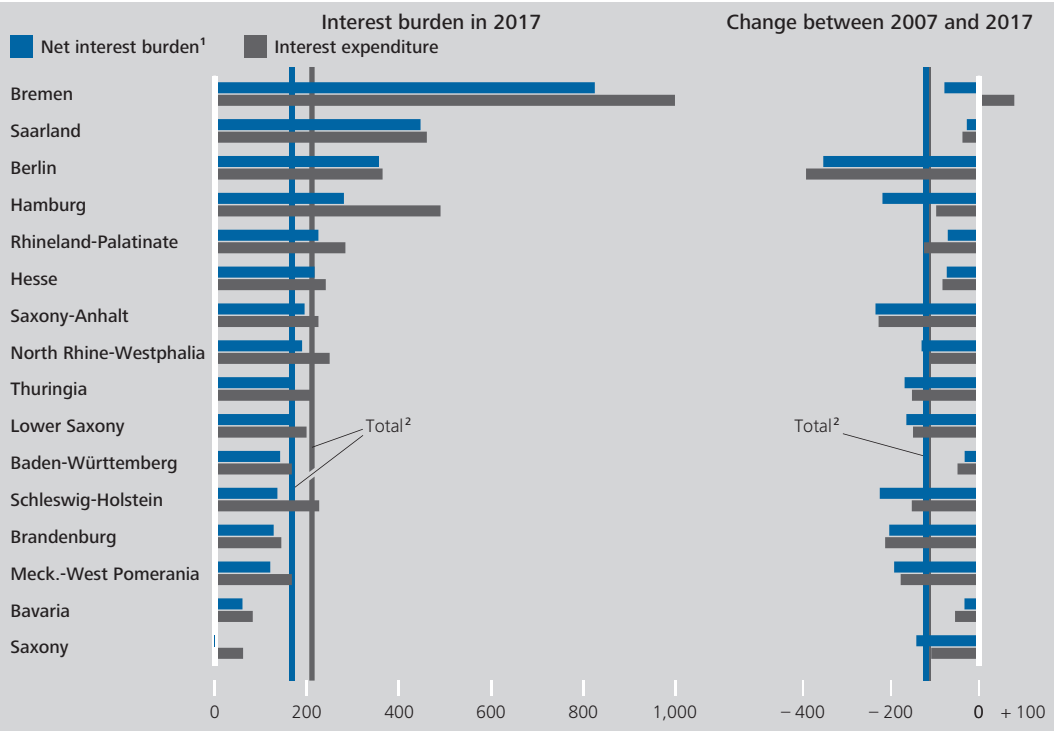
1 The average rate of interest is the reported interest expenditure as a percentage of the amount of debt at the end of the previous year. In some federal states, the average interest rate differs significantly from the figure stated due to the effects of interest rate hedges in particular.
2 The debt statistics for 2007 include only a small number of off-budget entities. However, it was only after that date that debt levels at these entities such as the bad banks began to rise significantly. Therefore, the comparison with the year 2017 should not be too distorted.
3 The data for North Rhine-Westphalia, for example, were affected by the establishment of the First Winding-up Agency (Erste Abwicklungsanstalt), the state-owned bad bank tasked with winding up the operations of WestLB. The debts managed by this Agency are offset by a stock of financial assets which are a source of interest income. By winding up these assets, the Agency expects to be able to scale back the debt level substantially over time. Bremen likewise saw its debt levels rise by far more than the deficits recorded in the core budget. The increase in interest expenditure was offset by strong growth in interest income during this period.

Interest burden of state and local governments*

€ per inhabitant



Sources: Federal Statistical Office and Bundesbank calculations. * Figures from the government financial statistics (cash statistics for 2017 including post-bookings). **1** Interest expenditure less interest income. **2** All state and local governments.

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Total revenue and total expenditure in 2017

Limited comparability of total revenue and expenditure: state government revenue-sharing scheme and …

The state government revenue-sharing scheme, for one, makes it difficult to compare total revenue and expenditure across the federal states. Federal states with a large financial capacity post "inflated" figures. They collect an above-average amount of tax revenue, part of which is dispensed again via payments into the state government revenue-sharing scheme. In order to neutralise this impact, payments under the revenue-sharing scheme made by the states providing contributions are recorded net; i.e. these payments are deducted from the total revenue and expenditure of the states in question.

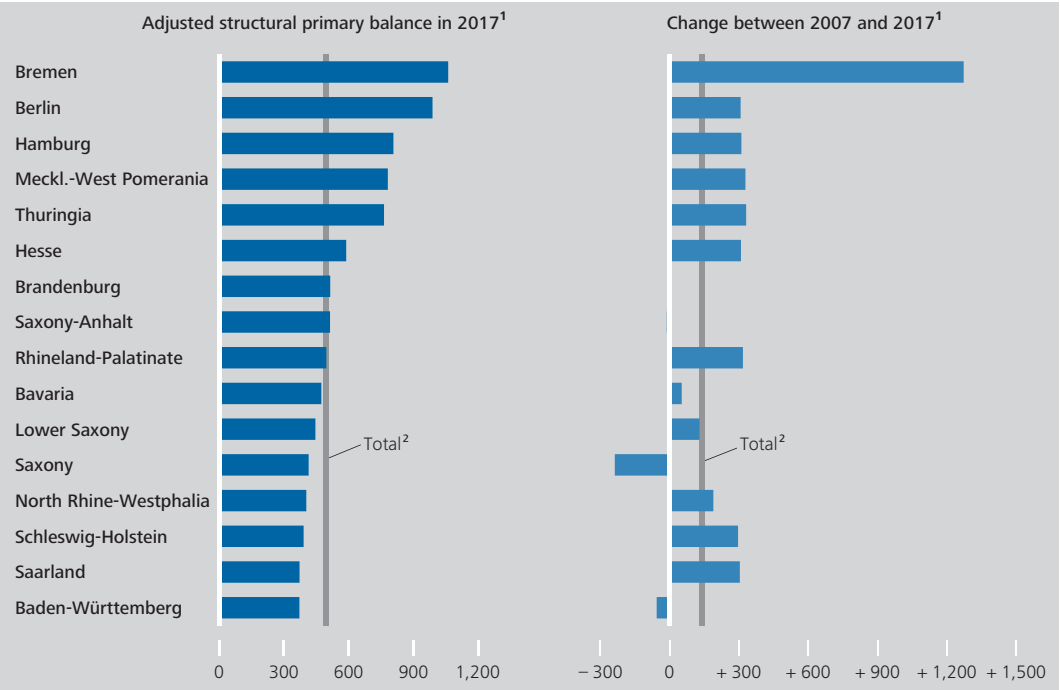
… receipts from fees recorded net

Furthermore, the individual states outsource a varying amount of tasks to private enterprises outside the government sector. Where tasks have been outsourced, government revenue and expenditure are lower. On the one hand, the corresponding receipts from fees, in particular, are no longer recorded on the revenue side. On the other hand, there is above all no personnel expenditure, other operating expenditure or spending on fixed asset formation on the expenditure side, respectively. Therefore, if a state records higher receipts from fees, this does not necessarily mean greater budgetary scope or higher burdens for the population than in other federal states. As a result, the particularly high level of receipts from fees recorded in Hamburg and partly in North Rhine-Westphalia is to be put into perspective, as is the higher level of spending observed in the corresponding categories in those states. In order to improve comparability of total revenue and total expenditure among federal states, receipts from fees are also recorded net here (i.e. deducted from total revenue and expenditure).

These adjustments considerably lowered the spread of total revenue and expenditure (see the table on pp. 20 and 21). The differences in

Primary balance of state and local governments*

€ per inhabitant



Sources: Federal Statistical Office and Bundesbank calculations. * Figures from the government financial statistics (cash statistics for 2017 including post-bookings). **1** After deduction of the net interest burden (interest expenditure less interest income). Balance adjusted for financial transactions, calculated cyclical effects and settlement under the state government revenue-sharing scheme. **2** All state and local governments.

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Higher expenditure, even after adjustment for interest burden, mostly covered by tax revenue capacity or transfers

interest expenditure outlined above can be seen on the expenditure side. Of the non-city states, Saxony-Anhalt recorded the highest level of other expenditure. However, this was offset by particularly high transfers from central government. Saxony-Anhalt was closely followed by Hesse which, at the same time, had a high level of tax revenue. Mecklenburg-West Pomerania was at the other end of the scale and also posted the highest surplus due to its relatively low level of expenditure. The values recorded by the city states were way above average: Hamburg recorded the highest level of other expenditure, closely followed by Bremen where tax revenue was much lower and the interest burden far higher.

Notes on selected expenditure categories

Staff costs are the largest expenditure item for all federal states. Expenditure for current staff per inhabitant is already very varied in the non-city states. For example, Brandenburg spent almost a quarter more on staff than Schleswig-Holstein. However, the largest amounts were recorded in the city states, especially Hamburg. Yet, caution should be exercised when interpreting these figures. Some federal states contract out public services outside the government budgets. One example is privately run institutions taking on childcare. The states' own staff costs are then lower, but grants to such institutions are higher.

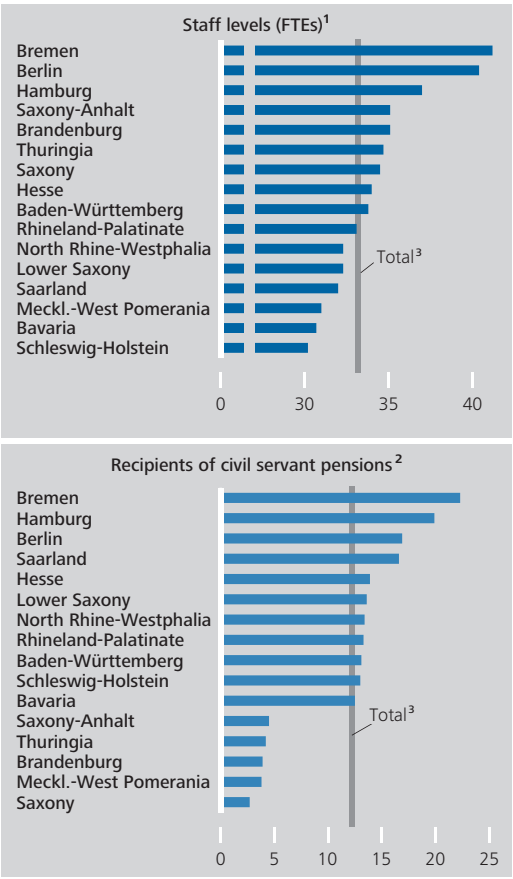
Personnel expenditure: marked differences in expenses for current staff …

A key factor behind staff costs is staff numbers. In the core government areas, staff numbers are again particularly high in the city states and, above all, in Bremen (see the chart on p. 28). But the eastern states, too – with the exception of Mecklenburg-West Pomerania – have staff levels that are way above average. The lowest levels are in Schleswig-Holstein and Bavaria.

… primarily due to staff numbers …

Staff levels and number of recipients of civil servant pensions in state and local governments in 2017

per 1,000 inhabitants



Sources: Federal Statistical Office and Bundesbank calculations. **1** Staff in public sector in state and local governments (in full-time equivalents) on 30 June 2017. Those areas where tasks do not usually belong to enterprises that are part of the government sector have been removed. **2** Recipients of civil servant pensions of state and local governments on 1 January 2017. **3** All state and local governments.

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… and differences in civil servant pay rates

Furthermore, pay rates differ from one federal state to the next. While negotiated rates of pay – with a few exceptions – have been collectively agreed throughout Germany, civil servant pay rates differ, in some cases considerably, among the federal states. There has been no national uniform legislation since the 2006 federal structure reform, with the result that Bavaria's annual gross civil servant pay rate in the final level of A 13 – the pay grade for a great many civil servants – was just over 6% higher than the average this year (see the chart on p. 29). Saarland recorded the lowest level.[24]

States have distinct scope when setting civil servant pay rates

In a ruling on judges' remuneration, the Federal Constitutional Court found no cause for concern if civil servant pay rates are up to one-tenth lower than the average. Furthermore, different costs of living could distort an economic assessment of the varying pay rates. If the costs of living are lower, real remuneration is correspondingly higher. This is likely to be the case in the eastern states.[25] There is also a certain degree of scope when assigning civil servants to various pay grades for certain functions. Official statistics do not contain any information on this, however. Overall, then, federal states do have ways in which to adjust these rates in order to meet state-specific consolidation requirements, for instance.

Vast differences in civil servant pensions, especially between eastern and western states

The spread for spending on civil servant pensions per inhabitant is even wider than it is for current personnel expenditure. This is predominantly attributable to lower numbers of recipients in the eastern states (see the adjacent chart). The eastern states make special payments to central government for special and supplementary pension payments made to former employees from the period prior to reunification. But even after factoring in these expenses, the eastern states reached, at most, two-thirds of the national result. Of the western German non-city states, Schleswig-Holstein was the only state below the national reference figure. Saarland exceeded the national reference figure by one-fifth, although the fact that population trends there have been weak for some time had an impact on per capita expenditure. The city states of Hamburg and Bremen have to foot an even heftier bill.

There are also substantial differences in transfers to households. North Rhine-Westphalia, Bremen and Hesse recorded the highest expenditure. It is the needs-based social benefits

24 The order of federal states is not the same for all pay grades and experience levels. For more information on the data, see DGB, Besoldungsreport 2018, April 2018.
25 For more information, see Deutsche Bundesbank, Personnel expenditure in the individual federal states, Monthly Report, October 2015, pp. 40-43.

Differences in transfers to households softened by central government contributions

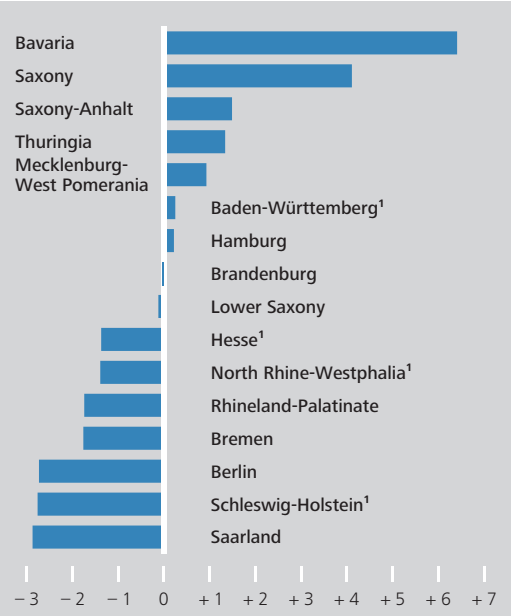
(such as basic allowance benefits), in particular, that have been driving up this item. Such benefits tend to be focused on regions where the population is denser or the economy weaker. Specific decisions regarding the division of responsibilities,[26] but also the range of benefits, are also likely to be a factor. It is difficult to derive from the government financial statistics the actual net burden on a state from social benefits. This is also because central government's contribution differs. For instance, central government grants towards the accommodation costs of recipients of unemployment benefit II, the full refund of basic allowances for the elderly as well as other cost reimbursements have varying effects from state to state.

Large deviations in other operating expenditure and fixed asset formation

Spending on other operating expenditure and fixed asset formation also varies considerably. Here, too, it is difficult to interpret the figures because tasks are outsourced to non-public sector entities to varying degrees. In both expenditure categories, comparison is distorted by the extremely high values recorded in Hamburg. The high levels of investment in Hamburg are mostly posted by off-budget entities. Bavaria and Baden-Württemberg are not far behind Hamburg, recording large volumes of investment, too. Bremen and, in particular, Saarland have below-average values but are still way ahead of Berlin. Past and present budgetary strains also ultimately have a negative impact on investment levels. A shortage of staff may currently also be holding back the implementation of investment projects. The government financial statistics do not contain investment in the form of public-private partnerships. Ultimately, in order to ensure that the comparison across states is meaningful, attention should be focused more on the public infrastructure provided than the level of expenditure. However, this information is not available.

A 13 annual gross civil servant pay in 2018*

Percentage deviation from the mean figure, as at April 2018



Sources: DGB Besoldungsreport 2018 and Bundesbank calculations. * Total of annual basic salary in the final level of the pay grade, general job-based allowance or structural allowance, special payment(s), assuming a 40-hour week. The A 13 pay grade particularly covers many school teachers. **1** Pay for a 41-hour week converted to 40 hours.

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Notes on selected revenue categories

Differences in tax revenue mainly equalised, …

The revenue-sharing scheme has greatly diminished the differences in tax revenue.[27] This scheme ensures that the federal states end up with at least 95% (or thereabouts) of the average financial capacity specified therein for each group of states (non-city states and city states).[28] One notable reason why actual rev-

26 The very low figure for Saxony-Anhalt is a result of a different division of responsibilities between state government and local government. In Saxony-Anhalt, the state – as the provider of certain social benefits – posts refunds to other areas (other operating expenditure) whereas, in other states, similar payments are included under social benefits via local government statistics. As a result, other operating expenditure is higher in Saxony-Anhalt than in most other states.

27 Taxes plus compensation for passing on motor vehicle tax to central government, the balance in the state government revenue-sharing scheme and general supplementary central government grants.

28 For more details, see Deutsche Bundesbank, The reform of financial relations in the German federal system, Monthly Report, September 2014, pp. 38-42.

enue differences turn out to be somewhat larger is that only just under two-thirds of local government tax revenue is taken into account in this scheme. In the original allocation of taxes (i.e. before turnover tax revenue is reallocated), the differences among states are more apparent. In many cases, shifts in the original allocation were strictly limited over the last decade. The development in North Rhine-Westphalia was striking. Its financial capacity in this regard has diminished more or less continuously. At last count, it was significantly lower than the average. Overall, in 2017, the spread of per capita tax revenue ranged from €6,450 in Hamburg to €4,200 in Saxony-Anhalt. The national average stood at €4,720 (non-city states: €4,610; city states: €6,080). Of the non-city states, Hesse recorded the highest amount (€4,910).[29]

… but differences of note in tax rates set decentrally

The taxes set autonomously by state or local governments vary greatly. The differences in real estate acquisition tax rates are considerable. Five states – including Saarland – now have a rate of 6.5%. By contrast, Bavaria and Saxony have kept their rate at the former uniform national level of 3.5%. In 2017, the city states tended to record the highest average rates for local government real estate tax B and local business tax. The multipliers for real estate tax B are the most widely scattered of these taxes. Berlin has the top position with 810%. Of the non-city states, local governments in North Rhine-Westphalia had the highest multipliers (570%) on average. Some local governments with a particularly tense budget situation recorded rates that were far higher than in Berlin. Schleswig-Holstein and Bavaria had the lowest average multipliers (390%). Local business tax rates were not spread quite so widely across the federal states. They ranged from 470% in Hamburg to 320% in Brandenburg. All in all, local government multipliers rose distinctly over the past decade, although local governments recently posted significant fiscal surpluses. Larger debt burdens and relatively unfavourable budget situations meant higher tax rates.[30]

Eastern states plus Bremen and Saarland with high revenue from other central government grants

In addition to tax revenue, central government transfers play a key role.[31] On average, these amounted to €560 per capita. But the eastern states recorded much higher levels. The special-needs supplementary central government grants for infrastructure reconstruction in eastern Germany and to offset the higher burdens caused by long-term unemployment still amounted to around €270 per capita in these states in 2017. Consolidation assistance did not have much of an impact in Berlin, Saxony-Anhalt and Schleswig-Holstein. However, it benefited Bremen and Saarland enormously.

More meaningful data on expenditure and performance items desirable for inter-state comparisons

All in all, there are special factors which make inter-state comparisons of individual revenue and expenditure items extremely difficult in some cases. There is no comprehensive, up-to-date set of data on revenue and expenditure broken down according to government functions. Some state governments and the local government level for the most part have introduced double-entry bookkeeping, which could additionally complicate the comparability of results from government financial statistics. Ideally, data – broken down by government function – would be published promptly, thus improving comparability across the board. This would enable the financial impact of policy decisions to be outlined more clearly and made more transparent for the general public. Meaningful budget data augmented by comparisons of the results, for instance as with the Pisa tests for schools, could generally help to better identify promising policy approaches. It therefore seems advisable to make reporting transparent and develop indicators suitable for comparison

29 Bavaria recorded €4,740. The lower amount in comparison with Hesse is ultimately due to taxes that are set at state and local government-specific rates, and these are higher in Hesse. In the state government revenue-sharing scheme, Bavaria has a higher financial capacity because the calculations are based on normalised tax rates.
30 However, for local government multipliers, it is evidently also important how strictly the state government budgetary supervision implements the provisions governing a balanced budget.
31 The compensation for passing on motor vehicle tax and the general supplementary central government grants to further align financial capacities have already been included in tax revenue.

purposes. This could sustainably strengthen federalism in Germany as a whole.

Budgetary surveillance by the Stability Council

The tasks of the Stability Council

The tasks of the Stability Council: …

The Stability Council was established with the anchoring of the debt brake in Germany's Basic Law. Its members are the Federal Minister of Finance, the federal states' finance ministers and the Federal Minister for Economic Affairs and Energy. The Council is intended to play the central role in budgetary surveillance in Germany and has a variety of tasks.

… warning against impending budgetary hardship, …

First, the Council is there to monitor budgetary developments in central government and the individual federal states and warn against impending budgetary hardship. To do this, four predefined key figures were agreed, with two of them being ultimately based on the level of debt. Any budgetary recovery procedure depends on an irregularity being flagged by the majority of the key figures and is therefore likely to be triggered only at a very late stage. Overall, the key figures used so far have not been convincing.[32]

… monitoring compliance with the deficit reduction paths mapped out for federal states receiving consolidation assistance, …

Second, the Stability Council monitors progress made by the federal states which are receiving consolidation assistance: Berlin, Bremen, Saarland, Saxony-Anhalt and Schleswig-Holstein. These federal states show particularly high levels of debt and, in 2011, agreed reduction paths for their structural budget deficits. If these are complied with, assistance payments totalling €800 million annually are pledged up to 2019. So far, the tests have invariably been positive. The chosen approach has not been convincing in this respect either. For example, major off-budget entities of individual federal states are left out if they do not have any borrowing authorisations. These include, say, pension reserves that can be structured flexibly and one large Berlin investment fund. Furthermore, the definition of the financial transactions that have been deducted is less than satisfactory. Moreover, the (per capita) cyclical components that have been included sometimes vary a great deal from one federal state to the next. This seems inappropriate, because the state government revenue-sharing scheme ought to largely offset cyclical developments specific to each federal state's economy.[33]

… safeguarding general government deficit limit, …

Third, the Stability Council monitors compliance with the EU requirements for budgetary discipline. In doing so, it is supported by an independent advisory board. In accordance with the European rules, the general government budget has to be close to balance in structural terms. For Germany, an upper limit of 0.5% applies to the structural deficit ratio. If there is a risk of the upper limit being exceeded, the Council is to recommend consolidation measures. Since this task was transferred to the Council in 2014, this limit has been complied with, as expected by the Council and its advisory board. However, it is likely that the safety margins will become smaller again in future, especially given instances of recourse to the extensive reserves. The latter, in particular, pose a challenge for monitoring (see the box on p. 32). Overall, the documentation submitted to the Council needs to be improved so that future developments can be estimated as reliably as possible.[34]

… and monitoring the implementation of the debt brake from 2020

Fourth, the Stability Council will, from 2020 onwards, assess whether central government and the individual federal states are complying with the debt brake. This was decided in 2017, when financial relations within Germany's federal system were restructured. For central government,

32 For more details, see Deutsche Bundesbank, The debt brake in Germany – key aspects and implementation, Monthly Report, October 2011, pp. 20 ff.
33 Significant differences remain even after adjusting, say, for higher population growth rates (as suggested in Berlin's 2017 consolidation report).
34 See also Independent Advisory Board of the Stability Council, Neunte Stellungnahme zur Einhaltung der Obergrenzen für das strukturelle gesamtstaatliche Finanzierungsdefizit nach § 51 Abs. 2 HGrG, June 2018, pp. 17 f.

Reserves as a challenge for the European fiscal framework

Central, state and local governments as well as social security funds have built up sizeable reserves. In particular, the surpluses of recent years have often been used to form reserves and to prefinance off-budget entities. Sizeable funds can be withdrawn from these sources if required. The fact that provision is being made for future expenses is to be welcomed. Nevertheless, special requirements in terms of transparency and coordination should apply with regard to the European fiscal framework in the event of these funds being drawn on to a major extent. If reserves are drawn on, net borrowing in budgetary terms will be lower, and it will be easier to adhere to debt brakes that are linked to this item. However, the European fiscal framework relates to the deficit, which is not reduced by making withdrawals from reserves.[1] One major example of such reserves is central government's refugee reserve. This is set to be used up over the next few years to finance structural deficits. At the end of 2017, social security funds had free reserves in the amount of €88 billion. If more extensive use were to be made of such reserves to cover structural burdens – as will be the case in future with the statutory pension insurance scheme – the general government deficit ceiling might be exceeded even though there is no net borrowing. In this case, the Stability Council would have to recommend measures in order to maintain the deficit ceiling.

1 For more details, see Deutsche Bundesbank, Excursus: the use of reserves and off-budget entities by central and state government, Monthly Report, August 2018, pp. 69-73.

structural net borrowing since 2016 is limited to a maximum of 0.35% of GDP. The individual federal states will have to balance their budgets by 2020 at the latest without (structural) new net borrowing. If the Stability Council were to diagnose a breach of the rules, this would have no direct legal or financial consequences. It would, however, be a clear signal to the state government concerned and to the general public. This diagnosis might also be relevant in proceedings before a constitutional court.

Differences in the specific details of federal states' debt brakes

Many federal states still have not finalised the details of their debt brake. It would make the Stability Council's job easier if the rules were largely harmonised and geared to the European target variables. However, the current status shows that the approaches taken do differ quite substantially (see also the box on pp. 40 to 47). It is therefore all the more important to agree transparent monitoring procedures and have meaningful and comparable information available as soon as possible.

Requirements for budgetary surveillance

Independent boards of particular importance

Fiscal rules can play an important part in safeguarding sound public finances. Budgetary surveillance has a key role to play in this. It would seem prudent to make independent boards responsible for these activities.[35] This is also envisaged by the European fiscal rules for the national budgetary surveillance of the Member States. In Germany, this role is performed chiefly by the Stability Council. Thus, the Federal Ministry of Finance and the federal states' finance ministries are to monitor themselves via the Council. The independent advisory board mainly plays a part in monitoring the European rules for general government and is substantially dependent on the documentation provided by the Stability Council.

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

High degree of transparency essential for effective surveillance …

In order to ensure stringent budgetary surveillance in this approach, the procedures should be clearly structured and rule-bound. The general public should also be able to understand how the current situation looks and what risks exist in terms of failing to comply with national or European rules. Transparency is of key importance in this context. The budgetary key figures for central government and the individual federal states would have to be informative, up-to-date and comparable. In each instance, there would have to be an account of what effect the expected developments have with regard to the requirements of the respective debt brakes and the European rules. At present, only the rudimentary elements of this are in place.

… and information should already be available

The task of monitoring the debt brakes as from 2020 has considerably widened the Stability Council's mandate. This presents the opportunity to achieve a major advance in budgetary surveillance. It would be important to eliminate any grounds to suspect that the ministries of finance will take a lenient view of each other's books and are not interested in transparency. All things considered, this would not need to add substantially to the data collection workload. Responsible budgetary policy already implies comprehensive monitoring and planning systems. To a large extent, the pre-existing information from these systems would merely have to be harmonised, updated as necessary and then published.

Complying with debt rules stabilises debt and prevents budgetary hardship

Enhanced fiscal surveillance is yet to be given concrete form by the Stability Council. Assuming the debt brake is strictly adhered to, budgetary hardship should, by rights, be a thing of the past. If, from 2020, the federal states regularly achieve a structurally balanced budget with no net borrowing, a permanent rise in debt beyond the level then reached would be ruled out in principle. It would therefore be logical for the focus in future to be on monitoring compliance with the debt brakes. The current or medium-term threat of conflicts with constitutional requirements would have to be highlighted and suitable countermeasures recommended.

Enhanced monitoring of changes in debt and financial transactions an obvious thing to do

Nevertheless, the debt brakes also allow exceptions to the ban on new borrowing. Borrowing is permitted if this is for building up financial assets.[36] Cyclical developments or the exemption clause for emergency situations may also justify new borrowing temporarily. In the process, biases in the method of cyclical adjustment, utilised exemption clauses with repayment outstanding and assumptions of debt that are not taken into account may lead to a sustained build-up of debt. This would be contrary to the intention of the Basic Law, under which only a rising stock of financial assets would justify a structural build-up of debt. To allow for this in the budgetary surveillance process, it would be vital for the federal states, first, to give the Stability Council an account of the transaction-related change in their level of debt and their stock of financial assets since the introduction of the debt brake (including, in each case, the relevant off-budget entities). Second, the sum of the cyclical components taken into account and of the deviations from the structural annual upper limit in the budget outturn would also have to be stated. The Council could determine ex ante thresholds for the build-up of debt, from and above which it could call for a rule-based medium-term repayment.

Gearing to European requirements also needed

The information provided to the Council should, besides the debt brake, also make it verifiable whether there is a risk of breaching the European rules. To do this, the Stability Council, say, would also have to apply the European cyclical adjustment procedure to each of the expected budget outturns. Furthermore, the key figures should be brought more closely into line with the methodology and sectoral classification of the national accounts. This also includes the federal states submitting additional data and estimates and providing in-

36 Financial transactions are the point of reference. Reclassifications of previously acquired assets play no part in this.

Budgetary surveillance: good information basis is crucial

The Stability Council is responsible for monitoring compliance with the debt brakes of the individual federal states and the European fiscal rules for general government. To do this, sound and up-to-date basic information on the important factors has to be available. This is not sufficiently ensured at present.

General requirements[1]

The European rules are directed at general government deficits as defined in the national accounts. Budgetary surveillance therefore calls for a consistent and current estimate of the government account within the national accounts. This should be based on appropriate projections as defined in the budget accounts (government finance statistics) for central, state and local government and social security funds (and their main schemes). The focus should not only be on the core budgets, but also on the rest of the government sector included in the national accounts. The transition from the budgetary statistics to the national accounts should be clear in identifying the key ways in which it has been implemented. The fiscal estimates need to be based on a current macroeconomic projection. This is used to derive the estimated cyclical effects.

For monitoring the debt brakes, estimates for the relevant data from central and individual state governments have to be available. With regard to the general government deficit ceiling, the contributions of the individual federal states should also be made clear. Besides the off-budget entities, it would also be vital in this regard to have the best possible budget estimate for the local government level under their budgetary supervision.

Key figures

For appropriate, well-founded and transparent budgetary surveillance, central government and the individual state governments should provide a standardised overview of their current financial position and outlook.[2] Information that would appear necessary for such surveillance is shown on p. 36 for the Länder by way of an example. Corresponding information should also be provided by central government. It may be assumed that central and state governments already possess most of this information from their budget management and control. This basic information should be made available to the Stability Council in updated form at the time of auditing. There is no reason why this information should not be made accessible to the general public, too.

For the individual indicators, both the results for the past two years and the latest estimate for the current year and the medium term should be reported. This would represent a major advance on the data in the current stability reports on emergency prevention. At present these contain a compilation of budget planning information with very different data vintages in some instances. In many cases, for example, that data for the Länder have not been brought into line with the latest official tax estimate. In this respect, it is mostly not possible to

1 See also Independent Advisory Board to the Stability Council, Neunte Stellungnahme zur Einhaltung der Obergrenze für das strukturelle gesamtstaatliche Finanzierungsdefizit nach § 51 Absatz 2 HGrG, June 2018, pp. 17-18.
2 This is fundamentally envisaged for European budgetary surveillance, too. The individual Member States should submit updated and standardised forecasts about their own finances at specific points in time; these then undergo a rule-based evaluation.

discern the currently expected development.[3]

On the revenue side, taxes are the most important item. If a state government's forecast differs from the regionalisation (allocation between the Länder) of the last official tax estimate, this should be explained. Possible reasons might be an update by the state government in the interim, features that are specific to the given federal state such as an assumed divergence in economic or demographic development, or changes in tax legislation for which additional allowance has been made in the budget. Consideration should also be given to updated projections for the state government revenue-sharing scheme, the general supplementary central government grants and, where applicable, for the local government revenue-sharing scheme.

A key item on the expenditure side is personnel expenditure. Data on the expected development of staffing levels and the number of civil servant pension recipients are vital. Any planned decoupling of civil servant pay rates from national trends would also be relevant.

Further key items to be reported might include other operating expenditure and fixed asset formation.

In the case of interest expenditure, data on assumed interest rates would be essential. As defined in the budget, interest rates are heavily influenced by premiums, discounts and effects of derivatives positions. These items generally have no direct impact on national accounts results, however, and should therefore be shown.

If global items (for example, planned expenditure shortfalls or revenue windfalls) are included in the budget estimate, these should be listed.

Financial transactions have a different impact on the results in the budgets and in the national accounts. In order to assess such effects, these transactions should be shown on both the revenue and expenditure side. This should be based, as far as possible, on the strict requirements of the national accounts for financial transactions (acquisition or redemption of financial assets with genuine recoverable value): capital injections without a prospect of profit or for the purpose of offsetting losses should form as little a part of this as calls on guarantees.

Any reserve transactions affecting the budget, such as reserves or off-budget entities, should also be reported. Important examples are the use of "repealed" borrowing authorisations or withdrawals from the special funds for pension provisions. Although such transactions reduce net borrowing in budgetary terms, they do not improve the fiscal balance (which is consolidated with off-budget entities). They can be designed flexibly by the individual federal states and could conceal the structural budgetary position.

Where more significant one-off factors affect the budget outturn, it would be desirable to include a memorandum item. Examples are the fine paid by Volkswagen to the federal state of Lower Saxony in the current year or extensive sales of fixed assets. This would make it easier to assess the underlying budgetary position.

In addition to net borrowing and the fiscal balance according to the budget statistics, a balance consistent with the national accounts should also be shown. This should be adjusted for financial transactions as well as other known major adjustment

3 By contrast, the estimates of the Federal Ministry of Finance for the results of the state governments as a whole are updated in principle, but do not permit any analyses for individual Länder.

Key figures for budgetary surveillance for each federal state

Results t–2 and t–1, current estimate to t+4 (in € million and € per capita)

Core budget

- Total revenue
  - Taxes
    - If applicable, difference from last tax estimate stating reasons
  - Transfers from general government
    - Of which: From off-budget entities of the federal state
      - Of which: Pension reserves/funds
  - Financial transactions (excluding guarantees)
  - If applicable, global revenue increases/shortfalls
  - Other revenue affecting the fiscal balance
- Total expenditure
  - Personnel expenditure (excluding pension schemes)
    - Of which: Pensions and healthcare subsidies
    - Memo item: Development of active staff (full-time equivalent)
      - Development of persons receiving pension benefits
      - If applicable, state-specific details with relation to civil servant pay rate adjustments
  - Other operating expenditure
  - Interest expenditure
    - Here: Average interest rate for new borrowing
    - Of which: if applicable, premium/discount
    - Of which: if applicable, result from derivatives
  - Transfers to general government
    - Of which: To local government
    - Of which: Transferred by central government
    - Of which: Pension reserves and funds
    - Of which: Other provision funds
  - Current subsidies
  - Fixed asset formation
  - Financial transactions (excluding guarantees)
  - If applicable, global revenue increases/shortfalls
  - Other expenditure affecting the fiscal balance
- Net borrowing and balances
  - Net borrowing
  - Withdrawal from/transfer to reserves etc.
  - Fiscal balance
  - Balance of financial transactions
  - List of other major differences compared with national accounts (e.g. debt relief)
  - Fiscal balance consistent with national accounts

Budget consistent with national accounts (with off-budget entities und local governments)

- Fiscal balance core budget consistent with national accounts
- Fiscal balance off-budget entities (according to national accounts list)
- Balance off-budget entities consistent with national accounts
  - Of which: Off-budget entities considered in the debt brake
- Fiscal balance local governments
- Balance local government consistent with national accounts (similar methodology to that of the state governments)
- Total balance consistent with national accounts (with off-budget entities and local governments)
- Memo items:
- Key differences between national accounts and government finance statistics (list)
- One-off factors accounting for at least ½% of overall expenditure (list)

Information on budget rules

- EU rules
  - Total balance consistent with national accounts
  - Cyclical factor EU procedure
  - Total balance consistent with national accounts after cyclical adjustment
- Federal state's debt brake
  - Deficit/borrowing ceiling (according to debt brake)
  - Deficit/borrowing
    - Of which: State-specific cyclical component
    - Memo item: Net effect, recourse to/filling reserves
  - Federal state's debt level
  - Sum of the financial transactions deducted since 2020
  - Sum of the cyclical components since 2020 (cyclical control account)
  - Sum of the deviations from ceiling since 2020 (control account)
  - Reserve holdings to maintain the debt brake (e.g. budgetary reserves)
  - Additional information
    - Debt of off-budget entities which are not included
    - Debt of local governments
      - Of which: Cash advances

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items, such as debt assumptions and debt relief.

Results for the off-budget entities should be reported in accordance with the current list of such entities published by the Federal Statistical Office. Taking these into account brings the balance more closely into line with the national accounts and provides a more comprehensive picture.

The expected overall balances are significant for the local governments of a federal state. This concerns, first, their effect on the general government balance. Second, in combination with information on the volume of cash advances, an assessment can be made of whether a tense financial situation at local governments poses a risk for future state government budgets.

For the European rules, a federal state's expected contribution to the general government structural deficit as defined in the national accounts is important. Therefore, a structural balance that is consistent with the national accounts should also be reported for the individual states using the EU's cyclical adjustment method. The Federal Ministry of Finance could make the cyclical impact available on the basis of the method applied there. It would then be easier to assess whether the general government deficit might come into conflict with the structural ceiling of 0.5% of GDP.

In order to monitor compliance with the federal states' respective debt brake, the individual states would, as a rule, have to provide further supplementary information. This includes the expected margin to the state-specific debt brake ceiling. Data on the cyclical components considered would also be vital. This will make it possible to assess over the long term whether the symmetry requirement of the German Basic Law has been met.

formation for all their off-budget entities and the local governments. The box on pp. 34 to 37 contains an example of a set of vital basic information for effective fiscal surveillance.

Outlook and conclusions

Further convergence of fiscal positions of the individual federal states desirable

Following the favourable outturn in 2017, the positive development in state government finances is continuing. In the current year, the surplus adjusted for special factors is likely to increase further after the strong half-year result.[37] Even after adjustment for the positive economic situation, a marked surplus is in the offing. It is not possible to tell at present whether the disparity between federal states will narrow further. This would be desirable as the significant lingering differences make political decisions with a nationwide fiscal impact more difficult. For instance, in light of the favourable state of German public finances, there is talk of cutting national income tax rates. In some federal states, potential conflicts with the debt brake or short-term consolidation needs can be avoided once the fiscal positions are more closely converged.

Low interest rates not to be regarded as something that will go on for ever

An ambitious fiscal policy is advisable especially for highly indebted federal states. These are benefiting very strongly from the low funding costs in a low interest rate environment, which has made fiscal consolidation much easier in recent years. However, the extremely low interest rates should not be considered as something permanent. Although this relief is likely to continue for some time, not least in cases where longer average fixed-interest periods have been agreed, high levels of debt ultimately make it considerably more difficult to

37 Major negative special factors expected in the second half of the year are calls on guarantees in relation to the privatisation of HSH Nordbank and assumptions of debt by the state government of Hesse in favour of its local governments as part of the new "Hessenkasse" assistance programme.

combine sound fiscal policy with good public services as soon as monetary policy returns to normal.

More federal funds in future state government revenue-sharing scheme, yet different extent of relief with respect to present

In the medium term, the reform of the state government revenue-sharing scheme means that state government budgets will, from 2020 onwards, be significantly strengthened to the detriment of central government.[38] At the same time, however, the special funds for infrastructure reconstruction in eastern Germany and the funds paid by central government to offset the cutback in mixed financing in 2006 will be discontinued. Therefore, some federal states are likely to be in only a slightly better position than they are now.

Planned expansion of mixed financing questionable

However, the Federal Government is planning to transfer further funding to the federal states. The aim is to significantly increase mixed financing again. New grants are being earmarked for investment in schools, childcare, transport projects and social housing. Furthermore, central government is also promising to contribute financially to addressing the legacy debt problems of many local governments. The planned mixed financing obscures the link between public services and their actual costs. It is also becoming apparent that responsibility for public services and for any problems that may arise in this context is not clearly discernible. Experience has shown that such a situation is not conducive to an efficient use of funds and an effective performance of tasks.

Strengthening of individual responsibility more helpful

The new projects represent a departure again from the objectives of the reform of the financial constitution in 2006. The reform was designed to make state governments more self-reliant in their decision-making in terms of the services they provide and also force them to take greater account of the associated costs. This was intended to strengthen their individual responsibility. Suitable key figures would be important for a comparison of the different approaches adopted by the individual federal states. These are, in some cases, already available in the field of education, for example. For all their limitations, these indicators do provide additional, structured information for identifying promising approaches (best practices). This could enhance the efficiency of Germany's federal structure.

Strengthening revenue autonomy

It might also make sense to grant state governments greater discretionary powers on the revenue side as well. This might include, say, income tax surcharges that can be set individually at the state level.[39] To the extent that there are marked differences in preferences regarding the nature and scope of public services, state government policy can respond to them more precisely. The debt brake means that borrowing is not available as an option, and any need for adjustment falls largely on the expenditure side at present. Greater revenue autonomy would also make clear to the general public the connection between public services and their funding, while greater involvement of central government obscures it.

Longer-term challenges posed by demographic developments …

Looking ahead, demographic developments will place a further burden on state government budgets. For example, tax revenue will increase more slowly, while spending on civil servants' pension benefits will grow disproportionately, at least up to the middle of the next decade. This is due, in particular, to the fact that the number of civil servants was expanded significantly in the past, especially in the case of teachers in response to growing numbers of pupils. Furthermore, life expectancy is increasing, which means that civil servants will be drawing a pension for longer if the retirement

38 For more details, see Deutsche Bundesbank, Public finances, Monthly Report, November 2016, pp. 61-72. Relief for the federal states is also being afforded by the impending back-transfer of turnover tax funds by central government (just over €2 billion), as the debts of the "German Unity Fund" are fully funded in formal terms. The fact that the increased share of local business tax (€3½ billion) will no longer have to be transferred to western German state governments, on the other hand, will ease the burden on local government. Individual federal states could offset this to the benefit of their budgets.

39 For more detailed information on this topic, see Deutsche Bundesbank, The reform of financial relations in the German federal system, Monthly Report, September 2014, pp. 44-46.

age remains unchanged. There are parallels here with the statutory pension insurance scheme. It therefore appears appropriate to also link the retirement age of civil servants to increasing life expectancy levels. At the same time, this would at least go some way towards easing a situation where demographic developments are likely to make it more difficult to recruit new staff.

… only partially accounted for so far by the formation of reserves

To provide for the foreseeable large civil servant pension obligations, the federal states have been setting aside pension reserves and funds over the past two decades. In doing so, they pursued very different approaches. Generally speaking, it is appropriate to recognise the additional pension burdens associated with the employment of civil servants on an accruals basis in the current budgets. A systematic provision also seems prudent. Nevertheless, the accumulation of reserves of late has arguably been geared more to the current budgetary situation. The obligations which have already accrued are far from being covered. It is scarcely possible to estimate how far the earmarked funds are supposed to cover expenditure in individual years. To enhance transparency, regular harmonised civil servant pension reports would be desirable. These would need to be presented at agreed points in time. Of interest here are the expected future expenditure paths, as well as the financial provisions and their intended use.

Specific form the debt brake takes differs widely among federal states

Moreover, many federal states still have the implementation of the debt brake into state legislation on their agendas. The approaches specified so far differ quite considerably in some cases (see the box on pp. 40 to 47). Above all, there are major differences in terms of cyclical adjustment procedures, the inclusion of financial transactions and off-budget entities, as well as the point of reference (net borrowing or deficit).

Requirements for state debt brakes

In terms of design, the crucial factor is to effectively safeguard the constitutional objective of a consistent limit on debt and the European fiscal rules. It is therefore essential to take account of off-budget entities and remove financial transactions as defined in the national accounts. Where cyclical effects are left aside, the adjustment methods used must not allow any structural build-up of debt, as stipulated by the Basic Law. Exemptions for emergency situations would have to be defined as clearly as possible and backed by effective repayment rules. However, even if the debt brakes are designed quite strictly, it cannot be ruled out that debt will increase, contrary to the intention of the debt brakes, when the budget is implemented. In this case, there should be a requirement for state government to reduce any newly accrued debt according to a fixed set of rules if certain thresholds are exceeded. In any case, fiscal planning and developments should be modelled in such a way that allows compliance with the rules to be controlled effectively. To this end, the relevant calculations and key figures should be both comprehensible and presented transparently.

Significant expansion of budget information needed for the Stability Council

The Stability Council has a key role to play in budgetary surveillance. In addition to its existing tasks, it will examine compliance with the respective debt brakes in future. To achieve this, information which is more extensive than that available at present is necessary. This would also have to be published so that the general public can understand this surveillance process (see the box on pp. 34 to 37). At the time of auditing, central and state governments should present updated estimates for the current year and the medium term. These should contain the information needed to assess potential conflicts with the European or national rules.

Implementing the debt brake in the federal states

The debt brake limits structural new borrowing by central government to 0.35% of gross domestic product (GDP) in accordance with Article 115 of Germany's Basic Law *(Grundgesetz)*. Legislation implementing the debt brake entered into effect in the 2011 fiscal year. As for the state government budgets, Article 109(3) of the Basic Law generally prohibits the federal states from (structural) new borrowing as from the year 2020.[1] Any exceptions need to be addressed by state law, and they are not permitted to undermine the intention of the debt brake.

To date, the debt brake has been enshrined in the state constitutions of eight federal states (Bavaria, Bremen, Hamburg, Hesse, Mecklenburg-West Pomerania, Rhineland-Palatinate, Saxony and Schleswig-Holstein), though the relevant legislation does still need to be fleshed out in some instances. Five other states (Baden-Württemberg, Lower Saxony, North Rhine-Westphalia, Saxony-Anhalt and Thuringia) have not (yet) amended their constitutions, but they have updated their state budgetary acts. Here again, there are some states which have still not enacted any rules to implement the debt brake. Berlin, Saarland and Brandenburg have not made any arrangements under state law to date. That said, both Berlin and Saarland are currently subject to administrative agreements in connection with the consolidation assistance they are receiving.[2] These agreements are there to prepare Berlin and Saarland to comply with the debt brake as from 2020, and they were designed specifically with the debt brake in mind.

Target variable: new borrowing or fiscal balance

In the vast majority of cases, the debt rules which the federal states have implemented so far refer to net borrowing.[3] Only Schleswig-Holstein and – by virtue of the link to the administrative agreement in connection with the consolidation assistance running until the end of 2019 – Bremen and, up to the end of 2018, Rhineland-Palatinate have debt rules that are geared to the fiscal balance. Unlike net borrowing, the fiscal balance does not change when reserves are replenished or drawn down. This is consistent with the European fiscal rules, which use the fiscal balance as defined in the national accounts as their point of reference. What makes the debt brake more difficult to comply with in this case is that unused budgetary scope cannot be carried forward (in the form of reserves) to future periods.[4]

Reserves are becoming an increasingly important budgetary instrument for the state governments. Mecklenburg-West Pomerania reported the highest per capita stock of reserves, at almost €1,000 (see the overview on pp. 44 ff.).[5] The highest volume in absolute terms, meanwhile, was reported by Bavaria, at just over €6 billion, or €470 per capita. Other federal states such as North Rhine-Westphalia have no general reserves to speak of.[6]

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1 Here, and in the remainder of this box, this means net new borrowing. Therefore, rolling over maturing debt instruments continues to be permitted.
2 Similar agreements are in place for Bremen, Saxony-Anhalt and Schleswig-Holstein.
3 At the central government level, net borrowing is considered for the core budget, and the fiscal balance for the off-budget entities consolidated under the debt brake.
4 See also the box on p. 32.
5 Information collected by a Bundesbank survey among the federal states' finance ministries.
6 The North Rhine-Westphalian state constitutional court curtailed the scope for creating and using such reserves by narrowly interpreting the state constitution.

Adjusting budgets for cyclically induced revenue growth

The Basic Law allows exceptions to be made from the debt ban, with the federal states having the scope to make their own individual arrangements. This includes the ability to adjust their budgets symmetrically to allow for cyclical effects. That is to say, they are permitted to borrow as a way of bridging cyclically induced deficits they incur during weak spells, provided similarly sized surpluses are generated when conditions improve to repay the debt. Thus far, cyclical adjustment methods have been adopted and published by eight federal states. One feature all these methods have in common is that they use tax revenue to measure cyclical effects. In other respects they vary substantially, so they each have their own set of advantages and drawbacks.[7]

Hesse and Schleswig-Holstein have opted for a method that is much like the one used by central government. Similar methods are used in connection with the consolidation assistance schemes, where an estimated aggregate output gap is the starting point used during budget planning to determine the cyclical component. When measuring this gap, it is assumed that the ratio to the cyclical component of tax revenue is fixed. Positive output gaps are an indication of good economic conditions (overutilisation), while negative gaps show that the situation is poor. If tax revenue deviates from the budgeted data over time right up to budget outturn, these deviations are also considered cyclical (except where they can be traced back to legislative changes). To ensure that positive and negative cyclical effects balance out over time, it makes sense to record all the cyclical effects identified on a cyclical control account, as is done in the state of Hesse, for instance. If the amount of debt posted on this account reaches a fairly high level over a longer period of time, the structural budgetary position was assessed as being better on average than it actually is. This happens because the debt which was thought to have been cyclically induced (and was thus allowed) was not automatically paid down out of cyclically induced surpluses. That is why a threshold value needs to be set for the cyclical control account above which debt reduction follows a rule-based procedure.

The federal states of Baden-Württemberg, Hamburg, Mecklenburg-West Pomerania, Rhineland-Palatinate, Saxony and Thuringia, meanwhile, have opted to apply tax-smoothing methods rather than a mechanism linked to the output gap. Under these methods, the cyclical component is the difference between tax revenue and a "normal level" of tax revenue. This normal level of tax revenue, which is adjusted for changes in legislation, is determined in different ways. Baden-Württemberg and Rhineland-Palatinate identify their normal values by selecting a starting year for which economic conditions were assumed to be normal. The tax revenue collected in this starting year is then carried forward at a trend growth rate which is updated annually. Hamburg determines its trend level using an econometric method which assumes a constant rate of trend growth (tax trend method group). Tax trend methods tend to generate smoother cyclically adjusted tax revenue levels than those linked to the output gap. However, if the actual rate of trend growth deteriorates, there is a risk that there might be no need for the state government to respond promptly. The danger then is that structural deficits might be permitted (wrongly) as cyclically induced developments, and an additional persistent debt might build up. Targeted trend adjustments would therefore appear to be necessary to address this problem. The essence of this idea is anchored in the method used in Rhineland-

7 For details, see Deutsche Bundesbank, Federal states' cyclical adjustment in the context of the debt brake, Monthly Report, March 2017, pp. 33 ff.

Palatinate, where the cyclical components are monitored on a control account. If the control account reaches substantial negative levels, there is a mechanism which automatically reduces the trend growth rates.

The tax-smoothing methods applied in Mecklenburg-West Pomerania, Saxony and Thuringia determine the normal level using the average level of tax revenue in multiple previous years (tax level method). However, if GDP and thus tax revenue increase over time (as they normally do), the use of past data as a point of reference will result in the normal levels determined being too low. As a result, for the most part, excessively high positive cyclical effects would be identified. These can be used for additional expenditure as long as they do not run up any debt, no repayments need to be made on loans borrowed earlier, and no reserves have to be replenished. High levels of reserves and safety margins are especially important under these methods because of the very tight constraints applied to cyclically induced borrowing.

Adjusting budgets for financial transactions

Transactions are deemed to be "financial transactions" when financial assets are realised or acquired. These transactions do not change the net stock of financial assets, nor do they accrue to the fiscal balance as defined in the national accounts, which is the point of reference for the European budgetary surveillance procedure. The state governments are free to choose whether and how they adjust their key budgetary position for the debt brake to allow for financial transactions.

To date, only Baden-Württemberg, Bremen, Hamburg, Hesse, Rhineland-Palatinate and Schleswig-Holstein make adjustments for financial transactions. For the most part, they make allowances for acquisitions and reductions of equity interests or loans as well as repayments and borrowing in the public sector. What this sometimes means, however, is that assumptions of losses and capital injections at enterprises with no prospect of distributing any profits in the future will also be included. These cases do not constitute financial transactions in the national accounts, however, and rightly so; instead, they are posted as capital transfers and thus affect the fiscal balance. The state governments ought to do likewise in order to comply with the objective of the debt brake, which is to avoid structural increases in debt without corresponding additions to the stock of financial assets. Starting in 2019, Rhineland-Palatinate will be following the approach used in the national accounts, at least in some respects (just like central government), in that drawn down guarantees will not be deducted as financial transactions. Like the national accounts, Hesse captures debt relief as regular expenditure items, with the result that the budgetary scope is reduced.

New borrowing in emergencies

Further exemptions from the debt brake rules are possible by adopting contingency clauses. These clauses can be activated in the event of natural disasters or exceptional emergency situations which escape government control and impact significantly on the state's financial situation. However, borrowing is only ever permitted in circumstances like these if it is linked to a repayment schedule.

The federal states' rules for contingency borrowing differ in a number of respects, including the voting majorities which are required in the state parliament.[8] These range from a simple majority of the votes cast

8 It does not seem appropriate here to modify the majority requirements enshrined in the state constitution by passing a set of sub-constitutional implementation acts.

(in North Rhine-Westphalia, Rhineland-Palatinate and Thuringia) to a two-thirds majority of mandates (in Hesse, Saxony and Schleswig-Holstein). In Mecklenburg-West Pomerania, a situation is only given emergency status above a specific threshold value. Yet, at less than 1% of the budget volume in recent years, this does appear to be a fairly low hurdle.[9] So far, Hesse, Saxony and Thuringia are the only federal states to articulate both an obligation and a clearer time schedule for scaling back funds raised under these contingency clauses.

Including off-budget entities

According to the wording of Article 109(3) of the Basic Law, the debt brake relates to borrowing by central and state government. The transitional provisions set forth in Article 143d make it clear, at least for central government, that its separate special funds (off-budget entities) also need to be included.[10] This arrangement does not apply as such to the state governments because they might still have the option of setting up off-budget entities equipped with borrowing authorisations during the transitional period. However, Article 109(2), which precedes the subsection anchoring the debt brake in the Basic Law, clearly states that the European fiscal rules must be complied with. It is reasonable to assume, then, that the state governments should likewise include their off-budget entities.[11]

The bulk of the federal states appear to have plans to stop granting borrowing authorisations to off-budget entities, in a move that is seen as satisfying the debt brake rule. This step does not suffice for the general government deficit ceiling, however – if off-budget entities are funded upfront, there is a possibility that the ceiling will be breached when the funds are drawn down at a later date.[12] The latter would be a case for including off-budget entities in the debt brake rules. But at a minimum, the balances of off-budget entities need to be added to the ongoing surveillance process.

Control account during budget execution

There is always a possibility that the debt brake will be adhered to during planning, but not in budget execution.[13] To prevent this from driving up debt levels, a number of federal states have set up control accounts (just like central government). This account shows how far net borrowing has deviated from the debt brake ceiling at budget outturn. If this account exceeds a threshold value, an adjustment will normally be made by lowering the borrowing ceiling in the next budget.[14] The federal states' control accounts differ primarily in terms of their threshold values. In Rhineland-Palatinate, the threshold is set at 15% of tax revenue in normal cyclical conditions, while in Hesse and Schleswig-Holstein it is 5%.

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9 However, what this also means in an emergency is that fiscal burdens of this amount or less cannot be covered by borrowing.
10 If at all, only borrowing authorisations issued before 2011 may still be used here.
11 Central government has been counting off-budget entities newly established since 2011 which are recipients of funding contributions from the core budget towards the debt brake. In compliance with the European fiscal rules, the fiscal balance is included for these entities. As a result, the advance funding does not curtail the budgetary scope under the debt brake rules, because the core budget is charged and the institution obtaining the funding receives the same amount of relief. Only when the funds flow out of the off-budget entity is the budgetary scope curtailed. Bearing this in mind, such pre-funded central government off-budget entities are viewed in a more positive light under the European fiscal rules than reserves.
12 See also the box on p. 32.
13 There is broader scope for borrowing during this phase, not only for central government.
14 In most cases, there is no need to reduce borrowing in adverse cyclical conditions, the idea here being to avoid any consolidation measures which have a procyclical effect.

Implementation of the debt brake pursuant to Article 109 III of the German Basic Law: current status*

Federal state	Legal basis	Point of reference	Deviations from debt ban for		
			Cyclical factors	Financial transactions[1]	Emergencies
Baden-Württemberg	Section 18 SBA; Reg on section 18 SBA	Net borrowing	Yes Tax trend method	Yes	Yes – Majority required: absolute majority. – Repayment schedule: within an appropriate period.
Bavaria	Recast Article 82 SC, Article 18(1) SBA	Net borrowing	No Option enshrined in SC unused.	No	Yes
Berlin[2]	No arrangements as yet.	–	–	–	–
Brandenburg	No arrangements as yet.	–	–	–	–
Bremen[2]	Article 131a SC; no IA as yet. Article 131b SC for a transitional period.	No arrangements as yet.	Yes Details unspecified as yet.	Yes Details unspecified as yet.	Yes – Majority required: absolute majority. – Repayment schedule: not specified.
Hamburg	Articles 72 and 72a SC, section 27 SBA, Act to strategically realign the budgetary framework of the Free and Hanseatic City of Hamburg	Net borrowing	Yes Tax trend method	Yes – Loans only if repayment is assured. – No securities carried as current assets	Yes – Majority required: two-thirds (simple). – Repayment schedule: within an appropriate period.
Hesse	Article 141 SC; IA for Article 141	Net borrowing	Yes Based on Federal Government's procedure with cyclical control account.	Yes Loan losses accounted for.	Yes – Majority required: two-thirds (absolute). – Repayment schedule: repayment in full, normally within seven years.
Lower Saxony	SBA; amendment of SC scheduled.	Net borrowing	Yes Details unspecified as yet.	Yes Details unspecified as yet.	Yes Details unspecified as yet.
Mecklenburg-West Pomerania	Article 65 SC, section 18 SBA, Act on the SF cyclical adjustment reserve of the Federal State of Mecklenburg-West Pomerania	Net borrowing	Yes Tax level method	No	Yes – Repayment schedule: not specified.

***** Abbreviations: SC – state constitution, SBA – state budgetary act, IA – implementing act, Reg – regulation, SF – special fund. **1** In case of adjustment, the federal state's definition of financial transactions may deviate from the budgetary classification system used in the Federal Statistical Office's tables (SKF-3). **2** State subject to an administrative agreement for consolidation assistance.

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Off-budget entities included?	Control account in outturn	Selected key figures		Federal state
		2017 budget as per debt brake	Reserves for investment or to balance budget	
No	Yes Threshold value: 10% of trend tax revenue. Above that, mandatory reduction.	Net borrowing core budget (plan): -€410 million (repayment of implied debt after deducting €949 million in net borrowing permitted for a transitional period) Fin. transactions (net): -€153 million Cyclical component: €1,512 million	Calculated surplus from previous years: €1,962 million	Baden-Württemberg
No No off-budget entities with borrowing authorisation at present.	No	Net borrowing core budget (outturn): -€500 million Fin. transactions (net): -€188.1 million (memo item)	Reserve to rebalance the budget, strengthen cash resources and protect guarantees (end of 2016): €6,300 million	Bavaria
–	–	(Only data in consolidation report for 2017)	Off-budget entity SIWANA: out of 2015-17 surpluses: €3,109 million. Additionally €90 million. Outflows: €455 million. Buffer of €290 million.	Berlin[2]
–	–	–	No information.	Brandenburg
Details unspecified as yet.	Yes Details unspecified as yet.	(Only data in consolidation report for 2017)	–	Bremen[2]
Yes All state corporations, SFs and public higher education institutions.	No	Net borrowing core budget (outturn): -€644.8 million Net borrowing off-budget entities: €293.4 million Fin. transactions (net): -€64.1 million Cyclical component: €1,281.6 million	No single-entry reserves.	Hamburg
No Net borrowing only prohibited by law for state corporations, higher education institutions and SFs. Stock changes in pension reserve included.	Yes Threshold value: 5% of average tax revenue over past three years. Reduction mandatory if threshold value is exceeded.	Net borrowing core budget (outturn): -€200 million Net borrowing off-budget entities: none. Fin. transactions (net): €159 million Cyclical component: €617 million	Cyclical adjustment reserve (end of 2017): €450 million	Hesse
No arrangements as yet. No off-budget entities with borrowing authorisation at present.	Yes Details unspecified as yet.	No amounts under the debt brake reported as yet.	Reserves for investment etc. (end of 2017): €529 million General reserve (end of 2017): €1,505 million	Lower Saxony
No Borrowing not permitted for SFs.	No	No information.	Cyclical adjustment reserve: €300 million General reserve: €1,595.7 million	Mecklenburg-West Pomerania

Implementation of the debt brake pursuant to Article 109 III of the German Basic Law: current status* (cont'd)

Federal state	Legal basis	Point of reference	Deviations from debt ban for		
			Cyclical factors	Financial transactions[1]	Emergencies
North Rhine-Westphalia	Section 18 SBA; no IA as yet.	Net borrowing	Yes Details unspecified as yet.	Yes Details unspecified as yet.	Yes – Majority required: simple majority. – Repayment schedule: within an appropriate period.
Rhineland-Palatinate	Article 117 SC; section 18 SBA; IA for Article 117; Reg on the method used to determine the cyclical component	Up to 2019: fiscal balance As from 2019: net borrowing	Yes Tax trend method	Yes Up to 2019: incl. guarantees As from 2019: excl. guarantees	Yes – Majority required: simple majority. – Repayment schedule: reports to state parliament on repayments and outstanding balance; repayment cyclically appropriate.
Saarland[2]	No arrangements as yet.	–	–	–	–
Saxony	Article 95 SC; section 18 SBA	Net borrowing	Yes Tax level method (repayment within eight years)	No	Yes – Majority required: two-thirds (absolute). – Repayment schedule: within eight years.
Saxony-Anhalt[2]	Section 18 SBA; no IA as yet	Net borrowing	Yes Details unspecified as yet.	No	Yes – Majority required: no information. – Repayment schedule: within an appropriate period.
Schleswig-Holstein[2]	Article 61 SC; IA for Article 61 SC	Fiscal balance	Yes Based on Federal Government's procedure, with cyclical control account.	Yes	Yes – Majority required: two-thirds (absolute). – Repayment schedule: repayment reports to state parliament; repayment within an appropriate period.
Thuringia	Section 18 SBA; no IA	Net borrowing	Yes Tax level method	No	Yes – Majority required: simple majority. – Repayment reports to state parliament; repayment in five years (can be postponed in case of new borrowing).

Deutsche Bundesbank

Off-budget entities included?	Control account in outturn	Selected key figures		Federal state
		2017 budget as per debt brake	Reserves for investment or to balance budget	
No arrangements as yet.	Yes Threshold value: 1% of state GDP. Above that, cyclically appropriate reduction is mandatory.	No amounts under the debt brake reported as yet.	No general reserves.	North Rhine-Westphalia
(Yes) Up to 2019: larger relevant off-budget entities included. As from 2019: no borrowing authorisation for state corporations and SFs.	Yes Threshold value: 15% of tax revenue in a cyclically normal situation. Cyclically appropriate reduction mandatory if threshold value is exceeded.	Net borrowing core budget (outturn): -€872.0 million Net borrowing off-budget entities: -€173.0 million Fin. transactions (net): -€127.0 million Cyclical component: €1,021.0 million	SF "Wissen schafft Zukunft": allocation in 2016: €118.7 million 2017: €7.1 million Stock of reserves at end of 2016: €2.0 million Residual borrowing authorisation: End of 2015: €3,334 million End of 2016: €2,036 million End of 2017: •	Rhineland-Palatinate
–	–	(Only data in consolidation report for 2017)	For investment: €265 million To balance the budget: €90 million	Saarland[2]
Yes All legally dependent SFs.	Yes Deviations to be offset no later than in the next budget plan.	Net borrowing core budget (outturn): -€75 million Net borrowing off-budget entities: 0 Fin. transactions (net): not relevant Cyclical component: €1,835 million (implied)	Reserve for investment etc. €3,940 million Reserve to balance the budget: €1,529 million	Saxony
No No off-budget entities with borrowing authorisation at present.	No	(Only consolidation report for 2017)	Tax fluctuation reserve: €500.5 million General reserve: €301.9 million	Saxony-Anhalt[2]
No	Yes Threshold value: 5% of prior-year tax revenue. Above that, cyclically appropriate reduction mandatory.	Net borrowing core budget (outturn): -€117 million Net borrowing off-budget entities: none Fin. transactions (net): -€32 million Cyclical component: €137 million	Allocations to provisions: €1 billion in 2016-17; disposals: €481 million Reserve to balance the budget: none	Schleswig-Holstein[2]
No	No	Net borrowing core budget (outturn): -€415.2 million Net borrowing off-budget entities: €29.1 million Fin. transactions (net): -€14.5 million Cyclical component: not reported.	Reserve to balance the budget: €1,366.8 million SF "Thüringer Wohnungsbauvermögen": €225 million	Thuringia

The macroeconomic impact of uncertainty

The question as to the consequences of heightened uncertainty has been increasingly pushed to centre stage in economic policy discourse in connection with the global recession of 2008-09 and the European sovereign debt crisis. Yet with regard to other events, too, such as the referendum on the United Kingdom remaining in the EU or parliamentary elections followed by difficulties in the formation of new governments, political uncertainty is regularly diagnosed as potentially being capable of impairing economic activity. Similar outcomes are also attributed to financial market turmoil and heightened uncertainty concerning the economic outlook. Against this background, this raises the question as to whether uncertainty is having a systematic impact on macroeconomic developments. Despite numerous explanatory approaches, it has proved challenging to demonstrate the existence of such an effect.

One reason is that there is no generally accepted measure of uncertainty. While some approaches focus on the political environment and evaluate the relevant information, others look at the volatility of financial market variables, the dispersion of survey results or the forecastability of key economic variables. Depending on the underlying approach, conventional measures of uncertainty can produce different findings. A comparison of selected measures of uncertainty in the euro area shows, in some cases, considerable discrepancies. These differences carry over to the estimated relationship between uncertainty and macroeconomic developments.

Details of econometric modelling likewise play a meaningful role in adequately capturing the macroeconomic consequences of uncertainty shocks. Different findings can be reached depending on how the estimation approach is specified. In addition, it is often very difficult to tell uncertainty shocks apart from other shocks that operate in a similar manner, such as financial shocks, for instance.

Over the observation period, even despite the aforementioned difficulties, the existence of statistically significant relationships between uncertainty shocks and the euro-area real economy can be proven. During the global financial and economic crisis of 2008-09, in particular, uncertainty weighed perceptibly on output. In the more recent past, however, there has been no evidence that uncertainty shocks have dampened macroeconomic activity.

Background

Heightened interest in the economic consequences of uncertainty

Over the past ten years, the question as to the consequences of heightened uncertainty for macroeconomic developments has been shifted increasingly towards centre stage in economic policy discourse. The global financial and economic crisis and the subsequent sovereign debt crisis in the euro area were key reasons for this. In particular, the considerable economic turmoil during the crisis years and the sluggish economic recovery – compared with earlier cycles – were regarded as a consequence of heightened uncertainty. The tensions visible in the financial markets in the aftermath of the Brexit referendum and the concerns aired prior to a number of significant parliamentary elections in Europe about their outcome have stoked interest in the aggregate costs of heightened uncertainty.

Possible transmission channels for uncertainty

In principle, there are many conceivable transmission channels through which uncertainty can impact adversely on output.[1] One of these channels, for instance, is sluggish investment or consumption patterns. Investment is often very difficult to reverse or is even irreversible. This can prompt firms to delay investment expenditures amidst heightened uncertainty in order to make better-informed decisions at a later date.[2] Households may behave similarly with regard to the purchase of durable consumer goods.[3] Increased precautionary saving on the part of households can also exert a negative macroeconomic impact owing to the attendant cutback in consumer spending.[4] Moreover, specific forms of performance-based executive compensation can lead to increased caution and thus hesitancy regarding investment decisions in times of heightened uncertainty.[5] Uncertainty-induced financial market responses such as rising risk premiums and a credit crunch can also dampen real economic growth.[6] Against this background, the question presents itself as to how much uncertainty shocks have weighed on output growth in the euro area over the past few years.

Approaches to capturing uncertainty

No clear-cut measure of uncertainty

An assessment of the macroeconomic impact of uncertainty is predicated on properly capturing this factor. Although theory goes some way towards defining the concept of uncertainty, especially setting it apart from risk, where probabilities can be assigned to a set of potential outcomes,[7] and surprises as forecast errors,[8] there is no unique, clear-cut measure. Conventional uncertainty indicators therefore generally do not follow such a strict separation, but are often a combination of uncertainty, risk, and in particular cases, surprise.[9] In addition, the individual meas-

1 An overview of the potential channels of uncertainty can be found, inter alia, in N. Bloom (2014), Fluctuations in uncertainty, Journal of Economic Perspectives 28 (2), pp. 153-176.
2 See B. S. Bernanke (1983), Irreversibility, uncertainty and cyclical investment, The Quarterly Journal of Economics, 98 (1), pp. 85-106; R. S. Pindyck (1991), Irreversibility, uncertainty and investment, Journal of Economic Literature 29(3), pp. 1110-1148; and Deutsche Bundesbank, Uncertainty, freedom of action and investment behaviour – empirical findings for Germany, Monthly Report, September 2001, pp. 71-86. Uncertainty-induced reluctance to invest can also manifest itself in hesitation to enter a given market. See also A. Dixit (1989), Entry and exit decisions under uncertainty, Journal of Political Economy 97 (3), pp. 620-638.
3 See J. C. Eberly (1994), Adjustment of consumers' durables stocks: Evidence from automobile purchases, Journal of Political Economy 102 (3), pp. 403-436; G. Bertola, L. Guiso and L. Pistaferri (2005), Uncertainty and consumer durables adjustment, Review of Economic Studies 72 (4), pp. 973-1007.
4 For more on the topic see, inter alia, S. Basu and B. Bundick (2017), Uncertainty shocks in a model of effective demand, Econometrica 85 (3), pp. 937-958.
5 See B. Glover and O. Levine (2015), Uncertainty, investment, and managerial incentives, Journal of Monetary Economics 69 (C), pp. 121-137.
6 See L. J. Christiano, R. Motto and M. Rostagno (2014), Risk shocks, American Economic Review 104 (1), pp. 27-65; S. Gilchrist, J. W. Sim and E. Zakrajšek (2014), Uncertainty, financial frictions, and investment dynamics, NBER Working Paper No 20038; I. Alfaro, N. Bloom and X. Lin (2018), The finance uncertainty multiplier, NBER Working Paper No 24571.
7 Knight (1921) makes a distinction between uncertainty and risk, which can be captured by probability theory. See F. H. Knight (1921), Risk, uncertainty and profit, Boston, Houghton Mifflin Company.
8 See C. Scotti (2016), Surprise and uncertainty indexes: Real-time aggregation of real-activity macro surprises, Journal of Monetary Economics 82 (C), pp. 1-19.
9 Exceptions may be found in G. Bekaert, M. Hoerova and M. Lo Duca (2013), Risk, uncertainty and monetary policy, Journal of Monetary Economics, 60 (7), pp. 771-788; B. Rossi, T. Sekhposyan and M. Soupre (2016), Understanding the sources of macroeconomic uncertainty, CEPR Discussion Papers No 11415; and C. Scotti (2016), op. cit.

ures are, in some cases, conceptually considerably different, in terms of both the method of calculating the indicators and also the data used.

Conventional uncertainty indicators based on volatility of financial market data, …

The time-varying volatility of financial market data is a conventional measure for approximating uncertainty. Examples include the volatility of stock market indices derived from options prices and the implied volatility of exchange rates calculated from foreign exchange options.[10] This rests on the assumption that option prices contain meaningful information about market participants' perception of risk.

… the dispersion of future expectations, …

The dispersion of future expectations represents an additional frequently used measure of uncertainty. This approach rests on the assumption that the dispersion of market agents' or analysts' forecasts increases with rising uncertainty, whereas a low degree of uncertainty leads to a more uniform picture of expectations.[11] Standard reference variables include growth of real gross domestic product (GDP), consumer price inflation and the change in manufacturing output.[12]

… media coverage analysis …

Another widespread approach is to use media coverage analysis to capture uncertainty tendencies.[13] For example, a popular indicator of economic policy uncertainty measures the frequency with which major daily newspapers report on it. Newspaper articles are searched at fixed intervals for keywords or combinations of terms referring to this type of uncertainty. A measure of uncertainty is then derived from the intensity of reporting.

… and the volatility of forecast errors

One general criticism of the uncertainty measures listed above is that the underlying data set is usually small, which calls their suitability into question. Another is that these measures do not always make a clear distinction between forecastable developments and developments that actually have to be regarded as unexpected. As a case in point, the dispersion of future expectations might reflect different, albeit certain (e.g. sector or firm-specific) expectations. The volatility of financial market variables – owing, for example, to changes in risk aversion or market participants' sentiment – can also increase without being attributable to uncertainty surrounding the possible realisation of macroeconomic fundamentals. Such indicators therefore run counter to a widely held opinion that uncertainty is linked to the limited ability to forecast future events.[14] Against the background of these two criticisms, more recent studies recommend deriving uncertainty indicators from the volatility of estimation errors resulting from the forecasting of a broad selection of business cycle-relevant time series and financial market data.[15] The fluctuation intensity of forecast errors determines the degree of uncertainty here.[16]

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10 See N. Bloom (2009), The impact of uncertainty shocks, Econometrica 77 (3), pp. 623-685; and A. Haddow, C. Hare, J. Hooley and T. Shakir (2013), Macroeconomic uncertainty: What is it, how can we measure it and why does it matter? Bank of England Quarterly Bulletin 53 (2), pp. 100-109.

11 See A. Girardi and A. Reuter (2017), New uncertainty measures for the euro area using survey data, Oxford Economic Papers 69 (1), pp. 278-300.

12 See N. Bloom (2009), op. cit.; J. H. Wright (2011), Term premiums and inflation uncertainty: Empirical evidence from an international panel dataset, American Economic Review 101 (4), pp. 1514-1534; R. Bachman, S. Elstner and E. Sims (2013), Uncertainty and economic activity: Evidence from business survey data, American Economic Journal: Macroeconomics 5 (2), pp. 217-249.

13 See S. R. Baker, N. Bloom and S. J. Davis (2016), Measuring economic policy uncertainty, The Quarterly Journal of Economics 131 (4), pp. 1593-1636; D. Caldara and M. Iacoviello (2018), Measuring geopolitical risk, International Finance Discussion Papers No 1222, Board of Governors of the Federal Reserve System.

14 See K. Jurado, S. C. Ludvigson and S. Ng (2015), Measuring uncertainty, American Economic Review 105 (3), pp. 1177-1216; and S. C. Ludvigson, S. Ma and S. Ng (2015), Uncertainty and business cycles: Exogenous impulse or endogenous response? NBER Working Paper No 21803.

15 This measure of uncertainty is calculated in three steps. The first step is, using a factor model approach, to estimate the forecastable components of the underlying macroeconomic time series. Given the resultant forecast errors, a stochastic volatility model is employed in a second step to derive the individual uncertainty attributable to the respective macroeconomic time series, being captured by the conditional volatility of the forecast error. In the final step, the measure for macroeconomic uncertainty is determined by aggregating time-series-specific uncertainty. For a detailed description of the methodology, see K. Jurado, S. C. Ludvigson and S. Ng (2015), op. cit.

16 Analyses based on this indicator for selected euro area countries may be found in Deutsche Bundesbank (2016), Investment in the euro area, Monthly Report, January 2016, pp. 31 ff.

Uncertainty measures for the euro area*

Monthly data

Sources: Bundesbank calculations based on data from Eurostat, Haver Analytics, Global Insight and www.policyuncertainty.com * A rise (fall) in the standardised indicators suggests a rise (fall) in uncertainty. The period from January 1999 to June 2018 forms the underlying dataset. **1** Based on the volatility of forecast errors derived from a comprehensive dataset. **2** Based on the dispersion of output expectations in manufacturing. **3** VSTOXX Volatility Index. Calculated from options on the EURO STOXX 50. **4** Calculated as the arithmetic mean of the Economic Policy Uncertainty Indexes for France, Germany, Italy and Spain.

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Development of uncertainty indicators for the euro area over time

A descriptive comparison of common uncertainty indicators for the euro area, …

Further analysis is based on four uncertainty indicators for the euro area. These comprise an indicator for economic policy uncertainty,[17] measures referring to the volatility of the stock market,[18] the dispersion of production expectations in manufacturing[19] and a proxy of macroeconomic uncertainty based on the volatility of the non-forecastable component of cyclically relevant indicators.[20]

… despite some similarities, …

Over the period under review, it becomes apparent that, except for the economic policy uncertainty indicator, all of the measures of uncertainty reached their peak during the global financial crisis of 2008-09. Although the economic policy uncertainty indicator rose during the crisis, it hit its peak in 2016 during the month in which the United Kingdom voted on whether to remain in the European Union.[21] In the months that followed, too, movements in the economic policy uncertainty index deviated from developments in the other measures of uncertainty. While economic policy uncertainty tended to hover at well above average levels, uncertainty in the euro area as indicated by the other measures remained relatively low on the whole as the economic recovery proceeded.[22]

17 The index of economic policy uncertainty is derived from the evaluation of newspaper articles and measures how often the words "uncertainty", "economy" and specific policy-relevant keywords occur together. For a detailed description of the measurement concept, see S. R. Baker, N. Bloom and S. J. Davis (2016), op. cit. The indicator for the euro area was calculated as the simple arithmetic mean of the indicators for Germany, France, Spain and Italy (available at www.policyuncertainty.com).

18 Stock market volatility is calculated using the implied volatility of the EURO STOXX 50 derived from stock options (with a maturity of 30 days).

19 The dispersion of output expectations for the next three months in manufacturing is calculated on the basis of monthly opinion surveys conducted by the European Commission. See also R. Bachmann, S. Elstner and E. R. Sims (2013), op. cit.; P. Meinen and O. Röhe (2017), On measuring uncertainty and its impact on investment: Cross-country evidence from the euro area, European Economic Review 92 (C), pp. 161-179; and European Commission, European Business Cycle Indicators: 4th Quarter 2016, Special topic: Measuring uncertainty using survey data – What do we measure?, European Economy Technical Paper No 13, January 2017, pp. 24-28.

20 The index of macroeconomic uncertainty for the euro area is calculated as the arithmetic mean of the measures for Germany, France, Spain and Italy. Depending on the country in question, the calculation comprises between 122 and 139 time series, including cyclical indicators, survey data, financial market series as well as prices and exchange rates. For a detailed description of the index concept, see K. Jurado, S. C. Ludvigson and S. Ng (2015), op. cit.; for a detailed description of the calculation method for the euro area, see P. Meinen and O. Röhe (2017), op. cit.

21 The indicators show further periods of heightened uncertainty in the euro area following the terrorist attacks in the United States on 11 September 2001, the Iraq war in 2003 (predominantly stock market volatility, economic policy and macroeconomic uncertainty), the European sovereign debt crisis and the recent US presidential election (the indicator of economic policy uncertainty only).

22 This is particularly true of the indicator for macroeconomic uncertainty, which has remained below its long-term average since October 2012.

Contemporaneous correlations of various measures of uncertainty and their interaction with real GDP growth in the euro area*

Variable	Macroeconomic uncertainty[1]	Dispersion of expectations[2]	Implied stock market volatility[3]	Economic policy uncertainty[4]
Real GDP growth	– 0.525***	– 0.682***	– 0.513***	– 0.311***
Macroeconomic uncertainty[1]	1.000	.	.	.
Dispersion of expectations[2]	0.593***	1.000	.	.
Implied stock market volatility[3]	0.721***	0.529***	1.000	.
Economic policy uncertainty[4]	– 0.170	0.135	0.232**	1.000

Sources: Bundesbank calculations based on quarterly data from Eurostat, Haver Analytics, Global Insight and www.policyuncertainty.com * The statistical significance of the estimated correlation coefficients is denoted by */**/*** at the usual levels. The period from Q1 1999 to Q2 2018 forms the underlying dataset. **1** Based on the conditional volatility of forecast errors derived from a comprehensive dataset. **2** Based on the dispersion of output expectations in manufacturing. **3** VSTOXX Volatility Index. Calculated from options on the EURO STOXX 50. **4** Calculated as the arithmetic mean of Economic Policy Uncertainty Indexes for France, Germany, Italy and Spain.

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… sometimes shows marked differences in terms of time pattern …

The unique behaviour of the indicator for economic policy uncertainty can also be seen in a simple correlation analysis. While implied stock market volatility, the dispersion of expectations and macroeconomic uncertainty as measured by forecast error volatility are fairly closely correlated, the same can only be said of economic policy uncertainty to a limited extent. In combination with the macroeconomic uncertainty indicator, it even gives rise to a negative correlation coefficient, albeit a statistically insignificant one. Stock market volatility and the macroeconomic uncertainty indicator exhibit an especially pronounced positive relationship.

… and interaction with output

All of the uncertainty indicators nevertheless display a negative relationship with respect to aggregate growth. The simple correlation coefficient with the quarterly GDP growth rate proves to be statistically significant for each of the indicators. The negative correlation measured using this method is particularly noticeable for the dispersion of expectations, while it is relatively weak for economic policy uncertainty.

Quantification of uncertainty effects for the euro area

The measurement of macroeconomic uncertainty effects …

Simple correlations can provide broad indications of relationships between economic time series. To analyse the macroeconomic effects of uncertainty in greater depth, two classes of models are commonly used in applied economic research. In addition to microfounded dynamic stochastic general equilibrium models (see also the box on pp. 54 ff.), structural vector autoregression models (SVAR models) are frequently employed. In these multi-equation models, a vector of selected endogenous variables is first regressed on its own lags. An estimated multi-dimensional linear equation system such as this can capture the dynamic relationships between a large number of key macroeconomic variables. The residual values of the various individual equations are then used to identify the drivers of the model – the structural shocks. The aim is to observe the impact of these disturbances on the system in isolation and to estimate their relative importance.

… can be carried out using econometric estimation methods

Identifying these shocks requires additional assumptions derived, inter alia, from economic theory. The recursive identification method assumes, for example, that certain shocks initially have a delayed impact on selected variables

Macroeconomic effects of uncertainty in the context of DSGE models

Microfounded dynamic stochastic general equilibrium models (DSGE models) have become a standard tool in quantitative macroeconomics. This type of model typically attempts to explain macroeconomic developments based on individual optimal decision rules of rational economic agents.[1] In these models, the cyclical dynamics of the economy are induced by a variety of unexpected disturbances (referred to as shocks).

The first generation of DSGE models was kept relatively simple, but methodological refinements and greater computing power have expanded their modelling possibilities.[2] As a result of these developments, it is also possible to explore the macroeconomic effects of uncertainty using DSGE models. One of the advantages here over other modelling strategies (such as structural vector autoregressive models) is the ability to map specific transmission channels in detail.

In DSGE models, uncertainty shocks are often captured as unexpected changes in the variance of selected disturbances[3], whereby frictions are of key importance to the macroeconomic effects of uncertainty shocks. Besides nominal and real rigidities, these include financial market imperfections, in particular.[4]

Depending on which frictions are taken into account, there can sometimes be clear differences in the quantification of uncertainty effects. This also applies to key macroeconomic variables such as output and price developments, which are of special interest from a monetary policy perspective.

It is true that the direction of the impact on aggregate output is largely undisputed – an increase in uncertainty generally has a dampening effect.[5] That said, the effects of the adverse uncertainty shocks on output

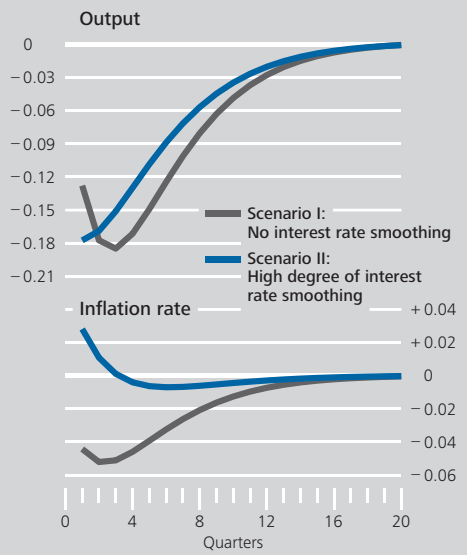
1 DSGE models typically assume that economic agents do not make any systematic errors when forming their expectations and that they make optimum use of all the information that is available to them. See also Deutsche Bundesbank, Lower bound, inflation target and the anchoring of inflation expectations, Monthly Report, June 2018, pp. 31-50.
2 See L. J. Christiano, M. S. Eichenbaum and M. Trabandt (2018), On DSGE models, Journal of Economic Perspectives 32 (3), pp. 113-140.
3 See J. Fernández-Villaverde, P. Guerrón-Quintana, J. F. Rubio-Ramírez and M. Uribe (2011), Risk matters: The real effects of volatility shocks, American Economic Review 101 (6), pp. 2530-2561. Alternative approaches to modelling uncertainty in DSGE models can be found, inter alia, in P. D. Fajgelbaum, E. Schaal and M. Taschereau-Dumouchel (2017), Uncertainty traps, The Quarterly Journal of Economics 132 (4), pp. 1641-1692 and T. Nakata (2017) Uncertainty at the zero lower bound, American Economic Journal: Macroeconomics, 9 (3), pp. 186-221.
4 An example of the interaction of uncertainty shocks and real rigidities in the form of (non-convex) adjustment costs for investment and employment can be found in Bloom et al. (2018). In their paper, Basu and Bundick (2017) focus on the interplay between price rigidities and uncertainty shocks. For information about the role of financial market imperfections in the transmission of uncertainty, see, inter alia, Arellano et al. (2018), Christiano et al. (2014) and Gilchrist et al. (2014). See L. J. Christiano, R. Motto and M. Rostagno (2014), Risk shocks, American Economic Review, 104 (1), pp. 27-65; S. Gilchrist, J. W. Sim and E. Zakrajšek (2014), Uncertainty, financial frictions, and investment dynamics, NBER Working Paper No 20038; S. Basu and B. Bundick (2017), Uncertainty shocks in a model of effective demand, Econometrica 85 (3), pp. 937-958; N. Bloom, M. Floetotto, N. Jaimovich, I. Saporta-Eksten and S. J. Terry (2018), Really uncertain business cycles, Econometrica, 86 (3), pp. 1031-1065; C. Arellano, Y. Bai and P. J. Kehoe (2018), Financial frictions and fluctuations in volatility, Journal of Political Economy, forthcoming.
5 In this context, several studies point to the increased impact of uncertainty shocks in periods with a binding zero lower bound on the nominal interest rate. Moreover, a binding zero lower bound in combination with conventional macroeconomic shocks, too, can lead to heightened uncertainty about macroeconomic developments. See also S. Basu and B. Bundick (2017), op. cit. and M. Plante, A. W. Richter and N. A. Throckmorton (2018), The zero lower bound and endogenous uncertainty, The Economic Journal 128 (611), pp. 1730-1757.

shown in the DSGE simulations range from relatively small[6] to clearly contractionary.[7]

When it comes to price developments, the direction of the impact is less clear cut. A number of analyses find that output and prices demonstrate unidirectional responses, as can also be observed for macroeconomic demand shocks.[8] Other studies point to the possibility of opposite movements as a result of heightened uncertainty.[9] In this context, the result sometimes depends significantly on the assumptions about the conduct of monetary policy.[10] In DSGE models, central bank policy is often described by a simple reaction function. The central bank adjusts the policy rate to movements in output measures and deviations of the inflation rate from the target. The strength of the response usually also depends on a smoothing parameter which is supposed to portray the preferences of the central bank in terms of interest rate stability.

Effects of an uncertainty shock under different degrees of interest rate smoothing*

Percentage deviation from the (stochastic) steady state



Source: Bundesbank calculations based on S. Basu and B. Bundick (2017), Uncertainty shocks in a model of effective demand, Econometrica 85 (3) pp. 937-958. * Impulse-responses of output and inflation rate to an uncertainty shock using a DSGE model for the United States.

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Simulations using a prototypical DSGE model with imperfect competition and nominal rigidities confirm that the assumed degree of interest rate smoothing can play a key role in determining the direction of the impact of uncertainty shocks on the inflation rate.[11] If the central bank decides not to smooth interest rate fluctuations, aggregate output and inflation respond to an unexpected increase in uncertainty in the same direction, as is typical for demand shocks.[12] In actual fact, however, empirical estimations usually point to comparatively

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6 See B. Born and J. Pfeifer (2014), Policy risk and the business cycle, Journal of Monetary Economics 68, pp. 68-85.
7 See S. Leduc and Z. Liu (2016), Uncertainty shocks are aggregate demand shocks, Journal of Monetary Economics 82, pp. 20-35 and S. Basu and B. Bundick (2017), op. cit.
8 See S. Leduc and Z. Liu (2016), op. cit. and S. Basu and B. Bundick (2017), op. cit.
9 See also B. Born and J. Pfeifer (2014), op. cit. and J. Fernández-Villaverde, P. Guerrón-Quintana, K. Kuester and J. Rubio-Ramírez (2015), Fiscal volatility shocks and economic activity, American Economic Review 105 (11), pp. 3352-3384.
10 See S. Fasani and L. Rossi (2018), Are uncertainty shocks aggregate demand shocks?, Economics Letters 167, pp. 142-146. For an overview of the significance of heightened uncertainty for monetary policy, see also R. Mendes, S. Murchison and C. A. Wilkins (2017), Monetary policy under uncertainty: Practice versus theory, Bank of Canada Staff Discussion Paper No 2017-13.
11 The underlying model is based on Basu and Bundick (2017) and calibrated for the United States of America. See S. Basu and B. Bundick (2017), op. cit.
12 The direction in which the inflation rate moves following an uncertainty shock is the result of a combination of different forces. The decline in demand triggered by an uncertainty shock puts downward pressure on prices. This may be countered by the fact that firms which are subject to heightened uncertainty can also have an incentive to increase prices. Although the expected variability of future shocks increases when uncertainty is greater, the direction of impact is unclear. If price adjustment costs go up in line with the strength of the price change and if a price that is set too low in comparison to competitors causes a greater loss of profits than a price that is too high (convex price adjustment costs in combination with a concave profit function), prices may rise after an uncertainty shock. If the central bank reacts comparatively strongly to an uncertainty shock (no interest rate smoothing), the likelihood of high, cost-intensive future price adjustments decreases. In this case, the price dampening effect of uncertainty shocks therefore predominates.

high degrees of interest smoothing.[13] It is then also possible that output and prices move in opposite directions following uncertainty shocks. However, especially in periods of severe macroeconomic distortions, which are sometimes also characterised by a high degree of uncertainty, interest rate smoothing can be far less pronounced.[14] In these circumstances, it would also be conceivable that output and prices would respond in the same direction. This contradictory finding is consistent with the inconclusive empirical evidence on the price effects of uncertainty shocks (for details, see the box on pp. 60 ff.).

13 See R. Clarida, J. Gali and M. Gertler (1999), The science of monetary policy: A New Keynesian perspective, Journal of Economic Literature, 37 (4), pp. 1661-1707; and E. Castelnuovo (2007), Taylor Rules and interest rate smoothing in the euro area, The Manchester School; 75 (1), pp. 1-16.
14 See F. S. Mishkin (2009), Is monetary policy effective during financial crises?, American Economic Review: Papers and Proceedings, 99 (2), pp. 573-577; and F. S. Mishkin (2010), Monetary policy flexibility, risk management, and financial disruptions, Journal of Asian Economics, 21 (3), pp. 242-246.

and do not cause any direct effects within that same period.[23] In this identification strategy, it is not only the selected data frequency but also the order of the variables within the estimation model that determines how rapidly individual indicators react to certain disturbances over time.[24]

Structural vector autoregression models …

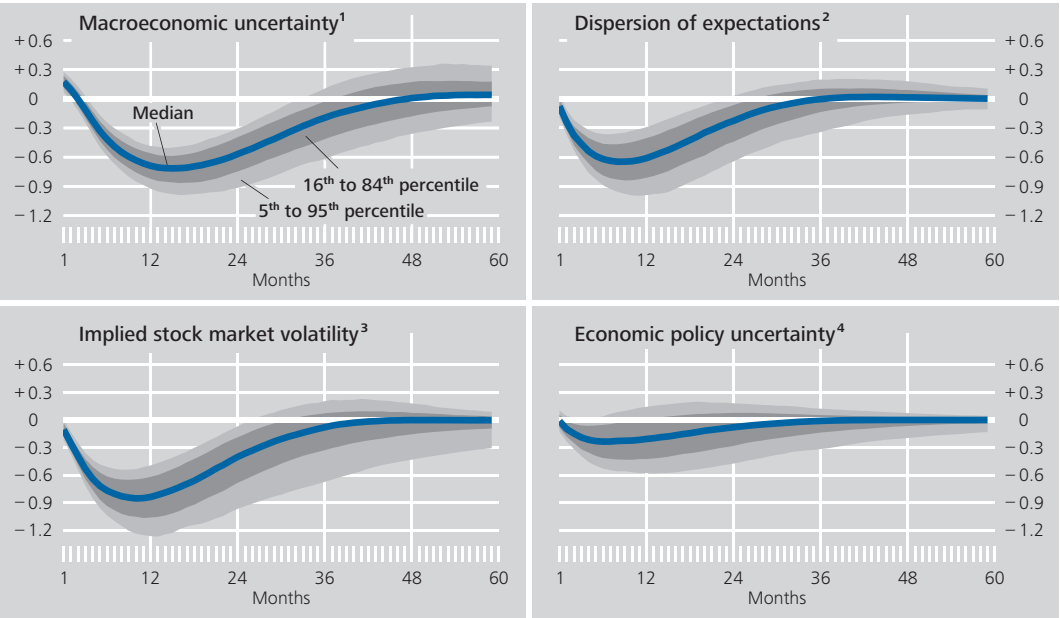
To obtain initial findings on the macroeconomic effects of uncertainty in the euro area, a recursive SVAR model is estimated using two variables – one of the uncertainty indicators presented and industrial production (excluding the construction sector) as an indicator of real economic activity.[25] Here it is assumed that uncertainty shocks can directly influence the level of uncertainty as well as the real economy. Output also responds immediately to shocks in the real economy. These, however, only affect uncertainty after a lag of one period. The assumption of a lag of one period in the impact of real economic shocks on uncertainty can be justified for at least some of the measures of uncertainty employed on account of their backward-looking orientation when using monthly data.[26] The use of lower-frequency data series such as quarterly GDP would be more problematic under this assumption.[27]

The relevance of the identified shocks can be determined using impulse-response functions and a variance decomposition of the model's

23 See C. A. Sims (1980), Macroeconomics and reality, Econometrica 48 (1), pp. 1-48.
24 A Cholesky decomposition of the variance-covariance matrix of the VAR residuals is generally used to carry out the recursive identification.
25 See C. Scotti (2016), op. cit.; and R. Bachmann, S. Elstner and E. R. Sims (2013), op. cit.
26 This is true, for instance, for the dispersion of output expectations based on surveys. See also S. Leduc and Z. Liu (2016), Uncertainty shocks are aggregate demand shocks, Journal of Monetary Economics 82, pp. 20-35; and K. Istrefi and S. Mouabbi (2018), Subjective interest rate uncertainty and the macroeconomy: A cross-country analysis, Journal of International Money and Finance 88, pp. 296-313.
27 See also B. Born, S. Breuer and S. Elstner (2018), Uncertainty and the Great Recession, Oxford Bulletin of Economics and Statistics 80 (5), pp. 951-971.

Effects of an adverse uncertainty shock on industrial production in the euro area using various measures of uncertainty*

in %



Sources: Bundesbank calculations based on data from Eurostat, Haver Analytics, Global Insight and www.policyuncertainty.com *Impulse responses resulting from uncertainty shocks of one standard deviation derived from Bayesian two-variable SVAR models. The structural shocks are obtained by recursive identification. The period from January 1999 to December 2017 forms the underlying dataset. **1** Based on the volatility of forecast errors derived from a comprehensive dataset. **2** Based on the dispersion of output expectations in manufacturing. **3** VSTOXX Volatility Index. Calculated from options on the EURO STOXX 50. **4** Calculated as the arithmetic mean of the Economic Policy Uncertainty Indexes for France, Germany, Italy and Spain.

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… as a common standard tool for analysing uncertainty shocks

forecast errors.[28] The impulse-response functions depict the responses of the model variables to each of the shocks over time. The variance decomposition sheds light on the relative importance of the shocks to the fluctuations in the variables observed.[29]

Estimation results generally show a negative …

For all four measures of uncertainty, the impulse-response functions derived from the two-variable model indicate a decline in industrial production resulting from an unexpected increase in uncertainty. However, the selected credible intervals are only able to identify a statistically highly significant effect for three of the uncertainty indicators presented (stock market volatility, dispersion of output expectations and macroeconomic uncertainty), but

28 The impulse-response analysis and variance decomposition are based on models estimated with Bayesian techniques. A normal-inverse-Wishart prior with a Minnesota structure is used as the prior distribution of the model parameters, while the hyperparameters are set on the basis of standard assumptions (see, inter alia, Canova, 2007). The impulse-response analysis and variance decomposition are depicted via the median and selected credible intervals calculated from the posterior distribution of the SVAR parameters using 2,000 draws. The period from January 1999 to December 2017 forms the underlying dataset. The maximum time lag for the endogenous variables to be included in the SVAR model (lag order) is 12 periods. The individual model equations also contain deterministic components in the form of a constant. See F. Canova (2007), Methods for applied macroeconomic research, Princeton University Press.

29 Forecast error variance decomposition specifically shows what share of the forecast error variance for a specific forecast horizon of the model's variables can be explained by the respective structural shock in the SVAR model. In the context of the impulse-response analysis, the SVAR system – assuming a state where all fundamental disturbances in the model take on the value zero – is hit once with a structural shock amounting to one standard deviation. The impulse-response function depicts the response of the model variables to this unexpected impulse over time. For a detailed description of the methodology, see, inter alia, H. Lütkepohl (2005), New Introduction to multiple time series analysis, Springer-Verlag; and L. Kilian and H. Lütkepohl (2017), Structural vector autoregressive analysis, Cambridge University Press.

Relative contribution of uncertainty shocks to the fluctuation in industrial production in the euro area using various measures of uncertainty*

%

Measure of uncertainty/model	Forecast horizon in months			
	1	12	36	60
Macroeconomic uncertainty[1]				
Two-variable SVAR	3	29	55	53
Multiple variable SVAR I[2]	1	47	39	37
Multiple variable SVAR II[3]	0	33	30	26
Dispersion of expectations[4]				
Two-variable SVAR	1	28	35	35
Multiple variable SVAR I[2]	0	16	13	12
Multiple variable SVAR II[3]	0	8	7	6
Implied stock market volatility[5]				
Two-variable SVAR	1	44	59	59
Multiple variable SVAR I[2]	1	34	33	33
Multiple variable SVAR II[3]	0	6	8	7
Economic policy uncertainty[6]				
Two-variable SVAR	0	4	6	6
Multiple variable SVAR I[2]	0	6	7	7
Multiple variable SVAR II[3]	0	1	2	2

Sources: Bundesbank calculations based on data from Eurostat, Haver Analytics, Global Insight and www.policyuncertainty.com
* Forecast error variance decomposition for selected forecast horizons based on recursively identified SVAR models for industrial production in the euro area. The period from Q1 1999 to Q4 2017 forms the underlying dataset. **1** Based on the conditional volatility of forecast errors derived from a comprehensive dataset. **2** Multiple variable SVAR I: uncertainty shocks have an immediate impact on all model variables. **3** Multiple variable SVAR II: uncertainty shocks have an immediate impact on uncertainty and affect the remaining model variables with a lag of one period. **4** Based on the dispersion of output expectations in manufacturing. **5** VSTOXX Volatility Index. Calculated from options on the EURO STOXX 50. **6** Calculated as the arithmetic mean of the Economic Policy Uncertainty Indexes for France, Germany, Italy and Spain.

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not for economic policy uncertainty.[30] There are also noticeable differences in terms of the magnitudes of the uncertainty shocks. According to the estimated impulse-response functions, the decline in industrial production is much lower when the indicator for economic policy uncertainty is used compared to the other measures.

… and, in some cases, significant impact of shocks on the real economy

A similar picture emerges from a variance decomposition of the forecast errors. While uncertainty shocks do go a substantial way towards explaining the fluctuations in industrial production in the euro area for three of the indicators, i.e. stock market volatility, the dispersion of expectations and macroeconomic uncertainty, this is not the case for economic policy uncertainty.

The impact intensity of heightened uncertainty nevertheless depends on …

Though a two-variable model can provide initial insights into the macroeconomic significance of uncertainty shocks, a more precise quantification requires an expanded set of variables given the diverse ways in which economic variables interact. Therefore, a second econometric model takes into account a stock index, a shadow short rate, the Harmonised Index of Consumer Prices, the standardised unemployment rate and industrial production in the euro area in addition to one of the four measures of uncertainty.[31]

… the model size, …

As in the two-variable model, it is assumed that uncertainty shocks have an immediate impact on all other variables.[32] The variance decomposition shows that including additional macroeconomic relationships typically reduces the estimated extent to which uncertainty shocks account for fluctuations in output.[33] This decrease is particularly noticeable when measuring uncertainty based on the dispersion of output expectations. By contrast, the results for the macroeconomic uncertainty indicator prove relatively robust. Though the importance of uncertainty shocks declines significantly when the

30 Credible intervals are the Bayesian counterpart to confidence intervals used in frequentist statistics. They define the region that contains a specific, pre-defined share of the probability mass of the posterior distribution. See F. Canova (2007), op. cit.; and L. Kilian and H. Lütkepohl (2017), op. cit.
31 The EURO STOXX 50 price index was chosen as the stock index for the euro area. The shadow short rate is intended to measure the degree of monetary policy accommodation when the policy rate is at the zero lower bound. In "normal" periods, the shadow short rate matches the short-term interest rate. See L. Krippner (2013), Measuring the stance of monetary policy in zero lower bound environments, Economics Letters, 118 (1), pp. 135-138; and Deutsche Bundesbank, The influence of credit supply shocks on the development of real GDP and lending to euro-area non-financial corporations, Monthly Report, September 2015, pp. 36 ff.
32 Lag order, variable frequency and estimation periods are kept in accordance with the two-variable SVAR model. The specification and ordering of variables in the model are based on Bloom (2009). See N. Bloom (2009), op. cit.
33 While this is not the case for economic policy uncertainty, its explanatory contributions are approximately as low as in the two-variable model.

indicator for stock market volatility is employed, they still have a relatively high level of explanatory power.

… the model specification …

In a further review of the results, it is assumed that uncertainty shocks only have an effect on the remaining variables with a lag of one period.[34] On balance, the explanations provided by uncertainty shocks across the entire forecast horizon are once again much lower than before. This is especially true when uncertainty indicators geared towards stock market volatility and the dispersion of expectations are used. That said, uncertainty shocks do still explain a relatively large share of the fluctuations in industrial production when the indicator for macroeconomic uncertainty is deployed.

… and the chosen uncertainty indicator

It is therefore evident that estimations of the macroeconomic impact of uncertainty shocks can produce very different results depending on the measure of uncertainty selected and the specification of the econometric model. Only the measure for macroeconomic uncertainty based on the volatility of forecast errors yields relatively robust results. These suggest a clear temporary impact of uncertainty on aggregate activity.

Isolating uncertainty shocks

Need to identify uncertainty shocks precisely

When determining the macroeconomic impact of uncertainty shocks, it is particularly important to carefully separate these disturbances from other relevant shocks. In some cases, for instance, quantitative analyses point to markedly similar real economic effects arising from an unexpected increase in uncertainty and from other typical negative macroeconomic shocks – such as adverse financial shocks.[35] In this context, a precise identification is also important from a monetary policy perspective. This is demonstrated by a number of studies which indicate that an unexpected increase in uncertainty can impair the impact of conventional monetary policy measures.[36] For example, any changes in firms' price-setting behaviour[37] and in financial sector leverage[38] triggered by uncertainty can water down the effects of monetary policy on macroeconomic activity. Moreover, clearly identifying uncertainty shocks may be relevant when assessing price dynamics (see the box on pp. 60 ff.).

Uncertainty shocks difficult to isolate

With regard to the econometric framework used up until now, it is rather difficult to separate uncertainty shocks from financial shocks as they have a similar impact on macroeconomic variables and identifying assumptions regarding their lagged impact sometimes seem to be arbitrary. Such models may therefore cause the macroeconomic consequences of heightened uncertainty to be misinterpreted.

Use of sign restrictions to identify uncertainty shocks

Bearing all this in mind, identifying shocks on the basis of sign restrictions represents an alternative method of jointly capturing uncertainty and financial shocks in SVAR models.[39] Under this approach, the signs derived from economic theory are imposed on the impulse response

34 Uncertainty therefore now occupies the last position in the variable vector of the SVAR model. The lag in the impact of uncertainty shocks specified in this model is justified, amongst other things, by the desire to achieve the most conservative possible quantification of uncertainty effects on the real economy. Similar approaches can be found in K. Jurado, S. C. Ludvigson and S. Ng (2015), op. cit.; and P. Meinen and O. Röhe (2017), op. cit.

35 See also F. Furlanetto, F. Ravazzolo and S. Sarferaz (2018), Identification of financial factors in economic fluctuations, The Economic Journal, forthcoming.

36 See N. Bloom (2009), op. cit.

37 See J. Vavra (2014), Inflation dynamics and time-varying volatility: New evidence and an Ss interpretation, The Quarterly Journal of Economics 129 (1), pp. 215-258; K. A. Aastveit, G. J. Natvik and S. Sola (2017), Economic uncertainty and the influence of monetary policy, Journal of International Money and Finance 76, pp. 50-67; G. Pellegrino (2018), Uncertainty and the real effects of monetary policy shocks in the euro area, Economics Letters 162, pp. 177-181; and E. Castelnuovo and G. Pellegrino (2018), Uncertainty-dependent effects of monetary policy shocks: A New Keynesian Interpretation, Journal of Economic Dynamics and Control 93, pp. 277-296.

38 See S. Eickmeier, N. Metiu and E. Prieto, Time-varying volatility, financial intermediation and monetary policy, Deutsche Bundesbank Discussion Paper No 46/2016.

39 See D. Caldara, C. Fuentes-Albero, S. Gilchrist and E. Zakrajšek (2016), op. cit. as well as F. Furlanetto, F. Ravazzolo and S. Sarferaz (2018), op. cit.

The effects of uncertainty shocks on prices

Although the macroeconomic effects of uncertainty shocks have been examined intensively in the past few years, there are only a few empirical studies which deal with their price effects in more detail. Analyses based on micro-founded dynamic stochastic general equilibrium models (DSGE models) show distinct effects of these shocks on macroeconomic economic activity for the most part, but the direction of impact on prices is less clear. While part of the DSGE literature emphasises a co-movement of prices and real economic activity following unexpected changes in uncertainty,[1] there are also arguments suggesting that firms might increase their prices in response to adverse uncertainty shocks.[2] In this context, it must also be taken into account that assumptions made with regard to the monetary policy reaction function can be crucial for the price effects (see comments on page 54 ff.).

An investigation of the effects of uncertainty shocks on prices requires that these disturbances be isolated from other relevant structural shocks. A distinction is particularly challenging for the type of shocks that originate from the financial market, as these often turn out to have very similar macroeconomic effects. Moreover, the direction in which financial shocks move prices is likewise unclear.[3]

An empirical analysis of the price effects of uncertainty shocks is carried out here with the help of a structural vector autoregressive (SVAR) model. A setup with six variables is estimated each for the United States and the euro area. It contains the log real gross domestic product (GDP), the log Harmonised Index of Consumer Prices (HICP), a shadow short rate as a measure of the monetary policy stance,[4] a bank credit spread[5] and a stress indicator for the financial system[6] – in order to capture the situation in the financial markets – as well as a macroeconomic uncertainty measure.[7] For availability reasons, the estimates for the euro area are based on data for the period from the first quarter of 1999 to the fourth quarter of 2017 and for the United

1 See S. Leduc and Z. Liu (2016), Uncertainty shocks are aggregate demand shocks, Journal of Monetary Economics 82, pp. 20-35.
2 See B. Born and J. Pfeifer (2014), Policy risk and the business cycle, Journal of Monetary Economics, 68, pp. 68-85; J. Fernández-Villaverde, P. Guerrón-Quintana, K. Kuester and J. Rubio-Ramírez (2015), Fiscal volatility shocks and economic activity, American Economic Review 105 (11), pp. 3352-3384; and the comments on pp. 54 ff.
3 The analysis conducted by Abbate et al. (2016) is one of the few empirical studies to examine this issue. Along with empirical evidence for the United States, it also contains an overview of the literature on the price effects of financial market shocks in DSGE models. See A. Abbate, S. Eickmeier and E. Prieto (2016), Financial shocks and inflation dynamics, Deutsche Bundesbank Discussion Paper, No. 41/2016.
4 Krippner (2013) provides shadow short rate data for both economic areas. The indicator measures the degree of monetary policy accommodation when the policy rate is at the zero lower bound. Otherwise the shadow rate corresponds to the short-term interest rate. See L. Krippner (2013), Measuring the stance of monetary policy in zero lower bound environments, Economics Letters 118 (1), pp. 135-138. Updated data are available at https://www.rbnz.govt.nz/research-and-publications/research-programme/additional-research/measures-of-the-stance-of-united-states-monetary-policy/comparison-of-international-monetary-policy-measures
5 The variable measures the interest rate spread between an average interest rate for bank loans to non-financial corporations and yields on ten-year German government bonds and ten-year US Treasuries.
6 The stress indicator for the euro area measures the yield spread between selected debt securities (bonds) issued by euro area non-financial corporations and German government bonds (zero-coupon bonds) with a corresponding maturity (Gilchrist and Mojon, 2018). Gilchrist and Zakrajšek (2012) provide a comparable indicator for the United States. See S. Gilchrist and B. Mojon (2018), Credit risk in the euro area, The Economic Journal 128 (608), pp. 118-158; and S. Gilchrist and E. Zakrajšek (2012), Credit spreads and business cycle fluctuations, American Economic Review 102 (4), pp. 1692-1720.
7 For the USA, the indicator developed by Jurado et al. (2015) is used and, for the euro area, that developed by Meinen and Röhe (2017). See K. Jurado, S. C. Ludvigson and S. Ng (2015), Measuring uncertainty, American Economic Review 105 (3), pp. 1177-1216 and P. Meinen and O. Röhe (2017), On measuring uncertainty and its impact on investment: Cross-country evidence from the euro area, European Economic Review 92 (C), pp. 161-179.

Sign restrictions to identify contractionary structural shocks in a vector autoregressive model*

Variables/shocks	Aggregate supply shock	Aggregate demand shock	Monetary policy shock	Financial shock	Uncertainty shock
Gross domestic product	–	–	–	–	–
Consumer prices	+	–	–	.	.
Short-term shadow rate	+	–	+	–	–
Bank credit spread	.	–	.	+	+
Financial market stress	.	.	.	+	+
Financial market stress/ uncertainty[1]	.	.	.	+	–

***** A positive (negative) sign implies a contemporaneous rise (decline) in the variable as a result of the shock. A point means that there is no restriction. **1** The indicators for financial market stress and uncertainty are standardised; they therefore each have the same first and second moment. Although the relative response of both indicators is restricted, both series are entered into the model separately.

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States from the third quarter of 1986 to the fourth quarter of 2017.[8]

In addition to the uncertainty shock, a financial shock, an aggregate supply shock, an aggregate demand shock and a monetary policy shock are identified in the model using sign restrictions. This identification approach is based on assumptions about the contemporaneous direction of the reaction of the variables to the shock in question, which generally stem from theoretical considerations. In this context, the structural shock must satisfy the following restrictions: A negative supply shock leads to a decline in GDP and an increase in the price level and short-term interest rate. By contrast, a negative demand shock leads to a reduction in GDP and a similar response by the consumer price index and shadow rate. Furthermore, an unexpected decline in aggregate demand results in a contraction of the bank credit spread. A negative monetary policy shock implies that interest rates will go up and GDP and consumer prices will go down.[9]

Financial shocks and uncertainty shocks are assumed to heighten uncertainty and financial market stress and increase the gap between bank lending rates and long-term government bond yields. At the same time, they have a dampening effect on macroeconomic activity and monetary policy becomes more accommodative.[10] Owing to the ambiguity of theoretical results, the direction of impact on prices is not specified.[11] The distinction between an

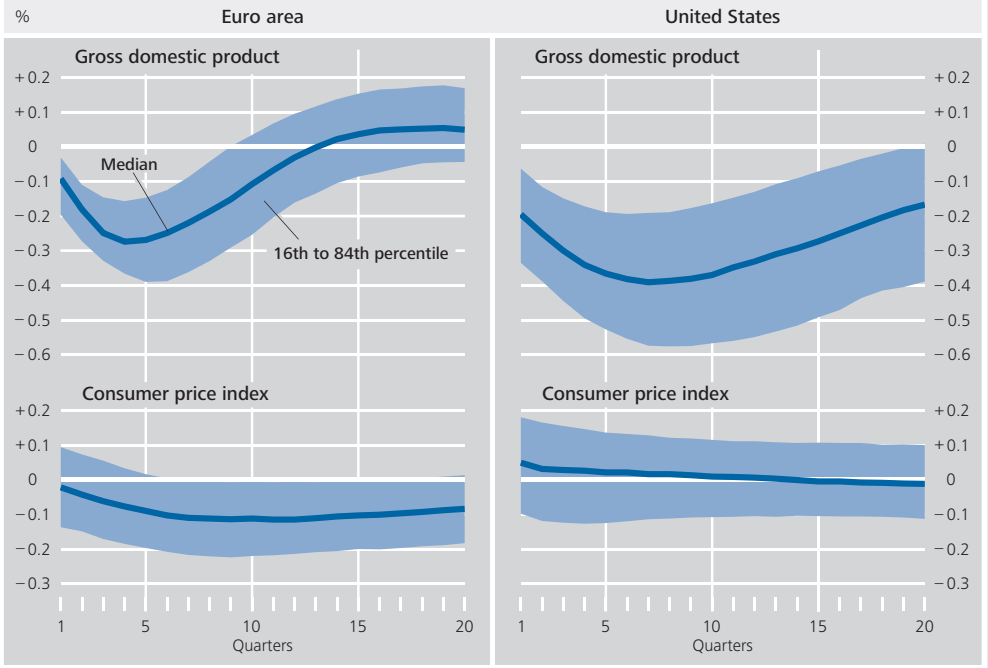
8 In addition to the contemporaneous and lagged variables, the individual model equations of the SVAR system each contain a constant. The lag order of the SVAR model is 5. The estimation is carried out using Bayesian methods. A normal-inverse Wishart prior with Minnesota structure is used, with the specification of hyperparameters in line with standard assumptions in the literature (see, inter alia, Canova, 2007). The implementation of sign restrictions is based on the algorithm developed by Rubio-Ramírez et al. (2010). See F. Canova (2007), Methods for Applied Macroeconomic Research, Princeton University Press; J. F. Rubio-Ramírez, D. F. Waggoner and T. Zha (2010), Structural vector autoregressions: Theory of identification and algorithms for inference, The Review of Economic Studies 77 (2), pp. 665-696.

9 Sign restrictions are used to ensure that the residual shock of the six-variable model is differentiated from the structural disturbances. For a detailed description of the identification strategy, see P. Meinen and O. Röhe (2018), To sign or not to sign? On the response of prices to financial and uncertainty shocks, Economics Letters 171, pp. 189-192.

10 See L. Gambetti and A. Musso (2017), Loan supply shocks and the business cycle, Journal of Applied Econometrics 32 (4), pp. 764-782; and D. Bonciani and B. van Roye (2016), Uncertainty shocks, banking frictions and economic activity, Journal of Economic Dynamics and Control, 73 (C), pp. 200-219.

11 For another study which does not restrict the price response to financial shocks, see Deutsche Bundesbank, The influence of credit supply shocks on the development of real GDP and lending to euro-area non-financial corporations, Monthly Report, September 2015, pp. 36-38. Based on these assumptions, uncertainty shocks and financial market shocks could result in a monetary policy response without this necessarily being required in terms of maintaining price stability. Such behaviour can be explained with a broader approach to monetary policy which incorporates the goal of financial market stability. The fact that a recent empirical study stressed the importance of financial market stress levels for monetary policy is consistent with this picture. See D. Caldara and E. Herbst (2018), Monetary policy, real activity, and credit spreads: evidence from Bayesian proxy SVARs. American Economic Journal: Macroeconomics, forthcoming.

Impact of an adverse uncertainty shock on macroeconomic activity and consumer prices in the euro area and in the United States*



* Impulse responses to uncertainty shocks of one standard deviation, derived from SVAR models estimated using Bayesian techniques. The models are estimated separately for the euro area and the United States and contain six variables each. Sign restrictions are used to identify the shock. The period from Q1 1999 to Q4 2017 forms the underlying data set.

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uncertainty shock and a financial shock is ultimately based on an assumption about the relative change in uncertainty and financial market stress. Here, an uncertainty shock is assumed to result in a stronger response by uncertainty relative to the stress indicator, whilst a financial market shock has a relatively stronger influence on stress levels in the financial market.[12]

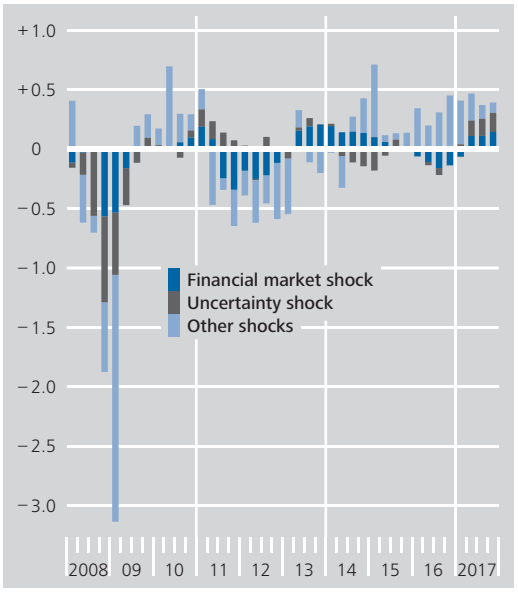
The impulse response functions derived from the model first of all confirm that uncertainty shocks negatively impact macroeconomic activity in both economic areas. In addition, output responds in a fairly similar way to financial market shocks. By contrast, the response of prices is less clear. For the euro area, the median of the estimated impulse response functions tends to suggest a co-movement of both shocks with GDP, but the wide dispersion of the results – as shown by the credible intervals[13] – illustrates the high estimation uncertainty associated with the price effects. In the case of the United States, the median price reaction even runs counter to the GDP response following an unexpected increase in uncertainty. Estimation inaccuracy is even more pronounced here, however, which means that in this scenario, too, the response is indistinguishable from zero. Overall, the results therefore suggest that the response of prices to uncertainty shocks is ambiguous in empirical terms.[14]

12 This separation of financial and uncertainty shocks follows the approach devised by Furlanetto et al. (2018) See F. Furlanetto, F. Ravazzolo and S. Sarferaz (2018), Identification of financial factors in economic fluctuations, The Economic Journal, forthcoming.
13 Credible intervals are the Bayesian counterpart to confidence intervals used in frequentist statistics.
14 Further estimates indicate that if, as often occurs in empirical applications, a co-movement of GDP and prices is restricted in response to financial and uncertainty shocks, this can weaken the estimated role these disturbances play for real economic activity.

functions.[40] To this end, an SVAR model is estimated, in this instance at quarterly intervals, employing the indicator of macroeconomic uncertainty, real GDP, the Harmonised Index of Consumer Prices, a shadow short rate, a bank credit spread[41] and a stress indicator for the financial system.[42] The estimations are based on the period from the first quarter of 1999 to the fourth quarter of 2017.[43] Alongside a financial shock and an uncertainty shock, an aggregate supply shock, an aggregate demand shock, and a monetary policy shock are specified. All the above shocks are identified using contemporaneous sign restrictions, i.e. on the basis of assumptions regarding the direction of the response of the model variables during the period when the shock occurs. The uncertainty shock is distinguished from a financial shock by means of the relative change in uncertainty and financial market stress.[44] A detailed description of the identification strategy can be found in the box on pp. 60 ff.

Historical decomposition of the effects of economic shocks on the quarterly growth rate of real GDP in the euro area*

%



* Contributions of contemporaneous and past realisations of economic shocks to the deviation of the observed variable from its unconditional mean, as derived from a structural VAR model with sign restrictions. For each shock, the median of the posterior distribution of its contribution is shown. The period from Q1 1999 to Q4 2017 forms the underlying dataset.

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Uncertainty shocks have dampened euro area GDP, notably during the financial crisis

The macroeconomic impact of uncertainty and financial shocks in the euro area in specific periods is gauged by undertaking a historical shock decomposition of quarterly real GDP growth rates.[45] There is evidence that both uncertainty shocks and financial shocks have influenced macroeconomic developments in the euro area during different periods. This is especially true of the global financial and economic crisis of 2008-09. In addition, the analysis suggests that financial shocks also slowed GDP growth in the wake of the European sovereign debt crisis. Conversely, during this phase, uncertainty shocks had no discernible macroeconomic impact. Similarly, at the end of the period under review, in 2017, uncertainty was not observed to have had any detrimental effect on overall output in the euro area. In fact, GDP growth was noticeably boosted when the

40 See J. Faust (1998), The robustness of identified VAR conclusions about money, Carnegie-Rochester Series on Public Policy 49, pp. 207-244; F. Canova and G. De Nicoló (2002), Monetary disturbances matter for business fluctuations in the G-7, Journal of Monetary Economics 49 (6), pp. 1131-1159; H. Uhlig (2005), What are the effects of monetary policy on output? Results from an agnostic identification procedure, Journal of Monetary Economics 52 (2), pp. 381-419.

41 The interest rate spread between an average interest rate for bank loans to non-financial corporations and yields on ten-year German government bonds is captured.

42 The stress indicator for the euro area measures the yield spread between selected debt securities of non-financial corporations in the euro area and German government bonds with corresponding maturities (see the comments on p. 60).

43 Since the identification strategy using sign restrictions basically allows the structural shocks to have a contemporaneous impact on all the model variables, the choice of variable frequency is of secondary importance, unlike in the case of a recursive approach.

44 Uncertainty shocks and financial shocks are set apart from one another following the approach by Furlanetto et al. (2018), which does not rest on any one specific theoretical foundation. The other shocks are identified by deriving robust sign restrictions on the basis of standard New Keynesian DSGE models. See F. Furlanetto, F. Ravazzolo and S. Sarferaz (2018), op. cit.

45 The contributions of contemporaneous and past realisations of economic shocks to the deviation of the respective model variables from their unconditional mean are determined using a historical shock decomposition. This decomposition thus provides insights into the impact of the identified shocks on the evolution of the key variables under observation. For a detailed description of the methodology, see, inter alia, L. Kilian and H. Lütkepohl (2017), op. cit.

level of uncertainty unexpectedly decreased.[46] This finding is consistent with the observation of a favourable macroeconomic environment in the euro area.

Conclusion

Challenges faced when analysing uncertainty shocks

The importance of uncertainty shocks for macroeconomic developments has attracted greater attention on the back of the financial and sovereign debt crisis. However, the task of assessing these effects has proved far from simple. One reason for this is the lack of a clear-cut measure of uncertainty, making it necessary to rely on approximations when performing empirical analyses. What is more, the commonly used quantification methods have sometimes been known to respond sensitively to the selected model specification. These points should be taken into account when analysing uncertainty effects.

Not all uncertainty indicators have a demonstrable impact on GDP

In the context of econometric studies, for example, it has not been possible to identify any systematic impact on output in conjunction with a commonly used indicator of economic policy uncertainty – at least not for the euro area. Given the high degree of media interest in the indicator in question, this finding is remarkable. This is not the case for the indicator used to gauge macroeconomic uncertainty, which is derived from the volatility of the forecast errors of a plethora of macroeconomic time series. In the period under review, this indicator reveals that uncertainty has a relatively robust negative impact on output.

No indications of dampening effects due to uncertainty in the recent past

Applying this indicator for the euro area, uncertainty is shown to have had a pronounced impact on the real economy over the period under review, especially during the financial and economic crisis. During the sovereign debt crisis, by contrast, financial shocks were of greater relevance. In the past few years, a period encompassing not just an array of important general election results, but also the Brexit referendum, the economic development in the euro area does not appear to have suffered from any significant adverse uncertainty effects.

46 A historical decomposition of consumer price inflation shows that uncertainty shocks have had a dampening effect, especially in the wake of the financial and economic crisis, but no notable impact on price increases at the end of the observation horizon.

Activities of multinational enterprise groups and national economic statistics

The business activities of international enterprise groups present great challenges for national economic statistics. They became a focus of attention for economic analysis when Ireland's gross domestic product (GDP) for 2015 was raised by one-quarter following a reorganisation of the division of labour within enterprise groups, even though the utilisation of labour and real installed capital in Ireland had not changed to any notable extent. This shows that GDP according to the national accounts methodology currently in place is not necessarily identical to the economic output generated by domestic labour and installed capital. For example, income from licenses, which serve to produce output abroad through the combination of labour and real installed capital there, counts towards domestic product. In consequence, the organisational decisions taken by multinational enterprise groups for, say, tax optimisation purposes can lead to abrupt shifts in the allocation of value added between national economies, thereby triggering jumps in domestic product levels. This can make interpreting key macroeconomic indicators such as economic growth, investment activity and productivity trends considerably more difficult.

The implications of the global economic activity of multinational enterprise groups are currently making themselves felt, above all, in small economies with a large share of such enterprises; but once they reach a certain scale, they can also have a tangible impact on the macroeconomic performance of larger economic areas. In 2015, for example, the events in Ireland led to a 0.4 percentage point increase in the estimate of GDP growth for the euro area. Even greater changes were seen that year and in subsequent years, particularly in the recorded statistics of investments in the euro area. Influences of this kind are highly detrimental to economic analysis, which is therefore very much dependent on detailed information from the statistical offices.

Growing global interconnectedness and official statistics

Growing importance of multinational enterprise groups …

The global interconnectedness of economic activity has accelerated considerably over the last three decades. Not only has trade in goods risen sharply; so, too, has the importance of cross-border production and supply chains as well as the cross-border provision of financial and consultancy services. This has been attributable to political and institutional changes such as the growing liberalisation of international economic activity as a result, inter alia, of progress made by the World Trade Organization or in connection with regional groupings such as the European Union (EU). Moreover, technological progress has drastically reduced communication and transport costs, which has facilitated a continual rise in the importance of enterprises that maintain production locations and subsidiaries in multiple countries or outsource parts of production to legally independent enterprises abroad.[1] This is particularly true of the EU, not least given the single market with its four basic freedoms. Multinational enterprise groups make major contributions to value added and employment in most EU Member States.[2]

… presenting great challenges for official statistics

The cross-border activities of globally interconnected enterprises present great challenges for national economic statistics.[3] In essence, the objective of official statistics is to capture domestic economic activity. However, multinational enterprise groups typically spread their activities among different countries. Given their complexity, it is often very difficult to allocate activities and transactions of multinational enterprise groups to specific national units.[4] Moreover, the structure and business operations of international networks are extremely diverse. Multinational enterprise groups do not operate solely on the basis of what is known as the horizontal or vertical division of labour.[5] Hybrid forms are also selected depending on the institutional, tax or cost-related circumstances.[6]

Recording the activities of multinational enterprise groups in the national accounts

Fundamental principles of the ESA 2010

Adjusting the standards in latest national accounts reform

The main objectives of the recent reform of the international standards for national accounts included a more comprehensive description of both the global economy and the changing production processes, in particular with regard to the provision of knowledge-based services. Research and development expenditure of firms on own account for own use is no longer regarded as intermediate consumption, but is instead treated as investment in intellectual property products and allocated to the capital stock. The resident units to which certain tasks of multinational enterprise groups are allocated can now also include what are known as special purpose entities or special purpose vehicles. Moreover, the principle of economic ownership is consistently brought to bear. The European System of Accounts (ESA) 2010, which is based on the System of National Accounts (SNA) 2008 that was drawn up under the auspices of

1 See P. Dicken (2015), Global Shift: Mapping the Changing Contours of the World Economy, 7th edition, The Guilford Press; World Trade Organization (2013), Global value chains in a changing world; and OECD (2013), Interconnected economies: benefiting from global value chains.
2 See C. Cadestin, K. de Backer, I. Desnoyers-James, S. Miroudot, M. Ye and D. Rigo, Multinational enterprises and global value chains: new insights on the trade-investment nexus, OECD Science, Technology and Industry Working Paper No 05/2018, p. 21; F. Boccara and T. Picard, Multinational enterprises and international trade: different country profiles, INSEE Première No 1558; and Eurostat, Multinational enterprise groups and their structure, https://ec.europa.eu/eurostat/web/experimental-statistics/multinational-enterprise-groups
3 See United Nations (2011), The impact of globalization on national accounts; United Nations (2015), Guide to measuring global production; and S. Allafi, S. Jung and V. Spies, Globalisierung in der amtlichen Statistik, Wirtschaft und Statistik 2017 (5), pp. 130-48.
4 See United Nations (2011), op cit., pp. 13-26.
5 Horizontal integration refers to enterprises on the same production level. With vertical integration, different levels of the production process are combined within one enterprise.
6 See C. Cadestin et al. (2018), op cit., pp. 8-9.

the United Nations, has been legally binding for EU Member States since 2014.[7]

Definition of resident units

The definition of "resident units" is of key importance when measuring the national value added contribution of multinational enterprise groups. It is these units that specific activities and transactions of the multinational enterprises are allocated to.[8] A key requirement for such a unit is that it engages in economic activity on a significant scale over at least one year in the country in question. However, it need not be formally legally independent. Branches, offices or production facilities may also be regarded as resident in the economic sense.[9] Resident producers pursuant to the ESA 2010 may also include what are referred to as special purpose entities or special purpose vehicles.[10] These are always formally subordinate to a larger company and in many cases they do not have significant staffing and lack production facilities. Thus, they do not usually meet the criterion of independent economic activity. They are regarded as separate resident units, as they are subject to the law of their country of residence and not that of the parent company's country of residence.[11]

Definition of economic ownership plays a key role

A second central principle when allocating activities to certain economic units is the ownership principle. Transactions are allocated based on ownership rights "in the economic sense". The economic owner according to the ESA 2010 is the unit that is "entitled to claim the benefits associated with the use of the asset by virtue of accepting the associated risks".[12] Thus, the economic ownership rights, which are of decisive importance for the national accounts, may deviate from the legal ownership rights.[13] In practice, however, the allocation of transactions is often likely to be based on business accounting, i.e. to take its bearings from the legal structures.[14] It is therefore possible that activities carried out jointly by the units of a multinational enterprise are recorded separately although they would be recorded jointly under a different organisational structure.

Transfer of economic ownership pivotal to goods trade transaction

With regard to the definition of trade in goods in the national accounts, it follows from the ownership principle that imports and exports are defined as transactions where economic ownership is transferred between a resident and a non-resident unit.[15] The objective of the national accounts statistics is to capture the income streams between residents and non-residents. This is in line with the current accounting rules of the balance of payments statistics (BPM 6).[16]

Transactions involving intellectual property products

The extension of the definition of investment in the ESA 2010 also has an impact on the accounting of transactions of multinational enterprise groups. According to the new national

7 See also United Nations (2009), System of National Accounts 2008; Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union; and A. Braakmann, Revidierte Konzepte für Volkswirtschaftliche Gesamtrechnungen, Wirtschaft und Statistik 2013 (8), pp. 521-527.
8 See Regulation (EU) No 549/2013, op cit., paragraph 1.61. "An [economic] unit is a resident unit of a country when it has a centre of predominant economic interest on the economic territory of that country – that is, when it engages for an extended period (one year or more) in economic activities on this territory."
9 As what are referred to as notional resident units. See also Regulation (EU) No 549/2013, op cit., paragraph 1.63.
10 See Regulation (EU) No 549/2013, op cit., paragraph 2.17. "A special purpose entity (SPE) or a special purpose vehicle (SPV) is usually a limited company or a limited partnership, created to fulfil narrow, specific or temporary objectives and to isolate a financial risk, a specific taxation or a regulatory risk."
11 A special purpose vehicle that had been set up in the country of the parent company would not be considered a separate institutional unit. See B. Moulton and P. van de Ven (2018), Addressing the Challenges of Globalization in National Accounts, Paper presented at the NBER Conference on Research in Income and Wealth, p. 4.
12 See Regulation (EU) No 549/2013, op cit., paragraph 15.06.
13 See United Nations (2009), op cit., p. 41. The reason given for this in the ESA 2010 is that "multinational corporations organising their business across national boundaries, [often seek] to maximise production efficiency and minimise the global tax burden. This can give rise to artificial corporation structures which may not reflect the economic reality" (Regulation (EU) No 549/2013, op cit., paragraph 1.16).
14 See B. Moulton and P. van de Ven (2018), op cit., p. 7.
15 See Regulation (EU) No 549/2013, op cit., paragraph 3.162, "Imports and exports of goods occur when economic ownership of goods changes between residents and non-residents. This applies irrespective of corresponding physical movements of goods across frontiers."
16 See International Monetary Fund (2009), Balance of Payments and International Investment Position Manual, sixth edition (BPM6).

accounts standards, firms' own-account expenditure on research and development is considered to be an investment alongside computer programs, mineral exploration and literary or artistic originals, which were already included in the ESA 1995, and is recognised as an intangible asset.[17] Like other intangible assets, the results of firms' own-account research and development can be protected with intellectual property rights. The outsourcing of such rights to units abroad[18] is regarded as a cross-border transaction which reduces the domestic capital stock. Income from licences and the corresponding value added is then also allocated to the units abroad.

Examples of cross-border economic activity and how it is recorded in the current ESA

Traditional cross-border trade

Following these principles, there are a number of particularities in recording the cross-border activities of multinational enterprise groups, as opposed to traditional trade.[19] In the case of traditional trade, an enterprise with a domestic economic owner produces goods domestically with domestic production factors, possibly using intermediate goods (e.g. raw materials) from an enterprise abroad to which it is not legally affiliated. When recorded in the national accounts, the proceeds from selling the goods abroad are allocated in full to domestic exports. Domestic value added is determined by deducting the cost of the imported intermediate goods from the export proceeds.

Cross-border production chains with transfer of economic ownership

If a domestic enterprise of a multinational group outsources parts of the production process abroad, economic ownership rights at the respective production stage determine how this is recorded. With a typical breakdown of the production chain, certain upstream activities, such as the development of new products and initial production steps, as well as downstream activities, such as the final assembly and marketing, remain with the head office, whereas the intermediary production stages are carried out by a subsidiary or an external enterprise abroad. If the economic owner of the goods to be processed changes in the course of the production process (i.e. where certain benefits and risks are transferred to the enterprise abroad), the value added created in the individual stages of production (output minus intermediate goods) is allocated to the manufacturing sector of the respective country of the producing unit. In the case of transactions within a multinational enterprise, the breakdown of value added at home and abroad is carried out on the basis of transfer pricing. Under these conditions, foreign trade transactions are recorded in the same way in the national accounts and the foreign trade statistics.

Cross-border production chains involving contract manufacturing abroad

It is also possible for the domestic enterprise to merely place a production order with the enterprise abroad. Economic ownership of the goods involved in the production process would thereby remain with the domestic enterprise. Under the ESA 2010, such manufacturing performed for a fee, but without a transfer of economic ownership, is referred to as contract manufacturing. This manufacturing is categor-

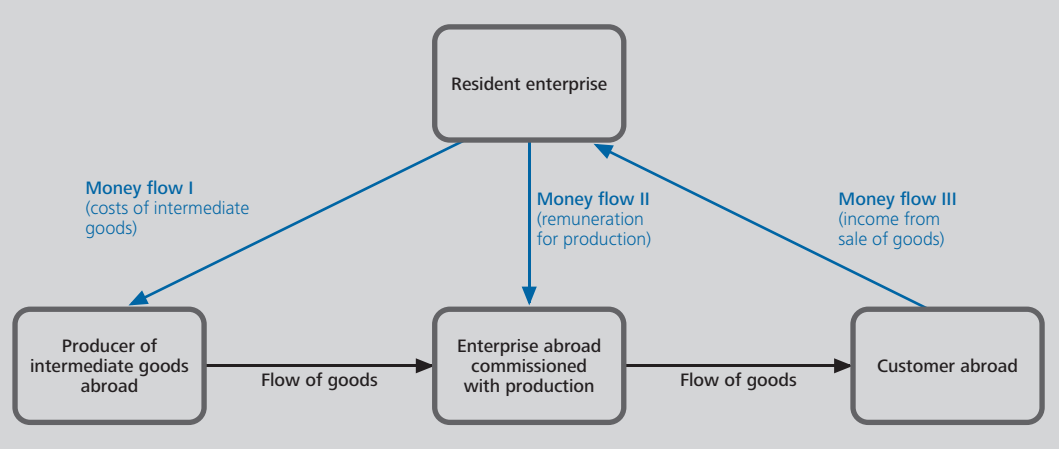
17 In the ESA 1995, firms' own-account expenditure on research and development was still regarded as intermediate consumption. The change in accounting approach was explained by the similarity to other investment processes and the growing importance of intangible assets in the production process. For questions on reporting with regard to the recognition of intellectual property, see OECD, Frascati Manual 2015, Guidelines for Collecting and Reporting Data on Research and Experimental Development; OECD (2010), Handbook on Deriving Capital Measures of Intellectual Property Products; Eurostat (2014), Manual on measuring Research and Development in ESA 2010; and W. Adler, N. Gühler, E. Oltmanns, D. Schmidt, P. Schmidt and I. Schulz, Forschung und Entwicklung in den Volkswirtschaftlichen Gesamtrechnungen, Wirtschaft und Statistik 2014 (12), pp. 703-718. The EU Member States have currently not yet fully harmonised the procedure for capturing investment in intellectual property products. See J. Ribarsky, P. Konijn, H. Nijmeijer and J. Zwijnenburg (2018), The Measurement of Stocks and Flows of Intellectual Property Products, Paper prepared for the 35th IARIW General Conference, Copenhagen.

18 These units may also include special purpose vehicles.

19 See also S. Stapel-Weber and J. Verrinder, Globalisation at work in statistics – Questions arising from the 'Irish case', EURONA, Eurostat review on National Accounts and Macroeconomic Indicators No 2/2016, pp. 29-44; as well as S. Avdjiev, M. Everett, P. R. Lane and H. S. Shin, Tracking the international footprint of global firms, BIS Quarterly Review, March 2018.

Contract manufacturing abroad

Simplified overview



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ised as a service, even if the goods are processed or manufactured by the non-resident company. In the balance of payments and the national accounts, such manufacturing is recorded as an import of services in the domestic country and should be recorded as an export of services in the foreign country. The share of the value added ascribed to the foreign country is derived from the fee agreed in exchange for the processing performed. The remainder of the value added is ascribed to the domestic contracting party and allocated to the manufacturing sector.[20] However, the value of semi-finished or finished goods transferred across national borders in the course of contract manufacturing transactions is not recorded under trade in goods pursuant to the national accounts, as only transactions associated with a change of ownership are recorded there. Hence, the physical movement of goods diverges from the income streams recorded in the national accounts if the physical flow of goods does not match the path of ownership transfer. This is the case if a domestic enterprise purchases an intermediate good, which the non-resident manufacturer sends directly to the non-resident company in charge of production, or if the non-resident enterprise delivers the finished product directly to the non-resident customer. In both cases, payments flow across national borders from or to the resident enterprise.

Factoryless goods production

In extreme cases, all production is outsourced, as opposed to just individual production stages. In such a case, the domestic enterprise would, for example, only be in charge of product design as well as specifying and monitoring the production stages. Such enterprises are known as factoryless goods producers. How this is recorded depends on the ownership of the input factors used in production and of the finished product. If a factoryless goods producer is also the economic owner of the intermediate input factors and thus also of the finished product, production is treated as contract manufacturing in statistical terms. If this is not the case, the factoryless goods producer is deemed to be a trader in goods who purchases and sells on the finished product.[21]

Accounting of merchanting trade

Accounting based on the ownership principle also applies to what is known as merchanting trade.[22] In the case of such transactions, resi-

20 If the finished product is a service, the value added is recorded in the corresponding services sector.
21 See United Nations (2015), op. cit. pp. 14 f., where it is stated that "A principal who completely outsources the transformation process should be classified into manufacturing if and only if it owns the input materials to the production process – and therefore owns the final output."
22 See S. Allafi, S. Jung and V. Spies (2017), op. cit., p. 139.

dent traders acquire goods from non-resident producers and sell them to non-resident customers, without the goods ever physically entering or leaving domestic territory. The flow of these transactions via domestic territory thus relates to ownership and payments, not to the physical movement of the goods.[23] Here, the national accounts show the acquisition of goods by the merchants as a negative export of goods and the sale of goods as a positive export of goods.[24] The determining factor for recording this as a trade of goods transaction is solely the transfer of economic ownership. The difference between the acquisition cost of the goods and the sales proceeds is recorded as domestic value added.[25]

Outsourcing intellectual property rights to subsidiaries abroad

If the rights to the results of firms' own-account research and development, such as patents, trademarks and copyrights, are managed by institutional units resident in another country, the accrued value added is divided up between the parent enterprise's country of residence and that of the subsidiary managing the rights. The share of value added pertaining to the entity abroad depends on the transfer prices for the use of intellectual property products. In the event that intellectual property rights are transferred across national borders along with the economic ownership, the corresponding value added is transferred as well.[26] Much the same is true of a legal transfer of a corporation's headquarters. The transactions linked to these headquarters, including income arising from intellectual property rights, would then count towards the target country's value added.

Complex business structures

The exact features of cross-border activity may vary substantially and encompass complex business structures. For example, a group may be headquartered in country A, where research and development are conducted. The intellectual property rights are outsourced to a special purpose vehicle in country B. The actual physical production of the product is performed in country C, with input factors from yet other countries. There are units in other countries which also take charge of distribution in a number of neighbouring countries. How to record such complex cross-border business activities in the national accounts requires a relatively detailed knowledge of the production process in place and the prevailing economic and legal ownership structure as well as a high level of coordination between the statistical offices. Moreover, given that rules and recommendations are not in place for all conceivable cases, it is likely that decisions on how to record highly complex transactions are made on a case-by-case basis.[27]

The informative value of domestic product as a measure of domestic production

Problems arising from the use of transfer prices

Despite a strict application of the ESA 2010 principles, value added cannot always be clearly allocated to specific national units as the organisational structure of multinational enterprise groups is sometimes very complex. Problems arise, for instance, from the application of transfer prices for intermediate goods and for the use of intellectual property products. Pursuant to the requirements of the ESA 2010, transfer prices should be equivalent to market prices. However, many services are never or rarely traded on markets, which makes it difficult to determine the corresponding prices. It is likely that enterprises will often carry out their reporting based on intra-group transfer prices – an area in which enterprises enjoy discretion. This discretionary scope may be used, for ex-

23 The resident trader records an incoming payment from the non-resident customer and an outgoing payment to the non-resident producer.
24 See Regulation (EU) No 549/2013, op. cit., paragraph 18.40; as well as United Nations (2009), op. cit., paragraphs 14.73 and 26.21.
25 Such transactions can also occur at leasing enterprises, who may, for instance, lease capital goods which have never physically been in domestic territory, but were produced in one foreign country and are used in another foreign country. The owner is the domestic leasing enterprise.
26 A transfer of value added shares also occurs in the event of a cross-border sale of ownership rights.
27 For a typology of global production structures and how they are recorded in the current national accounts, see United Nations (2015), op. cit., pp. 7-27.

ample, to report the smallest possible amount of income domestically and a correspondingly higher amount in a country that is more favourable in terms of tax. For this purpose, exports to such a country are undervalued, whereas imports are overvalued. The GDP recorded at home compared with estimated "real" market prices would then be too low and that recorded abroad would be too high.[28] Internationally coordinated regulatory and fiscal rules should, however, be able to limit enterprises' room for manoeuvre in this regard (see the box on pp. 72 ff.).

Organisational decisions of international corporations can affect GDP level

A country's domestic product can also reflect purely organisational decisions taken by multinational enterprise groups. In the case of outsourcing intellectual property rights or transferring an enterprise's headquarters to which the intellectual property rights are linked, the proceeds assigned to intangible assets are transferred across national borders and subsequently treated as domestic output in the respective foreign country.[29] Domestic product can therefore contain value added which is not generated through the joint deployment of domestic labour and installed capital, but is the result of income streams from ownership rights held by domestic subsidiaries which do not themselves carry out any manufacturing. The geographical separation of an enterprise's headquarters, the production sites and the locations of its various subsidiaries is a key characteristic of globalised economic activity. The current accounting practice reflects the associated payment streams. However, this represents a break with the notion that income is generated at the place of physical production through the joint deployment of labour and capital.[30] As a result of globalisation, the national accounts series are departing from established concepts of macroeconomic analysis.

Sectoral composition of GDP reflects income streams

Outsourcing intellectual property rights to non-producing subsidiaries abroad also has implications for the sectoral composition of the domestic product. For instance, both the country in which the parent enterprise is domiciled and that of the subsidiary owning the intellectual property products can record value added in the manufacturing sector without having to carry out the corresponding manufacturing or having the necessary production capacity in place for this. The functions performed by the parent enterprise itself may include services such as marketing and accounting. By contrast, in the country where the physical production takes place, the material transformation can be recorded as a service (contract manufacturing). The national accounts statistics measure the factor income generated in these sectors, including the charges for the use of intangible assets.

The impact of accounting practices under ESA 2010 on economic analysis

The accounting rules outlined here have potentially far-reaching implications for the analysis of macroeconomic trends and relationships. This applies not only to the allocation of economic output by region and sector or the recording of aggregate output, but also to economic growth, imports and exports, investment activity, productivity, and unit labour costs.

28 See B. Moulton and P. van de Ven (2018), op. cit., p. 6; as well as the Federal Statistical Office, Infoblatt Außenhandel, Ursachen für Asymmetrien in den Außenhandelsstatistiken.
29 In principle, outsourcing physical capital has the same effect but is more costly than a shift of intellectual property rights and therefore less important.
30 See OECD (2016), Irish GDP up by 26.3% in 2015?, available at http://www.oecd.org/sdd/na/Irish-GDP-up-in-2015-OECD.pdf. On the discussion of the implications of the broad definition of investment in intellectual property in the current national accounts, see also M. de Haan and J. Haynes, R&D capitalisation: where did we go wrong?, EURONA, Eurostat review on National Accounts and Macroeconomic Indicators No 1/2018, pp. 7-34; as well as B. Thage and P. R. Jensen (2018), GDP and Globalization, Paper prepared for the 35th IARIW General Conference, Copenhagen.

Globalisation and official statistics – the way forward

In order to meet the statistical challenges arising from the cross-border economic activities of multinational enterprise groups, official statistics producers need to make better contextualised use of the data from the various statistical fields and step up their cross-border cooperation. This is the objective of a number of initiatives at the national, European and international levels.

The most important thing here is to standardise reports from enterprises and enterprise groups by way of common definitions and standards and thus facilitate the exchange of information, both between the various statistical fields and between data producers. With its Framework Regulation Integrating Business Statistics (FRIBS), the EU intends to consolidate all regulations for short-term business statistics and structural statistics in one legal basis.[1] The corresponding draft regulation has not yet been finalised.[2] This regulation is intended to consolidate and further harmonise the legal bases for the field of business statistics. It includes a number of provisions that will help improve the recording of multinational activities. The role of the national business registers will be strengthened and it will become easier to exchange information between them. The single European statistical definition of "enterprise"[3] is to be implemented in all areas, after previous attempts proved to be only partially successful. In future, it will be possible to exchange information on trade in goods in a largely standardised way, and sales and production data in the services sector will be reported on a monthly rather than quarterly basis, as is already the case for manufacturing. Improvements are also to be made to the recording of cross-border trade in services and cross-border supply chains.

With the Data Gaps Initiative, the G20 agreed on a number of steps to improve the data basis, while also aiming to capture multinational economic activity more precisely.[4] The second phase of this initiative now also demands the removal of obstacles faced by statistical authorities with regard to a more extensive exchange of data and metadata, without this jeopardising statistical confidentiality.[5]

Alongside the members of the OECD and G20, other developing countries and emerging market economies also participate in

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1 See B. Waldmüller and J. Weisbrod, Neuere Entwicklungen in den Unternehmensstatistiken, Wirtschaft und Statistik 2015 (5), pp. 33-48; and R. Klein, Konzepte der Weiterentwicklung der Unternehmensstatistiken. FRIBS und die Umsetzung des EU Unternehmensbegriffs, Statistical Monatshefte Rheinland-Pfalz 2017 (3), pp. 153-159.

2 Bundesrat, Drucksache 211/17 of 6 March 2017: Proposal for a regulation of the European Parliament and of the Council on European business statistics amending Regulation (EC) No 184/2005 and repealing 10 legal acts in the field of business statistics. The draft is currently being worked on in a European Council working group.

3 In European statistics, an enterprise is the smallest independent economic entity with a certain degree of autonomy in decision-making. If economically necessary activities, such as accounting, are spun off in separate units, then the enterprise consists of multiple legal units in statistical terms. It is possible for such legal units of an enterprise group to be based in different countries. A comprehensive and consistent implementation of this concept in the EU has yet to occur. See R. Opfermann and M. Beck, Einführung des EU-Unternehmensbegriffs, Wirtschaft und Statistik 2018 (1), pp. 63-73.

4 An overview of the role of the recommendations of the second phase of the Data Gaps Initiative concerning questions of globalisation is provided by T. Jellema, S. Stapel-Weber, J. Verrinder and C. Willeke, Overview of statistical initiatives and outcome of the CMFB brainstorming, CMFB Globalisation Workshop, Vienna, 4-5 July 2018, p. 19 (https://www.cmfb.org/meetings/cmfb-globalisation-workshop).

5 The Inter-Agency Group on Economic and Financial Statistics (IAG) has made detailed proposals for implementing the recommendations on the exchange of granular data: IAG, Update on the Data Gaps Initiative and the Outcome of the Workshop on Data Sharing, March 2017. They were expressly welcomed in July of last year as part of the "Hamburg Action Plan" of the G20 heads of state and government.

the Base Erosion and Profit Shifting Project, which aims to combat tax avoidance by multinational enterprise groups and curb tax competition between countries.[6] Although the initiative does not have a statistical background, it could nevertheless be of considerable importance for the quality of the data bases. The project was completed in October 2015 with a series of recommendations. Since then, an automated exchange of information between tax authorities has been introduced with the common reporting standard. The international guidelines on transfer pricing[7] have been updated to restrict loopholes. For transactions between affiliated enterprises, the prices charged must generally be those that would have been charged in comparable transactions between independent third parties. Furthermore, for external reporting purposes, enterprises are obligated to break down most of their economic activities by country.[8] This has already been transposed into German national law.[9] These arrangements are also likely to indirectly improve the international comparability and quality of statistical data.

As globalisation can entail rapid changes in the organisation of multinational enterprise groups, such changes need to be recorded as soon as possible after they occur. Furthermore, the collection and processing of this information must be coordinated at the international level if asymmetries in the statistical data from different countries are to be avoided. This requires improvements to the statistical infrastructure and the exchange of information.[10] To this end, changes are being made to business registers. At the EU level, the EuroGroups Register has been in operation for some years. It provides reference data for all enterprise groups that are active in more than one EU country to ensure that consistent statistical treatment is possible in the participating countries. Data on ownership structures, particularly on intra-group relationships, are also provided. In parallel, the Eurosystem is setting up a business register for the euro area with its Register of Institutions and Affiliates Data (deepened and broadened by AnaCredit, the ESCB credit data statistics).

For the production of internationally coordinated statistics, it is essential that the relevant domestic and foreign producers of statistics are able to use the national and supranational registers. It would be helpful to put in place the necessary legal arrangements for an exchange of data between the national business registers and the Eurosystem business register. This could improve the statistical database and thus the coherence of financial and non-financial statistics.[11]

In order to amalgamate the information on the activities of international enterprises in different jurisdictions, global common iden-

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6 For more information see the website of the Federal Ministry of Finance https://www.bundesfinanzministerium.de/Web/DE/Themen/Steuern/Beps/beps.html

7 See OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 2017.

8 See the OECD's documentation at http://www.oecd.org/tax/beps/

9 BEPS-I Implementation Act (*BEPS-I Umsetzungsgesetz*) of 20 December 2016 (Amendment to section 90 (3) and introduction of section 138a of the Tax Code (*Abgabenordnung*)).

10 For current overviews, see S. Stapel-Weber, P. Konijn, J. Verrinder and H. Nijmeier, Meaningful Information for Domestic Economies in the Light of Globalization – Will Additional Macroeconomic Indicators and Different Presentations Shed Light?, NBER Working Paper, No 24859; and Jellema et al. (2018), op. cit. (https://www.cmfb.org/meetings/cmfb-globalisation-workshop). The latter document also contains scheduling information.

11 See also Recommendation 2 of the Committee on Monetary and Financial Statistics (CMFB) on statistical work using business identifiers and business registers of 2 December 2016. The CMFB is calling for the removal of legal obstacles to the exchange of data between the European Statistical System and the ESCB for statistical purposes, and for a limited set of business register characteristics also for non-statistical purposes; see https://www.cmfb.org/opinions

tifiers are required. An identifier already exists for entities listed in the European business register. The Legal Entity Identifier endorsed by the G20 is a global initiative for a system of clear global identifiers. It is an alphanumeric code that includes key reference data.[12] While it is, in principle, voluntary for enterprises to apply for such an identifier, the European Markets in Financial Instruments Regulation and other regulations already require such an identifier to be quoted when submitting certain reports.

In 2017, a European early warning system[13] to identify significant restructurings of multinational enterprise groups was also set up. It aims to ensure a coordinated approach between the relevant authorities and central banks through the exchange of information at the earliest possible stage. In some statistical offices in the EU, such as in Ireland and the Netherlands, "large cases units" have already been set up. These are intended to ensure complete and consistent recording of the activities of large multinational enterprise groups that are active in their respective countries.

In order to improve the recording of gross national income (GNI), the European Statistical System has set up a pilot project to examine the way in which the activities of a select number of very large multinational enterprise groups are captured in the national accounts of the Member States. The assessments of groups based in Germany are being coordinated by the Federal Statistical Office. It is envisaged that data on these groups will be exchanged in a non-anonymised form between the relevant Member States and Eurostat, in compliance with the legal provisions.[14] The focus of this examination is on whether the value added of enterprises and their legal entities is being booked in full and in the correct EU Member States. In addition, a review is also taking place as to whether transactions involving intellectual property products are being adequately captured, particularly with regard to research and development.

The EuroGroups Register, the early warning system and the GNI pilot project are important approaches at the European level for a granular information exchange between producers of official statistics in Europe. Thus far, however, this exchange is limited to a few narrowly defined fields. For a radical improvement in the information base, it would be necessary for the exchange of data within the statistical systems to be simplified overall without compromising confidentiality, as proposed in recommendation 20 of the second phase of the G20 Data Gaps Initiative.

12 https://www.gleif.org/en/about-lei/introducing-the-legal-entity-identifier-lei
13 See S. Allafi, S. Jung and V. Spies, Globalisierung in der amtlichen Statistik, Wirtschaft und Statistik 2017 (5), p. 143 f.; and Jellema et al. (2018), op. cit. p. 5 f.
14 See Jellema et al. (2018), op. cit., p. 6 f.; and Destatis, Informationen aus der Statistik 2018 (1), p. 8. This publication also addresses challenges regarding data protection in Germany.

Jumps in time series following relocation of intellectual property rights

Relocation of economic ownership changes how value added is allocated among countries

If intellectual property rights are relocated across borders, if intellectual property usage fees change, or if an enterprise's headquarters are relocated, then the corresponding value added is also transferred to another country. For that transfer, the change in economic ownership is crucial. It need not necessarily entail changes in the production process itself or in the utilisation of labour or physically installed capital. Depending on the size of the affected country and of the transaction, this can have a considerable impact on GDP and its components. For instance, in the summer of 2016, Irish GDP from the first quarter of 2015 onwards was retroactively revised upwards by almost a quarter due to the restructuring operations of multinational enterprise groups at the time.[31] The underlying transactions were not disclosed for confidentiality reasons. However, communication from the Irish Central Statistics Office and Eurostat revealed that intellectual property rights worth €300 billion (150% of Ireland's GDP in 2014) were transferred to legally associated entities that were already operating in Ireland.[32] According to the assessment of the Irish Central Statistics Office, the units in Ireland are now the economic owners of these intellectual property products.[33] The licensing income from these intellectual property products is consequently factored into Irish exports of services. In addition, the Irish entities are classified as factoryless goods producers that are the economic owners of the input materials and of the final output.[34] As a result, the processing carried out abroad is recorded as contract manufacturing services and the income from the sales of the final products is allocated to Irish exports of goods in the national accounts. Intellectual property products newly created by the business entities in Ireland are registered as Irish gross fixed capital formation.

The unusually large GDP rise in 2015 was therefore largely due to the income from licensing (services exports) newly ascribed to Ireland as well as the sales of the final products (goods exports). According to the definition in the national accounts, total exports including services correspondingly rose by nearly one-third. Conversely, the increased reliance on foreign manufacturing services led to services imports rising by one-fifth.

Level shifts and jumps in Irish time series since 2015

Very strong, temporary expansion of investment in Ireland

Estimated investment in intellectual property products grew by 170% in 2015. However, unlike in the case of value added, this did not amount to a long-term level shift. Admittedly, investment expenditure for intellectual property products again saw very strong growth in 2016. In 2017, however, it fell by almost a third compared with the previous year. Besides these examples, there were subsequent further conspicuous movements in the time series of the Irish national accounts. Without additional information, these time series are no longer usable for economic and growth analyses.[35]

Jumps in Irish data complicate economic analysis for euro area

Level shifts and jumps in macroeconomic time series due to relocation of intellectual property rights are likely to affect small economies in particular. Difficulties in conducting economic analyses can also arise for larger economic regions, however. Without adequate communication from statistical offices, changes in GDP due to relocation of intellectual property prod-

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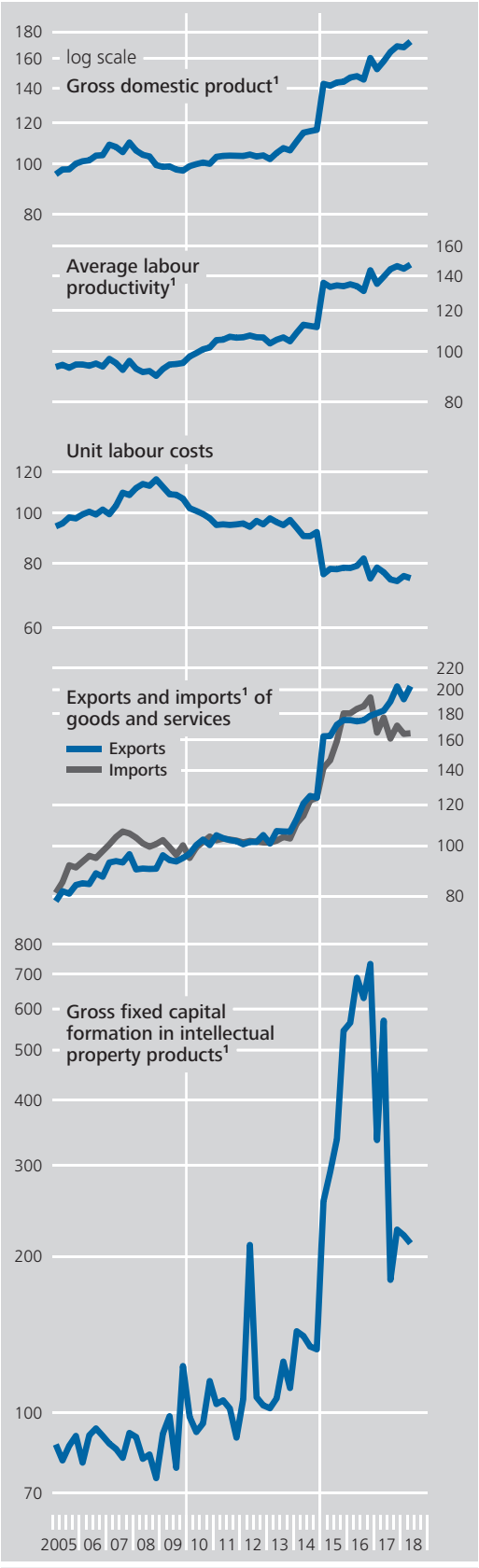
31 See Central Statistics Office (2016), National Income and Expenditure Annual Results 2015, Dublin; and Deutsche Bundesbank, The revision of the euro-area national accounts for 2015, Monthly Report, November 2016, p. 16 f.
32 Central Statistics Office (2017), Report of the Economic Statistics Review Group, Dublin; and S. Stapel-Weber and J. Verrinder (2016), op. cit.
33 See S. Allafi, S. Jung and V. Spies (2017), op. cit., p. 142.
34 See S. Allafi, S. Jung and V. Spies (2017), op. cit., p. 142; and OECD (2016), op. cit.: "… the intellectual property is used in contract manufacturing type of arrangements. Under these arrangements, Irish enterprises (among which Irish affiliates of foreign MNEs) involve contract manufacturers, including those domiciled outside Ireland, to produce final products using the blueprints from the IPPs. The subsequent distribution and sale of these products, organised by the Irish enterprises, results in value added being created in the Irish economy, which also includes income generated by the IPP."
35 See J. FitzGerald (2018), National accounts for a global economy: the case of Ireland, Trinity Economic Papers No 0418.

Selected economic data for Ireland

2010 = 100, seasonally adjusted



Source: Eurostat. **1** Price-adjusted.
Deutsche Bundesbank

ucts could potentially be falsely attributed to cyclical movements. Especially in the cases of major countries, there is a danger of these jumps and level shifts not being properly recognised as such due to their smaller relative magnitudes. For example, after the level of Irish GDP was shifted by one-quarter, euro area GDP was revised upwards by ½%. Without the Irish one-off effect, the annual GDP growth rate in the euro area would have been 1.5% in 2015, representing only a gradual increase over the 1.4% GDP growth rate of the previous year. By contrast, due to the Irish one-off effect, the official time series depicts significant strengthening to 1.9%. The growth rate would have subsequently remained static in 2016. Excluding Ireland, however, the data indicate a cyclical upturn, which would have better reflected the underlying economic trends.[36] Furthermore, investment in intellectual property products in Ireland in 2016 was so significant that even official figures on investment activity in the euro area have recently been skewed. Official euro area figures indicate that investment activity decelerated in 2017. If the Irish contribution to the euro area is ignored, however, it becomes clearly apparent that the upswing in investment activity continued last year.[37] For this reason, alongside the official national accounts figures, the Bundesbank also uses its own time series excluding Ireland for its euro area economic analysis.

36 Similar irregularities can also be found in Irish primary statistics such as industrial production.
37 In line with the Dutch figures published in summer 2018 as part of a major revision, there were also significant changes here in gross fixed capital formation. According to the revised data, real investment expenditure rose by seasonally adjusted 160% on the quarter in the second quarter of 2015. The reason for this was unusually high investment in intellectual property products. The investment was sourced from imports of services. In the third quarter, price-adjusted gross fixed capital formation then fell by just under half. These changes are also reflected in the euro area aggregates. They also explain the year-on-year decline in investment in the second quarter of 2016 with this base effect. By contrast, real gross fixed capital formation in the euro area rose fairly steadily during the second quarter of 2016. See Statistics Netherlands (2018), National accounts 2015 benchmark revision.

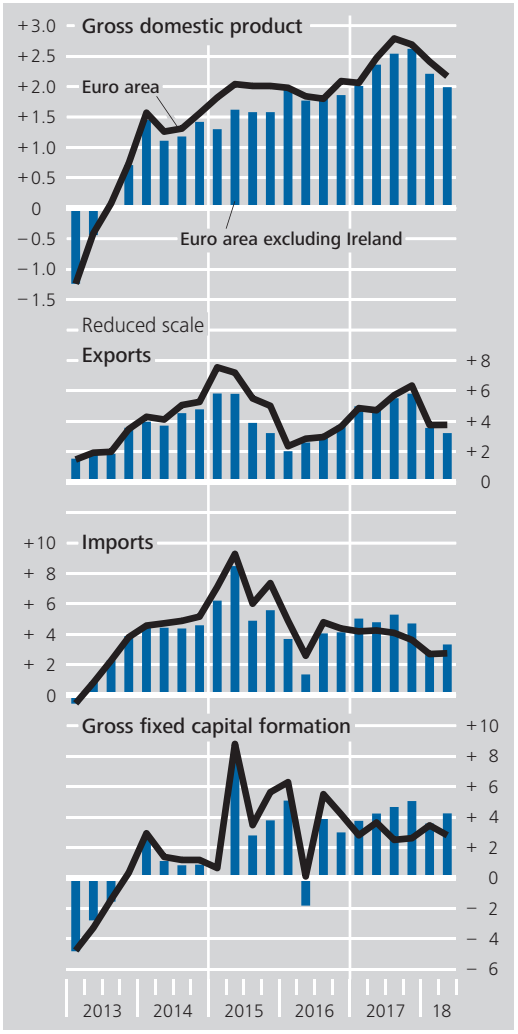
Distortion of derived indicators

Greater difficulties in interpreting derived indicators

The jumps in GDP also make it more difficult to interpret key derived macroeconomic indicators. Against a backdrop of relatively steady growth in employment, average labour productivity in Ireland rose by just over one-fifth in 2015 according to official figures. However, this is just the product of a particular statistical approach. The actual productivity of the Irish labour force is likely to have risen to a much more limited extent. Accordingly, the average compensation of employees also only increased by just under 3%. As a consequence, unit labour costs appear to have fallen by no less than 15%. This would represent a distinct improvement in the competitiveness of the Irish economy. In actual fact, however, the competitiveness of Irish companies is likely to have improved to a far lesser degree. Similar problems regarding the usefulness of indicators affect other key macroeconomic indicators such as the aggregate output gap, labour income share, current account balance as well as budget balance and government debt in relation to GDP. All of this also has consequences for model-based empirical economic research.

Selected economic data for the euro area including and excluding Ireland

Year-on-year percentage change, price and seasonally adjusted



Sources: Eurostat and Bundesbank calculations.
Deutsche Bundesbank

Differences between goods trade data in national accounts and foreign trade statistics

Discrepancy between foreign trade data in national accounts and trade statistics

While goods trade transactions in the national accounts are defined based on the ownership principle pursuant to the European System of Accounts (ESA 2010) and the Balance of Payments and International Investment Position Manual (BPM6), foreign trade statistics continue to revolve around goods physically crossing borders.[38] Discrepancies in these statistics occur in particular where there is a high proportion of contract manufacturing and as a result of merchanting transactions. These discrepancies concern the absolute values of imports and exports, their rates of change, as well as the balance of trade. In Germany, for example, export earnings in 2017 amounted to €1,279 billion in the foreign trade statistics (special trade) and €1,270 billion in the national accounts.[39] Expenditure

38 Another difference resulting from this definition is that the value of the goods in the foreign trade statistics is evaluated at the reporting country's border (imports including transport and insurance costs, exports excluding transport and insurance costs), while goods in the balance of payments (goods trade) are evaluated at the border of the exporting country (i.e. always excluding transport and insurance costs). Taken in isolation, imports in goods trade (national accounts) are thus lower than imports in foreign trade. Accordingly, the goods trade balance is likely to be higher than the foreign trade balance.

39 The goods exports in the national accounts are derived from general trade in goods (which comprises special trade and supplementary trade items) as well as net goods exports in merchanting trade and exports of non-monetary gold. See Deutsche Bundesbank, Statistical Supplement, Balance of payments statistics, table I.3.a.

on imports also came out higher in the foreign trade statistics than in the national accounts. By contrast, the trade balance was higher when calculated using the national accounts approach (€265 billion or 8.1% of GDP compared with €244 billion or 7.5% of GDP). There were considerably larger discrepancies for Ireland. According to the national accounts, goods exports totalled €193 billion or 65% of GDP in 2017. In the foreign trade statistics, this figure was €122 billion or 42% of GDP. In the case of imports, this gap was significantly narrower. This reflected the fact that multinational enterprise groups domiciled in Ireland outsource considerable volumes of production abroad via contract manufacturing. In the national accounts, this is recorded as imports of services. Conversely, the income from the sales of the goods produced is recorded as Irish exports of goods. Accordingly, the surplus in goods trade comes out considerably higher using the national accounts method (€104 billion) than in the trade statistics (€44 billion).[40] Once again, this shows just how far removed cross-border income streams linked to goods trade can become from traditional trade flows due to the impact of globalisation.

Outlook and initiatives

Alternative measures of activity for Ireland

The problems in capturing and classifying the economic activity of multinational enterprise groups and their implications for economic analysis have been thoroughly investigated in recent years. In 2016, a working group was set up in Ireland to shed light on the GDP level shift and to devise supplementary indicators for measuring domestic economic output.[41] Since last year, the Irish Central Statistics Office has published figures for gross national income adjusted for certain activities of multinational enterprises. Furthermore, the figures for the value added of multinational enterprise groups are presented separately.[42] In this respect, the Irish Central Statistics Office has taken on a pioneering role.

Initiatives to improve statistical recording of multinational enterprises

There are also a number of international initiatives to address the challenges posed by globalisation with regard to official statistics. In particular, the aim is to process larger volumes of data at the international level and to increase harmonisation between national statistics and individual statistical fields (see the box on p. 72 ff.). However, it would also be important to develop standards for communicating level shifts in macroeconomic indicators due to specific activities of multinational enterprises. In terms of economic analysis, it is essential to be able to differentiate between transfers of capital stock and material macroeconomic developments. For this reason, the impact of multinational enterprise groups' cross-border activities on the presentation of macroeconomic data should – with due regard to the relevant data protection provisions – be made more apparent.[43]

40 See International Monetary Fund (2017), Selected Issues Ireland, Country Report No 17/172.
41 See Central Statistics Office (2017), Report of the Economic Statistics Review Group.
42 "Modified gross national income" was introduced as a new indicator for domestic economic output. See Central Statistics Office (2017), Press Statement Macroeconomic Releases Year 2016 and Quarter 1 2017; and Central Statistics Office (2017), Gross Value Added for Foreign-owned Multinational Enterprises and Other Sectors Annual Results.
43 See S. Stapel-Weber, P. Konijn, J. Verrinder and H. Nijmeijer (2018), Meaningful Information for Domestic Economies in the Light of Globalization – Will Additional Macroeconomic Indicators and Different Presentations Shed Light?, NBER Working Paper No 24859.

The growing importance of exchange-traded funds in the financial markets

Exchange-traded funds (ETFs) are vehicles in the form of investment funds that usually replicate a benchmark index and whose shares are traded on stock exchanges. As such, ETFs differ from traditional open-end investment funds, which are characterised by the fact that fund shares are traded directly with the fund provider. The ETF segment has grown enormously in recent years, making it an increasingly important fixture of the financial markets.

A major driving force behind ETF growth is that investors are given the opportunity to cost-efficiently invest in a diversified portfolio, which also underpins the trend towards passive investment strategies to accumulate assets.

The possible risks involved in making an ETF investment are chiefly the market and credit risk associated with ETFs' underlying assets. In view of their complex structure, however, ETFs can also have specific effects on market liquidity in the financial system. This issue has become the subject of mounting debate between market participants, academics and supervisors, which is why it is one of the focal points of this article.

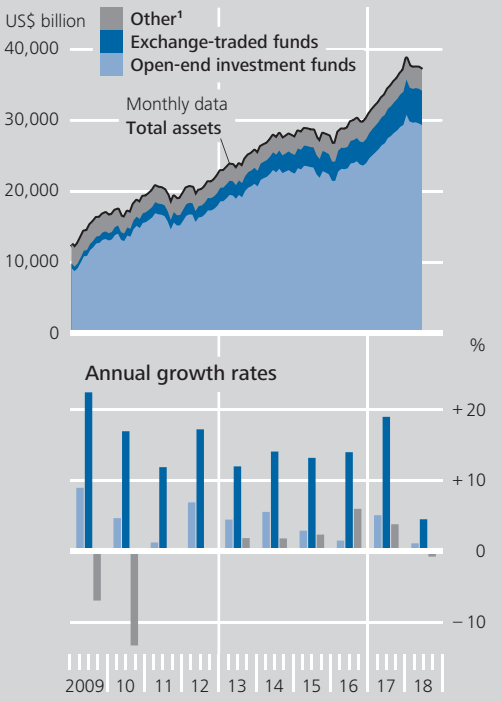
There is a great deal of evidence to suggest that ETFs enhance liquidity conditions in comparatively illiquid asset classes during quiet market phases. What has not been tested up to now, however, is the extent to which this improvement in liquidity generated by ETFs also holds during a protracted period of market stress. It is crucial in this connection that parties known as authorised participants, which play a key role in primary and secondary market ETF trading, function properly. In addition, an analysis of several flash crashes indicates that the way to alleviate possible market disruption depends on how specific market structures are designed.

The evolution of the ETF sector in recent years

Growing importance of ETFs as an investment vehicle

The importance of ETFs as an investment vehicle in the international financial system has grown in recent years. The value of the assets managed worldwide by all types of investment funds stood at US$37.1 trillion at the end of the first half of 2018, of which ETFs accounted for US$5.1 trillion (13.7%) (see the upper panel of the chart below).[1] The biggest of all the investment fund categories remains the traditional open-end investment funds,[2] which hold assets worth US$29.3 trillion. This makes it clear that the ETF sector is still of comparatively negligible significance. However, its growth momentum has been particularly pronounced in recent years. For instance, ETFs accounted for a mere US$0.7 trillion (5.4%) of the assets managed by all types of investment funds back in early 2009. Since then, its share of all fund products has increased significantly, which is attributable to considerably higher growth rates for ETFs compared to those for open-end investment funds (and other investment funds) over the past few years (see the lower panel of the chart on this page). While, for example, the ETF sector expanded by 18.9% in 2017, open-end investment funds and other funds recorded likewise positive but significantly lower growth rates of 5.1% and 3.8% respectively.[3] Despite the high growth rates enjoyed by ETFs, the increase in assets managed by open-end investment funds remains the largest in absolute terms. At US$5.4 trillion in 2017, growth in this segment far surpassed that in the ETF segment, which amounted to US$1.3 trillion in the same period.

Investment fund assets worldwide*



Sources: Morningstar and Bundesbank calculations. * Assets less liabilities (net asset value). 1 Insurance and money market funds.

Deutsche Bundesbank

Stock ETFs: dominant force

Valued at US$3,868 billion, stock ETFs dominated the global ETF sector at the end of the first half of 2018 (see the chart on p. 81). However, bond ETFs have grown in prominence in recent years – holding US$814 billion in assets in the same period, they take second place. With a value of US$129 billion, commodity ETFs make up the third most important segment. All other categories are of secondary importance, each being worth less than US$100 billion.

North America: most important asset region

By far the largest target region for investing via ETFs is North America, which, with 933 ETFs, makes up 57% of ETF assets worldwide (see the lower chart on p. 81). ETFs holding securities that are domiciled in Asia account for 19% of ETF assets worldwide (1,131 ETFs). ETFs with

1 The figures presented here are based on data supplied by the data provider Morningstar and are available from the start of 2009. This means that it is possible to track growth in the wake of the 2008 financial crisis and the associated rise in the importance of ETFs. Data on ETFs can also be found in the Bundesbank's capital market statistics. These cover ETFs established under German law; given the intention to provide a global perspective in this article, these will not be discussed in detail. See Deutsche Bundesbank, Statistical Supplement 2 – Capital market statistics, pp. 73 f.

2 Various definitions can be found in databases and the literature. Strictly speaking, ETFs are also open-end investment funds. However, they are treated here as a sector in their own right – a sector that differs from the "traditional open-end investment fund" sector (hereinafter referred to simply as "open-end investment funds").

3 These developments are not solely attributable to inflows of investor capital. The fund segments' growth dynamics are also affected by price increases. However, the ETF sector's higher growth in relative terms is unlikely to have been chiefly driven by these.

global and European portfolios make up 14% and 9% respectively of ETF assets worldwide (1,414 and 1,181 ETFs).

ETFs: how they work and how they are structured

Intraday ETF trading requires a particular structure

ETFs are investment vehicles that usually track the performance of an index – a stock price index, for example. Unlike open-end investment funds, which are priced and traded only once a day, ETFs can be traded throughout the day on secondary markets (mostly stock exchanges), making them comparable to stocks in this regard. In order to facilitate this intraday trading, ETFs require a structure different to that of open-end investment funds. The latter are designed such that investors trade fund shares directly with the investment company. In line with inflows or outflows, the fund manager then purchases or sells assets (e.g. listed securities) on the stock exchange or in OTC markets. The net asset value (NAV) is the value of all assets in the fund portfolio less its liabilities. The NAV is determined at the end of the trading day and serves as the basis for selling or purchasing fund shares.[4] In the case of both ETFs and open-end investment funds, the securities held in the portfolio constitute a special fund that is protected against direct access by the investment company (or its creditors) in the event of insolvency.

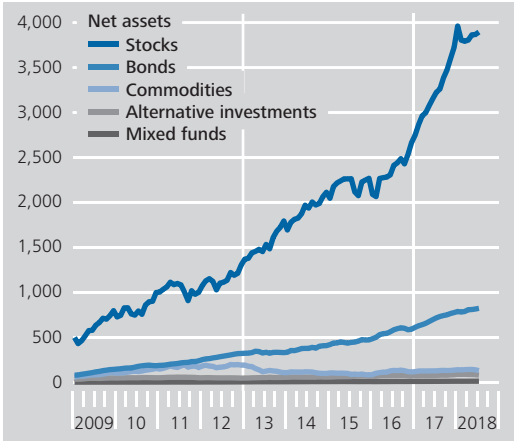
Creation of ETF shares on the primary market

Creation of ETF shares by exchanging securities

ETFs differ from open-end investment funds in that no direct trading takes place between the fund provider and investors. On the primary market, agents known as authorised participants (APs) – typically large financial institutions or specialised market makers – serve as the link between the ETF primary market and the ETF secondary market. In a first step, trading takes place on the primary market, where APs provide a basket of securities[5] (or, in rarer

ETF assets worldwide by investment type

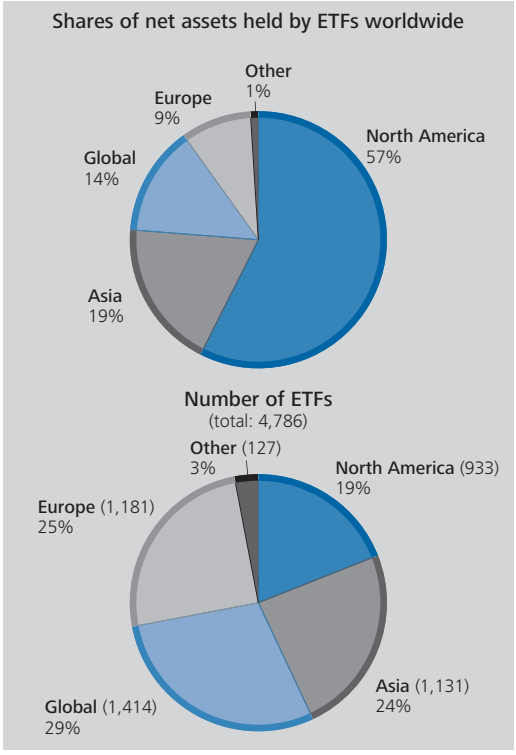
US$ billion, monthly data



Sources: Morningstar and Bundesbank calculations.
Deutsche Bundesbank

Significance of ETFs by asset region

As at July 2018



Source: Morningstar.
Deutsche Bundesbank

4 Some open-end investment funds can also be exchange-traded (on an intraday basis). However, it is difficult to determine a fair price here given that there is no comparison with a benchmark index as there is for ETFs.
5 ETF providers can also hold assets that are not securities. This applies to real estate ETFs, for instance. However, the term "securities" is used consistently throughout this article due to the fact that ETF providers hold securities in their ETF portfolios in the vast majority of cases.

cases, cash) in exchange for ETF shares from ETF providers. These bundles of newly created ETF shares are referred to as creation units and are normally issued in large blocks of 50,000 or, in some instances, multiples thereof. Just as APs can create ETF shares, they can also redeem them by returning creation units to the ETF provider in exchange for securities. This process is often referred to as the creation/redemption mechanism (see the right-hand panel of the chart on p. 83). It should be noted here that APs have no legal obligation to either create or redeem ETF shares. The (trading) costs incurred during this process are usually borne by the AP. The charges incurred for investors amount to less than 1 basis point (0.01%) for most ETFs.[6]

Trading ETF shares on the secondary market

Secondary market: ETF shares bought and sold by end investors

In a second step, investors trade the created ETF shares on the secondary market (see the left-hand panel of the chart on p. 83). Trading typically takes place either on the stock exchange or directly with market makers.[7] In this context, APs may assume a dual role, as they often also operate as market makers on the ETF secondary market. In this way, investors are able to trade individual ETF shares without new ETF shares having to be created or redeemed for such transactions. This makes intraday trading on the secondary market possible. New ETF shares are only created, then, if these are purchased by the investor via an AP, but the AP itself no longer has sufficient holdings of ETF shares and cannot procure them via the stock exchange. High demand for ETF shares amongst investors thus tends to result in the creation of new ETF shares on the primary market. If demand for a certain ETF decreases amongst investors, the AP will ultimately take the ETF shares that it has accumulated, and which are no longer needed, and deliver them to the ETF provider in exchange for securities. The process described here basically boils down to changing the form in which securities are held. Either the ETF shares or the underlying securities are traded on the market. From a macroprudential perspective, however, this can also be accompanied by a change in liquidity risk.[8]

ETFs' net asset value and secondary market price

ETFs' net asset value (NAV) and trading price are connected …

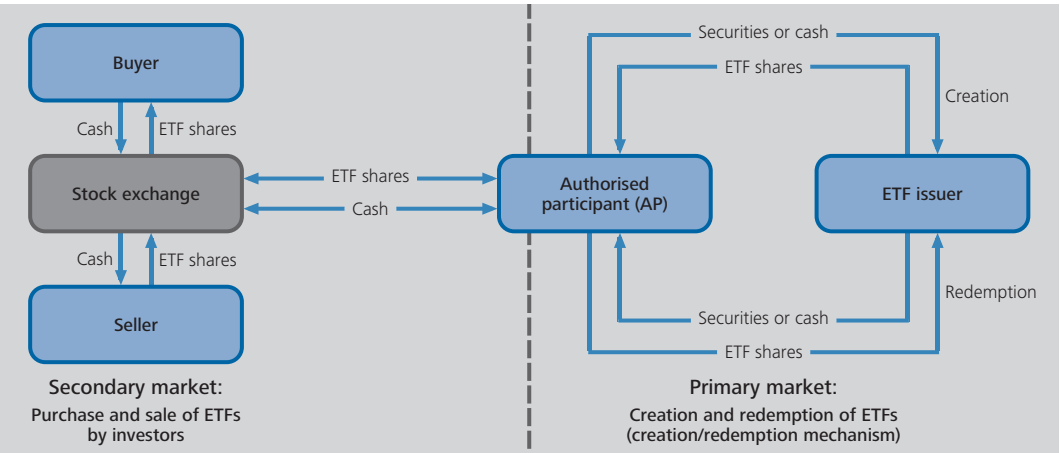
As is the case for open-end investment funds, ETFs generally publish their NAV daily. For ETFs, this is based on an overview of the portfolio of securities held by the ETF provider. It is always generated at the end of the trading day. The daily NAV serves as an important metric for transparent pricing on the stock exchange and facilitates the arbitrage mechanism that underlies the creation/redemption mechanism. The NAV and the price of ETF shares traded on the secondary market may differ from one another over the course of the trading day. As a general rule, the price of ETF shares is derived from the relationship between ETF supply and demand on the stock exchange.

… as a result of arbitrage activities carried out by APs, …

Intraday differences between the prices of securities and ETF shares should tend to be eliminated by APs' arbitrage mechanisms when the NAV is recalculated at the end of the trading day. If, for example, the price of a certain ETF share is below the fair value assumed by the AP, the AP has an incentive to purchase these ETF shares. The AP can hold on to the ETF shares it has purchased until such time as a favourable price emerges at which it can either sell them directly or deliver them to the ETF provider in exchange for securities. However, it is also possible for the NAV and the price of ETF

6 According to I. Ben-David, F. A. Franzoni and R. Moussawi (2017), Exchange-Traded Funds, Annual Review of Financial Economics, Vol. 9, pp. 169-189, the average fee per creation unit created on the primary market is US$1,047, while the median is US$500.
7 The bid and ask prices determined in this connection are risk prices that are executed by the AP immediately without any delay. The market risk assumed by the AP, which is determined by factors such as the liquidity of the underlying securities, is reflected together with additional implicit costs in the bid-ask spreads.
8 This is touched upon in the section entitled "Risks associated with ETFs" on pp. 92 ff.

ETF primary/secondary market mechanism



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shares to diverge to a greater extent over the course of several days. This is especially the case for ETFs in less liquid markets, as low liquidity can result in delays in the adjustment of prices of individual securities in the basket of assets and, therefore, of the NAV.[9]

… which serve as key link between primary and secondary markets

The primary/secondary market mechanism presented here is a characteristic that is unique to ETFs. In view of their role as a link between the primary and secondary markets, APs are fundamentally important, with the result that particular attention should be paid to ensuring that they function properly.

Physical versus synthetic ETFs

Physical replication: purchase of securities contained in benchmark index

ETFs can take two different forms – they can replicate a benchmark index physically or synthetically. In the case of physical replication, a distinction is made between full replication and what is known as sampling. Full replication involves the ETF tracking the benchmark index by holding the exact same underlying securities in the ETF provider's basket of assets. This method is suited for stock and bond ETFs that comprise a low number of liquid securities, such as the DAX 30. Using the sampling method, only a selection (or sample) of the securities in the benchmark index are held in the ETF provider's portfolio. This method is an appropriate choice when securities are relatively illiquid and, in particular, the number of securities in the benchmark index is high. In addition to the issue of liquidity – more liquid securities tend to be preferred – the representativeness of the index is also important when making the selection. For example, a US corporate bond ETF would be a good candidate for the sampling method, as this market comprises a total of more than 5,000 different bonds, a vast number of which are relatively illiquid.

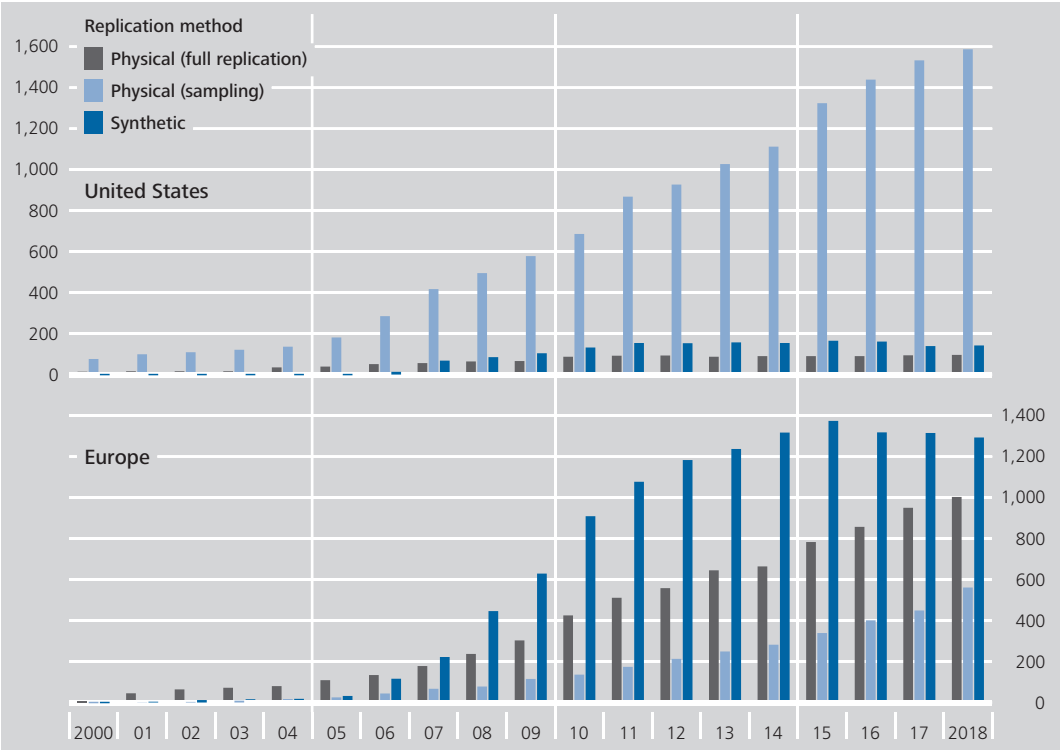
Synthetic replication based on swap transactions

In the case of synthetic ETFs, the index concerned is replicated via derivatives. The ETF provider does not physically hold the basket of securities in this set-up. Instead, the AP receives creation units in exchange for cash. This cash is then exchanged for a basket of securities that does not need to be linked to the index in question. The performance of this basket of securities is then exchanged for the return on the benchmark index by means of a swap contract. This method is chosen if, inter alia, investment restrictions such as trading restrictions or taxation make market access more difficult. However, it is also used for relatively liquid indices

9 See A. Madhavan and A. Sobcyzk (2016), Price Dynamics and Liquidity for Exchange-Traded Funds, Vol. 14, No 2, pp. 1-17.

ETF replication methods*

Number of funds per replication method



Sources: Morningstar and Bundesbank calculations. * Ways in which benchmark index performance is replicated.
Deutsche Bundesbank

such as the DAX 30 and EURO STOXX 50 on cost grounds.

Physical replication is the most common replication method for ETFs in both Europe and the United States. However, while sampling is clearly the replication method of choice for all ETFs currently available in the United States, the picture in Europe is more mixed (see the chart above). While full physical replication and sampling together remain the most common replication method for ETFs here, analysing the three replication forms individually shows that synthetic replication is (still) the most widely adopted method in Europe at this time. The decline in the number of synthetic ETFs in Europe since 2016 appears to be driven by the demand side. Going by market participants' perceptions, the higher degree of complexity, the risks associated with swap transactions and the lack of transparency relating to the securities held in portfolios clearly play an important role.

Available range of investments

Wide range of products available

ETFs typically aim to track the performance of a particular index (passive ETFs). While the first ETFs merely tracked the performance of stock market indices,[10] they are now available for a very wide variety of indices and encompass, inter alia, bond indices, sector indices such as sustainability or electric mobility, and volatility measures such as the VIX.

Smart beta and active ETFs based on specific investment strategies

Smart beta ETFs and active ETFs represent a more recent development and are based on selecting and/or weighting individual securities (following a specific strategy).[11] Their objective is to outperform a benchmark index. Examples of this are pursuing either a value-oriented

10 The first ETF, named SPDR, was set up by State Street in 1993. It tracks the performance of the US stock market index S&P 500 and is now the largest ETF in the world, with market capitalisation of US$289 billion as at September 2018.
11 This makes it clear that ETFs cannot be thought of solely as passive investment strategies.

strategy based on certain metrics such as the price-to-book ratio or following a growth-oriented strategy. Some smart beta ETFs also focus on selecting high-dividend stocks. Additionally, smart beta ETFs can combine various factors. The idea behind this is to leverage diversification and correlation effects.

ETPs are debt securities with a risk profile differing from that of ETFs

In addition to ETFs, there are also exchange-traded products (ETPs). ETPs are debt securities that can be further broken down into exchange-traded commodities (ETCs) and exchange-traded notes (ETNs).[12] While ETCs focus exclusively on tracking the performance of commodities, or on tracking commodities futures or commodities indices, ETNs are debt securities that track the performance of an underlying benchmark index outside the commodities sector. As ETPs are (secured but also often unsecured) debt securities and do not have special fund status, the investor is exposed to the issuer's credit risk when trading in these products. This gives rise to particular risks for the investor that are not comparable to those associated with ETFs.[13]

Leveraged and inverse ETFs available

Also available are ETFs and ETPs that either provide leveraged exposure to the underlying benchmark indices (i.e. they amplify their returns) or track declines in the value of the benchmark indices. These leveraged and/or inverse ETFs and ETPs have a higher value at risk with respect to index performance (for more information, see the box on pp. 86 f.).

Driving forces behind exchange-traded fund growth

The strong growth observed in the ETF sector in recent years reflects its great popularity amongst investors and is attributable to various factors. In terms of growth drivers, it is possible to distinguish between product features, type of usage and structural trends (see the adjacent table), which are detailed below.

ETF growth drivers

Product features	Usage	Structural trends
Intraday trading	Asset allocation (e.g. into asset classes or regions)	ETFs as core investment
Diversification	Simplification of investment processes (e.g. in terms of index weighting, market access)	Search for yield throws spotlight on cost of financial investment in low interest rate environment
Transparent pricing		Regulatory changes
Secondary market trading and additional market liquidity		Shift in distribution
Cost efficiency		

Deutsche Bundesbank

Product features

Intraday trading and diversification are important product features

One major product feature of ETFs is that they combine the advantages of open-end investment funds and stocks. ETFs facilitate investment in diversified portfolios (as for open-end investment funds) and intraday trading on stock exchanges (as for stocks). In addition to greater flexibility with respect to buying and selling, this also enables transparent pricing on account of comparability with the benchmark index in the case of passive ETFs.

Secondary market trading of ETFs and additional liquidity

ETFs often have lower bid-ask spreads than their underlying securities

Additional liquidity generated through secondary market trading is frequently attributed to ETFs. Investors can trade ETF shares without affecting the benchmark index's underlying individual securities. In fact, ETFs are often more liquid than the average of their underlying indi-

12 There is a lack of clarity in the literature with respect to how ETPs are defined. Some of the literature uses the definition outlined here and defines ETPs as a separate investment vehicle that exists alongside ETFs. Other literature describes ETPs as an umbrella term that includes ETFs as one of various subcategories.
13 See A. Madhavan (2016), Exchange-Traded Funds and the New Dynamics of Investing, Oxford University Press, New York.

Exchange-traded funds for inverse volatility during the flash crash[1] of 5 February 2018

Through ETFs, investors can participate in the movements of certain volatility measures. There are also products available that are designed to track the inverse performance of a particular volatility index. Owing to the historically low (implied) volatility on the financial markets and the associated positive stock price movements, these products were enjoying growing popularity amongst investors in the lead-up to the flash crash of 5 February 2018. This box looks at a specific ETF offering inverse performance to the VIX volatility index. The commentary is therefore of an illustrative nature and is intended to provide an insight into the highly diverse risks associated with ETFs with respect to price movements.

On Monday, 5 February 2018, the US financial markets were rocked by heavy turbulence late in the trading day. The S&P 500 stock market index closed having fallen around 4% that day. Against the backdrop of this market development, there was a marked rise in implied volatility. Implied volatility reflects current expectations regarding the price swings for a given underlying instrument, so when implied volatility is on a strong upward trajectory, this is often interpreted by market participants as a rise in the "fear barometer". The VIX, which is a measure of implied volatility for the US stock market index S&P 500, rose temporarily over the course of 5 February

1 A flash crash is a rapid, deep and volatile decline in security prices. Automated trading algorithms and high-frequency trading generally play a part in such events, which are also characterised by swift price recovery. See D. Bozdog (2011), Rare Events Analysis of High-Frequency Equity Data, Wilmott Journal, pp. 74-81.

S&P 500 and implied volatility from 2 to 8 February 2018

Source: Bloomberg.
Deutsche Bundesbank

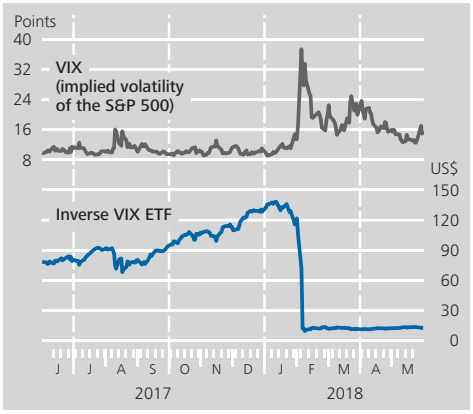
2018 from 17.31 points to 37.32 points – a 116% increase (see the chart on p. 86).

As implied volatility climbed from 5 February 2018, ETFs designed to track the inverse performance of the VIX saw prices tumble. The ProShares Short VIX Short-Term Futures ETF (SVXY) serves here as an example. At the time of the flash crash, it was tracking the daily percentage changes of a synthetic 30-day VIX future,[2] the performance of which is closely linked to the VIX, with a leverage factor of -1.0. In other words, if the 30-day VIX future index rose by 5% on a single trading day, the SVXY would have fallen by 5%. The sharp VIX increase from 5 February 2018 (and the associated upward movement of the synthetic 30-day VIX future) led the SVXY to fall by 91% in the space of four days (see the chart above).[3] It is important to point out here that the ETF provider made explicit reference to this risk in its prospectus and the ETF functioned exactly as described.

The example of the SVXY shows that some ETFs carry a very high profit and loss potential. Whilst an investment in the S&P 500 via an ETF would have resulted in only temporary, manageable losses,[4] investors in the inverse VIX ETF had heavy losses to bear. The case examined here makes plain that the various types of products that exist in the ETF/ETP universe can vary hugely in terms of the level of risk entailed. Furthermore, in periods of stress, these kinds of products may have an impact on the underlying securities or derivatives markets.[5]

VIX and inverse VIX ETF

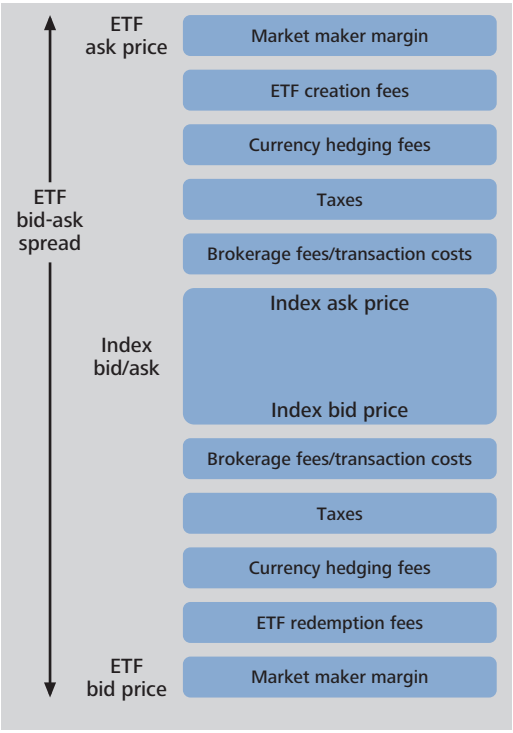
Daily data



Source: Bloomberg.
Deutsche Bundesbank

2 The synthetic 30-day VIX future is a weighted basket of VIX futures with 20 and 50-day maturities.
3 A new factor of -0.5 was introduced on 28 February 2018, and this has contributed to the SVXY's smaller percentage price swings since then. In addition, following the significant price declines in February 2018 and owing to the lower basis, the percentage changes are leading to less pronounced fluctuations in absolute terms.
4 ETFs tracking the development of the S&P 500 (such as the SPDR) only fell by around 6.5% between 5 and 8 February 2018, and on 26 February 2018 had already surpassed 2 February 2018 levels again.
5 For more on the behaviour of ETFs in periods of market stress, see the box on pp. 97 ff.

ETF costs contained in the bid-ask spread



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vidual securities (see the box on pp. 89 ff.). However, this liquidity advantage is probably largely at play during periods of low volatility on the financial markets. By contrast, the secondary market liquidity generated by ETFs can potentially dry up quickly, particularly during periods of pronounced market stress.[14]

Cost efficiency

Whilst ETFs have cost advantages over open-end investment funds, …

Another product feature of ETFs is their high cost efficiency, especially in comparison with traditional investment funds, some of which currently charge considerable fees for active management. On the one hand, actively managed open-end investment funds sometimes incur higher charges which do not apply to ETFs (such as transfer agent fees). As ETF trades on the secondary market are not performed with the fund provider directly, front-end loads are either lower or non-existent. On the other hand, awareness of price competition and cost sensitivity in relation to open-end investment funds do not appear to have been particularly pronounced amongst investors in the past.[15] However, the differences in cost between various investment vehicles are likely to have become more important to many investors recently, as the percentage of the expected total return accounted for by costs is higher in many asset classes in the low interest rate environment. A further reason behind the higher cost efficiency of ETFs lies in their structure. For example, the costs arising during the creation process on the ETF primary market, such as the bid-ask spread of the underlying securities, broker fees, taxes, exchange charges and AP fees (see the adjacent chart) are only incurred once and, over time, are spread across the different investors who trade in ETF shares on the ETF secondary market.

… it is unclear whether open-end investment funds systematically generate higher returns than ETFs

If active fund managers are not able to outperform the market as a whole (benchmark index), investors would not be compensated for the higher costs of actively managed funds by excess returns. Based on the assumption that the asset markets are informationally efficient and no costs are incurred when procuring and processing information, securities reflect all the information available at any given time, meaning that excess future returns cannot be predicted.[16] Actively managed funds would be crowded out of the market under such conditions.

14 The problems associated with this "illusion of liquidity" are discussed in greater detail in the section entitled "Risks associated with ETFs" on pp. 92 ff.
15 A study published in 2017 by the Financial Conduct Authority (FCA), which is responsible for the regulation of the financial market and its infrastructure in the United Kingdom, found that price competition among British active fund managers is weak, and that retail investors are barely aware of the significance of management fees. For more information, see Financial Conduct Authority (2017), Asset Management Market Study – Final Report.
16 See B. B. Jonathan and R. C. Green (2004), Mutual Fund Flows and Performance in Rational Markets, Journal of Political Economy, Vol. 112, No 6, pp. 1269-1295. It should also be noted that investors may possess differing amounts of information and that the process of procuring information can incur charges. See S. J. Grossman and J. E. Stiglitz (1980), On the Impossibility of Informationally Efficient Markets, The American Economic Review, Vol. 70, No 3, pp. 393-408.

Liquidity analysis of exchange-traded funds

The bid-ask spread can be used as a simple measure of market liquidity. This metric is used here to gauge whether ETFs are more liquid than their underlying basket of securities or the relevant benchmark index. Various trading venues (Germany: Frankfurt, Xetra; United States: New York, NYSE; Europe: respective national trading venues) and asset classes (stocks and bonds) are considered.

To analyse stock index ETFs, the normalised bid-ask spreads – defined as the bid-ask spread as a percentage of the closing price – are compared, on a weekly basis, with the weighted average bid-ask spreads of the stocks included in the relevant benchmark index for the period from January 2013 to December 2017. The three ETFs analysed here consistently have a lower normalised bid-ask spread than their underlying benchmark indices. In the period under review, the iShares Core DAX UCITS ETF (DE) (DAXEX) has a bid-ask spread of 3.9 basis points. The volume-weighted average of the individual securities in the benchmark index (DAX 30) comes to 4.5 basis points, which is 0.6 basis point higher than the ETF (see the adjacent chart).

Similar results can be seen for the S&P 500 index and FTSE Europe. In both cases, the bid-ask spreads of the ETFs are again lower than the average of the volume-weighted individual securities (see the table on p. 90). However, it should be noted that, for each of the three regions and benchmark indices, the ETF with the highest total net assets was chosen. This is likely to result in higher than average "liquidity advantages" compared with other ETFs for the same benchmark indices.

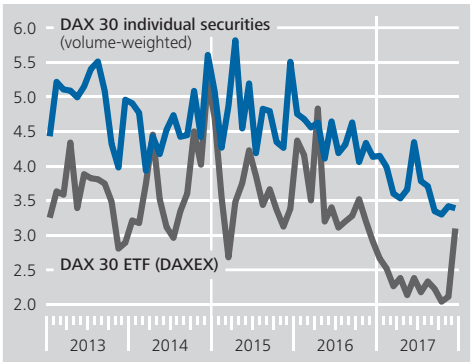
There are discernible differences not just between ETFs and benchmark indices, but also between the various trading venues. In the United States, both the ETF and the benchmark index tend to have lower bid-ask spreads than the corresponding metrics in Europe and Germany, though the spreads for the FTSE Europe ETF are lower than those for the DAX 30 ETF. This reflects the higher average trading volume of the S&P 500 and an overall higher level of net assets in the US market compared with Europe and Germany.

The situation is similar in the bond segment. Owing to the large number of assets in the underlying benchmark indices, a different method is used to analyse bond ETFs. The bid-ask spread is measured as at a specific reporting date (12 July 2018) and the benchmark index is based on self-generated baskets of securities based on the respective ETFs (see the chart on p. 90).

As with stock ETFs, ETFs in the emerging market and corporate bond segments are shown to have greater liquidity than their

DAX liquidity: ETF versus individual securities*

Basis points



Source: Bloomberg. * Liquidity measured on the basis of the normalised bid-ask spread.
Deutsche Bundesbank

Bid-ask spread of ETFs and the underlying benchmark indices (normalised bid-ask spread in basis points)*

Region	Index	Index spread	ETF	ETF spread	Difference between index spread and ETF spread
Germany	DAX 30	4.5	DAXEX	3.9	0.6
United States	S&P 500	2.5	SPY	0.5	2.0
Europe	FTSE Europe	4.5	VGK	1.9	2.6

Sources: Bloomberg and Bundesbank calculations. * The normalised bid-ask spread is defined as the bid-ask spreads as a percentage of the (daily) closing price. All figures are based on weekly values for the period from 1 January 2013 to 29 December 2017. For all three regions and benchmark indices, the most important ETFs – measured by total net assets – were chosen. This is the iShares Core DAX UCITS ETF (DE) (DAXEX) for the DAX 30, the SPDR 500 ETF (SPY) for the S&P 500, and the FTSE Europe All Cap Net Tax (VGK) for the FTSE Europe.

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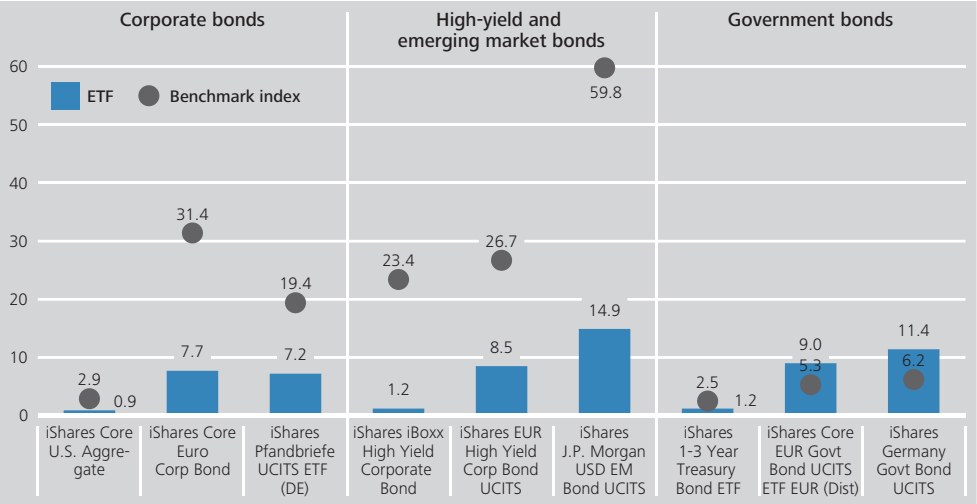
underlying reference assets. In the government bond segment, however, there are no notable differences between the liquidity of ETFs and the corresponding basket of bonds. The bid-ask spread of the ETF tracking US Treasuries, for example, is only slightly lower than that of its basket of securities, while the spreads of European and German government bond ETFs are somewhat higher than those of their underlying baskets.

With regard to the liquidity effects of ETFs on their underlying basket of securities, no definitive conclusion has been reached. On the one hand, ETFs could cause liquidity to increase, as authorised participants (APs) can reduce or eliminate price differences

Liquidity of bond ETFs and their benchmark indices*

Normalised bid-ask spread (in basis points)



Source: Bloomberg. * The normalised bid-ask spreads for the benchmark indices were calculated on a volume-weighted basis for 12 July 2018. In the case of the iShares Pfandbriefe UCITS, the iShares J.P. Morgan USD EM Bond ETF, the iShares 1-3 Year Treasury Bond ETF, the iShares Core EUR Govt Bond UCITS and the iShares Germany Govt Bond UCITS, all individual securities were included in the calculation of the volume-weighted, normalised bid-ask spread. In the case of the following ETFs, the calculation included individual securities from their baskets of securities: the iShares EUR High Yield Corp Bond UCITS (180 individual securities; 47% of assets under management (AUM)), the iShares iBoxx High Yield Corporate Bond (180 individual securities; 38% of AUM), the iShares Core Euro Corp Bond (90 individual securities; 10% of AUM) and the iShares Core U.S. Aggregate (90 individual securities; 35% of AUM). If all securities in the ETFs had been included in the calculation for the benchmark indices – i.e. 100% of AUM – the result would probably have been higher bid-ask spreads, as the securities not included tend to have comparatively low liquidity (and therefore comparatively higher bid-ask spreads on an individual basis). As such, it is likely that the difference between the benchmark index and the ETF actually tends to be underestimated for this group.

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between ETF shares and the basket of securities via arbitrage.[1] On the other hand, trading in ETF products could give rise to a crowding-out effect, whereby market participants who would otherwise have traded individual securities directly may now invest indirectly via ETFs and thus divert liquidity away from the market for individual securities. This transmission mechanism could gain further significance given sustained growth in the ETF sector.

The analysis presented here shows that ETFs – at least those with high investment volumes in calm market phases – have lower (normalised) bid-ask spreads than the average of their underlying individual securities. However, this "liquidity advantage" may dissipate in times of market stress and could even be reversed in extreme cases.[2]

1 An analysis of the French CAC40 index reveals that the bid-ask spread narrows in the short and long term after the launch of an ETF. See R. De Winne, C. Gresse and I. Platten (2009), How Does the Introduction of an ETF Market with Liquidity Providers Impact the Liquidity of the Underlying Stocks?, Working Paper.
2 For an analysis of ETFs in periods of market stress, see the box on pp. 97 ff.

Even if the assumption of informationally efficient markets charging no transaction costs does not hold, a passive investment strategy (using ETFs) can be optimal. To the extent that potential outperformance represents a zero-sum game – the excess return over the benchmark index achieved by some active fund managers must be offset by other active fund managers' excess losses compared with the benchmark index – the average return generated by active management (excluding costs) would correspond to the return on the benchmark index, which can be replicated by an ETF.[17] Taking management fees into account, then, the achievable average return would be lower for active investors than for passive investors.[18]

It is, however, conceivable that informed active fund managers systematically generate higher returns than other uninformed active investors.[19] Furthermore, the zero-sum game argument only applies to static portfolios. Be that as it may, passive fund managers must also adapt their portfolios in practice – when index adjustments are made, for example. This results in predictable trading patterns and creates particular profit opportunities for active managers. In summary, it can be concluded that there is limited opportunity, if indeed any, for active fund managers to systematically outperform the benchmark index. Even where this is possible, the resulting profit would have to cover the management fees charged by active investment funds.

17 An exception to this would be if non-investment fund investors systematically underperformed investors in open-end investment funds.
18 For a discussion of potential outperformance by active investment funds, see also V. Sushko and G. Turner, The implications of passive investing for securities markets, BIS Quarterly Review, March 2018, pp. 116-117.
19 See L. Barras, O. Scaillet and R. Wermers (2010), False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas, The Journal of Finance, Vol. 65, No 1, pp. 179-216.

Usage

Passive fund management but active allocation decisions on the part of investors

With regard to the use of ETFs, their great significance for the allocation of capital must be stressed. ETFs are by no means a purely passive investment vehicle. Investors pursue an investment policy and must decide, for example, which region (e.g. Europe versus the United States) their ETF portfolio should be invested in, as well as choosing the level of specialisation (broad diversification versus niche investment) and an asset class (e.g. bonds or stocks). These decisions are usually made on the basis of the risk exposure and expected return on an investor's portfolio.[20] The passive element of an ETF is that the fund manager makes no active decisions as to whether certain securities in an index should be overweighted at a certain point in time. The asset managers track the performance of the relevant index as precisely as possible in a purely passive manner. The combination of actively selecting a specific investment policy and passive fund management is also called a semi-active strategy.

Investment processes facilitated by easier market access, inter alia

Overall, ETFs can simplify investment processes. For example, it is far simpler to purchase an ETF for the DAX 30 than the 30 underlying index components. Even in the event of index adjustments (for example, new weightings or risers/fallers), investors do not have to become active. Furthermore, ETFs can facilitate market access. Via ETFs investors can invest in otherwise less liquid investment segments such as corporate bonds. Constraints and barriers in certain countries, such as trading restrictions on securities or taxes, can also be overcome by means of synthetic replication by ETFs. Simplified investment processes via ETFs are also useful to small-scale investors or savers accumulating assets (to bolster pension provisions), as they can encourage a more balanced mix of investments.

Structural trends

ETFs increasingly the focus of core investment strategies

The structural trends identifiable in asset management over the past few years represent a further driver of ETF growth. Passive asset allocation is increasingly becoming the preferred focus of the overall investment strategy (core investment). In addition, the low interest rate environment is shifting investors' focus to the cost of investing. In the wake of the financial crisis, furthermore, adjustments were made to the regulatory framework (as part of Basel III, Solvency II and MiFID II, for example), and this may have changed the investment behaviour of market participants. In this vein, some market participants have since found investment in asset classes such as a direct investment in derivatives to be a less attractive prospect, and ETFs may have profited from this. This could create an incentive to construct a similar risk/return profile using specific ETFs without directly investing in the relevant asset class. The new sales channels established in the past few years, such as online banking and the emergence of digital asset managers which use "robo advisors",[21] for instance, are likely to have contributed to the strong growth of ETFs.

Risks associated with ETFs

Risk of underlying assets in the benchmark index highly significant for ETF risk

The risks associated with investing in ETFs should not be primarily assessed based on whether or not an investor could potentially suffer a financial loss. Individual securities and open-end investment funds are subject to considerable price volatility which can give them

20 It can be demonstrated that up to 90% of a portfolio's return is dependent on the investment policy. See G. P. Brinson, J. J. Diermeier and G. G. Schlarbaum (1986), A Composite Portfolio Benchmark for Pension Plans, Financial Analysts Journal, Vol. 42, No 2, pp. 15-24 as well as G. P. Brinson, B. D. Singer and G. L. Beebower (1991), Determinants of Portfolio Performance II: An Update, Financial Analysts Journal, Vol. 47, No 3, pp. 40-48.
21 Robo advisors are products offered by FinTech firms which digitalise and automate financial services. Investment decisions are made based on the investor's previously established risk appetite using rule-based models which control the creation, monitoring and adjustment of the portfolio.

profit and loss potential, and the same applies to ETFs. For instance, the market risk associated with an ETF investment cannot be regarded as a risk exclusive to ETFs. Rather, it is important to distinguish whether ETFs pose a particular additional risk compared with other asset classes – especially the individual securities in the benchmark index – and whether certain risks have simply been insufficiently addressed. Against this backdrop, this article will examine liquidity risk, counterparty risk and risks related to price formation, including in the form of potential procyclical developments in the financial markets. The phenomenon of common ownership structures will also be touched upon in the context of ETFs.

Liquidity risk

Secondary market liquidity generated by ETFs can dry up quickly in phases of market stress, …

Due to the particular structure of ETFs, with their primary/secondary market mechanism, risks resulting from potential imbalances between the liquidity of the ETF and that of the underlying securities can arise. ETF providers may be obligated to buy back ETF shares on request at short notice. The risk here is that in the event of a price drop, the providers may be unable to liquidate the securities held in their portfolios in a timely manner. In a higher illiquidity scenario such as this, the trading price of ETF shares could fall below the value of the underlying portfolio (NAV). This is particularly problematic when investors take market conditions in calm periods to draw conclusions about conditions amidst adverse market trends (known as the liquidity illusion). The liquidity transformation of relatively illiquid securities from an index into more liquid ETF shares, which is carried out when the market is calm, could quickly be reversed in periods of stress, should investors sell ETF shares on a large scale.

… with ETFs for less liquid asset classes in particular appearing susceptible

Problems can occur particularly with ETFs with less liquid underlying baskets of securities (e.g. corporate bond ETFs or emerging market ETFs). Here, there can be strong pressure to sell in times of market stress (for more on the behaviour of ETFs in periods of market stress, see the box on pp. 97 ff.). Whilst investors in open-end investment funds can generally redeem their shares at the NAV, in the case of ETFs discrepancies can arise between the NAV and the ETF's trading price, which is the price relevant to the investor. If investors expect the ETF price on the stock exchange to fall below that of the underlying basket of securities, it would be rational for them to offload ETF shares as quickly as possible (first-mover advantage[22]), amplifying negative price effects. This may result in the entire redemption process being brought forward, thereby exacerbating liquidity problems or even creating such problems in the first place. Any pressure to sell could also be amplified due to a lack of dampening mechanisms in the ETF sector such as lock-up periods for hedge funds or minimum holding periods and redemption notice periods for real estate funds.[23]

The significance of authorised participants in times of market stress

Potential disruptions to the functioning of APs during periods of stress …

In times of high market stress, falling prices and high volatility, there is a risk that APs will no longer fulfil their intended role as a link between the ETF secondary and primary markets. This is particularly important if APs assume a dual role, operating simultaneously as market makers on the secondary market. A lack of reliable price information about the underlying securities or balance sheet restrictions may be responsible for this.[24] It is also important to note that risks can be transferred from the ETF provider to the AP when performing cash

22 For more on the relationship between price formation and the first-mover advantage in the case of ETFs, see also International Monetary Fund, Navigating Monetary Policy Challenges and Managing Risks, Global Financial Stability Report, April 2015, Chapter 3, pp. 101-103.
23 See Deutsche Bundesbank, Financial Stability Review 2011, p. 31.
24 Aside from this, APs could feel induced, under certain conditions, to utilise the ETF creation and redemption process to manage portfolio risk, rather than attempting to offset mispricing in the markets. For more information, see K. Pan and Y. Zeng (2017), ETF arbitrage under liquidity mismatch, European Systemic Risk Board Working Paper, No 59.

transactions on the primary market. The ETF provider initially assumes the price risks associated with trading the securities, for which it charges the AP a fee. Moreover, ETF providers often ask the AP to provide cash collateral, for example if trading in the underlying securities markets has closed due to time zone differences. In order to mitigate risk further still, some providers ultimately make contractual arrangements reserving the right to switch from payment in cash to payment in kind (in exchange for securities).[25] In this set-up, the securities, and thus the price risk associated with the sale, pass completely from the ETF provider to the AP.

… can lead to discrepancies between the ETF price and its NAV

To account for this heightened risk, APs might respond by widening the bid-ask spread and/or trading ETF shares at a considerable discount to the NAV. (Temporarily) suspending redemption of ETF shares would be another possible reaction. As a result, the ETF's NAV and the market price of the ETF shares could diverge further.[26] In addition, many APs trade with several ETFs, meaning that different funds could be affected by market tensions. Due to the critical significance of APs, it would therefore be preferable for ETF providers to be affiliated with a large number of APs so that a possible withdrawal of an individual market player could be compensated for more easily.[27] However, this possibility could be severely limited for some market segments as precise knowledge of the specific market is needed for less liquid and/or complex benchmark indices, which is expertise that potentially only a few APs possess.

Number of APs per ETF varies

Due to the limited nature of disclosure requirements applying in this area, information available as to the number of APs that ETF providers are contractually linked with is by no means comprehensive. These data gaps make it hard to conduct a detailed analysis of such links. Where it is possible to obtain lists of ETF providers, these mostly constitute overviews of all of the APs with which an ETF company works for all of its ETF products and do not normally contain breakdowns showing which individual ETFs are linked to which APs. Information from studies and reported anecdotally by market participants indicates that there is significant variation in terms of the number of APs per ETF. While large ETFs will often have contractual links with more than 30 APs, smaller niche ETFs (such as those for emerging markets) may have far fewer.[28] But a simple statement of the number of APs contractually linked to an ETF does not reveal a great deal as to the actual activity levels of those APs. The number of active APs is often fewer than five, and even less in the case of niche products.[29] Adverse market developments, in particular, could see the number of APs which are actually active reduce still further – and even fall to zero in extreme cases. Given the major importance of APs as a link between the primary and secondary markets, it would be wise to work towards greater transparency in terms of the (contracted) number of (active) APs per ETF.[30]

Safeguards in the event of disruption to the primary/secondary market mechanism

While a total breakdown of AP activities seems unlikely, it cannot be entirely ruled out in an extreme stress scenario triggered by a systemic

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25 Furthermore, some ETF providers can limit the daily redemption volume per AP or overall, or extend the repayment deadline. This means that the provider has a longer period to sell securities, but leads to a delayed inflow of liquidity for the AP.

26 Some trading platforms employ protective measures when faced with strong price fluctuations. For example, the trading platform Xetra has "circuit breakers" which interrupt continuous trading as soon as potential execution prices exceed predetermined price ranges. These are defined on the basis of historical volatility.

27 See Deutsche Bundesbank, Financial Stability Review 2013, pp. 42-43.

28 Regarding US ETFs, see M. Lettau and A. Madhavan (2018), Exchange-Traded Funds 101 for Economists, Journal of Economic Perspectives, Vol. 32, No 1, pp. 135-154; and R. Antoniewicz and J. Heinrichs (2015), The Role and Activities of Authorized Participants of Exchange-Traded Funds, Investment Company Institute, Washington, DC.

29 See G. Turner and V. Sushko, What risks do exchange-traded funds pose, Banque de France, Financial Stability Review, No 22, April 2018.

30 The importance of transparency in relation to APs has also been stressed by the Central Bank of Ireland in a consultation paper on ETFs. See Central Bank of Ireland, Feedback Statement on DP6 – Exchange Traded Funds, September 2018.

ETF providers obligated to buy back shares as a way of protecting investors

event, for instance. In a case such as that, the only option left to ETF investors would be to return shares to the ETF provider directly. This process is governed by guidelines issued by the European Securities and Markets Authority (ESMA).[31] In their prospectuses and market communications, ETF providers should first draw attention to the fact that the purchase and sale of ETF shares usually takes place on the secondary market with the assistance of an intermediary, meaning that there can be discrepancies between the NAV and ETF share prices. Where the value of the ETF shares varies significantly from the NAV – such as in the case of market disruption in the absence of a market maker – the investor should be allowed to sell them back directly to the ETF provider. In situations such as this, the ETF provider would be obligated to inform its investors that they can opt to redeem their shares directly with the provider. The exact process and the costs involved (which must not be excessive) should be disclosed in the ETF provider's prospectus.

Legal provisions are complex

The option to return ETF shares directly to the ETF provider is an important feature for protecting private investors. Given this role, it is significant that the ESMA guidelines leave ETF providers with scope in terms of the precise implementation. When exactly is the stock exchange value of the ETF shares classified as varying significantly from the NAV? When exactly does the ETF provider inform its customers about the direct redemption option in the event of market disruption? What are the costs involved? These may be crucial aspects, for example. Furthermore, there are doubts as to whether private investors in particular are able to fully appreciate the sometimes complex interrelationships involved and evaluate them appropriately.

Halts to trading aid market stabilisation in periods of stress

Trading halts are another form of safeguard. As the analysis of various flash crashes shows, they can help to stabilise the market when volatility increases during periods of stress (see the box on pp. 97 ff.).

Counterparty risk

While counterparty risk in the case of physical ETFs derives from securities lending, …

ETFs are exposed to counterparty risk, that is to say the risk that a counterparty may default. There is a distinction to be drawn between the risks in the case of physical ETFs and those associated with the synthetic breed. With physical ETFs, the counterparty risk stems from the securities lending transactions routinely involved. These transactions are common practice in financial markets and feature in open-end investment fund activity and derivatives trading, too. The ETF provider lends stocks or bonds from the portfolio to another market player for a set period of time. In exchange for the securities it has lent, the ETF provider receives a fee as well as other securities as collateral. According to industry data, profit made through securities lending typically accounts for around one-third of an ETF provider's total revenue.[32]

If the counterparty then defaults, the borrowed security does not get returned to the ETF provider. In this case, the ETF provider is left with the securities that it received as collateral, which at the time of transaction are worth more than the lent securities on account of the standard practice of over-collateralisation. While this practice provides additional protection against falling prices, adverse market developments can potentially entail such steep price drops that the over-collateralisation proves insufficient and the ETF provider incurs losses through its securities lending operations.[33] Via the primary/secondary market

31 See Guidelines for competent authorities and UCITS management companies, ESMA/2014/937EN of 1 August 2014, in particular Section IX entitled "Treatment of secondary market investors of UCITS ETFs" on p. 7 at https://www.esma.europa.eu/system/files_force/library/2015/11/esma-2014-0011-01-00_en_0.pdf

32 See Deutsche Bank, In the ETF labyrinth, where does the thread begin?, 7 July 2011, p. 23.

33 Additional protection is provided by the Securities Financing Transactions Regulation (SFTR), the guidelines issued by the European Securities and Markets Authority (ESMA) and the EU provisions relating to mutual funds (UCITS). These provide for rules on diversification, counterparty limits, transparency rules (primarily concerning securities lending) and minimum requirements for the quality of collateral posted.

mechanism, these losses in the ETF portfolio would end up being transferred to the ETF shares. In extreme scenarios, this could trigger general pressure to sell across the ETF sector, which would accelerate the price decline still further.[34]

… it stems from swap transactions in the case of synthetic ETFs

The counterparty risk in the case of synthetic ETFs results from swap transactions. As in the case of physical ETFs, there is also the possibility that the collateral will turn out to be insufficient to offset losses in the event of counterparty default, meaning that negative price dynamics could be triggered or catalysed with this type of ETF, too.

Furthermore, with synthetic ETFs there is the danger that the ETF provider may become unable to replicate the performance of the relevant benchmark index in the event of a swap counterparty defaulting. If no new swap with a different market participant can be agreed, the ETF provider would have to sell the securities in its portfolio and, in turn, buy the securities of the benchmark index in order to achieve physical replication – so far as the possibility is even afforded given any barriers to entry or other market obstacles that might exist. This sort of process could lead to a loss of confidence – especially if several ETFs are affected at the same time – and thus, in a first step, trigger pressure to sell in the synthetic ETF segment. In a second step, the physical ETF segment could be hit by contagion effects if similar strategies are being pursued or as herd behaviour comes into play.

Additional risk is created when AP, swap counterparty and ETF provider are linked

There are additional risks if the AP, swap counterparty and/or ETF provider are heavily interconnected. The swap counterparty and the AP could belong to the same banking group, for instance. While this may make for greater cost efficiency when it comes to collateral management and refinancing,[35] this kind of market structure can produce perverse incentives. For example, there is the risk that some banks might use illiquid securities to refinance themselves through swaps. Since related party transactions are prohibited in the United States, this is a risk primarily for the European ETF market.[36] It must be said, however, that the number of ETF products offering synthetic replication has been waning in Europe in past years, which ought to significantly reduce the associated counterparty risk (see the upper panel of the chart on p. 84).

Influence on price formation

Mechanical index investment may compromise the informative function of prices

Results are inconclusive as to the impact of ETFs on price formation. First, it is possible that ETF-based mechanical index investment may stifle important price signals, which can lead to misallocation of capital. In the event of weak company performance, investors or fund managers become unable to easily offload shares because they have to follow a prescribed weighting. This could compromise the informative function of prices. It should be stressed in this context, however, that passivity in purchase decisions does not necessarily have to mean passivity on the part of ETF companies as regards managerial control. ETF companies influence corporate decisions by exercising voting rights in shareholders' meetings.

It remains to be seen what size the ETF sector needs to reach before it starts having the potential to impair the informative function of prices. But if the robust growth seen in the past few years persists, the importance of this issue looks set to grow.

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34 From a financial stability perspective, there could also end up being a shortage of collateral in the financial system if a large number of ETF providers (and other market participants, too – those involved in derivatives transactions, for instance) were to simultaneously stop extending their securities lending transactions. See Financial Stability Board, Potential financial stability issues arising from recent trends in Exchange-Traded Funds (ETFs), 12 April 2011.

35 For a detailed discussion of this point, see S. Ramaswamy (2001), Market structures and systemic risk of exchange-traded funds, BIS Working Papers No 343, Bank for International Settlements.

36 See G. Turner and S. Sushko, What risks do exchange-traded funds pose, Banque de France, Financial Stability Review, No 22, April 2018, pp. 133-144.

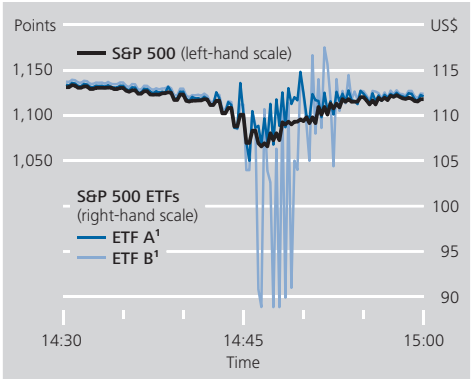
Exchange-traded funds in periods of market stress

On 6 May 2010 – amid, amongst other things, concerns about the ongoing sovereign debt crisis in Greece – the prices of US stocks (as measured by the S&P 500) plummeted by around 5% within a very short space of time, having already fallen by around 4% over the course of the day. This meant a peak loss of 9% on the previous day's closing prices (see the chart below). Prices recovered in minutes, with the index recording a daily loss of just over 3% as the markets closed. Against the backdrop of a weak market environment, the price collapse was very probably due to the automated placing of sell orders for futures contracts, which then triggered corresponding stop-loss orders. Amplified by high-frequency traders, these developments spilled over into the ETF markets.

The large number of sell orders caused bid-ask spreads to widen significantly. Market makers' pricing models are important in this connection. The models they used here were partly responsible for significant differences between the prices determined by market makers and the indicative net asset value (iNAV) of the ETFs concerned.[1] As a result, market makers and APs withdrew from the market, liquidity dried up and some orders could no longer be executed.[2] While ETFs were hit harder by the "flash crash" than other asset classes, it does not appear that they were the cause of it. In response to this event, a raft of regulations were introduced and existing regulations tightened in the United States. These include, in particular, "circuit breakers" that temporarily halt trading when prices hit predefined "tripwires".[3]

On the morning of 24 August 2015, there was another flash crash just as the markets opened. With a slump in prices on the Asian stock markets having caused futures prices to fall in Europe and the United States (the Chinese SSE Composite Index had tumbled by 8.5%), the S&P 500 in the United States opened 5.2% down on the previous day's closing prices and temporarily plunged by 7.8% in the space of five minutes. Most of these losses had been recouped by the

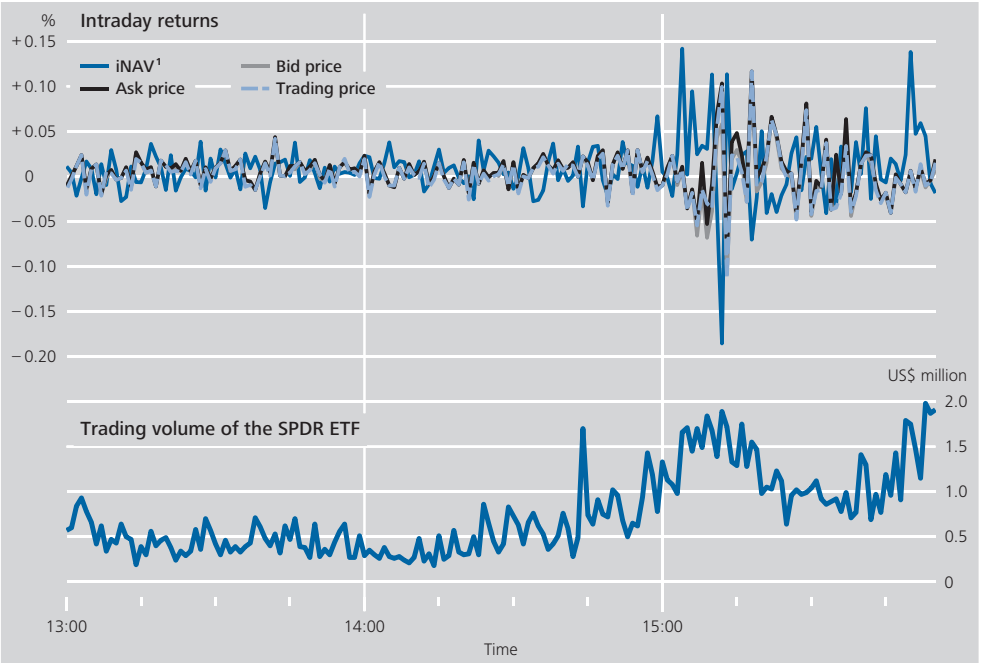
Intraday price movements of the S&P 500 and selected ETFs on 6 May 2010



Source: Bloomberg. **1** ETFs anonymised.
Deutsche Bundesbank

1 Some market makers determine their ETF prices based on supply and demand only, without any regard for the underlying index values, while others take into account the value of the replicated basket of securities. However, the latter need time to evaluate information and price changes. If individual market makers withdraw from the market, it can result in reduced liquidity and larger price swings. For more information, see United States Security and Exchange Commission (SEC), US Commodity Futures Trading Commission: Findings Regarding the Market Events of May 6, 2010, 30 September 2010.
2 Some 70% of the transactions that were subsequently cancelled were also ETF transactions. For more information, see M. Borkovec, I. Domowitz, V. Serbin, H. Yegerman, Liquidity and Price Discovery in Exchange-Traded Funds: One of Several Possible Lessons from the Flash Crash, Investment Technology Group, May 2010, p. 1.
3 These were introduced by the SEC and the US Commodity Futures Trading Commission (CFTC) in several stages. In addition to tightening the trading halt rules put into effect in 1987, they also set out requirements for risk management and rules on automated trading.

Intraday returns of the SPDR ETF relative to the S&P 500 and its trading volume on 5 February 2018



Source: Bloomberg. **1** Indicative net asset value.
Deutsche Bundesbank

afternoon. Price swings in excess of predefined price changes triggered a total of 1,278 trading halts – 1,058 of which were in the ETF and ETP sectors. These served to stabilise the markets.

Yet another flash crash took place on 5 February 2018 (for more information, see the box on pp. 86 f.). Suffering heavy intraday losses (-4%), S&P 500 prices dipped by 2.1% in a matter of minutes just after 15:00 local time, only to pick up again to pre-dip levels a short time later (see the chart on p. 86). The flash crash appears to have been sparked by high volumes of accumulated VIX short positions combined with long positions in the S&P 500 stock market index, which, following a slow start to the trading day, reached their liquidation trigger thresholds, provoking massive ETF sell orders in the process.[4] Some of the long positions were in ETF portfolios, which could explain the downward pressure in this market segment. To the extent that it is possible to comment without inspecting the order books, it appears that, measured by volume, the volatility of price movements during and after this event was relatively moderate (see the chart above). This could be an effect of the rules that were introduced and tightened in the wake of the flash crash of 6 May 2010.

Although the circumstances surrounding each of the flash crashes presented here are different, one commonality is the massive surge of automated sell orders that were activated. It seems that, while the market for ETFs played a major role in these devel-

4 According to investment management company BlackRock's figures, the trading volume of ETFs in the week of trading from 5 to 9 February 2018 was worth US$1,000 billion. The SPDR S&P 500 ETF recorded weekly outflows of US$23.6 billion, which equates to around 8% of its market volume at that time. See Blackrock, Case Study: ETF Trading in a High-Velocity Market, Viewpoint, March 2018.

opments, it did not trigger them. The market structure – in particular, the ability to trade high-pressure asset classes at all times in conjunction with unstable market depth in the context of market-making activities – has proved to be a weakness. It can lead to differences between the price at which an ETF is exchange-traded and its iNAV, and cause the affected ETFs or their underlying securities to become increasingly volatile. The halts to trading existing on the European trading markets even prior to the flash crashes and the tougher circuit breakers subsequently put in place on US stock markets to curb significant price drops therefore constitute an important safeguard against the rapid spread of distortions on the financial markets.

In addition to the "illusion of liquidity" – the problem of ETFs that are liquid during normal times merely appearing to remain liquid during periods of market stress – there are further risks. For example, there could be asymmetries in information processing between the ETF provider, the AP and/or the end investor. It cannot be ruled out that, in times of stress, APs may be unable or unwilling to absorb high order volumes in a short space of time. This could ultimately also result in APs demanding higher bid-ask spreads. ETFs with relatively illiquid assets (e.g. investments in emerging market economies or corporate bonds) are likely to be hit especially hard by this.

Additional liquidity improves price formation processes – risks due to potential propagation of price shocks

ETFs appear to have a positive impact on price formation due to the additional secondary market liquidity: market makers and APs carry over information available at the ETF level to the underlying securities, which can – in particular – speed up the price formation process, it seems. However, the structure of ETFs also allows non-fundamental liquidity shocks on the secondary market to be propagated to the individual underlying securities. Moreover, owing to their low-cost nature, ETFs lend themselves to speculative purposes. Investors can bet on price trends over short horizons. This can produce non-fundamental price shocks which then propagate via the primary/secondary market mechanism to the individual securities that make up an index.[37]

Possible amplification effects through ETFs

towards reinforcement of existing trends. In relation to ETFs, there is the potential danger that price developments in the financial markets could be amplified. For example, a fall in the price of individual securities belonging to the relevant benchmark index would, by definition, lead to a drop in price for that index. Valuation shifts in the benchmark index caused by the passive investment process can then call for adjustments to the ETF portfolio, which, under certain circumstances, may mean that the ETF provider needs to offload individual securities from the basket within a short space of time. The resulting procyclical developments could foster the build-up of potential risks in the financial system, which could then spread throughout the system in times of stress.

Procyclical developments as a specific form of price formation risk

In the context of securities markets, the term procyclicality refers, in general, to a tendency

37 For a detailed discussion on pricing, see I. Ben-David, F. A. Franzoni und R. Moussawi (2017), Exchange-Traded Funds, Annual Review of Financial Economics, Vol. 9, pp. 169-189.

Common ownership

ETFs can encourage common ownership structures, …

ETFs are a cost-effective means of diversification. It has been shown that cost-effective options for diversification can be associated with a rise in common ownership structures.[38] The term "common ownership structure" describes a situation where the shares of several enterprises belonging to the same sector are held by one asset manager. This set-up could lead to insufficient incentives for competition. When one enterprise acquires a greater market share by pursuing an aggressive competitive policy this leads to a reduced market share for another enterprise from the same sector. A common owner – one who possesses (the same) shares in both enterprises – therefore does not benefit from an aggressive competitive policy of this kind. If common owners supplant individual owners as the most powerful shareholders there are no longer any incentives to compete. Negative consequences might include higher prices for consumers and a narrower range of products on offer. It is important to note here that there does not necessarily need to be any price collusion or cartel for these effects to arise.

… which can lessen the incentive to compete and lead to higher prices for consumers

Empirical studies indicate that, in certain sectors, an increasing market concentration due to common ownership structures has led to climbing consumer prices.[39] It must be said that there are also those (in particular, major asset managers) who take a contrary view and adopt a critical stance towards the literature dealing with common ownership structures.[40]

Conclusion

Cost-efficient investment in a diversified portfolio

ETFs are enjoying increasing popularity with investors as reflected in high growth rates, including in comparison to open-end investment funds. Despite their growing importance, ETFs make up just under 14% of fund assets worldwide, meaning that their role still ranks as lower-level. There appear to be a range of factors driving the fast-paced expansion of the ETF sector, chief among them – at this point in time – being the fact that they represent a cost-efficient means of investing in a diversified portfolio. They thus also open up access to market segments which are difficult to reach through other investment instruments. This may also have a bearing in terms of pension-related asset accumulation.

ETFs' credit and market risks determined by the benchmark index selected

The prime factors determining the potential for profit, loss and risk of any given ETF are the underlying assets. Investing in ETFs can come with significant risks attached – for instance, if the selected benchmark index tracks a very high-risk asset class. Furthermore, some ETFs have particular features built in such as leveraged exposure or a structure offering inverse performance tracking of the benchmark index. When assessing the risks specific to ETFs as a product class, however, the underlying credit or market risk of the reference assets are less relevant. The most pressing issue here is whether ETFs may be a source of additional risks when compared with other asset classes, such as open-end investment funds or individual securities.

Specific risks due to complex structure – liquidity risk particularly significant

Overall – and partly because the sector is still relatively small – the specific risks for the financial system associated with ETFs appear limited for now. However, analysis of various flash crashes suggests that there is the potential for episodes of pronounced financial market tension to be amplified in the short term. The complex structure of ETFs, including the primary/secondary market mechanism, makes the task of risk assessment harder and may harbour liquidity risk. In that regard, APs occupy a key position in the system. Disruption to the proper

38 See J. J. Rotemberg (1984), Financial transaction costs and industrial performance, Working Paper, Massachusetts Institute of Technology.
39 See J. Azar, M. C. Schmalz und I. Tecu (2018), Anticompetitive Effects of Common Ownership, The Journal of Finance, Vol. 73, No 4, pp. 1513-1565; and J. Azar, S. Raina and M. C. Schmalz (2016), Ultimate Ownership and Bank Competition, Working paper, IESE/University of Alberta/University of Michigan.
40 See, for example, BlackRock, Index Investing and Common Ownership Theories, March 2017.

functioning of APs may result in the ETF and the benchmark index drifting apart in price terms. In the past, such disturbances have been limited to just a few minutes. However, it cannot be ruled out that – particularly in the case of systemic stress events – longer-lasting periods of dwindling market liquidity or sustained negative price dynamics, including an increase in volatility extending beyond the short term, may occur. It should be borne in mind that the strong growth of ETFs did not set in until after the financial crisis of 2008; the sector, with its new-found significance, has yet to be exposed to more sustained market disruption.

Safeguard mechanisms enhance resilience in times of stress

A number of mechanisms already exist to keep ETFs working smoothly. In the event of a volatility spike in stress periods, halts to trading seem to be able to help stabilise the market. In addition, a large number of active APs per ETF appears to be important for ensuring that the primary/secondary market mechanism remains able to function when adverse market developments occur. It would be good to see more transparency on the part of ETF providers here, especially concerning the links between ETF providers and APs as well as the detailed arrangements applying to the option for ETF shares to be returned to the ETF provider as laid down in the ESMA guidelines.

In addition to liquidity risk, ETFs also involve counterparty risk stemming from securities lending or swap transactions. Risks related to price formation can emerge in particular if ETFs used for speculative purposes propagate liquidity shocks on the secondary market to the individual underlying securities. Lastly, ETFs appear to foster common ownership structures, which could dampen incentives for competition in corporate sectors.

Statistical Section

Contents

I Key economic data for the euro area

II Overall monetary survey in the euro area

III Consolidated financial statement of the Eurosystem

IV Banks

V Minimum reserves

VI Interest rates

VII Insurance corporations and pension funds

VIII Capital market

IX Financial accounts

X Public finances in Germany

XI Economic conditions in Germany

XII External sector

I. Key economic data for the euro area

1. Monetary developments and interest rates

	Money stock in various definitions [1,2]				Determinants of the money stock [1]			Interest rates		
			M3 [3]							
	M1	M2		3-month moving average (centred)	MFI lending, total	MFI lending to enterprises and households	Monetary capital formation [4]	EONIA [5,7]	3-month EURIBOR [6,7]	Yield on European government bonds outstanding [8]
Period	Annual percentage change							% p.a. as a monthly average		
2016 Dec.	8.8	4.8	5.0	4.8	4.7	2.4	– 1.7	– 0.35	– 0.32	1.0
2017 Jan.	8.4	4.6	4.7	4.8	4.5	2.4	– 1.6	– 0.35	– 0.33	1.1
Feb.	8.4	4.7	4.6	4.8	4.3	2.3	– 1.1	– 0.35	– 0.33	1.2
Mar.	9.0	5.0	5.1	4.8	4.8	2.8	– 1.2	– 0.35	– 0.33	1.2
Apr.	9.2	5.0	4.8	4.9	4.5	2.6	– 1.5	– 0.36	– 0.33	1.1
May	9.2	5.1	4.9	4.9	4.3	2.6	– 1.4	– 0.36	– 0.33	1.1
June	9.6	5.2	4.9	4.8	4.1	2.8	– 1.3	– 0.36	– 0.33	1.0
July	9.3	5.0	4.6	4.8	3.8	2.6	– 1.0	– 0.36	– 0.33	1.2
Aug.	9.6	5.4	5.0	4.9	3.8	2.3	– 0.9	– 0.36	– 0.33	1.0
Sep.	9.9	5.4	5.2	5.1	3.9	2.4	– 1.0	– 0.36	– 0.33	1.0
Oct.	9.5	5.4	5.0	5.0	3.7	2.5	– 1.4	– 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	5.3	4.6	4.5	3.5	2.9	– 0.8	– 0.36	– 0.33	1.1
Feb.	8.4	4.9	4.3	4.2	3.3	2.6	– 1.3	– 0.36	– 0.33	1.2
Mar.	7.6	4.4	3.7	3.9	2.8	2.4	– 0.9	– 0.36	– 0.33	1.1
Apr.	7.0	4.2	3.8	3.9	2.8	2.7	– 0.7	– 0.37	– 0.33	1.0
May	7.5	4.6	4.0	4.1	3.2	3.2	– 1.1	– 0.36	– 0.33	1.1
June	7.5	4.8	4.5	4.1	3.1	2.8	– 1.2	– 0.36	– 0.32	1.1
July	6.9	4.4	4.0	4.0	3.4	3.3	– 0.9	– 0.36	– 0.32	1.0
Aug.	6.4	4.0	3.5	...	3.3	3.4	– 1.0	– 0.36	– 0.32	1.1
Sep.	...	...	...	...	...	...	...	– 0.36	– 0.32	1.2

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 *

	Selected items of the euro area balance of payments [r]								Euro exchange rates [1]		
	Current account		Financial account							Effective exchange rate [3]	
	Balance	of which: Goods	Balance	Direct investment	Portfolio investment	Financial derivatives [2]	Other investment	Reserve assets	Dollar rate	Nominal	Real [4]
Period	€ million								EUR 1 = USD ...	Q1 1999 = 100	
2016 Dec.	+ 46,912	+ 33,170	+ 68,184	– 5,158	+ 63,410	+ 7,264	– 3,401	+ 6,069	1.0543	93.7	89.0
2017 Jan.	– 7,077	+ 6,106	+ 23,342	+ 39,132	– 8,790	+ 8,141	– 10,043	– 5,096	1.0614	93.9	89.1
Feb.	+ 19,091	+ 18,038	+ 31,258	+ 20,665	+ 73,508	+ 8,144	– 73,080	+ 2,021	1.0643	93.4	88.9
Mar.	+ 44,810	+ 36,988	– 5,009	– 66,478	+ 30,449	+ 7,916	+ 22,382	+ 722	1.0685	94.0	89.2
Apr.	+ 17,361	+ 23,885	+ 16,981	+ 40,487	+ 11,691	+ 1,648	– 32,689	– 4,157	1.0723	93.7	89.0
May	+ 8,317	+ 28,589	+ 29,818	+ 56,523	– 33,737	+ 3,740	+ 2,166	+ 1,126	1.1058	95.6	90.5
June	+ 32,661	+ 33,683	+ 63,354	– 2,349	+ 16,611	– 6,644	+ 54,163	+ 1,573	1.1229	96.3	91.2
July	+ 38,356	+ 30,738	+ 37,440	+ 6,143	+ 25,547	– 2,681	+ 13,623	– 5,193	1.1511	97.6	92.4
Aug.	+ 34,660	+ 24,391	+ 736	– 22,320	+ 70,436	– 5,531	– 41,175	– 674	1.1807	99.0	93.6
Sep.	+ 47,516	+ 33,420	+ 78,205	+ 24,453	+ 29,898	– 2,104	+ 19,545	+ 6,413	1.1915	99.0	93.6
Oct.	+ 37,385	+ 28,848	+ 29,065	+ 13,606	+ 54,468	– 612	– 35,702	– 2,695	1.1756	98.6	93.1
Nov.	+ 37,201	+ 35,049	– 2,026	– 68,135	+ 33,562	+ 510	+ 25,873	+ 6,164	1.1738	98.5	93.0
Dec.	+ 44,807	+ 31,020	+ 92,238	+ 42,836	– 20,621	+ 4,571	+ 67,057	– 1,604	1.1836	98.8	93.3
2018 Jan.	+ 9,705	+ 11,708	– 1,146	+ 30,735	+ 14,130	– 1,640	– 46,653	+ 2,282	1.2200	99.4	93.9
Feb.	+ 24,904	+ 24,819	+ 22,200	+ 22,327	+ 40,187	+ 72	– 40,267	– 119	1.2348	99.6	93.9
Mar.	+ 47,018	+ 37,133	+ 104,332	+ 70,346	– 36,362	– 2,935	+ 64,070	+ 9,213	1.2336	99.7	94.2
Apr.	+ 33,307	+ 26,577	– 8,407	+ 43,083	+ 30,768	+ 12,054	– 90,682	– 3,629	1.2276	99.5 p	93.9
May	+ 13,370	+ 25,733	+ 29,783	– 7,236	+ 50,197	+ 15,547	– 31,070	+ 2,345	1.1812	98.1 p	92.8
June	+ 32,782	+ 31,599	+ 62,467	+ 27,329	– 40,414	+ 12,921	+ 54,763	+ 7,869	1.1678	97.9 p	92.6
July	+ 31,930	+ 25,366	+ 4,995	– 23,206	+ 40,629	+ 5,257	– 13,690	– 3,995	1.1686	99.2 p	93.8
Aug.	...	...	...	...	...	...	...	...	1.1549	99.0 p	93.5
Sep.	...	...	...	...	...	...	...	...	1.1659	99.5 p	93.9

***** Source: ECB, according to the international standards of the International Monetary Fund's Balance of Payments Manual (sixth edition). **1** See also Tables XII.10 and 12, pp. 82-83• . **2** Including employee stock options. **3** Against 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]										
Annual percentage change										
2015	2.1	1.4	1.7	1.9	0.1	1.1	– 0.4	25.1	0.9	3.0
2016	1.9	1.4	2.2	3.5	2.5	1.2	– 0.2	5.0	1.1	2.1
2017	2.4	1.7	2.2	4.9	2.8	2.2	1.5	7.2	1.6	4.6
2017 Q1	2.1	1.8	3.4	4.9	4.2	1.7	0.7	2.8	2.3	4.3
Q2	2.5	1.5	0.9	5.8	2.7	1.6	1.4	6.2	1.4	4.4
Q3	2.8	1.6	2.2	3.9	2.1	2.5	1.4	13.2	1.3	5.5
Q4	2.7	2.0	2.2	4.8	2.3	2.8	1.8	6.5	1.3	4.3
2018 Q1	2.4	1.4	1.4	3.3	2.6	2.0	2.6	9.3	1.2	4.0
Q2	2.2	1.4	2.3	3.7	2.7	1.6	1.8	9.0	1.5	5.3
Industrial production [2]										
Annual percentage change										
2015	2.6	– 1.2	0.9	– 0.2	– 1.1	1.5	1.0	35.9	1.1	3.4
2016	1.6	4.5	1.1	3.0	3.9	0.3	2.6	1.8	1.9	4.9
2017	2.9	2.9	3.4	8.0	3.9	2.4	4.8	– 2.2	3.6	8.5
2017 Q1	1.2	1.5	1.0	10.7	5.5	0.8	9.9	– 6.6	2.2	8.6
Q2	2.4	4.0	3.1	12.4	2.8	1.6	3.4	– 6.6	3.8	9.2
Q3	4.0	4.2	4.3	4.3	2.5	3.1	4.5	3.4	4.6	11.4
Q4	4.1	1.9	5.0	4.9	4.7	4.0	1.9	0.5	4.0	4.9
2018 Q1	3.2	2.7	4.0	5.6	5.2	2.5	– 0.5	– 2.2	3.5	4.5
Q2	2.4	1.3	r 3.1	2.6	4.1	1.2	1.7	4.1	1.9	0.1
Capacity utilisation in industry [3]										
As a percentage of full capacity										
2015	81.2	79.7	84.3	71.4	79.2	82.7	66.2	–	75.5	71.5
2016	81.7	80.0	84.6	73.6	78.0	83.2	67.6	–	76.3	72.6
2017	83.1	81.8	86.6	74.9	82.3	84.7	70.0	–	76.8	74.5
2017 Q2	82.6	81.4	86.1	76.4	82.1	84.3	68.1	–	76.0	74.8
Q3	83.3	82.0	86.9	73.9	82.6	84.7	72.0	–	77.0	74.5
Q4	84.0	82.9	87.7	74.8	83.6	85.2	71.2	–	77.6	74.2
2018 Q1	84.5	82.1	88.2	75.5	83.1	86.2	70.4	–	78.3	75.8
Q2	84.3	81.2	87.8	73.9	84.3	85.9	71.2	–	78.1	76.3
Q3	84.1	79.9	87.8	75.2	84.7	85.7	70.7	–	77.9	77.4
Standardised unemployment rate [4]										
As a percentage of civilian labour force										
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	11.2	8.7
2018 Apr.	8.4	6.3	3.5	5.1	7.7	9.1	19.9	5.8	10.9	7.7
May	8.2	6.3	3.5	5.1	7.6	9.1	19.4	5.8	10.4	7.7
June	8.2	6.4	3.5	5.0	7.6	9.1	19.1	5.8	10.6	7.7
July	8.2	6.6	3.4	5.3	7.6	9.2	19.0	5.8	10.2	7.6
Aug.	8.1	6.5	3.4	...	7.6	9.3	...	5.6	9.7	7.4
Sep.	...	...	...	...	...	...	...	5.4	...	...
Harmonised Index of Consumer Prices										
Annual percentage change										
2015	[5] 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
2018 Apr.	1.3	1.6	1.4	2.9	0.8	1.8	0.5	– 0.1	0.6	2.1
May	1.9	2.3	2.2	3.1	1.0	2.3	0.8	0.7	1.0	2.4
June	2.0	2.6	2.1	3.9	1.2	2.3	1.0	0.7	1.4	2.7
July	2.1	2.7	2.1	3.3	1.4	2.6	0.8	1.0	1.9	2.7
Aug.	2.0	2.6	1.9	3.5	1.4	2.6	0.9	0.9	1.6	2.8
Sep.	2.1	2.8	2.2	3.5	1.4	2.5	1.1	1.2	1.5	3.3
General government financial balance [6]										
As a percentage of GDP										
2015	– 2.0	– 2.5	0.8	0.1	– 2.8	– 3.6	– 5.7	– 1.9	– 2.6	– 1.4
2016	– 1.5	– 2.5	0.9	– 0.3	– 1.8	– 3.4	0.6	– 0.5	– 2.5	0.1
2017	– 0.9	– 1.0	1.0	– 0.3	– 0.6	– 2.6	0.8	– 0.3	– 2.3	– 0.5
General government debt [6]										
As a percentage of GDP										
2015	89.9	106.1	70.8	10.0	63.5	95.6	176.8	76.9	131.5	36.8
2016	89.0	105.9	67.9	9.4	63.0	96.6	180.8	72.8	132.0	40.5
2017	86.7	103.1	63.9	9.0	61.4	97.0	178.6	68.0	131.8	40.1

Sources: Eurostat, European Commission, European Central Bank, Federal Statistical Office, Bundesbank calculations. Latest data are partly based on press reports and are provisional. **1** Euro area: quarterly data seasonally adjusted. **2** Manufacturing, mining and energy: adjusted for working-day variations. **3** Manufacturing: quarterly

I. Key economic data for the euro area

Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovakia	Slovenia	Spain	Cyprus	Period
										Real gross domestic product [1]
										Annual percentage change
2.0	2.9	9.5	2.0	1.2	1.8	4.2	2.3	3.6	2.0	2015
2.4	3.1	5.2	2.2	2.0	1.9	3.1	3.1	3.2	4.8	2016
4.1	2.3	6.7	2.9	2.6	2.8	3.2	4.9	3.0	4.2	2017
4.6	2.6	7.0	3.0	3.0	3.5	3.0	4.8	2.7	4.4	2017 Q1
4.5	1.7	6.9	2.9	2.3	2.7	3.7	4.2	3.3	4.4	Q2
3.7	3.2	7.3	2.8	2.5	2.7	3.4	4.2	2.7	4.6	Q3
3.8	1.8	5.5	2.7	2.4	2.4	3.5	6.3	3.2	3.6	Q4
3.7	5.1	4.9	2.8	3.7	1.7	3.6	4.5	2.8	3.9	2018 Q1
3.8	...	5.9	3.1	2.7	2.2	4.2	3.8	2.5	3.9	Q2
										Industrial production [2]
										Annual percentage change
4.2	1.5	6.3	– 3.3	2.2	2.1	6.0	5.1	3.4	5.1	2015
2.8	0.8	– 4.7	2.2	2.9	2.4	3.7	7.7	1.7	9.2	2016
6.8	2.6	3.9	2.0	4.5	3.5	3.1	8.3	3.2	8.3	2017
5.1	– 1.1	6.8	2.3	2.0	3.5	5.3	6.3	1.9	10.9	2017 Q1
6.2	1.2	2.5	1.4	4.0	2.7	0.4	7.5	2.7	7.3	Q2
8.7	5.4	4.7	2.2	6.3	5.6	2.9	8.4	3.1	7.9	Q3
7.0	5.3	1.7	2.1	5.8	2.4	3.7	10.9	5.3	7.5	Q4
6.5	5.5	– 3.3	3.0	6.3	2.0	0.3	8.4	2.9	3.1	2018 Q1
4.5	1.8	– 1.7	0.4	6.1	0.4	2.9	6.6	1.2	8.8	Q2
										Capacity utilisation in industry [3]
										As a percentage of full capacity
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
77.4	82.1	79.1	82.5	86.6	79.1	86.5	85.4	78.1	57.6	2017 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
77.5	82.0	77.6	83.6	88.7	81.4	86.3	86.0	80.3	60.9	Q2
77.2	80.8	83.2	84.4	88.7	82.0	84.0	84.6	79.3	61.8	Q3
										Standardised unemployment rate [4]
										As a percentage of civilian labour force
9.1	6.5	5.9	6.9	5.7	12.6	11.5	9.0	22.1	15.0	2015
7.9	6.3	5.2	6.0	6.0	11.2	9.7	8.0	19.6	13.0	2016
7.1	5.6	4.6	4.9	5.5	9.0	8.1	6.6	17.2	11.1	2017
5.9	5.3	3.9	3.9	4.8	7.1	6.9	5.4	15.6	8.4	2018 Apr.
5.8	5.2	3.8	3.9	4.6	7.1	6.8	5.4	15.4	8.1	May
5.8	5.2	3.8	3.9	4.7	6.8	6.7	5.3	15.3	7.9	June
6.3	5.2	3.9	3.8	4.9	6.8	6.7	5.3	15.2	7.6	July
6.2	5.2	3.8	3.9	4.8	6.8	6.6	5.3	15.2	7.5	Aug.
...	...	...	...	...	...	...	...	...	...	Sep.
										Harmonised Index of Consumer Prices
										Annual percentage change
– 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
2.2	1.3	1.4	1.0	2.0	0.3	3.0	1.9	1.1	– 0.3	2018 Apr.
2.9	2.1	1.7	1.9	2.1	1.4	2.7	2.2	2.1	1.0	May
2.6	2.4	2.0	1.7	2.3	2.0	2.9	2.3	2.3	1.7	June
2.3	2.5	2.1	1.9	2.3	2.2	2.6	2.1	2.3	1.4	July
1.8	2.4	2.4	1.9	2.3	1.3	2.9	2.0	2.2	1.7	Aug.
2.4	2.7	2.5	1.6	2.1	1.8	2.7	2.2	2.3	1.7	Sep.
										General government financial balance [6]
										As a percentage of GDP
– 0.2	1.4	– 1.1	– 2.1	– 1.0	– 4.4	– 2.7	– 2.9	– 5.3	– 1.3	2015
0.3	1.6	1.0	0.4	– 1.6	– 2.0	– 2.2	– 1.9	– 4.5	0.3	2016
0.5	1.5	3.9	1.1	– 0.7	– 3.0	– 1.0	0.0	– 3.1	1.8	2017
										General government debt [6]
										As a percentage of GDP
42.6	22.0	58.7	64.6	84.6	128.8	52.3	82.6	99.4	107.5	2015
40.1	20.8	56.2	61.8	83.6	129.9	51.8	78.6	99.0	106.6	2016
39.7	23.0	50.8	56.7	78.4	125.7	50.9	73.6	98.3	97.5	2017

data seasonally adjusted. Data collection at the beginning of the quarter. **4** Monthly data seasonally adjusted. Germany: Bundesbank calculation based on unadjusted data from the Federal Statistical Office. **5** Including Lithuania from 2015 onwards. **6** According to Maastricht Treaty definition.

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				
		Enterprises and households		General government									
	Total	Total	of which: Securities	Total	of which: Securities	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]
2017 Jan.	131.1	43.5	31.1	87.6	69.7	– 13.0	233.6	246.6	– 14.9	– 9.8	– 0.2	– 3.7	– 1.1
Feb.	46.4	31.2	4.1	15.2	35.3	– 46.7	52.8	99.5	14.3	– 6.2	– 0.5	– 3.0	24.0
Mar.	151.6	92.7	25.4	58.8	62.6	– 8.8	– 51.4	– 42.6	– 14.7	1.6	– 0.5	– 22.7	6.8
Apr.	54.7	24.5	20.1	30.2	27.6	– 38.6	77.9	116.5	– 22.6	– 12.2	– 0.3	– 0.5	– 9.6
May	48.4	24.0	16.3	24.4	35.1	0.7	– 4.0	– 4.7	16.0	– 7.7	– 2.4	17.0	9.1
June	24.1	29.4	0.4	– 5.3	– 5.3	58.2	– 108.4	– 166.6	– 4.8	– 13.6	– 0.1	– 6.3	15.2
July	6.9	– 0.0	15.2	7.0	9.4	6.7	105.8	99.1	– 6.7	– 7.8	– 0.9	– 2.5	4.6
Aug.	12.1	– 20.3	– 15.6	32.4	38.4	– 27.1	– 2.9	24.2	7.5	– 5.8	– 0.8	– 2.9	17.1
Sep.	54.8	43.1	– 13.7	11.7	17.1	6.5	– 34.7	– 41.2	– 24.2	– 12.0	– 0.9	– 30.0	18.7
Oct.	64.9	53.3	– 9.3	11.6	11.4	– 69.4	87.3	156.7	– 30.2	– 27.0	– 0.6	– 7.2	4.6
Nov.	127.8	99.1	22.1	28.7	34.8	18.6	– 1.0	– 19.6	3.8	4.5	– 0.8	– 2.5	2.6
Dec.	– 107.3	– 89.4	– 8.6	– 17.9	– 8.6	14.9	– 153.2	– 168.1	– 3.2	11.3	– 0.6	– 5.6	– 8.3
2018 Jan.	125.4	84.6	26.4	40.8	27.6	– 42.3	152.9	195.2	10.5	– 8.5	– 0.1	20.2	– 1.1
Feb.	5.0	– 0.0	– 0.1	5.0	20.8	– 11.8	46.9	58.6	– 18.1	0.1	– 0.5	– 12.5	– 5.2
Mar.	64.3	59.8	1.7	4.5	6.9	82.7	– 64.6	– 147.3	13.0	– 5.6	– 0.4	2.0	17.0
Apr.	67.5	66.4	52.1	1.1	– 0.7	– 74.9	41.0	115.9	– 7.0	– 1.7	– 0.5	– 2.5	– 2.3
May	121.9	87.9	11.1	34.1	39.9	– 35.9	120.5	156.4	– 13.1	– 7.4	– 0.4	1.1	– 6.4
June	– 6.9	– 21.9	– 20.6	15.0	18.0	77.4	– 66.4	– 143.8	– 11.5	– 5.0	– 0.4	– 10.7	4.7
July	69.2	67.8	20.5	1.4	4.0	– 26.0	40.4	66.5	11.0	6.2	– 0.6	– 8.4	13.7
Aug.	0.4	– 10.3	– 3.8	10.7	21.5	– 29.4	9.2	38.6	4.0	– 8.4	– 0.4	4.6	8.1

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				
		Enterprises and households		General government									
	Total	Total	of which: Securities	Total	of which: Securities	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]
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.	5.1	10.7	– 1.7	– 5.6	– 0.2	– 20.7	11.6	32.4	– 5.3	– 0.9	– 0.6	– 1.0	– 2.9
Mar.	7.2	9.7	– 2.2	– 2.5	– 0.6	7.9	– 5.2	– 13.1	3.1	– 2.6	– 0.4	4.0	2.2
Apr.	7.3	7.2	0.9	0.1	– 0.7	– 5.0	– 13.9	– 8.9	– 2.3	– 0.6	– 0.5	– 3.1	1.9
May	19.2	21.2	5.0	– 2.1	2.4	– 10.7	29.8	40.6	– 0.1	0.6	– 0.2	4.1	– 4.6
June	16.7	17.9	2.1	– 1.1	1.3	– 18.2	– 20.4	– 2.1	2.3	– 2.2	– 0.5	– 3.1	8.1
July	12.7	9.7	0.0	2.9	0.9	26.0	– 0.3	– 26.3	2.4	– 0.4	– 0.5	– 2.7	5.9
Aug.	4.1	5.8	– 8.7	– 1.6	2.8	– 8.9	2.8	11.7	– 3.6	– 3.2	– 0.4	– 1.8	1.9

***** 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 1 to the Monthly Report, 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. Deposits of central governments	V. Other factors		VI. Money stock M3 (balance I plus II less III less IV less V)										
				Money stock M2									
					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]	Repo transactions	Money market fund shares (net) [2,7,8]	Debt securities with maturities of up to 2 years (incl. money market paper) (net) [2,7]	
	Total [4]	of which: Intra-Eurosystem liability/ claim related to banknote issue	Total	Total	Total	Currency in circulation	Overnight deposits [5]						Period
62.7	42.7	–	27.6	6.3	– 6.5	– 11.8	5.4	3.1	9.7	– 17.4	11.5	– 1.2	2017 Jan.
– 17.4	– 26.7	–	29.5	31.0	31.3	2.9	28.4	– 1.9	1.6	– 8.6	– 4.1	6.0	Feb.
24.2	26.7	–	106.5	92.5	92.9	4.4	88.5	– 5.6	5.2	14.8	11.9	– 1.0	Mar.
– 5.4	– 9.4	–	53.5	72.4	101.9	6.8	95.1	– 31.2	1.7	– 5.9	– 4.3	– 16.4	Apr.
13.4	– 13.3	–	33.0	30.2	42.0	0.4	41.6	– 20.9	9.1	– 11.7	– 4.7	6.1	May
20.4	21.4	–	45.4	74.6	82.7	9.5	73.2	– 10.5	2.3	– 16.6	– 20.6	– 0.2	June
– 7.7	– 15.8	–	43.7	31.5	35.9	6.0	29.9	– 6.2	1.8	– 24.1	13.6	– 3.3	July
– 18.3	– 59.8	–	55.7	45.5	30.9	– 2.3	33.2	8.1	6.4	2.6	9.1	– 5.2	Aug.
41.3	23.5	–	20.6	23.3	47.9	0.9	47.0	– 21.6	– 3.0	7.0	– 4.1	10.5	Sep.
– 43.4	53.8	–	15.3	12.1	22.7	1.9	20.8	– 7.9	– 2.8	19.8	8.9	– 7.8	Oct.
– 8.8	72.9	–	78.6	73.2	81.7	0.9	80.8	– 7.7	– 0.9	17.2	– 3.8	1.3	Nov.
– 21.2	– 88.5	–	20.6	62.5	65.2	16.1	49.1	– 6.8	4.1	– 31.8	– 26.5	– 7.4	Dec.
41.3	22.1	–	9.3	– 1.8	– 19.0	– 15.2	– 3.8	5.6	11.7	– 7.6	19.6	– 11.8	2018 Jan.
13.5	10.8	–	– 13.0	– 9.5	5.1	0.3	4.8	– 17.3	2.7	– 5.2	– 11.3	4.4	Feb.
13.8	49.0	–	71.2	68.2	65.5	8.7	56.8	– 3.7	6.4	8.4	– 1.4	7.9	Mar.
– 19.7	– 30.7	–	49.9	29.6	48.4	4.2	44.2	– 20.8	2.0	– 3.9	12.6	0.9	Apr.
7.1	23.4	–	68.7	93.3	95.8	4.9	90.9	– 9.8	7.2	24.9	– 12.4	– 6.8	May
21.4	– 43.4	–	103.9	109.0	91.3	11.4	79.8	13.9	3.8	– 5.6	– 8.6	6.0	June
7.6	32.8	–	– 8.2	– 10.0	– 6.3	6.7	– 13.1	– 8.3	4.7	6.6	10.3	– 5.2	July
3.0	– 39.7	–	3.8	0.2	– 1.8	2.9	– 4.7	– 3.3	5.3	4.5	– 1.8	– 1.0	Aug.

b) German contribution

IV. Deposits of central governments	V. Other factors			VI. Money stock M3 (balance I plus II less III less IV less V) [10]							
		of which:			Components of the money stock						
	Total	Intra-Eurosystem liability/ claim related to banknote issue [9,11]	Currency in circulation	Total	Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits at agreed notice of up to 3 months [6]	Repo transactions	Money market fund shares (net) [7,8]	Debt securities with maturities of up to 2 years (incl. money market paper)(net) [7]	Period
– 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	– 21.2	2.0	– 0.3	1.7	5.2	– 4.4	0.3	– 0.5	0.3	0.7	Feb.
8.3	0.6	6.9	– 1.5	3.1	– 0.5	6.0	– 0.5	– 0.9	0.2	– 1.1	Mar.
– 15.2	14.5	1.3	1.9	5.3	14.7	– 8.6	– 0.3	– 0.5	– 0.0	– 0.0	Apr.
11.7	– 42.5	5.4	– 0.1	39.3	38.8	– 0.5	– 0.1	– 0.8	– 0.2	2.1	May
17.7	– 26.3	3.6	2.5	4.8	– 6.4	14.6	– 0.5	– 0.3	0.1	– 2.6	June
– 21.0	57.8	3.1	2.2	– 0.5	6.6	– 6.1	– 0.6	0.6	– 0.1	– 0.9	July
13.7	– 14.2	5.3	0.5	– 0.6	2.3	– 3.5	– 0.2	– 0.6	– 0.0	1.6	Aug.

8 Less German MFIs' holdings of paper issued by euro area MFIs. **9** Including national banknotes still in circulation. **10** The German contributions to the Eurosystem's monetary aggregates should on no account be interpreted as national monetary aggregates and are therefore not comparable with the erstwhile German money stocks M1, M2 or M3. **11** The difference between the volume of euro banknotes actually issued by the Bundesbank and the amount disclosed in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2).

II. Overall monetary survey in the euro area

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

End of year/month	Total assets or liabilities	Assets										
		Lending to non-banks (non-MFIs) in the euro area									Claims on non-euro area residents	Other assets
		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 July	27,135.3	17,093.7	12,852.5	10,737.6	1,359.7	755.3	4,241.2	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	4,239.2	1,103.0	3,136.2	5,321.4	4,610.8
Sep.	26,973.5	17,147.5	12,892.5	10,756.7	1,359.3	776.5	4,255.0	1,098.8	3,156.2	5,266.4	4,559.5
Oct.	27,047.7	17,202.9	12,923.4	10,785.5	1,363.1	774.8	4,279.6	1,101.2	3,178.4	5,421.5	4,423.3
Nov.	27,162.1	17,295.4	12,983.3	10,830.1	1,383.3	770.0	4,312.1	1,089.2	3,222.9	5,452.5	4,414.3
Dec.	26,715.8	17,273.1	12,963.7	10,810.3	1,372.2	781.2	4,309.4	1,079.7	3,229.7	5,208.4	4,234.3
2017 Jan.	26,797.3	17,356.0	12,994.9	10,815.3	1,393.4	786.2	4,361.1	1,097.6	3,263.5	5,377.9	4,063.4
Feb.	27,058.8	17,417.4	13,033.2	10,845.9	1,398.4	788.9	4,384.2	1,076.5	3,307.8	5,497.8	4,143.6
Mar.	27,010.2	17,549.8	13,115.7	10,902.1	1,423.7	789.8	4,434.2	1,073.0	3,361.2	5,418.3	4,042.0
Apr.	27,101.0	17,594.8	13,130.3	10,897.5	1,429.8	803.0	4,464.5	1,075.7	3,388.8	5,450.9	4,055.3
May	27,016.8	17,632.4	13,145.3	10,895.9	1,451.1	798.3	4,487.1	1,062.5	3,424.6	5,361.2	4,023.3
June	26,693.8	17,611.0	13,132.7	10,895.2	1,441.3	796.2	4,478.3	1,063.1	3,415.2	5,196.3	3,886.5
July	26,650.9	17,603.9	13,118.6	10,866.0	1,460.1	792.5	4,485.3	1,060.3	3,425.0	5,229.1	3,818.0
Aug.	26,683.7	17,610.2	13,087.0	10,853.0	1,444.2	789.7	4,523.2	1,054.6	3,468.6	5,199.6	3,874.0
Sep.	26,562.3	17,654.9	13,129.8	10,905.5	1,433.3	791.0	4,525.1	1,046.0	3,479.1	5,172.0	3,735.3
Oct.	26,761.0	17,733.2	13,189.6	10,968.3	1,423.0	798.3	4,543.6	1,046.2	3,497.5	5,292.8	3,735.0
Nov.	26,790.6	17,846.4	13,272.3	11,037.5	1,431.0	803.8	4,574.1	1,038.2	3,535.9	5,247.3	3,696.9
Dec.	26,322.0	17,710.4	13,169.4	10,944.8	1,425.7	798.9	4,541.0	1,028.7	3,512.2	5,064.5	3,547.0
2018 Jan.	26,338.9	17,822.0	13,244.5	10,993.9	1,449.1	801.5	4,577.5	1,041.3	3,536.3	5,253.2	3,263.7
Feb.	26,302.4	17,824.7	13,243.5	10,996.4	1,456.9	790.2	4,581.2	1,025.2	3,556.0	5,342.1	3,135.6
Mar.	26,294.7	17,882.1	13,281.4	11,033.8	1,467.0	780.6	4,600.7	1,022.9	3,577.8	5,258.4	3,154.2
Apr.	26,518.6	18,035.9	13,436.4	11,131.2	1,490.1	815.1	4,599.5	1,024.7	3,574.8	5,334.9	3,147.8
May	26,918.9	18,107.0	13,517.3	11,205.0	1,504.6	807.7	4,589.6	1,019.4	3,570.3	5,543.5	3,268.5
June	26,774.7	18,101.0	13,486.9	11,196.5	1,503.4	787.0	4,614.0	1,016.4	3,597.7	5,456.9	3,216.8
July	26,784.5	18,159.3	13,552.1	11,238.8	1,526.1	787.2	4,607.2	1,012.3	3,594.9	5,465.9	3,159.2
Aug.	26,816.6	18,133.3	13,539.0	11,232.7	1,523.4	782.8	4,594.3	1,001.6	3,592.7	5,480.7	3,202.6
	German contribution (€ billion)											
2016 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	636.8
Mar.	6,053.7	4,228.1	3,260.9	2,809.5	183.0	268.4	967.2	309.7	657.5	1,184.4	641.2
Apr.	6,046.4	4,233.3	3,267.7	2,816.0	184.4	267.4	965.6	310.5	655.0	1,178.5	634.6
May	6,148.1	4,248.4	3,280.8	2,824.1	186.8	269.8	967.6	306.5	661.1	1,226.7	673.0
June	6,120.9	4,264.2	3,297.3	2,838.8	187.5	271.0	966.9	304.3	662.7	1,201.8	654.9
July	6,089.3	4,274.2	3,307.9	2,849.4	187.0	271.5	966.3	304.9	661.4	1,194.2	620.9
Aug.	6,121.9	4,279.7	3,313.6	2,863.9	183.8	265.9	966.0	300.5	665.5	1,189.8	652.4

***** 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

II. Overall monetary survey in the euro area

Liabilities											
	Deposits of non-banks (non-MFIs) in the euro area										
			Enterprises and households								
					With agreed maturities of			At agreed notice of [6]			
Currency in circulation [4]	Total	of which: in euro [5]	Total	Overnight	up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	End of year/month
											Euro area (€ billion) [1]
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	2016 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.
1,069.9	11,797.6	11,048.0	11,134.9	5,680.6	936.9	307.6	2,018.8	2,123.8	67.2	Oct.
1,071.2	11,883.1	11,108.5	11,213.1	5,780.3	926.8	303.3	2,014.3	2,121.9	66.6	Nov.
1,087.5	11,929.6	11,211.6	11,321.5	5,826.7	911.7	294.0	2,050.9	2,172.7	65.6	Dec.
1,075.6	11,985.1	11,191.6	11,306.4	5,823.9	914.2	286.6	2,034.5	2,182.1	65.0	2017 Jan.
1,078.5	11,994.0	11,210.5	11,330.1	5,849.1	919.5	284.5	2,028.8	2,183.6	64.6	Feb.
1,082.9	12,103.6	11,279.9	11,422.6	5,945.0	910.9	285.3	2,029.0	2,188.3	64.1	Mar.
1,089.7	12,141.3	11,323.3	11,456.5	6,022.2	886.9	278.6	2,015.2	2,190.1	63.7	Apr.
1,090.2	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
1,099.7	12,214.1	11,384.0	11,483.6	6,113.6	854.2	265.6	1,986.8	2,201.6	61.9	June
1,105.6	12,209.8	11,392.9	11,476.5	6,123.8	848.8	262.8	1,976.5	2,206.2	58.4	July
1,103.3	12,226.8	11,422.8	11,505.1	6,146.8	857.8	260.6	1,969.7	2,212.6	57.7	Aug.
1,104.2	12,271.6	11,432.3	11,519.7	6,196.9	843.3	256.2	1,956.4	2,210.0	56.8	Sep.
1,106.2	12,217.2	11,420.3	11,507.4	6,217.3	846.5	250.5	1,929.6	2,207.3	56.2	Oct.
1,107.1	12,249.3	11,471.5	11,544.7	6,291.5	832.2	245.9	1,912.8	2,206.7	55.5	Nov.
1,123.2	12,285.1	11,542.2	11,617.0	6,348.8	834.7	242.1	1,925.3	2,211.3	54.9	Dec.
1,108.0	12,317.5	11,527.3	11,609.3	6,348.5	840.5	236.7	1,914.2	2,213.6	55.8	2018 Jan.
1,108.3	12,329.4	11,524.3	11,602.8	6,352.2	831.1	232.3	1,915.9	2,216.1	55.1	Feb.
1,117.0	12,393.9	11,580.8	11,661.0	6,417.2	831.5	226.3	1,909.0	2,222.2	54.8	Mar.
1,121.2	12,401.0	11,610.7	11,680.2	6,455.0	817.5	222.2	1,907.0	2,224.2	54.4	Apr.
1,126.1	12,502.2	11,690.6	11,763.0	6,548.2	810.9	217.6	1,900.6	2,231.7	54.0	May
1,137.6	12,613.4	11,776.9	11,845.0	6,624.0	821.4	214.8	1,894.8	2,236.3	53.7	June
1,145.3	12,605.4	11,760.5	11,826.8	6,604.1	817.0	212.1	1,899.5	2,241.0	53.1	July
1,148.3	12,597.9	11,755.7	11,807.3	6,594.1	812.0	212.1	1,890.0	2,246.4	52.7	Aug.
											German contribution (€ billion)
247.4	3,464.1	3,368.1	3,233.1	1,793.5	174.7	38.2	638.3	533.8	54.6	2016 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.
248.3	3,652.2	3,524.1	3,389.6	1,998.1	164.6	34.2	612.1	539.4	41.0	Mar.
250.3	3,641.8	3,529.8	3,395.0	2,013.5	157.6	33.6	610.6	539.1	40.6	Apr.
250.2	3,693.8	3,568.4	3,425.0	2,048.0	154.6	33.0	610.2	539.0	40.3	May
252.7	3,716.5	3,574.0	3,423.0	2,039.4	165.5	32.6	607.2	538.5	39.8	June
256.0	3,694.1	3,571.0	3,429.7	2,053.1	161.2	32.2	605.8	538.0	39.4	July
256.4	3,703.0	3,568.0	3,417.2	2,051.7	153.7	34.0	601.1	537.7	38.9	Aug.

volume of euro banknotes put into circulation by the Bundesbank in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2). The volume of currency actually put into circulation by the Bundesbank can be calculated by adding to this total the item "Intra-Eurosystem liability/claim related to banknote issue" (see "Other liability items"). **5** Excluding central governments' deposits. **6** In Germany, only savings deposits.

II. Overall monetary survey in the euro area

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

End of year/month	Liabilities (cont'd)												
	Deposits of non-banks (non-MFIs) in the euro area (cont'd)								Repo transactions with non-banks in the euro area		Money market fund shares (net) [3]	Debt securities	
	General government												
		Other general government											
				With agreed maturities of			At agreed notice of [2]						
	Central governments	Total	Overnight	up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	Total	of which: Enterprises and households		Total	of which: Denominated in euro
	Euro area (€ billion) [1]												
2016 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	267.8	267.1	511.8	2,221.7	1,503.9
Nov.	300.4	369.6	178.7	98.8	21.1	44.2	21.6	5.2	264.9	264.2	518.8	2,238.9	1,505.8
Dec.	253.0	355.1	168.6	93.9	21.5	43.3	22.6	5.1	268.9	268.2	512.8	2,226.4	1,503.6
2017 Jan.	316.7	362.0	169.5	99.5	21.3	43.4	22.9	5.5	250.1	249.5	524.2	2,205.3	1,488.5
Feb.	299.9	364.1	175.0	96.2	20.2	44.1	23.1	5.4	241.7	241.0	520.1	2,216.6	1,493.9
Mar.	324.0	357.0	165.4	96.5	21.5	44.6	23.6	5.4	256.5	255.8	532.0	2,188.7	1,479.9
Apr.	318.6	366.2	176.4	92.4	23.7	44.7	23.5	5.5	250.4	249.7	527.7	2,160.3	1,466.8
May	332.1	375.5	181.6	94.5	25.3	45.2	24.2	4.7	238.5	237.8	522.9	2,168.4	1,491.1
June	352.5	378.0	181.2	95.7	26.6	45.8	24.0	4.7	221.7	221.0	502.2	2,151.7	1,479.7
July	345.0	388.3	191.0	95.2	26.7	46.2	24.4	4.8	197.4	196.8	515.9	2,130.1	1,471.4
Aug.	326.7	395.0	197.1	94.8	27.8	46.2	24.4	4.7	199.6	198.9	525.0	2,115.2	1,464.4
Sep.	362.5	389.5	193.2	91.9	28.1	47.5	24.1	4.7	206.6	205.9	520.8	2,095.6	1,448.1
Oct.	318.9	390.9	197.9	87.6	28.3	48.3	24.1	4.7	226.5	225.8	529.8	2,086.5	1,430.8
Nov.	310.2	394.4	197.6	89.5	29.8	49.0	23.8	4.6	243.4	242.8	526.1	2,100.0	1,446.0
Dec.	289.0	379.1	191.1	81.5	31.5	46.8	23.5	4.6	211.5	211.0	499.7	2,081.5	1,436.8
2018 Jan.	330.1	378.0	186.2	84.3	31.1	47.5	24.1	5.0	203.5	203.0	519.3	2,075.2	1,442.0
Feb.	343.7	382.9	191.5	83.5	30.4	47.8	24.8	4.8	198.6	198.1	508.0	2,077.7	1,433.5
Mar.	357.6	375.3	181.4	85.8	29.5	48.6	25.1	4.8	206.9	206.4	506.5	2,082.2	1,438.1
Apr.	337.8	383.0	190.3	84.7	28.4	49.7	25.1	4.7	227.7	227.2	519.1	2,090.1	1,439.6
May	344.9	394.3	196.4	87.2	29.8	51.0	25.2	4.7	253.1	252.6	506.7	2,102.1	1,442.1
June	366.3	402.1	199.2	91.7	29.9	51.9	24.8	4.7	247.5	247.0	497.8	2,097.7	1,441.6
July	374.0	404.6	203.0	88.4	30.9	52.8	24.8	4.7	254.0	253.5	508.3	2,080.1	1,436.2
Aug.	377.0	413.5	208.2	90.6	31.0	54.4	24.8	4.6	258.5	258.0	506.5	2,086.9	1,442.9
	German contribution (€ billion)												
2016 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	522.7	263.8
Mar.	55.0	207.6	63.2	72.7	25.8	42.3	3.0	0.6	2.9	2.9	2.2	523.5	265.6
Apr.	39.7	207.0	63.1	72.5	24.4	43.3	3.0	0.6	2.4	2.4	2.1	524.1	270.0
May	51.4	217.4	68.6	74.9	25.7	44.5	3.1	0.6	1.6	1.6	1.9	536.8	274.3
June	69.1	224.5	70.7	79.2	25.6	45.3	3.1	0.6	1.3	1.3	2.0	531.3	274.8
July	48.1	216.4	63.4	76.6	26.5	46.2	3.1	0.6	1.8	1.8	1.9	526.6	277.0
Aug.	61.7	224.1	67.3	78.9	26.4	47.7	3.1	0.6	1.2	1.2	1.9	527.6	282.0

***** 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 DEM banknotes still in circulation (see also footnote 4 on p. 10•). **9** For the German contribution, the difference between the volume of

II. Overall monetary survey in the euro area

issued (net) 3						Other liability items		Memo item: Monetary aggregates 7 (from 2002 German contribution excludes currency in circulation)					
With maturities of													
up to 1 year 4	over 1 year and up to 2 years	over 2 years	Liabilities to non-euro area residents 5	Capital and reserves 6	Excess of inter-MFI liabilities	Total 8	of which: Intra-Eurosystem-liability/ claim related to banknote issue 9	M1 10	M2 11	M3 12	Monetary capital formation 13	Monetary liabilities of central governments (Post Office, Treasury) 14	End of year/month
Euro area (€ billion) 1													
54.6	47.8	2,155.8	4,071.9	2,678.7	– 105.4	4,521.1	–	6,967.7	10,543.0	11,225.5	6,991.2	131.5	2016 July
53.9	46.2	2,153.1	4,113.9	2,676.2	– 85.1	4,435.5	–	6,962.0	10,533.4	11,214.3	6,980.4	131.4	Aug.
48.7	46.1	2,132.3	4,069.0	2,698.3	– 45.1	4,388.5	–	6,984.6	10,550.9	11,216.3	6,969.2	131.3	Sep.
51.2	41.2	2,129.4	4,282.2	2,683.4	– 28.4	4,241.7	–	7,043.7	10,568.3	11,245.5	6,948.6	131.8	Oct.
52.3	40.3	2,146.3	4,323.0	2,662.6	– 55.8	4,255.5	–	7,146.0	10,660.0	11,341.1	6,939.2	136.4	Nov.
46.7	39.6	2,140.2	4,043.0	2,654.2	– 42.2	4,035.5	–	7,194.1	10,734.6	11,396.4	6,959.2	135.4	Dec.
42.5	43.4	2,119.5	4,248.8	2,646.2	– 16.1	3,878.0	–	7,183.7	10,734.7	11,418.3	6,914.1	139.1	2017 Jan.
47.3	44.8	2,124.6	4,380.1	2,696.3	– 20.2	3,951.6	–	7,218.4	10,769.9	11,452.3	6,963.9	140.1	Feb.
45.9	44.9	2,097.9	4,320.4	2,677.0	– 3.0	3,852.2	–	7,309.1	10,859.4	11,555.4	6,917.9	140.0	Mar.
33.1	41.5	2,085.8	4,403.3	2,662.8	1.1	3,864.2	–	7,406.4	10,925.6	11,602.7	6,877.7	142.1	Apr.
39.9	41.7	2,086.8	4,336.3	2,659.2	3.1	3,846.5	–	7,437.3	10,938.1	11,618.6	6,862.7	145.0	May
40.4	40.8	2,070.5	4,137.3	2,631.1	10.0	3,725.9	–	7,516.1	11,007.6	11,658.3	6,800.8	145.5	June
37.5	39.2	2,053.4	4,182.8	2,616.1	9.6	3,683.6	–	7,544.5	11,032.5	11,694.2	6,755.5	148.0	July
33.0	39.3	2,042.9	4,179.6	2,647.6	– 0.7	3,687.4	–	7,572.0	11,073.6	11,746.0	6,768.7	148.5	Aug.
41.9	38.9	2,014.8	4,157.5	2,650.6	17.1	3,538.1	–	7,620.8	11,098.3	11,765.8	6,730.9	150.4	Sep.
36.0	37.1	2,013.4	4,339.3	2,665.6	13.6	3,576.3	–	7,646.5	11,114.4	11,785.5	6,717.8	148.7	Oct.
40.9	37.5	2,021.6	4,289.1	2,657.4	46.1	3,572.0	–	7,724.4	11,175.5	11,855.8	6,701.0	151.3	Nov.
35.8	35.3	2,010.3	4,097.9	2,730.5	27.7	3,265.0	–	7,786.2	11,233.7	11,872.1	6,772.4	146.0	Dec.
28.5	29.9	2,016.8	4,414.5	2,714.5	– 41.0	3,027.4	–	7,767.9	11,221.0	11,869.1	6,753.8	148.1	2018 Jan.
34.9	28.5	2,014.2	4,505.6	2,707.9	– 25.9	2,892.8	–	7,777.2	11,217.7	11,863.3	6,745.8	147.5	Feb.
42.5	28.2	2,011.5	4,348.3	2,719.7	– 5.4	2,925.8	–	7,841.1	11,283.6	11,931.2	6,748.4	147.5	Mar.
43.7	28.4	2,018.1	4,492.4	2,720.3	13.3	2,933.5	–	7,892.7	11,317.1	11,988.5	6,754.2	148.4	Apr.
38.1	28.1	2,036.0	4,707.4	2,699.3	16.5	3,005.5	–	7,995.1	11,420.1	12,068.3	6,745.6	147.0	May
44.7	27.7	2,025.3	4,562.2	2,669.7	34.7	2,914.0	–	8,087.1	11,529.9	12,173.0	6,700.0	150.2	June
37.7	29.3	2,013.1	4,611.8	2,665.2	21.1	2,893.3	–	8,080.9	11,519.1	12,163.8	6,688.3	152.4	July
36.1	29.8	2,020.9	4,647.0	2,658.5	29.0	2,884.1	–	8,080.7	11,521.5	12,169.9	6,681.2	154.1	Aug.
German contribution (€ billion)													
30.5	12.6	481.1	807.8	595.1	– 824.9	1,673.4	311.7	1,853.4	2,702.0	2,750.9	1,806.5	–	2016 July
27.4	12.5	484.5	826.1	589.2	– 846.9	1,640.6	314.1	1,864.6	2,711.7	2,757.1	1,801.3	–	Aug.
26.4	12.9	477.4	851.2	594.2	– 876.5	1,616.7	318.8	1,867.6	2,719.5	2,764.2	1,797.3	–	Sep.
25.3	13.4	487.3	899.9	585.7	– 863.2	1,564.6	322.0	1,879.9	2,721.9	2,766.1	1,800.2	–	Oct.
22.7	14.6	504.7	905.9	578.4	– 918.6	1,536.5	323.9	1,917.2	2,762.9	2,805.6	1,809.3	–	Nov.
23.1	14.2	504.0	878.8	580.3	– 897.1	1,506.3	327.3	1,912.6	2,759.2	2,801.0	1,808.4	–	Dec.
22.8	14.4	516.2	930.2	575.5	– 926.5	1,465.7	328.3	1,928.9	2,784.9	2,829.2	1,811.9	–	2017 Jan.
22.2	15.2	519.2	972.2	587.9	– 944.3	1,484.8	330.1	1,943.0	2,797.0	2,841.1	1,825.3	–	Feb.
19.5	15.9	516.4	979.6	586.5	– 957.7	1,462.2	331.9	1,945.1	2,801.0	2,841.1	1,819.5	–	Mar.
17.7	16.9	512.1	985.8	597.9	– 965.5	1,463.1	335.2	1,954.8	2,803.4	2,843.5	1,822.6	–	Apr.
18.4	16.8	507.4	957.7	595.0	– 967.6	1,461.9	338.1	1,972.1	2,821.5	2,861.2	1,814.4	–	May
19.3	16.4	507.0	946.6	591.5	– 981.1	1,412.1	342.8	1,992.1	2,841.2	2,880.9	1,808.1	–	June
18.8	16.2	499.5	926.1	589.1	– 975.5	1,406.4	345.0	1,988.1	2,835.9	2,876.2	1,793.6	–	July
18.5	15.8	500.0	894.5	597.2	– 970.2	1,422.2	348.6	2,002.3	2,846.8	2,886.8	1,801.4	–	Aug.
19.3	15.4	494.4	927.7	594.2	– 982.9	1,387.5	352.1	2,008.2	2,853.5	2,893.0	1,792.0	–	Sep.
18.6	15.7	487.5	913.6	596.3	– 946.7	1,386.3	354.2	2,023.0	2,859.6	2,898.2	1,785.4	–	Oct.
18.5	15.8	484.0	883.4	593.7	– 940.3	1,382.0	355.5	2,056.1	2,890.9	2,929.9	1,781.9	–	Nov.
17.7	14.8	480.2	921.3	668.6	– 999.6	1,295.2	359.3	2,045.5	2,882.9	2,920.4	1,852.1	–	Dec.
16.0	14.2	488.5	931.6	656.8	– 974.7	1,303.7	359.3	2,056.2	2,894.2	2,930.5	1,846.2	–	2018 Jan.
16.7	14.3	491.6	968.4	653.3	– 1,003.8	1,263.2	361.3	2,062.1	2,896.6	2,933.5	1,844.1	–	Feb.
16.0	13.9	493.6	953.5	657.7	– 1,016.5	1,278.1	368.2	2,061.3	2,901.1	2,936.2	1,847.4	–	Mar.
17.5	12.3	494.3	949.7	658.7	– 1,002.9	1,270.5	369.5	2,076.6	2,907.0	2,941.3	1,848.1	–	Apr.
19.0	13.1	504.7	997.9	662.3	– 1,044.2	1,297.9	374.9	2,116.6	2,946.8	2,982.4	1,862.6	–	May
17.0	12.5	501.8	996.0	666.2	– 1,070.1	1,277.7	378.5	2,110.1	2,954.5	2,987.3	1,860.9	–	June
16.7	11.9	498.0	967.9	665.4	– 1,019.3	1,250.8	381.6	2,116.5	2,954.1	2,986.4	1,855.4	–	July
18.3	12.0	497.4	966.8	672.6	– 1,024.8	1,273.6	386.9	2,119.0	2,952.9	2,986.2	1,858.4	–	Aug.

euro banknotes actually issued by the Bundesbank and the amount disclosed in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2). **10** Overnight deposits (excluding central governments' deposits), and (for the euro area) currency in circulation, central governments' overnight monetary liabilities, which are not included in the consolidated balance sheet. **11** M1 plus deposits with agreed maturities of up to two years and at agreed notice of up to three months (excluding central governments' deposits) and (for the euro area) central governments' monetary liabilities with such maturities. **12** M2 plus repo transactions, money market fund shares, money market paper and debt securities up to two years. **13** Deposits with agreed maturities of over two years and at agreed notice of over three months, debt securities with maturities of over two years, capital and reserves. **14** Non-existent in Germany.

II. Overall monetary survey in the euro area

3. Banking system's liquidity position * Stocks

€ billion; period averages of daily positions

Reserve maintenance period ending in 1	Liquidity-providing factors					Liquidity-absorbing factors						
		Monetary policy operations of the Eurosystem										
	Net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations 3	Deposit facility	Other liquidity-absorbing operations 4	Banknotes in circulation 5	Central government deposits	Other factors (net) 6	Credit institutions' current account balances (including minimum reserves) 7	Base money 8
Eurosystem 2												
2016 Apr.	627.3	58.1	460.8	0.2	1,000.1	262.0	0.0	1,069.3	147.4	97.7	570.0	1,901.3
May	.	.	.	.	.	.	.	.	.	.	.	.
June	640.3	53.9	456.3	0.2	1,105.3	309.0	0.0	1,076.6	123.9	122.8	623.8	2,009.4
July	666.1	47.6	471.6	0.1	1,227.1	323.1	0.0	1,087.1	175.5	169.4	657.5	2,067.7
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	685.0	43.5	483.7	0.0	1,339.7	355.1	0.0	1,096.2	137.8	214.0	748.8	2,200.2
Oct.	687.8	37.4	503.5	0.1	1,447.0	387.3	0.0	1,094.7	168.3	248.0	777.4	2,259.4
Nov.	.	.	.	.	.	.	.	.	.	.	.	.
Dec.	687.4	34.0	511.8	0.2	1,570.2	439.4	0.0	1,103.1	159.7	277.6	823.9	2,366.3
2017 Jan.	674.7	34.6	548.9	0.2	1,670.8	434.4	0.0	1,119.1	143.1	313.6	919.0	2,472.6
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	662.4	29.0	554.3	0.3	1,787.5	479.2	0.0	1,110.8	160.3	322.2	960.9	2,550.9
Apr.	.	.	.	.	.	.	.	.	.	.	.	.
May	678.6	18.5	707.4	0.3	1,905.3	550.0	0.0	1,118.4	182.0	378.8	1,081.1	2,749.4
June	683.1	13.7	767.4	0.2	1,995.0	593.7	0.0	1,126.0	163.6	397.4	1,178.7	2,898.5
July	656.9	9.4	767.4	0.2	2,076.1	595.3	0.0	1,136.3	229.8	379.4	1,169.2	2,900.8
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	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
Oct.	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
Nov.	.	.	.	.	.	.	.	.	.	.	.	.
Dec.	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
2018 Jan.	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
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	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
Apr.	.	.	.	.	.	.	.	.	.	.	.	.
May	627.1	1.9	759.5	0.1	2,476.8	668.0	0.0	1,159.0	247.5	495.6	1,295.3	3,122.3
June	625.2	1.8	757.3	0.1	2,519.9	659.5	0.0	1,170.4	218.0	502.5	1,353.9	3,183.8
July	635.1	2.1	744.2	0.1	2,558.4	652.2	0.0	1,183.6	263.4	533.8	1,306.9	3,142.6
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	637.5	3.0	739.9	0.1	2,589.7	671.2	0.0	1,192.2	239.1	519.1	1,348.7	3,212.0
Deutsche Bundesbank												
2016 Apr.	152.2	3.1	45.0	0.0	214.1	67.6	0.0	252.1	37.3	– 105.1	162.4	482.1
May	.	.	.	.	.	.	.	.	.	.	.	.
June	156.4	3.3	45.3	0.0	237.2	87.3	0.0	254.7	41.1	– 127.2	186.5	528.4
July	163.3	2.7	44.7	0.0	263.4	89.8	0.0	257.4	47.2	– 117.0	196.6	543.9
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	168.3	1.9	44.0	0.0	288.2	90.8	0.0	258.7	36.2	– 112.6	229.3	578.9
Oct.	168.7	1.5	50.6	0.0	311.9	105.2	0.0	258.6	50.5	– 125.2	243.6	607.4
Nov.	.	.	.	.	.	.	.	.	.	.	.	.
Dec.	167.7	0.9	54.0	0.0	339.2	129.7	0.0	260.3	43.7	– 141.9	270.0	660.0
2017 Jan.	163.8	0.9	62.0	0.0	361.5	132.7	0.0	264.2	35.4	– 146.1	302.0	698.9
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	159.4	0.8	63.5	0.0	386.6	153.7	0.0	262.3	23.1	– 169.8	341.0	757.0
Apr.	.	.	.	.	.	.	.	.	.	.	.	.
May	164.4	1.0	86.0	0.1	412.4	181.4	0.0	264.1	29.7	– 185.3	374.0	819.5
June	165.8	0.3	95.0	0.0	431.8	181.2	0.0	266.2	32.4	– 204.9	418.0	865.4
July	159.6	0.5	95.0	0.0	447.9	170.1	0.0	269.0	52.7	– 201.6	412.7	851.9
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	155.2	0.3	94.9	0.0	463.2	165.5	0.0	269.9	52.4	– 192.6	418.5	853.9
Oct.	154.8	0.3	94.9	0.0	481.5	171.0	0.0	269.4	65.9	– 197.6	422.7	863.2
Nov.	.	.	.	.	.	.	.	.	.	.	.	.
Dec.	154.2	0.5	94.8	0.0	501.4	187.5	0.0	270.3	56.0	– 218.6	455.8	913.6
2018 Jan.	155.5	0.9	93.3	0.0	514.7	204.4	0.0	272.8	54.9	– 192.2	424.5	901.7
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	151.5	0.6	93.4	0.0	522.9	207.9	0.0	271.0	56.8	– 221.3	453.9	932.8
Apr.	.	.	.	.	.	.	.	.	.	.	.	.
May	150.7	1.1	93.3	0.0	530.6	190.8	0.0	273.8	61.1	– 191.3	440.9	905.5
June	150.1	1.1	93.1	0.0	540.6	200.3	0.0	277.4	59.2	– 217.9	466.0	943.6
July	151.9	0.4	91.8	0.0	547.6	196.8	0.0	280.0	69.4	– 194.1	439.6	916.4
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	152.1	0.4	91.5	0.0	556.2	192.9	0.0	282.0	65.2	– 178.9	439.0	913.9

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 asset purchase programmes. **4** From August 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, a share of 8% of the total value of the euro banknotes in circulation is

II. Overall monetary survey in the euro area

Flows

Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current account balances (including minimum reserves) [7]	Base money [8]	Reserve maintenance period ending in [1]
	Monetary policy operations of the Eurosystem											
Net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations [3]	Deposit facility	Other liquidity-absorbing operations [4]	Banknotes in circulation [5]	Central government deposits	Other factors (net) [6]			
Eurosystem [2]												
+ 19.5	– 4.8	– 0.9	+ 0.1	+ 92.5	+ 31.5	± 0.0	+ 5.9	+ 31.8	+ 23.8	+ 13.5	+ 50.9	2016 Apr.
+ 13.0	– 4.2	– 4.5	± 0.0	+ 105.2	+ 47.0	± 0.0	+ 7.3	– 23.5	+ 25.1	+ 53.8	+ 108.1	May
+ 25.8	– 6.3	+ 15.3	– 0.1	+ 121.8	+ 14.1	± 0.0	+ 10.5	+ 51.6	+ 46.6	+ 33.7	+ 58.3	June
+ 18.9	– 4.1	+ 12.1	– 0.1	+ 112.6	+ 32.0	± 0.0	+ 9.1	– 37.7	+ 44.6	+ 91.3	+ 132.5	July
+ 2.8	– 6.1	+ 19.8	+ 0.1	+ 107.3	+ 32.2	± 0.0	– 1.5	+ 30.5	+ 34.0	+ 28.6	+ 59.2	Aug.
– 0.4	– 3.4	+ 8.3	+ 0.1	+ 123.2	+ 52.1	± 0.0	+ 8.4	– 8.6	+ 29.6	+ 46.5	+ 106.9	Sep.
– 12.7	+ 0.6	+ 37.1	± 0.0	+ 100.6	– 5.0	± 0.0	+ 16.0	– 16.6	+ 36.0	+ 95.1	+ 106.3	Oct.
– 12.3	– 5.6	+ 5.4	+ 0.1	+ 116.7	+ 44.8	± 0.0	– 8.3	+ 17.2	+ 8.6	+ 41.9	+ 78.3	Nov.
+ 16.2	– 10.5	+ 153.1	± 0.0	+ 117.8	+ 70.8	± 0.0	+ 7.6	+ 21.7	+ 56.6	+ 120.2	+ 198.5	Dec.
+ 4.5	– 4.8	+ 60.0	– 0.1	+ 89.7	+ 43.7	± 0.0	+ 7.6	– 18.4	+ 18.6	+ 97.6	+ 149.1	2017 Jan.
– 26.2	– 4.3	± 0.0	± 0.0	+ 81.1	+ 1.6	± 0.0	+ 10.3	+ 66.2	– 18.0	– 9.5	+ 2.3	Feb.
– 17.9	– 3.9	+ 1.2	+ 0.1	+ 74.1	+ 16.1	± 0.0	+ 6.2	– 48.0	+ 5.7	+ 73.5	+ 95.9	Mar.
– 4.0	+ 1.2	– 3.3	– 0.1	+ 89.0	+ 36.7	± 0.0	+ 0.3	+ 36.5	– 1.2	+ 10.6	+ 47.5	Apr.
– 0.5	– 3.7	– 1.6	± 0.0	+ 94.3	+ 34.4	± 0.0	+ 3.8	– 29.8	+ 23.7	+ 56.4	+ 94.6	May
+ 1.2	– 0.1	– 3.1	± 0.0	+ 64.7	+ 6.7	± 0.0	+ 11.6	– 0.4	+ 79.4	– 34.5	– 16.3	June
– 4.8	– 1.4	– 0.1	– 0.2	+ 37.3	– 2.9	± 0.0	– 10.0	+ 15.5	– 12.1	+ 40.4	+ 27.6	2018 Jan.
– 3.8	+ 0.4	– 1.0	+ 0.1	+ 41.3	– 18.3	± 0.0	+ 10.8	+ 43.9	+ 20.7	– 20.3	– 27.8	Feb.
– 1.9	– 0.1	– 2.2	± 0.0	+ 43.1	– 8.5	± 0.0	+ 11.4	– 29.5	+ 6.9	+ 58.6	+ 61.5	Mar.
+ 9.9	+ 0.3	– 13.1	± 0.0	+ 38.5	– 7.3	± 0.0	+ 13.2	+ 45.4	+ 31.3	– 47.0	– 41.2	Apr.
+ 2.4	+ 0.9	– 4.3	± 0.0	+ 31.3	+ 19.0	± 0.0	+ 8.6	– 24.3	– 14.7	+ 41.8	+ 69.4	May
Deutsche Bundesbank												
+ 8.4	+ 1.1	– 1.3	+ 0.0	+ 20.3	+ 7.8	± 0.0	+ 1.7	+ 11.3	+ 8.2	– 0.4	+ 9.0	June
+ 4.3	+ 0.3	+ 0.4	– 0.0	+ 23.1	+ 19.7	± 0.0	+ 2.6	+ 3.8	– 22.1	+ 24.1	+ 46.3	July
+ 6.9	– 0.6	– 0.6	– 0.0	+ 26.2	+ 2.6	± 0.0	+ 2.8	+ 6.1	+ 10.2	+ 10.1	+ 15.4	Aug.
+ 5.1	– 0.8	– 0.7	– 0.0	+ 24.8	+ 1.0	± 0.0	+ 1.3	– 11.0	+ 4.4	+ 32.7	+ 35.0	Sep.
+ 0.4	– 0.5	+ 6.6	+ 0.0	+ 23.7	+ 14.4	± 0.0	– 0.1	+ 14.3	– 12.6	+ 14.2	+ 28.5	Oct.
– 0.9	– 0.5	+ 3.3	+ 0.0	+ 27.3	+ 24.4	± 0.0	+ 1.7	– 6.8	– 16.7	+ 26.5	+ 52.6	Nov.
– 4.0	– 0.1	+ 8.1	– 0.0	+ 22.3	+ 3.0	± 0.0	+ 3.9	– 8.3	– 4.3	+ 31.9	+ 38.8	Dec.
– 4.4	– 0.0	+ 1.4	+ 0.0	+ 25.1	+ 21.0	± 0.0	– 1.9	– 12.2	– 23.6	+ 39.0	+ 58.1	2017 Jan.
+ 4.9	+ 0.1	+ 22.6	+ 0.0	+ 25.9	+ 27.7	± 0.0	+ 1.8	+ 6.6	– 15.6	+ 33.0	+ 62.5	Feb.
+ 1.5	– 0.7	+ 9.0	– 0.1	+ 19.4	– 0.2	± 0.0	+ 2.1	+ 2.6	– 19.6	+ 44.0	+ 45.9	Mar.
– 6.2	+ 0.2	+ 0.0	+ 0.0	+ 16.1	– 11.1	± 0.0	+ 2.8	+ 20.3	+ 3.3	– 5.3	– 13.6	Apr.
– 4.4	– 0.2	– 0.1	+ 0.0	+ 15.4	– 4.6	± 0.0	+ 0.9	– 0.2	+ 9.0	+ 5.8	+ 2.1	May
– 0.4	– 0.1	– 0.1	– 0.0	+ 18.3	+ 5.5	± 0.0	– 0.5	+ 13.5	– 5.0	+ 4.2	+ 9.2	June
– 0.6	+ 0.2	– 0.0	– 0.0	+ 19.9	+ 16.5	± 0.0	+ 0.9	– 9.9	– 21.0	+ 33.1	+ 50.4	July
+ 1.3	+ 0.4	– 1.6	– 0.0	+ 13.3	+ 16.9	± 0.0	+ 2.5	– 1.1	+ 26.4	– 31.3	– 11.9	Aug.
– 4.0	– 0.3	+ 0.1	+ 0.0	+ 8.2	+ 3.5	± 0.0	– 1.7	+ 1.9	– 29.1	+ 29.4	+ 31.1	Sep.
– 0.8	+ 0.5	– 0.0	+ 0.0	+ 7.7	– 17.0	± 0.0	+ 2.8	+ 4.2	+ 30.0	– 13.0	– 27.3	Oct.
– 0.6	+ 0.0	– 0.2	– 0.0	+ 10.0	+ 9.5	± 0.0	+ 3.6	– 1.8	– 26.6	+ 25.1	+ 38.1	Nov.
+ 1.8	– 0.6	– 1.3	+ 0.0	+ 7.0	– 3.5	± 0.0	+ 2.6	+ 10.2	+ 23.9	– 26.4	– 27.2	Dec.
+ 0.2	+ 0.0	– 0.3	– 0.0	+ 8.6	– 3.9	± 0.0	+ 2.0	– 4.2	+ 15.2	– 0.6	– 2.5	2018 Jan.

allocated to the ECB on a monthly basis. 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 share of the euro banknotes issued corresponding 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 balances".

III. Consolidated financial statement of the Eurosystem

1. Assets *

€ billion

As at 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]									
2018 Mar. 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	–
Apr. 6	4,531.5	374.1	297.2	69.3	227.9	25.7	17.1	17.1	–
13	4,548.2	374.1	294.8	69.3	225.5	29.5	17.7	17.7	–
20	4,544.0	374.1	294.9	69.3	225.6	28.9	15.4	15.4	–
27	4,554.3	374.1	296.2	69.4	226.8	28.6	18.8	18.8	–
May 4	4,552.6	374.1	295.8	69.3	226.5	28.8	17.0	17.0	–
11	4,562.1	374.1	296.6	69.3	227.4	26.5	17.3	17.3	–
18	4,561.6	374.1	295.8	69.3	226.5	26.1	17.1	17.1	–
25	4,562.7	374.1	299.8	69.2	230.6	25.7	13.9	13.9	–
June 1	4,567.7	374.1	298.5	69.2	229.3	27.0	15.8	15.8	–
8	4,577.2	374.1	301.0	69.2	231.8	26.2	15.8	15.8	–
15	4,578.5	374.1	301.9	69.2	232.8	24.4	15.8	15.8	–
22	4,585.6	374.0	305.5	72.0	233.5	21.8	16.3	16.3	–
29	4,592.5	373.2	317.8	73.7	244.1	18.6	17.4	17.4	–
2018 July 6	4,593.3	373.2	314.3	73.7	240.6	22.0	16.7	16.7	–
13	4,599.9	373.2	312.6	73.8	238.8	22.9	15.9	15.9	–
20	4,605.0	373.2	313.5	73.9	239.6	22.9	18.0	18.0	–
27	4,612.0	373.2	314.2	73.8	240.4	24.0	17.3	17.3	–
Aug. 3	4,602.3	373.2	314.9	74.0	240.8	23.2	18.2	18.2	–
10	4,608.1	373.2	316.5	74.0	242.5	21.9	18.2	18.2	–
17	4,614.0	373.2	315.9	74.0	242.0	21.4	16.9	16.9	–
24	4,619.4	373.2	316.9	74.0	243.0	22.8	17.4	17.4	–
31	4,621.4	373.2	316.8	73.9	242.9	20.8	18.0	18.0	–
Sep. 7	4,634.0	373.2	317.0	74.0	243.0	20.7	19.2	19.2	–
14	4,638.8	373.2	317.8	74.0	243.8	20.7	19.3	19.3	–
21	4,645.8	373.2	318.1	73.9	244.2	20.3	18.4	18.4	–
28	4,619.8	355.5	319.4	73.8	245.6	18.4	20.0	20.0	–
Oct. 5	4,625.0	355.5	320.0	73.8	246.2	18.5	17.7	17.7	–
Deutsche Bundesbank									
2018 Mar. 23	1,725.0	117.3	49.8	18.1	31.6	– 0.0	2.1	2.1	–
30	1,756.2	116.6	49.2	18.0	31.2	0.0	1.5	1.5	–
Apr. 6	1,717.4	116.6	48.9	18.0	30.8	0.0	1.5	1.5	–
13	1,712.7	116.6	49.6	18.0	31.6	0.0	2.4	2.4	–
20	1,681.8	116.6	49.0	18.0	31.0	0.0	0.9	0.9	–
27	1,706.5	116.6	48.6	18.0	30.6	0.0	2.7	2.7	–
May 4	1,730.7	116.6	48.7	18.0	30.7	0.0	1.8	1.8	–
11	1,700.4	116.6	48.4	18.0	30.4	0.0	2.4	2.4	–
18	1,752.4	116.6	48.1	18.0	30.1	0.0	2.8	2.8	–
25	1,777.6	116.6	48.8	18.0	30.9	0.0	0.8	0.8	–
June 1	1,799.4	116.6	48.4	18.0	30.4	0.0	2.7	2.7	–
8	1,783.7	116.6	48.4	18.0	30.4	0.0	1.5	1.5	–
15	1,794.6	116.6	48.4	18.0	30.4	0.0	1.3	1.3	–
22	1,793.2	116.5	49.1	18.8	30.3	0.0	1.7	1.7	–
29	1,823.0	116.3	50.8	19.2	31.6	0.0	1.8	1.8	–
2018 July 6	1,744.4	116.3	50.9	19.2	31.7	0.1	1.3	1.3	–
13	1,743.6	116.3	50.7	19.2	31.5	0.0	1.0	1.0	–
20	1,744.8	116.3	50.7	19.2	31.5	0.1	3.1	3.1	–
27	1,745.0	116.3	51.1	19.2	31.9	0.1	1.5	1.5	–
Aug. 3	1,753.5	116.3	51.3	19.2	32.1	0.1	2.1	2.1	–
10	1,729.5	116.3	51.1	19.2	32.0	0.1	2.9	2.9	–
17	1,744.6	116.3	50.7	19.2	31.5	0.1	1.3	1.3	–
24	1,737.9	116.3	50.5	19.2	31.4	0.0	2.1	2.1	–
31	1,768.2	116.3	50.4	19.2	31.3	0.0	1.9	1.9	–
Sep. 7	1,741.9	116.3	50.4	19.2	31.2	0.0	3.7	3.7	–
14	1,739.5	116.3	50.4	19.2	31.3	0.0	3.5	3.5	–
21	1,753.9	116.3	50.6	19.2	31.4	0.0	3.1	3.1	–
28	1,817.3	116.3	50.3	19.2	31.1	0.0	4.4	4.4	–
Oct. 5	1,762.5	110.8	51.3	19.1	32.1	0.0	2.1	2.1	–

***** 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 end of the quarter. **1** Source: ECB.

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	As at reporting date
Total	Main refinancing operations	Longer-term refinancing operations	Fine-tuning reverse operations	Structural reverse operations	Marginal lending facility	Credits related to margin calls		Total	Securities held for monetary policy purposes	Other securities			
Eurosystem [1]													
761.9	1.5	760.3	–	–	0.1	–	50.2	2,738.0	2,468.6	269.4	25.0	238.1	2018 Mar. 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
761.5	1.7	759.3	–	0.0	0.6	–	47.4	2,753.7	2,486.3	267.4	24.9	244.4	13
761.0	1.6	759.3	–	–	0.1	–	48.7	2,751.5	2,485.6	265.9	24.9	244.5	20
761.9	2.8	759.1	–	–	0.0	–	50.0	2,760.8	2,496.6	264.2	24.9	239.1	27
761.7	2.6	759.1	–	–	0.0	–	48.3	2,762.2	2,499.4	262.8	24.9	239.8	May 4
761.1	2.0	759.1	–	–	0.1	–	50.6	2,771.7	2,509.0	262.6	24.9	239.2	11
758.7	2.0	756.6	–	–	0.1	–	47.6	2,777.9	2,514.2	263.7	24.9	239.5	18
759.0	2.1	756.6	–	–	0.2	–	47.3	2,781.1	2,517.8	263.3	24.9	236.9	25
758.3	1.6	756.6	–	–	0.1	–	48.9	2,785.3	2,524.0	261.3	24.9	235.0	June 1
757.8	1.2	756.6	–	–	0.0	–	46.3	2,794.7	2,533.1	261.7	24.9	236.3	8
757.8	1.1	756.6	–	–	0.1	–	46.7	2,795.5	2,535.1	260.4	24.9	237.3	15
758.2	1.5	756.6	–	–	0.1	–	43.9	2,803.7	2,544.0	259.7	24.9	237.2	22
744.8	2.7	742.0	–	–	0.1	–	39.2	2,806.1	2,547.0	259.1	24.5	250.9	29
744.3	2.3	742.0	–	–	0.1	–	37.9	2,810.7	2,551.8	258.9	24.5	249.8	2018 July 6
744.0	1.9	742.0	–	–	0.1	–	32.8	2,822.1	2,563.0	259.1	24.5	251.9	13
744.0	2.0	742.0	–	–	0.1	–	30.8	2,827.4	2,568.6	258.8	24.5	250.7	20
742.6	2.0	740.5	–	–	0.1	–	29.4	2,835.4	2,577.2	258.2	24.5	251.4	27
743.3	2.5	740.5	–	–	0.3	–	30.3	2,827.4	2,572.4	255.0	24.5	247.2	Aug. 3
743.3	2.7	740.5	–	–	0.0	–	26.1	2,834.2	2,579.2	255.0	24.5	250.3	10
743.3	2.7	740.5	–	–	0.1	–	30.8	2,838.7	2,583.5	255.2	24.5	249.3	17
743.3	2.8	740.5	–	–	0.1	–	30.4	2,843.6	2,588.4	255.2	24.5	247.4	24
741.6	2.5	739.0	–	–	0.0	–	30.9	2,848.5	2,593.0	255.5	24.5	247.1	31
742.7	3.6	739.0	–	–	0.0	–	31.4	2,858.1	2,602.6	255.5	24.5	247.2	Sep. 7
743.3	4.2	739.0	–	–	0.1	–	31.5	2,863.2	2,607.7	255.5	24.5	245.4	14
744.0	5.0	739.0	–	–	0.0	–	33.7	2,868.7	2,613.6	255.1	24.5	244.8	21
732.1	6.4	725.5	–	–	0.1	–	29.8	2,869.2	2,615.1	254.1	24.4	251.0	28
732.8	7.2	725.5	–	–	0.1	–	28.4	2,877.5	2,623.2	254.2	24.4	250.4	Oct. 5
Deutsche Bundesbank													
93.9	0.5	93.4	–	–	0.0	–	3.9	529.7	529.7	–	4.4	923.8	2018 Mar. 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
94.2	0.9	93.3	–	–	0.0	–	4.5	532.5	532.5	–	4.4	908.3	13
94.2	0.9	93.3	–	–	0.0	–	3.9	530.3	530.3	–	4.4	882.4	20
95.2	2.0	93.2	–	–	–	–	3.8	533.2	533.2	–	4.4	901.9	27
95.1	1.9	93.2	–	–	0.0	–	3.8	535.4	535.4	–	4.4	924.8	May 4
94.7	1.5	93.2	–	–	0.0	–	6.0	537.5	537.5	–	4.4	890.5	11
94.5	1.3	93.2	–	–	–	–	5.4	539.2	539.2	–	4.4	941.3	18
94.6	1.4	93.2	–	–	–	–	6.0	540.1	540.1	–	4.4	966.1	25
93.8	0.7	93.1	–	–	0.0	–	6.8	542.2	542.2	–	4.4	984.6	June 1
93.4	0.3	93.1	–	–	0.0	–	6.1	544.6	544.6	–	4.4	968.6	8
93.4	0.3	93.1	–	–	0.0	–	5.8	542.9	542.9	–	4.4	981.8	15
93.4	0.3	93.1	–	–	0.0	–	6.2	546.2	546.2	–	4.4	975.6	22
92.0	0.4	91.6	–	–	0.0	–	3.8	546.8	546.8	–	4.4	1 007.0	29
91.9	0.3	91.6	–	–	–	–	6.4	543.7	543.7	–	4.4	929.4	2018 July 6
92.1	0.5	91.6	–	–	0.0	–	6.2	547.0	547.0	–	4.4	926.0	13
92.1	0.5	91.6	–	–	–	–	6.3	549.5	549.5	–	4.4	922.2	20
92.1	0.6	91.5	–	–	0.0	–	6.2	552.3	552.3	–	4.4	921.0	27
92.1	0.5	91.5	–	–	0.1	–	6.0	552.2	552.2	–	4.4	929.0	Aug. 3
91.9	0.4	91.5	–	–	–	–	4.4	553.5	553.5	–	4.4	905.0	10
91.9	0.4	91.5	–	–	–	–	5.7	554.6	554.6	–	4.4	919.6	17
91.9	0.4	91.5	–	–	0.0	–	4.8	555.9	555.9	–	4.4	911.9	24
92.0	0.4	91.5	–	–	–	–	4.7	557.0	557.0	–	4.4	941.4	31
91.8	0.3	91.5	–	–	–	–	6.8	559.9	559.9	–	4.4	908.4	Sep. 7
92.2	0.7	91.5	–	–	–	–	5.7	558.9	558.9	–	4.4	908.1	14
92.0	0.5	91.5	–	–	0.0	–	6.9	561.1	561.1	–	4.4	919.4	21
88.5	0.5	87.9	–	–	0.1	–	3.5	564.4	564.4	–	4.4	985.3	28
88.5	0.5	87.9	–	–	–	–	5.0	564.7	564.7	–	4.4	935.7	Oct. 5

III. Consolidated financial statement of the Eurosystem

2. Liabilities *

€ billion

As at reporting date	Total liabilities	Banknotes in circulation 1	Liabilities to euro area credit institutions related to monetary policy operations denominated in euro						Other liabilities to euro area credit institutions denominated in euro	Debt certificates issued	Liabilities to other euro area residents denominated in euro		
			Total	Current accounts (covering the minimum reserve system)	Deposit facility	Fixed-term deposits	Fine-tuning reverse operations	Deposits related to margin calls			Total	General government	Other liabilities
Eurosystem 3													
2018 Mar. 23	4,539.1	1,154.2	1,925.7	1,263.9	661.8	–	–	0.0	14.7	–	405.0	275.7	129.4
30	4,529.6	1,164.2	1,883.4	1,236.2	647.2	–	–	0.1	19.7	–	363.8	237.8	126.0
Apr. 6	4,531.5	1,161.8	1,989.2	1,298.6	690.4	–	–	0.2	12.4	–	355.5	229.6	125.9
13	4,548.2	1,159.9	1,994.3	1,311.4	682.9	–	–	0.0	8.9	–	370.1	244.3	125.8
20	4,544.0	1,159.4	1,973.4	1,293.3	680.0	–	–	0.0	10.7	–	383.8	265.2	118.6
27	4,554.3	1,165.2	1,983.7	1,342.2	641.3	–	–	0.1	8.6	–	377.1	254.4	122.6
May 4	4,552.6	1,168.9	2,022.2	1,361.8	660.4	–	–	0.1	9.0	–	319.9	194.0	126.0
11	4,562.1	1,169.4	2,032.4	1,359.8	672.5	–	–	0.1	10.9	–	337.3	210.8	126.6
18	4,561.6	1,169.5	1,997.5	1,338.3	659.1	–	–	0.1	9.2	–	376.1	246.5	129.6
25	4,562.7	1,167.4	1,968.8	1,321.8	647.0	–	–	0.1	7.2	–	402.8	266.6	136.2
June 1	4,567.7	1,172.1	2,049.1	1,382.3	666.7	–	–	0.1	8.5	–	310.6	176.8	133.8
8	4,577.2	1,173.8	2,051.5	1,383.0	668.3	–	–	0.1	9.7	–	309.3	175.5	133.9
15	4,578.5	1,174.3	1,986.6	1,344.2	642.3	–	–	0.1	7.9	–	367.4	230.6	136.7
22	4,585.6	1,175.0	1,954.5	1,311.9	642.4	–	–	0.2	8.1	–	402.9	263.6	139.3
29	4,592.5	1,181.5	1,906.0	1,231.8	674.2	–	–	0.0	13.8	–	374.2	239.6	134.5
2018 July 6	4,593.3	1,185.5	2,004.6	1,329.6	674.9	–	–	0.1	9.1	–	350.0	221.0	129.0
13	4,599.9	1,187.3	1,992.4	1,324.1	668.3	–	–	0.0	6.4	–	377.2	243.9	133.3
20	4,605.0	1,187.0	1,931.6	1,299.0	632.5	–	–	0.2	6.5	–	445.7	305.9	139.8
27	4,612.0	1,188.6	1,949.7	1,314.5	635.1	–	–	0.1	6.4	–	441.4	301.9	139.4
Aug. 3	4,602.3	1,192.0	2,032.7	1,380.8	651.6	–	–	0.3	5.9	–	332.7	198.9	133.8
10	4,608.1	1,192.9	2,035.9	1,354.1	681.6	–	–	0.1	4.4	–	335.1	215.1	120.0
17	4,614.0	1,194.4	1,999.3	1,317.2	681.6	–	–	0.4	6.7	–	370.2	252.6	117.7
24	4,619.4	1,190.3	1,979.4	1,314.9	663.8	–	–	0.7	5.8	–	398.2	280.3	117.8
31	4,621.4	1,193.0	2,024.8	1,355.3	668.8	–	–	0.7	5.2	–	359.7	241.2	118.5
Sep. 7	4,634.0	1,193.7	2,048.0	1,356.4	691.4	–	–	0.2	8.4	–	350.6	224.9	125.7
14	4,638.8	1,192.7	2,013.2	1,351.0	662.1	–	–	0.2	6.1	–	384.7	261.3	123.4
21	4,645.8	1,191.8	1,987.9	1,333.5	654.5	–	–	0.0	9.7	–	420.2	292.7	127.5
28	4,619.8	1,194.8	1,951.4	1,311.9	639.5	–	–	0.0	7.4	–	409.3	284.2	125.1
Oct. 5	4,625.0	1,196.4	2,023.1	1,381.6	641.4	–	–	0.1	6.4	–	386.2	265.4	120.8
Deutsche Bundesbank													
2018 Mar. 23	1,725.0	276.6	626.2	437.0	189.3	–	–	0.0	5.8	–	136.5	73.9	62.6
30	1,756.2	273.8	633.1	442.4	190.6	–	–	0.0	8.2	–	114.5	55.9	58.6
Apr. 6	1,717.4	272.8	645.7	454.5	191.2	–	–	0.0	6.7	–	113.9	55.5	58.4
13	1,712.7	273.0	638.7	444.8	193.9	–	–	0.0	4.1	–	116.8	58.1	58.7
20	1,681.8	273.1	617.5	426.4	191.0	–	–	0.0	6.1	–	107.2	54.8	52.3
27	1,706.5	275.6	634.6	447.9	186.7	–	–	0.0	3.1	–	110.1	57.8	52.3
May 4	1,730.7	275.4	666.5	472.2	194.3	–	–	0.0	4.2	–	91.7	38.1	53.6
11	1,700.4	277.3	641.7	452.6	189.1	–	–	0.0	5.9	–	97.8	43.9	54.0
18	1,752.4	279.2	658.2	468.8	189.4	–	–	0.0	4.8	–	123.5	69.2	54.3
25	1,777.6	278.9	673.4	470.8	202.6	–	–	0.0	3.6	–	130.9	71.0	60.0
June 1	1,799.4	275.9	703.9	480.6	223.3	–	–	0.0	4.1	–	107.2	47.1	60.1
8	1,783.7	277.0	676.9	468.7	208.2	–	–	0.0	5.7	–	114.9	54.4	60.5
15	1,794.6	277.8	654.5	449.0	205.4	–	–	0.0	3.8	–	149.1	90.2	58.9
22	1,793.2	278.7	642.8	450.2	192.6	–	–	0.0	3.5	–	158.0	95.5	62.5
29	1,823.0	277.9	653.5	439.1	214.4	–	–	0.0	4.4	–	133.6	71.2	62.4
2018 July 6	1,744.4	279.4	649.0	440.6	208.4	–	–	0.0	3.9	–	105.7	43.9	61.9
13	1,743.6	280.7	634.3	436.9	197.4	–	–	0.0	3.3	–	121.0	59.5	61.5
20	1,744.8	281.4	616.2	433.2	183.0	–	–	0.0	3.9	–	137.6	72.3	65.3
27	1,745.0	282.6	618.1	432.0	186.1	–	–	0.0	4.0	–	141.8	76.6	65.2
Aug. 3	1,753.5	281.1	649.1	465.3	183.7	–	–	0.0	3.7	–	108.4	45.3	63.0
10	1,729.5	281.9	629.0	428.1	200.9	–	–	0.0	2.3	–	104.9	56.6	48.3
17	1,744.6	283.3	621.5	425.5	196.0	–	–	0.0	4.3	–	120.7	72.2	48.5
24	1,737.9	283.7	615.3	428.2	187.1	–	–	0.0	3.2	–	119.6	70.8	48.7
31	1,768.2	280.6	661.0	457.6	203.4	–	–	0.0	3.0	–	107.9	58.5	49.3
Sep. 7	1,741.9	281.4	645.3	448.9	196.4	–	–	0.0	5.3	–	101.8	56.6	45.2
14	1,739.5	282.0	598.0	419.7	178.3	–	–	0.0	3.9	–	140.2	94.8	45.4
21	1,753.9	282.9	596.4	426.1	170.2	–	–	0.0	7.1	–	156.5	95.5	61.0
28	1,817.3	281.0	644.0	473.4	170.6	–	–	0.0	3.9	–	143.2	76.6	66.5
Oct. 5	1,762.5	282.1	629.3	466.6	162.7	–	–	0.0	3.5	–	138.4	72.1	66.3

***** The consolidated financial statement of the Eurosystem comprises the financial statement of the European Central Bank (ECB) and the financial statements of the national central banks of the euro area Member States (NCBs). The balance sheet items for foreign currency, securities, gold and financial instruments are valued at market rates at the end of the quarter. **1** In accordance with the accounting procedure chosen by the Eurosystem for the issue of euro banknotes, a share of 8% of the total value of the euro banknotes in circulation is allocated to the ECB on a monthly basis. The counterpart of this adjustment is disclosed as an "Intra-Eurosystem liability related to euro banknote issue". The remaining 92% of the value of the euro banknotes in circulation is allocated, likewise on a monthly

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	As at reporting date
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
Eurosystem [3]										
266.5	7.3	12.9	12.9	–	55.2	236.1	–	357.9	103.5	2018 Mar. 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
257.3	6.8	12.4	12.4	–	54.9	228.0	–	351.2	104.3	13
257.1	7.6	11.1	11.1	–	54.9	230.5	–	351.2	104.4	20
262.7	8.6	10.9	10.9	–	54.9	227.1	–	351.2	104.4	27
273.9	7.4	11.8	11.8	–	54.9	228.8	–	351.2	104.5	May 4
257.1	7.1	10.5	10.5	–	54.9	226.9	–	351.2	104.4	11
256.6	6.2	9.8	9.8	–	54.9	226.3	–	351.2	104.4	18
258.4	7.8	11.6	11.6	–	54.9	228.1	–	351.2	104.4	25
272.3	8.6	10.8	10.8	–	54.9	225.4	–	351.2	104.4	June 1
276.0	10.7	10.1	10.1	–	54.9	225.7	–	351.2	104.4	8
285.0	9.9	10.1	10.1	–	54.9	226.8	–	351.2	104.4	15
288.2	8.1	10.5	10.5	–	54.9	228.0	–	351.2	104.4	22
348.0	4.5	10.5	10.5	–	56.1	233.0	–	360.4	104.4	29
276.5	6.2	10.5	10.5	–	56.1	229.9	–	360.4	104.4	2018 July 6
269.9	4.8	10.8	10.8	–	56.1	230.0	–	360.4	104.4	13
267.2	4.8	11.5	11.5	–	56.1	229.7	–	360.4	104.4	20
257.1	6.8	11.3	11.3	–	56.1	229.8	–	360.4	104.4	27
269.1	6.4	11.3	11.3	–	56.1	231.3	–	360.4	104.4	Aug. 3
267.3	7.1	11.2	11.2	–	56.1	233.3	–	360.4	104.4	10
271.6	6.5	10.5	10.5	–	56.1	233.8	–	360.4	104.4	17
271.8	9.1	10.1	10.1	–	56.1	233.8	–	360.4	104.4	24
267.5	6.9	10.2	10.2	–	56.1	233.0	–	360.4	104.4	31
257.4	7.3	10.0	10.0	–	56.1	237.6	–	360.4	104.4	Sep. 7
265.7	6.8	11.0	11.0	–	56.1	237.6	–	360.4	104.4	14
258.3	6.2	11.3	11.3	–	56.1	239.4	–	360.4	104.4	21
301.8	4.4	11.0	11.0	–	56.0	237.0	–	342.3	104.4	28
256.7	4.7	11.8	11.8	–	56.0	237.0	–	342.3	104.4	Oct. 5
Deutsche Bundesbank										
157.1	0.0	1.3	1.3	–	14.3	27.0	361.3	113.1	5.7	2018 Mar. 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
151.1	0.0	2.2	2.2	–	14.2	27.2	368.2	111.5	5.7	13
149.5	0.0	1.5	1.5	–	14.2	27.3	368.2	111.5	5.7	20
155.2	0.0	1.0	1.0	–	14.2	27.3	368.2	111.5	5.7	27
163.4	0.0	0.9	0.9	–	14.2	27.6	369.5	111.5	5.7	May 4
148.5	0.0	0.6	0.6	–	14.2	27.7	369.5	111.5	5.7	11
157.8	0.0	0.3	0.3	–	14.2	27.8	369.5	111.5	5.7	18
161.0	0.0	1.1	1.1	–	14.2	27.9	369.5	111.5	5.7	25
173.2	0.0	0.6	0.6	–	14.2	28.1	374.9	111.5	5.7	June 1
174.1	0.0	0.6	0.6	–	14.2	28.2	374.9	111.5	5.7	8
174.0	0.0	0.6	0.6	–	14.2	28.6	374.9	111.5	5.7	15
174.5	0.0	0.6	0.6	–	14.2	28.9	374.9	111.5	5.7	22
213.3	–	0.3	0.3	–	14.6	28.3	378.5	112.9	5.7	29
165.4	0.0	0.4	0.4	–	14.6	28.9	378.5	112.9	5.7	2018 July 6
163.4	0.0	0.3	0.3	–	14.6	28.9	378.5	112.9	5.7	13
164.8	0.0	0.3	0.3	–	14.6	29.0	378.5	112.9	5.7	20
157.3	0.0	0.6	0.6	–	14.6	29.0	378.5	112.9	5.7	27
166.5	0.0	0.9	0.9	–	14.6	29.3	381.6	112.9	5.7	Aug. 3
166.6	0.0	0.8	0.8	–	14.6	29.3	381.6	112.9	5.7	10
170.3	0.0	0.4	0.4	–	14.6	29.3	381.6	112.9	5.7	17
171.7	0.0	0.3	0.3	–	14.6	29.4	381.6	112.9	5.7	24
166.1	0.0	0.2	0.2	–	14.6	29.4	386.9	112.9	5.7	31
158.4	0.0	0.2	0.2	–	14.6	29.5	386.9	112.9	5.7	Sep. 7
165.8	0.0	0.2	0.2	–	14.6	29.5	386.9	112.9	5.7	14
160.7	0.0	0.4	0.4	–	14.6	29.8	386.9	112.9	5.7	21
191.2	0.0	0.2	0.2	–	14.6	29.8	390.8	112.9	5.7	28
160.3	0.0	1.0	1.0	–	14.5	29.4	390.8	107.5	5.7	Oct. 5

basis, to the NCBs, with each NCB showing in its balance sheet the share of the euro banknotes issued corresponding to its paid-up share in the ECB's capital. The difference between the value of the euro banknotes allocated to the NCB according to the aforementioned accounting procedure 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 DEM 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			
				to banks in the home country			to banks in other Member States				to non-banks in the home country		
												Enterprises and households	
			Total	Total	Loans	Securities issued by banks	Total	Loans	Securities issued by banks	Total	Total	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 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.	7,790.8	29.6	2,298.1	1,892.3	1,627.0	265.2	405.9	280.6	125.2	3,814.1	3,406.5	2,938.1	2,633.4
Mar.	7,746.6	35.1	2,254.6	1,852.5	1,585.3	267.1	402.1	274.9	127.2	3,814.9	3,410.8	2,946.8	2,644.4
Apr.	7,781.1	33.8	2,300.8	1,892.1	1,625.1	267.0	408.7	280.6	128.0	3,818.5	3,417.4	2,956.1	2,650.7
May	7,882.8	35.0	2,314.0	1,900.7	1,630.1	270.6	413.3	284.6	128.6	3,823.8	3,418.9	2,963.0	2,656.6
June	7,804.7	35.0	2,266.6	1,853.0	1,584.7	268.2	413.6	285.5	128.1	3,832.7	3,430.8	2,979.9	2,672.2
July	7,784.2	34.7	2,276.2	1,852.8	1,585.7	267.1	423.4	295.9	127.5	3,840.0	3,437.3	2,987.0	2,679.3
Aug.	7,828.1	35.1	2,294.8	1,865.2	1,597.6	267.6	429.6	301.1	128.5	3,840.6	3,431.8	2,987.4	2,690.7
	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 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.	6.3	0.3	0.5	0.6	2.0	– 1.4	– 0.1	– 0.4	0.3	0.2	– 0.7	7.7	10.7
Mar.	– 37.4	5.5	– 42.9	– 39.5	– 41.4	1.9	– 3.4	– 5.3	2.0	2.7	5.6	10.1	12.3
Apr.	28.9	– 1.3	45.6	39.7	39.9	– 0.2	5.9	5.1	0.9	4.0	7.1	9.8	6.3
May	85.0	1.3	12.4	9.1	5.7	3.4	3.4	2.8	0.5	12.9	9.4	15.3	14.3
June	– 77.2	– 0.1	– 47.4	– 47.7	– 45.4	– 2.3	0.3	0.9	– 0.5	9.9	12.8	17.9	16.4
July	– 14.4	– 0.3	10.5	0.3	1.3	– 1.0	10.1	10.7	– 0.6	7.8	6.8	5.9	6.1
Aug.	46.4	0.4	20.5	14.1	13.3	0.8	6.3	5.2	1.1	1.1	– 5.2	0.8	11.7

* 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														
				to non-banks in other Member States						Claims on non-euro area residents			
	General government				Enterprises and households		General government						
Securities	Total	Loans	Securities [2]	Total	Total	of which: Loans	Total	Loans	Securities	Total	of which: Loans	Other assets [1]	Period
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
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	2016 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	407.6	280.5	165.9	127.1	29.6	97.5	1,026.5	775.9	622.5	Feb.
302.4	463.9	275.5	188.4	404.1	278.3	164.9	125.9	29.8	96.1	1,016.8	763.8	625.3	Mar.
305.4	461.2	276.2	185.0	401.2	275.1	165.1	126.0	29.9	96.2	1,009.2	757.3	618.9	Apr.
306.4	455.9	272.3	183.6	404.9	280.2	167.4	124.8	29.8	95.0	1,052.9	799.1	657.1	May
307.7	450.8	270.0	180.8	402.0	278.4	166.4	123.6	29.9	93.7	1,032.5	777.4	637.9	June
307.7	450.3	270.8	179.5	402.7	281.2	169.9	121.5	29.7	91.8	1,028.8	770.8	604.5	July
296.8	444.3	266.4	178.0	408.9	286.1	173.1	122.8	29.7	93.1	1,020.9	762.2	636.6	Aug.
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
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	2016 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	– 3.3	1.0	1.7	1.7	– 0.7	– 0.2	– 0.5	10.6	11.1	– 5.4	Feb.
– 2.2	– 4.5	– 1.9	– 2.6	– 2.9	– 1.6	– 0.4	– 1.3	0.1	– 1.4	– 5.5	– 8.2	2.8	Mar.
3.5	– 2.6	0.7	– 3.3	– 3.1	– 3.3	0.0	0.1	0.1	0.0	– 13.2	– 11.9	– 6.2	Apr.
0.9	– 5.8	– 4.3	– 1.5	3.5	4.6	1.8	– 1.2	– 0.1	– 1.1	30.9	29.9	27.5	May
1.5	– 5.0	– 2.3	– 2.8	– 2.9	– 1.4	– 0.6	– 1.5	– 0.1	– 1.4	– 20.4	– 21.8	– 19.2	June
– 0.2	0.9	2.2	– 1.3	0.9	3.1	3.7	– 2.2	– 0.2	– 2.0	– 0.7	– 3.8	– 31.6	July
– 10.9	– 6.0	– 4.5	– 1.5	6.3	5.0	3.2	1.3	0.0	1.2	– 7.7	– 8.5	32.1	Aug.

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 instit utions (excluding the Bundesbank) in Germany *
Liabilities

€ billion

Period	Balance sheet total [1]	Deposits of banks (MFIs) in the euro area			Deposits of non-banks (non-MFIs) in the euro area								
						Deposits of non-banks in the home country						Deposits of non-banks	
			of banks					With agreed maturities		At agreed notice			
		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	Total	Over-night
	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 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.	7,790.8	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
Mar.	7,746.6	1,238.1	1,057.5	180.6	3,537.7	3,413.3	1,944.1	888.1	274.7	581.2	539.9	115.3	48.7
Apr.	7,781.1	1,233.9	1,053.5	180.4	3,551.3	3,430.7	1,967.4	882.9	270.2	580.4	539.6	108.8	46.7
May	7,882.8	1,232.4	1,037.1	195.3	3,582.2	3,462.4	1,998.3	884.0	271.4	580.1	539.5	109.4	47.7
June	7,804.7	1,224.7	1,035.7	189.0	3,582.9	3,463.7	1,991.4	893.1	281.1	579.2	539.1	109.0	44.0
July	7,784.2	1,228.5	1,042.2	186.3	3,584.2	3,462.9	1,997.6	887.1	277.5	578.2	538.6	108.8	44.5
Aug.	7,828.1	1,229.6	1,043.7	185.9	3,595.1	3,474.5	2,014.0	882.9	276.6	577.6	538.3	106.8	45.0
	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 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.	6.3	– 3.6	– 3.2	– 0.4	– 4.0	– 3.5	0.2	– 3.5	– 3.7	– 0.2	0.4	– 1.1	0.7
Mar.	– 37.4	– 8.3	– 0.5	– 7.9	1.3	– 2.8	– 1.1	– 0.8	1.5	– 0.9	– 0.5	5.7	1.6
Apr.	28.9	– 4.5	– 3.8	– 0.6	13.5	17.5	22.8	– 4.6	– 4.0	– 0.8	– 0.3	– 6.6	– 2.0
May	85.0	– 3.5	– 17.3	13.9	29.2	30.2	29.9	0.7	0.8	– 0.3	– 0.1	0.4	0.9
June	– 77.2	– 7.8	– 1.5	– 6.3	0.7	1.2	– 6.9	9.0	9.7	– 0.9	– 0.4	– 0.4	– 3.8
July	– 14.4	4.7	7.2	– 2.5	1.8	– 0.4	6.5	– 5.9	– 3.5	– 1.0	– 0.5	– 0.1	0.5
Aug.	46.4	2.6	2.9	– 0.3	11.0	11.7	16.4	– 4.0	– 0.8	– 0.6	– 0.2	– 2.1	0.5

* 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				Debt securities issued [3]					
With agreed maturities		At agreed notice				Liabilities arising from repos with non-banks in the euro area	Money market fund shares issued [3]		of which: with maturities of up to 2 years [3]	Liabilities to non-euro area residents	Capital and reserves	Other Liabilities [1]	Period
Total	of which: up to 2 years	Total	of which: up to 3 months	Total	of which: domestic central governments			Total					
End of year or month													
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
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	2016 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	1,006.3	36.0	690.3	678.6	625.9	Feb.
63.8	22.6	2.9	2.6	9.1	8.3	2.9	2.3	1,014.0	35.2	641.0	675.0	635.6	Mar.
59.2	18.0	2.9	2.5	11.7	8.4	2.4	2.2	1,016.6	34.7	672.9	677.3	624.6	Apr.
58.8	16.8	2.9	2.5	10.4	8.8	1.6	2.0	1,031.1	36.4	707.2	679.7	646.6	May
62.2	21.7	2.9	2.5	10.2	9.3	1.3	2.1	1,022.2	33.7	670.8	680.2	620.5	June
61.5	19.0	2.9	2.5	12.4	10.0	1.8	2.0	1,016.9	33.1	681.9	682.2	586.7	July
58.9	16.4	2.8	2.5	13.9	10.6	1.2	2.0	1,021.1	34.9	690.7	684.6	603.8	Aug.
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
1.1	0.0	– 0.3	– 0.1	– 2.2	– 1.2	– 0.3	– 1.1	8.6	– 1.3	116.1	26.4	– 39.5	2016
10.8	4.2	– 0.1	– 0.0	– 0.0	– 0.0	1.1	– 0.3	– 3.3	– 8.5	– 16.1	34.1	– 162.3	2017
0.5	– 0.2	– 0.0	0.0	– 1.1	– 0.3	– 0.8	– 0.0	– 6.8	– 1.3	– 69.7	– 0.2	– 34.3	2016 Dec.
– 0.6	– 0.1	– 0.0	– 0.0	– 1.1	– 1.0	2.6	– 0.1	17.9	0.5	76.7	– 5.1	– 38.9	2017 Jan.
1.6	2.3	0.0	0.0	0.8	0.3	– 0.3	– 0.1	3.4	0.3	14.4	2.4	18.7	Feb.
3.7	2.0	– 0.0	– 0.0	– 0.6	0.3	– 1.9	– 0.1	– 2.8	– 2.0	– 2.2	6.2	– 26.1	Mar.
– 1.9	– 1.6	– 0.0	0.0	0.2	– 0.3	0.9	– 0.0	1.4	– 1.8	22.7	5.6	– 5.3	Apr.
– 0.1	– 1.0	0.0	0.0	0.6	0.2	– 1.1	– 0.0	7.8	0.9	– 18.5	7.0	– 5.7	May
4.0	2.9	– 0.0	– 0.0	– 0.5	0.1	– 0.6	0.1	1.0	0.3	– 31.9	8.9	– 56.0	June
– 0.5	– 0.9	– 0.0	– 0.0	1.4	– 0.0	1.4	– 0.0	– 3.1	– 0.7	– 0.1	– 1.9	– 10.6	July
– 0.9	– 0.8	– 0.0	– 0.0	– 0.6	– 0.1	0.1	0.2	– 1.7	– 1.2	– 39.0	2.7	13.0	Aug.
3.2	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.
– 1.2	– 2.2	– 0.0	0.0	– 0.1	– 0.2	– 0.3	– 0.3	– 9.6	– 1.6	– 3.8	– 0.5	– 2.6	Oct.
– 1.3	– 1.5	– 0.0	– 0.0	3.0	0.3	0.3	0.0	– 0.2	– 0.5	– 0.6	– 1.5	– 7.1	Nov.
4.7	3.0	0.0	0.0	– 2.4	0.3	0.7	– 0.0	– 7.3	– 2.3	– 59.2	5.6	– 16.1	Dec.
– 1.5	– 0.8	– 0.0	– 0.0	0.6	0.2	1.0	– 0.0	15.8	– 2.2	84.0	– 17.5	11.0	2018 Jan.
– 1.7	– 0.8	– 0.0	– 0.0	0.6	– 0.1	– 0.5	– 0.0	– 0.5	0.6	5.0	10.8	– 1.0	Feb.
4.1	4.4	– 0.0	– 0.0	– 1.6	– 0.4	– 0.9	0.2	9.4	– 0.8	– 48.1	– 3.0	12.1	Mar.
– 4.6	– 4.6	– 0.0	– 0.0	2.7	0.1	– 0.5	– 0.1	– 0.9	– 0.3	28.0	1.7	– 8.4	Apr.
– 0.5	– 1.4	– 0.0	– 0.0	– 1.4	0.3	– 0.8	– 0.2	7.3	1.4	29.3	0.1	23.6	May
3.3	4.9	– 0.0	– 0.0	– 0.1	0.5	– 0.4	0.1	– 9.2	– 2.7	– 36.6	0.4	– 24.3	June
– 0.6	– 2.7	– 0.0	– 0.0	2.2	0.7	0.6	– 0.1	– 3.6	– 0.6	12.3	2.6	– 32.6	July
– 2.6	– 2.6	– 0.0	– 0.0	1.4	0.6	– 0.6	– 0.0	4.6	2.3	8.8	2.4	17.6	Aug.

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)						
				Total	of which:		Total	of which:				Participating interests	Other assets [1]
					Balances and loans	Securities issued by banks		Loans		Bills	Securities issued by non-banks		
								for up to and including 1 year	for more than 1 year				
All categories of banks													
2018 Mar.	1,627	7,791.9	494.0	2,382.8	1,903.2	476.5	4,078.8	360.8	3,014.7	0.5	695.2	112.7	723.6
Apr.	1,625	7,826.7	508.0	2,409.6	1,929.4	476.9	4,078.6	357.1	3,023.3	0.5	689.4	112.9	717.6
May	1,623	7,929.0	525.6	2,429.1	1,950.0	475.8	4,099.8	364.6	3,033.9	0.5	693.2	117.7	756.8
June	1,615	7,851.0	485.4	2,415.9	1,938.6	474.0	4,094.1	352.3	3,043.9	0.6	689.6	117.9	737.7
July	1,604	7,830.5	498.7	2,401.5	1,923.5	474.5	4,108.4	357.9	3,055.8	0.5	685.9	117.6	704.3
Aug.	1,601	7,875.6	497.7	2,411.7	1,931.3	476.8	4,117.2	355.9	3,070.1	0.5	682.6	111.3	737.7
Commercial banks [6]													
2018 July	264	3,110.8	310.9	996.6	919.4	76.6	1,252.5	197.6	837.2	0.4	213.6	55.3	495.4
Aug.	263	3,148.7	320.4	1,004.1	925.6	78.0	1,252.7	198.2	841.5	0.4	209.1	49.0	522.5
Big banks [7]													
2018 July	4	1,798.2	141.8	565.2	534.7	30.5	592.6	110.2	365.3	0.1	114.2	49.2	449.4
Aug.	4	1,826.5	149.9	560.5	528.7	31.8	597.8	113.5	367.2	0.1	114.4	43.3	475.1
Regional banks and other commercial banks													
2018 July	151	887.5	86.1	192.2	148.5	43.5	564.7	58.6	413.6	0.3	91.6	5.4	39.2
Aug.	149	888.8	92.9	191.1	147.3	43.5	559.4	55.4	416.3	0.3	86.9	5.0	40.4
Branches of foreign banks													
2018 July	109	425.1	83.1	239.1	236.1	2.6	95.3	28.7	58.3	0.1	7.8	0.7	6.9
Aug.	110	433.4	77.6	252.5	249.6	2.6	95.6	29.3	58.0	0.0	7.9	0.7	7.0
Landesbanken													
2018 July	8	895.1	61.8	274.6	207.1	66.9	463.2	57.2	343.6	0.1	60.1	10.2	85.4
Aug.	8	886.1	58.9	269.6	201.8	67.2	460.0	53.8	344.3	0.0	59.4	10.2	87.5
Savings banks													
2018 July	385	1,219.4	43.0	174.7	61.5	113.0	970.6	49.1	762.0	0.0	159.3	14.1	17.0
Aug.	385	1,227.8	46.0	175.9	62.2	113.5	974.3	48.3	765.9	0.0	159.9	14.1	17.4
Credit cooperatives													
2018 July	896	911.9	19.4	170.2	63.7	105.7	686.7	32.5	543.0	0.0	111.0	17.0	18.7
Aug.	895	919.5	20.0	172.1	65.3	106.2	690.7	32.8	546.3	0.0	111.4	17.0	19.6
Mortgage banks													
2018 July	12	224.3	4.1	28.6	18.1	10.5	185.0	3.1	160.5	–	21.4	0.1	6.4
Aug.	12	224.9	3.6	29.0	18.5	10.5	185.7	3.0	161.2	–	21.4	0.1	6.5
Building and loan associations													
2018 July	20	233.5	2.0	56.0	40.1	15.9	170.6	1.2	143.8	.	25.6	0.3	4.6
Aug.	20	233.9	1.5	56.1	40.1	16.0	171.4	1.2	144.4	.	25.8	0.3	4.6
Banks with special, development and other central support tasks													
2018 July	19	1,235.4	57.6	700.8	613.7	85.8	379.7	17.2	265.8	–	94.7	20.6	76.7
Aug.	18	1,234.6	47.2	704.8	617.9	85.5	382.5	18.6	266.4	–	95.6	20.6	79.6
Memo item: Foreign banks [8]													
2018 July	143	1,142.6	137.1	414.3	377.6	36.1	497.2	76.9	324.1	0.3	94.0	3.3	90.7
Aug.	143	1,153.8	134.9	424.9	388.0	36.4	494.6	76.7	325.6	0.3	90.3	3.3	96.1
of which: Banks majority-owned by foreign banks [9]													
2018 July	34	717.5	54.0	175.2	141.5	33.5	401.9	48.2	265.8	0.3	86.1	2.5	83.8
Aug.	33	720.4	57.3	172.4	138.4	33.8	399.0	47.4	267.6	0.3	82.4	2.5	89.1

***** 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) number 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 Statistical Supplement 1 to the Monthly Report – Banking statistics, in Tables I.1 to I.3. **2** For building and loan associations: including deposits under savings and loan contracts (see Table IV.12). **3** Included in time deposits. **4** Excluding deposits under savings and

IV. Banks

Deposits of banks (MFIs)			Deposits of non-banks (non-MFIs)										
	of which:			of which:									
					Time deposits 2			Savings deposits 4					
Total	Sight deposits	Time deposits	Total	Sight deposits	for up to and including 1 year	for more than 1 year 2	Memo item: Liabilities arising from repos 3	Total	of which: At 3 months' notice	Bank savings bonds	Bearer debt securities out-standing 5	Capital including published reserves, partici-pation rights capital, funds for general banking risks	Other liabi-lities 1	End of month
All categories of banks														
1,724.9	504.2	1,220.7	3,694.7	2,074.3	294.2	691.0	71.1	588.6	546.4	46.7	1,112.0	512.7	747.6	2018 Mar.
1,738.2	528.9	1,209.3	3,722.1	2,109.8	289.5	688.9	81.3	587.7	546.1	46.2	1,115.8	513.6	737.0	Apr.
1,766.0	559.7	1,206.3	3,757.2	2,143.1	291.3	690.6	82.4	587.4	546.0	44.8	1,133.6	515.7	756.4	May
1,747.3	554.8	1,192.5	3,732.2	2,119.8	293.7	687.7	61.7	586.4	545.5	44.5	1,119.0	522.7	729.7	June
1,749.9	539.0	1,210.9	3,746.3	2,132.1	296.1	688.8	72.9	585.4	544.9	44.0	1,110.8	524.8	698.7	July
1,752.7	521.6	1,231.0	3,763.8	2,149.5	298.9	687.2	83.4	584.7	544.6	43.5	1,116.1	524.5	718.6	Aug.
Commercial banks 6														
860.4	383.5	477.0	1,488.5	930.1	170.3	270.6	58.2	99.7	92.6	17.8	154.1	180.6	427.2	2018 July
870.6	388.3	482.3	1,495.1	936.9	173.5	267.7	67.8	99.3	92.5	17.7	157.6	180.1	445.3	Aug.
Big banks 7														
435.4	148.7	286.7	753.6	444.1	108.6	114.8	58.2	82.7	76.7	3.5	117.4	106.6	385.1	2018 July
436.6	144.7	291.9	760.6	446.6	111.3	116.7	67.8	82.5	76.7	3.5	120.4	106.7	402.3	Aug.
Regional banks and other commercial banks														
174.3	73.6	100.7	578.6	375.3	40.0	132.1	0.0	16.7	15.7	14.3	36.4	65.4	32.8	2018 July
175.4	74.3	101.1	577.6	379.6	39.9	127.3	–	16.6	15.6	14.2	37.0	64.9	33.9	Aug.
Branches of foreign banks														
250.8	161.2	89.5	156.3	110.7	21.7	23.7	–	0.2	0.2	0.0	0.3	8.5	9.3	2018 July
258.7	169.3	89.4	156.9	110.6	22.3	23.8	–	0.2	0.2	0.0	0.3	8.5	9.0	Aug.
Landesbanken														
262.0	69.8	192.2	296.3	134.2	57.6	91.5	10.4	12.4	12.2	0.6	194.4	50.8	91.6	2018 July
254.2	53.4	200.8	295.9	132.1	58.2	92.6	10.9	12.4	12.3	0.6	195.3	50.8	90.0	Aug.
Savings banks														
129.3	4.3	125.0	920.6	584.2	14.8	14.9	–	288.1	263.8	18.7	14.9	114.8	39.8	2018 July
128.5	3.1	125.5	929.3	593.4	14.8	14.9	–	287.7	263.6	18.5	14.8	114.9	40.3	Aug.
Credit cooperatives														
116.1	1.2	114.9	677.7	439.3	34.2	14.1	–	184.8	175.8	5.3	9.7	79.0	29.4	2018 July
116.5	1.1	115.4	684.3	445.6	34.5	14.2	–	184.7	175.8	5.2	9.6	79.1	30.1	Aug.
Mortgage banks														
43.2	2.8	40.4	76.3	3.0	3.2	70.1	–	–	–	.	89.6	8.8	6.5	2018 July
43.1	3.0	40.1	76.2	3.1	3.3	69.9	–	–	–	.	90.1	8.8	6.7	Aug.
Building and loan associations														
26.2	4.5	21.7	181.2	3.3	2.6	174.7	–	0.4	0.4	0.1	3.1	11.6	11.5	2018 July
26.2	4.1	22.1	181.6	3.3	2.6	175.1	–	0.4	0.4	0.1	3.1	11.6	11.5	Aug.
Banks with special, development and other central support tasks														
312.6	73.0	239.6	105.7	37.8	13.5	52.9	4.2	–	–	.	645.0	79.4	92.7	2018 July
313.6	68.8	244.8	101.4	35.1	12.0	52.8	4.7	–	–	.	645.7	79.2	94.7	Aug.
Memo item: Foreign banks 8														
436.8	243.5	193.3	542.8	386.0	47.2	82.3	6.6	20.6	20.1	6.6	23.7	50.4	89.0	2018 July
449.0	252.5	196.4	538.6	386.5	48.1	77.3	8.1	20.4	20.0	6.5	23.8	50.3	92.2	Aug.
of which: Banks majority-owned by foreign banks 9														
186.0	82.2	103.7	386.5	275.4	25.5	58.6	6.6	20.4	19.9	6.6	23.4	41.9	79.8	2018 July
190.3	83.3	107.0	381.7	275.8	25.8	53.5	8.1	20.2	19.8	6.4	23.5	41.7	83.2	Aug.

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 November 2009), Commerzbank AG, UniCredit Bank AG (formerly Bayerische Hypo- und Vereinsbank AG), Deutsche Postbank AG (from December 2004 up to April 2018) and DB Privat- und Firmenkundenbank AG (from May 2018) (see the explanatory notes in the Statistical Supplement to the Monthly Report 1, Banking statistics, Table I.3, banking group "Big banks"). **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
2017 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	2,910.6	0.2	1.2	426.4
Mar.	34.8	440.7	1,389.5	1,143.5	0.0	0.9	245.2	3.2	3,342.5	2,919.6	0.3	1.0	421.7
Apr.	33.5	464.4	1,405.8	1,159.9	0.0	0.8	245.1	3.6	3,348.5	2,926.7	0.2	1.6	420.0
May	34.8	475.7	1,398.4	1,153.4	0.0	1.0	244.1	4.1	3,350.0	2,928.6	0.2	2.3	418.8
June	34.7	437.6	1,388.9	1,146.3	0.0	1.0	241.6	4.5	3,361.8	2,941.9	0.2	1.8	417.7
July	34.4	456.8	1,369.6	1,128.2	0.0	1.1	240.3	4.8	3,368.0	2,949.9	0.2	2.2	415.6
Aug.	34.8	455.2	1,383.7	1,141.5	0.0	1.2	241.0	5.3	3,368.5	2,956.8	0.2	1.6	409.9
													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
2017 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
Mar.	+ 5.5	– 20.0	– 19.9	– 21.9	–	+ 0.1	+ 1.9	+ 0.3	+ 4.2	+ 9.1	+ 0.1	– 0.2	– 4.7
Apr.	– 1.3	+ 23.6	+ 16.8	+ 16.9	+ 0.0	– 0.0	– 0.0	+ 0.4	+ 6.4	+ 7.1	– 0.0	+ 0.7	– 1.3
May	+ 1.3	+ 11.4	– 5.8	– 4.9	–	+ 0.1	– 1.1	+ 0.5	+ 10.4	+ 10.8	– 0.0	+ 0.7	– 1.2
June	– 0.1	– 38.1	– 9.5	– 7.1	–	+ 0.0	– 2.4	+ 0.4	+ 11.8	+ 13.3	+ 0.0	– 0.5	– 1.0
July	– 0.3	+ 19.3	– 19.3	– 18.1	–	+ 0.1	– 1.3	+ 0.3	+ 6.2	+ 8.0	– 0.0	+ 0.4	– 2.1
Aug.	+ 0.4	– 1.6	+ 15.6	+ 14.8	–	+ 0.1	+ 0.7	+ 0.5	+ 0.7	+ 7.1	– 0.0	– 0.6	– 5.8

***** 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

IV. Banks

Equalisation claims [2]	Memo item: Fiduciary loans	Participating interests in domestic banks and enterprises	Deposits of domestic banks (MFIs) [3] Total	Sight deposits [4]	Time deposits [4]	Redis-counted bills [5]	Memo item: Fiduciary loans	Deposits of domestic non-banks (non-MFIs) Total	Sight deposits	Time deposits [6]	Savings deposits [7]	Bank savings bonds [8]	Memo item: Fiduciary loans	Period
End of year or month *														
–	47.2	111.2	1,582.5	138.5	1,444.0	0.0	41.6	2,781.4	834.6	1,276.1	535.2	135.4	32.3	2008
–	43.9	106.1	1,355.1	128.9	1,226.2	0.0	35.7	2,829.7	1,029.5	1,102.6	594.5	103.2	43.4	2009
–	33.7	96.8	1,238.3	135.3	1,102.6	0.0	13.8	2,935.2	1,104.4	1,117.1	618.2	95.4	37.5	2010
–	36.3	94.6	1,210.5	114.8	1,095.3	0.0	36.1	3,045.5	1,168.3	1,156.2	616.1	104.8	36.5	2011
–	34.8	90.0	1,135.5	132.9	1,002.6	0.0	36.3	3,090.2	1,306.5	1,072.5	617.6	93.6	34.9	2012
–	31.6	92.3	1,140.3	125.6	1,014.7	0.0	33.2	3,048.7	1,409.9	952.0	610.1	76.6	32.9	2013
–	26.5	94.3	1,111.9	127.8	984.0	0.0	11.7	3,118.2	1,517.8	926.7	607.8	66.0	30.9	2014
–	20.4	89.6	1,065.6	131.1	934.5	0.0	6.1	3,224.7	1,673.7	898.4	596.5	56.1	29.3	2015
–	19.1	91.0	1,032.9	129.5	903.3	0.1	5.6	3,326.7	1,798.2	889.6	588.5	50.4	28.8	2016
–	19.1	88.1	1,048.2	110.7	937.4	0.0	5.1	3,420.9	1,941.0	853.2	582.9	43.7	30.0	2017
–	20.1	89.1	1,077.0	137.4	939.6	0.0	5.5	3,342.8	1,817.0	890.9	586.7	48.2	30.4	2017 Mar.
–	20.1	88.8	1,074.8	140.7	934.2	0.0	5.5	3,360.3	1,844.4	881.9	586.2	47.8	30.3	Apr.
–	20.0	88.7	1,079.5	142.0	937.5	–	5.5	3,368.4	1,852.2	883.4	585.7	47.0	30.4	May
–	19.7	88.4	1,053.9	125.6	928.3	0.0	5.5	3,370.3	1,869.2	869.8	584.7	46.6	29.8	June
–	19.6	88.5	1,061.7	125.0	936.6	0.0	5.4	3,361.5	1,866.0	866.0	583.5	46.0	29.9	July
–	19.6	88.9	1,065.1	121.2	943.9	0.0	5.4	3,376.5	1,884.2	864.4	582.4	45.4	30.0	Aug.
–	19.5	88.1	1,071.5	120.2	951.3	0.0	5.3	3,380.7	1,891.7	861.9	581.8	45.3	30.0	Sep.
–	19.4	87.9	1,081.0	122.8	958.2	0.0	5.3	3,396.5	1,916.8	853.4	581.5	44.8	29.9	Oct.
–	19.4	88.1	1,079.8	125.9	953.9	0.0	5.3	3,426.8	1,944.0	857.5	581.0	44.3	30.1	Nov.
–	19.1	88.1	1,048.2	110.7	937.4	0.0	5.1	3,420.9	1,941.0	853.2	582.9	43.7	30.0	Dec.
–	18.9	88.2	1,060.1	116.0	944.1	0.0	5.0	3,428.9	1,949.3	854.1	582.4	42.9	30.4	2018 Jan.
–	19.0	88.5	1,056.6	110.3	946.4	0.0	5.0	3,425.8	1,949.6	851.6	582.2	42.3	30.9	Feb.
–	18.9	88.5	1,056.3	118.6	937.7	0.0	5.0	3,421.8	1,948.0	850.7	581.3	41.8	31.5	Mar.
–	18.8	89.2	1,052.8	118.2	934.6	0.0	5.0	3,439.5	1,971.4	846.3	580.5	41.3	31.9	Apr.
–	18.8	93.8	1,035.9	107.1	928.9	0.0	5.0	3,471.4	2,002.6	847.7	580.2	40.9	32.4	May
–	18.7	94.0	1,034.3	122.0	912.2	0.0	4.9	3,473.1	1,996.6	856.7	579.3	40.6	32.6	June
–	18.5	94.4	1,041.4	118.8	922.6	0.0	4.9	3,473.2	2,002.6	852.3	578.2	40.0	32.8	July
–	18.4	88.0	1,042.8	117.3	925.5	0.0	4.8	3,485.0	2,020.0	847.9	577.6	39.5	33.1	Aug.
Changes *														
–	– 4.2	+ 0.7	– 225.4	– 9.7	– 215.7	– 0.0	– 5.7	+ 59.7	+ 211.4	– 179.3	+ 59.3	– 31.6	– 0.9	2009
–	– 2.1	– 9.2	– 96.5	+ 22.3	– 119.1	– 0.0	– 0.2	+ 77.8	+ 76.0	– 18.9	+ 24.0	– 3.3	– 1.7	2010
–	– 1.1	– 2.2	– 25.0	– 20.0	– 5.1	– 0.0	+ 0.1	+ 111.2	+ 63.7	+ 40.9	– 2.6	+ 9.3	– 1.1	2011
–	– 1.3	– 4.1	– 70.8	+ 21.5	– 91.9	– 0.0	+ 0.2	+ 42.2	+ 138.7	– 86.7	+ 1.5	– 11.2	– 1.6	2012
–	– 3.3	+ 2.4	– 79.4	– 24.1	– 55.3	+ 0.0	– 3.4	+ 40.2	+ 118.4	– 53.9	– 7.4	– 17.0	– 1.7	2013
–	– 1.9	+ 2.0	– 29.0	+ 2.2	– 31.2	– 0.0	– 0.6	+ 69.7	+ 107.9	– 25.3	– 2.4	– 10.6	– 2.0	2014
–	– 2.1	– 4.3	– 46.6	+ 3.3	– 50.0	+ 0.0	– 1.3	+ 106.5	+ 156.2	– 28.3	– 11.3	– 10.1	– 1.6	2015
–	– 1.3	+ 1.5	– 1.7	+ 0.3	– 2.0	+ 0.0	– 0.5	+ 104.7	+ 124.5	– 6.9	– 7.9	– 5.0	– 0.5	2016
–	– 0.0	– 1.6	+ 11.0	– 18.4	+ 29.4	– 0.0	– 0.5	+ 103.1	+ 142.8	– 27.5	– 5.6	– 6.7	+ 0.4	2017
–	– 0.1	– 0.3	+ 22.4	– 4.1	+ 26.5	– 0.0	– 0.1	– 2.7	+ 0.4	– 0.5	– 1.9	– 0.7	– 0.1	2017 Mar.
–	– 0.1	– 0.3	– 2.2	+ 3.3	– 5.5	– 0.0	– 0.0	+ 17.5	+ 27.3	– 9.0	– 0.5	– 0.4	– 0.1	Apr.
–	– 0.0	– 0.0	+ 4.6	+ 1.3	+ 3.3	– 0.0	+ 0.0	+ 8.1	+ 7.8	+ 1.6	– 0.5	– 0.8	+ 0.0	May
–	– 0.4	+ 0.0	– 24.6	– 16.1	– 8.5	+ 0.0	– 0.0	+ 10.9	+ 17.0	– 4.6	– 1.0	– 0.4	– 0.6	June
–	– 0.0	+ 0.1	+ 7.8	– 0.5	+ 8.3	–	– 0.0	– 8.8	– 3.1	– 3.8	– 1.2	– 0.7	+ 0.2	July
–	– 0.0	+ 0.4	+ 3.5	– 3.9	+ 7.3	+ 0.0	– 0.1	+ 15.0	+ 18.2	– 1.6	– 1.1	– 0.6	+ 0.1	Aug.
–	– 0.1	– 0.3	– 3.3	– 1.0	– 2.3	–	– 0.1	+ 4.3	+ 7.5	– 2.5	– 0.6	– 0.1	– 0.1	Sep.
–	– 0.1	– 0.1	+ 9.5	+ 2.6	+ 6.9	–	+ 0.0	+ 15.7	+ 25.1	– 8.5	– 0.3	– 0.5	– 0.0	Oct.
–	– 0.0	+ 0.1	– 1.0	+ 3.1	– 4.2	–	+ 0.0	+ 30.3	+ 27.2	+ 4.0	– 0.5	– 0.5	+ 0.1	Nov.
–	– 0.3	+ 0.5	– 27.3	– 15.0	– 12.2	– 0.0	– 0.2	– 5.9	– 3.0	– 4.2	+ 1.9	– 0.6	– 0.1	Dec.
–	– 0.1	– 0.0	+ 11.9	+ 5.2	+ 6.7	+ 0.0	– 0.1	+ 7.6	+ 8.0	+ 0.9	– 0.4	– 0.8	+ 0.4	2018 Jan.
–	– 0.0	+ 0.4	– 3.5	– 5.8	+ 2.3	–	+ 0.0	– 3.1	+ 0.3	– 2.5	– 0.3	– 0.6	+ 0.5	Feb.
–	– 0.1	+ 0.0	– 0.3	+ 8.3	– 8.7	+ 0.0	– 0.0	– 4.0	– 1.7	– 0.9	– 0.9	– 0.5	+ 0.5	Mar.
–	– 0.1	+ 0.7	– 3.0	+ 0.3	– 3.2	– 0.0	– 0.0	+ 18.6	+ 23.4	– 3.5	– 0.8	– 0.5	+ 0.4	Apr.
–	+ 0.0	+ 4.6	– 16.9	– 11.2	– 5.7	+ 0.0	– 0.0	+ 31.9	+ 31.3	+ 1.4	– 0.3	– 0.5	+ 0.5	May
–	– 0.1	+ 0.2	– 1.6	+ 15.0	– 16.6	–	– 0.1	+ 1.8	– 6.0	+ 9.1	– 0.9	– 0.4	+ 0.3	June
–	– 0.2	+ 0.4	+ 7.7	– 2.7	+ 10.4	+ 0.0	– 0.1	+ 0.1	+ 6.1	– 4.4	– 1.0	– 0.6	+ 0.2	July
–	+ 0.0	– 6.0	+ 2.8	– 1.5	+ 4.2	– 0.0	– 0.0	+ 11.9	+ 17.3	– 4.3	– 0.6	– 0.5	+ 0.5	Aug.

operations with the Bundesbank. **5** Own acceptances and promissory notes outstanding. **6** Since the inclusion of building and loan associations in January 1999, including deposits under savings and loan contracts (see Table IV.12). **7** Excluding deposits under savings and loan contracts (see also footnote 8). **8** Including liabilities arising from non-negotiable bearer debt securities.

IV. Banks

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

€ billion

Period	Cash in hand (non-euro area banknotes and coins)	Lending to foreign banks (MFIs)							Lending to foreign non-banks (non-MFIs)					
		Total	Credit balances and loans, bills			Negotiable money market paper issued by banks	Securities issued by banks	Memo item: Fiduciary loans	Total	Loans and bills			Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks
			Total	Short-term	Medium and long-term					Total	Short-term	Medium and long-term		
	End of year or month *													
2008	0.3	1,446.6	1,131.6	767.2	364.3	15.6	299.5	1.9	908.4	528.9	151.4	377.5	12.9	366.6
2009	0.3	1,277.4	986.1	643.5	342.6	6.2	285.0	2.9	815.7	469.6	116.9	352.7	9.8	336.3
2010	0.5	1,154.1	892.7	607.7	285.1	2.1	259.3	1.8	773.8	461.4	112.6	348.8	10.1	302.3
2011	0.6	1,117.6	871.0	566.3	304.8	4.6	241.9	2.6	744.4	455.8	102.0	353.8	8.5	280.1
2012	0.8	1,046.0	813.5	545.5	268.1	5.4	227.0	2.6	729.0	442.2	105.1	337.1	9.0	277.8
2013	0.2	1,019.7	782.4	546.6	235.8	7.2	230.1	2.5	701.0	404.9	100.3	304.6	8.2	287.8
2014	0.2	1,125.2	884.8	618.7	266.1	7.9	232.5	1.1	735.1	415.2	94.4	320.8	6.5	313.5
2015	0.3	1,066.9	830.7	555.9	274.7	1.2	235.0	1.0	751.5	424.3	83.8	340.5	7.5	319.7
2016	0.3	1,055.9	820.6	519.8	300.7	0.5	234.9	1.0	756.2	451.6	90.1	361.4	5.0	299.6
2017	0.3	963.8	738.2	441.0	297.2	0.7	225.0	2.3	723.9	442.2	93.3	348.9	4.2	277.5
2017 Mar.	0.3	1,086.7	854.7	548.7	306.0	1.9	230.0	1.7	777.5	475.7	110.9	364.9	4.1	297.7
Apr.	0.3	1,063.7	833.7	529.7	304.0	1.9	228.0	1.7	774.4	477.4	114.5	362.9	4.8	292.2
May	0.3	1,037.5	804.3	506.9	297.4	2.2	231.0	1.9	771.7	475.9	112.3	363.6	5.1	290.8
June	0.3	1,043.5	812.2	515.4	296.8	2.3	229.0	1.9	756.2	461.8	102.5	359.3	6.3	288.1
July	0.3	1,018.5	788.2	493.2	295.0	2.3	227.9	2.1	751.5	458.0	102.6	355.4	6.1	287.4
Aug.	0.2	1,000.5	772.3	478.4	293.9	2.2	226.0	2.1	743.9	454.3	104.0	350.3	6.0	283.6
Sep.	0.3	1,007.0	780.1	484.7	295.4	1.9	225.1	2.1	743.3	457.8	107.9	349.9	6.7	278.8
Oct.	0.3	996.7	769.4	473.5	295.9	1.9	225.3	2.1	739.9	457.9	104.8	353.1	6.5	275.6
Nov.	0.3	988.3	761.0	467.6	293.4	1.4	225.9	2.2	736.5	454.9	105.5	349.3	6.4	275.2
Dec.	0.3	963.8	738.2	441.0	297.2	0.7	225.0	2.3	723.9	442.2	93.3	348.9	4.2	277.5
2018 Jan.	0.3	985.4	758.1	466.7	291.4	1.8	225.5	2.2	735.1	450.6	105.6	345.0	5.5	279.1
Feb.	0.3	999.3	770.8	477.7	293.1	2.1	226.3	2.3	742.5	459.1	111.5	347.7	6.2	277.2
Mar.	0.3	993.3	759.8	469.7	290.0	2.2	231.3	2.4	736.2	456.1	108.7	347.4	6.5	273.6
Apr.	0.3	1,003.7	769.6	478.3	291.3	2.3	231.8	2.4	730.1	453.9	105.2	348.7	6.8	269.4
May	0.3	1,030.6	796.6	501.0	295.6	2.3	231.7	2.5	749.9	470.2	112.9	357.2	5.3	274.4
June	0.3	1,027.1	792.4	501.1	291.2	2.3	232.4	2.5	732.4	454.6	97.7	356.9	5.9	271.8
July	0.2	1,031.9	795.4	502.7	292.7	2.3	234.2	2.6	740.4	464.1	103.9	360.2	6.1	270.2
Aug.	0.2	1,027.9	789.8	496.9	292.9	2.3	235.8	2.6	748.7	469.5	107.6	362.0	6.5	272.7
	Changes *													
2009	– 0.0	– 170.0	– 141.3	– 122.5	– 18.8	– 10.3	– 18.4	– 0.2	– 72.8	– 43.8	– 31.7	– 12.1	– 3.3	– 25.7
2010	+ 0.1	– 141.5	– 116.2	– 47.3	– 68.9	– 4.8	– 20.4	– 0.2	– 62.0	– 24.5	– 12.6	– 11.9	+ 0.4	– 38.0
2011	+ 0.1	– 48.4	– 32.6	– 45.3	+ 12.7	+ 2.5	– 18.4	+ 0.0	– 38.9	– 13.6	– 12.8	– 0.9	– 1.6	– 23.6
2012	+ 0.1	– 70.1	– 56.8	– 23.1	– 33.7	+ 0.9	– 14.1	– 0.1	– 9.4	– 7.5	+ 8.3	– 15.9	+ 0.6	– 2.5
2013	– 0.5	– 22.7	– 26.9	– 1.3	– 25.6	+ 1.8	+ 2.4	– 0.0	– 21.2	– 33.1	– 5.8	– 27.2	– 0.7	+ 12.6
2014	– 0.0	+ 86.1	+ 80.1	+ 63.2	+ 16.8	+ 0.7	+ 5.3	– 0.6	+ 5.7	– 10.2	– 12.8	+ 2.7	– 1.8	+ 17.7
2015	+ 0.1	– 91.8	– 86.0	– 82.2	– 3.8	– 6.7	+ 0.8	– 0.1	– 6.1	– 9.2	– 6.5	– 2.7	+ 1.1	+ 2.0
2016	+ 0.0	– 25.5	– 14.5	– 38.2	+ 23.7	– 0.7	– 10.3	– 0.0	+ 17.4	+ 28.9	+ 10.1	+ 18.8	– 3.0	– 8.5
2017	+ 0.0	– 57.2	– 48.7	– 61.5	+ 12.8	+ 0.0	– 8.5	+ 0.6	– 4.7	+ 13.0	+ 8.6	+ 4.4	+ 0.7	– 18.4
2017 Mar.	– 0.0	+ 1.3	+ 3.0	– 1.8	+ 4.8	+ 0.4	– 2.1	– 0.0	– 2.7	+ 2.7	+ 0.6	+ 2.1	– 0.7	– 4.7
Apr.	+ 0.0	– 16.1	– 14.2	– 15.4	+ 1.2	+ 0.0	– 1.9	+ 0.0	– 0.1	+ 4.2	+ 3.8	+ 0.4	+ 0.6	– 4.9
May	– 0.0	– 17.3	– 20.9	– 18.6	– 2.3	+ 0.3	+ 3.3	+ 0.2	+ 2.8	+ 3.0	– 0.3	+ 3.4	+ 0.4	– 0.6
June	– 0.0	+ 11.0	+ 12.7	+ 10.9	+ 1.9	+ 0.1	– 1.9	+ 0.0	– 12.8	– 11.8	– 9.3	– 2.5	+ 1.2	– 2.2
July	– 0.0	– 16.8	– 16.1	– 18.2	+ 2.1	+ 0.0	– 0.7	+ 0.1	+ 0.1	+ 0.2	+ 0.7	– 0.6	– 0.2	+ 0.1
Aug.	– 0.0	– 19.5	– 17.7	– 15.3	– 2.4	– 0.1	– 1.8	+ 0.0	– 0.5	+ 3.0	+ 3.8	– 0.7	– 0.0	– 3.5
Sep.	+ 0.1	+ 5.0	+ 6.5	+ 5.6	+ 0.8	– 0.4	– 1.1	– 0.0	– 0.8	+ 2.1	+ 3.4	– 1.4	+ 0.7	– 3.5
Oct.	+ 0.0	– 13.4	– 13.6	– 12.3	– 1.3	+ 0.1	+ 0.2	+ 0.0	– 5.3	– 1.5	– 3.4	+ 2.0	– 0.2	– 3.6
Nov.	– 0.0	– 3.2	– 3.4	– 3.4	– 0.1	– 0.5	+ 0.7	+ 0.0	– 0.8	– 0.9	+ 1.0	– 1.9	– 0.0	+ 0.1
Dec.	– 0.0	– 21.1	– 19.6	– 25.1	+ 5.5	– 0.7	– 0.8	+ 0.1	– 10.7	– 11.1	– 11.9	+ 0.8	– 2.2	+ 2.5
2018 Jan.	+ 0.0	+ 30.6	+ 28.8	+ 29.7	– 0.9	+ 1.1	+ 0.7	– 0.1	+ 15.8	+ 12.3	+ 12.8	– 0.6	+ 1.3	+ 2.3
Feb.	– 0.0	+ 8.4	+ 7.4	+ 8.2	– 0.8	+ 0.3	+ 0.7	+ 0.1	+ 4.9	+ 6.5	+ 5.4	+ 1.1	+ 0.7	– 2.3
Mar.	– 0.0	– 3.1	– 8.3	– 6.3	– 2.0	+ 0.0	+ 5.1	+ 0.1	– 5.1	– 2.1	– 2.6	+ 0.5	+ 0.4	– 3.4
Apr.	+ 0.0	+ 6.0	+ 5.4	+ 6.6	– 1.2	+ 0.2	+ 0.5	+ 0.0	– 8.2	– 4.1	– 3.9	– 0.3	+ 0.2	– 4.3
May	– 0.0	+ 16.9	+ 17.3	+ 17.3	– 0.0	– 0.0	– 0.4	+ 0.0	+ 14.7	+ 12.1	+ 7.0	+ 5.1	– 1.5	+ 4.2
June	+ 0.0	– 4.0	– 4.7	– 0.0	– 4.7	– 0.0	+ 0.8	+ 0.1	– 17.4	– 15.4	– 15.2	– 0.3	+ 0.6	– 2.6
July	– 0.0	+ 7.0	+ 5.1	+ 2.7	+ 2.4	+ 0.0	+ 1.8	+ 0.1	+ 9.2	+ 10.4	+ 6.4	+ 4.0	+ 0.1	– 1.4
Aug.	– 0.0	– 6.4	– 7.9	– 7.2	– 0.8	+ 0.0	+ 1.6	+ 0.1	+ 7.3	+ 4.7	+ 3.5	+ 1.1	+ 0.4	+ 2.3

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

IV. Banks

Memo item: Fiduciary loans	Participating interests in foreign banks and enterprises	Deposits of foreign banks (MFIs)						Deposits of foreign non-banks (non-MFIs)						Period
		Total	Sight deposits	Time deposits (including bank savings bonds)			Memo item: Fiduciary loans	Total	Sight deposits	Time deposits (including savings deposits and bank savings bonds)			Memo item: Fiduciary loans	
				Total	Short-term	Medium and long-term				Total	Short-term	Medium and long-term		
End of year or month *														
25.5	45.1	703.3	218.1	485.1	362.3	122.9	0.3	286.1	92.2	193.9	95.1	98.8	2.5	2008
32.1	45.4	652.6	213.6	439.0	307.4	131.6	0.2	216.3	78.1	138.2	73.7	64.5	1.9	2009
15.6	48.8	741.7	258.7	483.0	349.3	133.6	0.1	227.6	84.8	142.7	76.7	66.0	1.5	2010
32.9	45.0	655.7	242.6	413.1	289.4	123.7	0.1	225.9	92.3	133.6	66.9	66.6	1.3	2011
32.6	46.4	691.1	289.4	401.7	284.6	117.0	0.1	237.6	107.2	130.3	69.1	61.2	1.2	2012
30.8	39.0	515.7	222.6	293.2	196.0	97.2	0.1	257.8	118.1	139.7	76.8	62.9	1.0	2013
14.0	35.6	609.2	277.1	332.1	242.7	89.4	0.1	221.0	113.0	107.9	47.8	60.1	0.7	2014
13.1	30.5	611.9	323.4	288.5	203.8	84.7	0.1	201.1	102.6	98.5	49.3	49.2	0.7	2015
13.1	28.7	696.1	374.4	321.6	234.2	87.5	0.0	206.2	100.3	105.9	55.2	50.8	0.7	2016
12.1	24.3	659.0	389.6	269.4	182.4	87.0	0.0	241.2	109.4	131.8	68.1	63.8	0.3	2017
12.9	24.7	768.8	488.1	280.7	192.1	88.6	0.0	237.6	113.7	124.0	72.2	51.8	0.7	2017 Mar.
12.9	24.8	751.4	429.4	322.0	234.2	87.7	0.0	271.9	132.3	139.7	89.0	50.6	0.7	Apr.
12.8	24.6	732.4	464.0	268.4	181.8	86.5	0.0	269.4	134.1	135.3	85.0	50.3	0.6	May
12.5	24.4	720.3	463.2	257.1	170.1	87.0	0.0	259.9	123.7	136.1	75.7	60.4	0.6	June
12.5	24.4	692.4	441.0	251.4	165.5	85.9	0.0	282.5	137.7	144.8	84.4	60.5	0.6	July
12.4	24.4	648.0	389.2	258.9	174.0	84.9	0.0	286.0	133.1	152.9	92.5	60.4	0.5	Aug.
12.4	24.8	691.5	430.5	261.0	176.6	84.3	0.0	279.1	133.5	145.7	84.3	61.4	0.5	Sep.
12.3	24.8	687.6	433.6	254.0	169.4	84.7	0.0	282.8	132.3	150.5	87.9	62.6	0.4	Oct.
12.4	24.7	694.2	428.8	265.4	179.7	85.7	0.0	284.4	140.6	143.8	81.7	62.1	0.4	Nov.
12.1	24.3	659.0	389.6	269.4	182.4	87.0	0.0	241.2	109.4	131.8	68.1	63.8	0.3	Dec.
12.0	24.2	711.8	450.8	261.0	172.7	88.3	0.0	275.0	130.5	144.6	82.2	62.3	0.3	2018 Jan.
12.1	23.7	715.7	441.2	274.5	185.5	89.0	0.0	279.6	134.8	144.8	85.5	59.3	0.3	Feb.
12.2	24.0	668.6	385.6	283.0	196.4	86.5	0.0	272.9	126.3	146.6	87.8	58.8	0.3	Mar.
12.3	23.6	685.3	410.6	274.7	188.3	86.4	0.0	282.6	138.4	144.2	85.2	59.0	0.3	Apr.
12.2	23.7	730.1	452.6	277.4	188.0	89.4	0.0	285.8	140.5	145.4	86.9	58.5	0.3	May
12.1	23.7	713.1	432.8	280.3	187.1	93.1	0.0	259.1	123.3	135.8	78.9	56.9	0.3	June
11.9	23.0	708.4	420.2	288.2	197.2	91.0	0.0	273.1	129.4	143.7	84.1	59.6	0.3	July
11.9	23.1	709.8	404.3	305.5	217.7	87.8	0.0	278.8	129.5	149.2	90.1	59.1	0.3	Aug.
Changes *														
– 3.2	+ 0.1	– 81.4	– 2.1	– 79.3	– 57.5	– 21.7	– 0.2	– 33.5	– 13.3	– 20.1	– 17.0	– 3.1	– 0.6	2009
+ 0.2	+ 1.4	+ 895.4	+ 42.0	+ 542.4	+ 38.1	+ 136.8	– 0.1	– 1.6	+ 6.0	– 7.6	– 3.3	– 4.4	– 0.4	2010
– 0.1	– 3.9	– 88.8	– 13.8	– 75.0	– 61.8	– 13.1	– 0.0	– 9.3	+ 6.4	– 15.7	– 10.4	– 5.3	– 0.2	2011
– 0.3	+ 1.5	+ 38.2	+ 51.7	– 13.5	– 7.5	– 6.0	– 0.0	+ 12.6	+ 15.2	– 2.6	+ 2.5	– 5.1	– 0.1	2012
– 1.8	– 7.2	– 174.0	– 75.6	– 98.4	– 83.1	– 15.4	– 0.0	+ 13.5	+ 9.6	+ 3.9	+ 6.9	– 3.0	– 0.2	2013
+ 0.1	– 3.8	+ 76.3	+ 47.8	+ 28.5	+ 39.0	– 10.5	– 0.0	– 43.6	– 8.3	– 35.3	– 30.7	– 4.6	+ 0.2	2014
– 0.6	– 6.1	– 15.4	+ 40.6	– 56.0	– 48.6	– 7.4	– 0.0	– 26.5	– 13.9	– 12.6	+ 0.3	– 13.0	– 0.0	2015
– 0.1	– 1.5	+ 82.7	+ 51.0	+ 31.7	+ 27.0	+ 4.7	– 0.0	+ 3.5	– 3.1	+ 6.7	+ 5.9	+ 0.8	– 0.0	2016
– 1.0	– 4.1	– 15.5	+ 25.3	– 40.8	– 43.2	+ 2.4	± 0.0	+ 31.8	+ 11.0	+ 20.8	+ 15.6	+ 5.2	– 0.4	2017
– 0.0	– 0.0	+ 5.5	+ 8.3	– 2.8	– 4.5	+ 1.7	–	– 15.9	– 15.7	– 0.2	– 2.4	+ 2.2	– 0.0	2017 Mar.
– 0.0	+ 0.1	– 12.8	– 56.2	+ 43.4	+ 43.7	– 0.4	–	+ 34.4	+ 18.2	+ 16.2	+ 17.1	– 0.9	–	Apr.
– 0.1	– 0.1	– 13.8	+ 36.5	– 50.3	– 49.8	– 0.5	–	– 0.9	+ 2.4	– 3.3	– 3.3	– 0.0	– 0.0	May
– 0.3	– 0.2	– 9.0	+ 0.6	– 9.6	– 10.5	+ 0.9	–	– 17.8	– 10.0	– 7.8	– 9.0	+ 1.2	– 0.0	June
– 0.0	+ 0.0	– 23.9	– 19.7	– 4.2	– 3.7	– 0.5	+ 0.0	+ 24.0	+ 14.4	+ 9.6	+ 9.3	+ 0.3	– 0.0	July
– 0.1	+ 0.0	– 42.9	– 51.2	+ 8.3	+ 9.1	– 0.8	– 0.0	+ 4.6	– 4.0	+ 8.6	+ 8.5	+ 0.0	– 0.1	Aug.
– 0.0	+ 0.4	+ 42.4	+ 41.0	+ 1.5	+ 2.1	– 0.7	–	– 7.2	+ 0.2	– 7.4	– 8.4	+ 0.9	+ 0.0	Sep.
– 0.1	– 0.0	– 5.9	+ 2.4	– 8.3	– 8.3	+ 0.0	–	+ 3.0	– 1.4	+ 4.4	+ 3.4	+ 1.1	– 0.1	Oct.
+ 0.1	– 0.0	+ 9.4	– 3.6	+ 13.0	+ 11.6	+ 1.4	–	+ 2.3	+ 8.6	– 6.2	– 5.9	– 0.4	– 0.0	Nov.
– 0.3	– 0.4	– 33.3	– 38.4	+ 5.1	+ 3.5	+ 1.5	–	– 42.5	– 31.0	– 11.6	– 13.4	+ 1.8	– 0.1	Dec.
– 0.1	– 0.0	+ 57.4	+ 63.5	– 6.1	– 5.0	– 1.1	–	+ 35.0	+ 21.4	+ 13.6	+ 14.4	– 0.8	– 0.0	2018 Jan.
+ 0.1	– 0.5	+ 1.1	– 10.9	+ 12.0	+ 11.7	+ 0.3	– 0.0	+ 3.9	+ 4.0	– 0.2	+ 3.0	– 3.2	+ 0.0	Feb.
+ 0.1	+ 0.3	– 45.8	– 55.0	+ 9.1	+ 11.5	– 2.3	–	– 6.4	– 8.3	+ 1.9	+ 2.3	– 0.4	– 0.0	Mar.
+ 0.1	– 0.5	+ 13.1	+ 22.9	– 9.8	– 9.3	– 0.5	+ 0.0	+ 9.1	+ 11.9	– 2.8	– 2.9	+ 0.0	+ 0.0	Apr.
– 0.0	+ 0.1	+ 39.7	+ 40.1	– 0.4	– 2.7	+ 2.3	–	+ 1.9	+ 1.4	+ 0.5	+ 1.2	– 0.7	+ 0.0	May
– 0.2	–	– 17.3	– 19.9	+ 2.7	– 1.0	+ 3.7	–	– 26.8	– 17.2	– 9.6	– 8.0	– 1.6	–	June
– 0.1	– 0.6	– 3.0	– 12.2	+ 9.2	+ 9.1	+ 0.1	–	+ 13.9	+ 6.3	+ 7.6	+ 5.4	+ 2.2	–	July
– 0.1	+ 0.1	– 0.1	– 16.4	+ 16.3	+ 20.0	– 3.7	–	+ 5.7	– 0.1	+ 5.8	+ 5.8	– 0.1	– 0.0	Aug.

IV. Banks

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

€ billion

Period	Lending to domestic non-banks, total		Short-term lending							Medium and long-term	
				to enterprises and households			to general government				to enterprises
	including negotiable money market paper, securities, equalisation claims	excluding negotiable money market paper, securities, equalisation claims	Total	Total	Loans and bills	Negotiable money market paper	Total	Loans	Treasury bills	Total	Total
	End of year or month *										
2008	3,071.1	2,700.1	373.0	337.5	335.3	2.2	35.5	34.5	1.0	2,698.1	2,257.8
2009	3,100.1	2,692.6	347.3	306.3	306.2	0.1	41.0	37.1	3.9	2,752.8	2,299.7
2010	3,220.9	2,771.3	428.0	283.0	282.8	0.2	145.0	117.2	27.7	2,793.0	2,305.6
2011	3,197.8	2,775.4	383.3	316.5	316.1	0.4	66.8	60.7	6.0	2,814.5	2,321.9
2012	3,220.4	2,786.1	376.1	316.8	316.3	0.5	59.3	57.6	1.7	2,844.3	2,310.9
2013	3,131.6	2,693.2	269.1	217.7	217.0	0.6	51.4	50.8	0.6	2,862.6	2,328.6
2014	3,167.3	2,712.6	257.5	212.7	212.1	0.6	44.8	44.7	0.1	2,909.8	2,376.8
2015	3,233.9	2,764.4	255.5	207.8	207.6	0.2	47.8	47.5	0.2	2,978.3	2,451.4
2016	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0
2017	3,332.6	2,894.4	241.7	210.9	210.6	0.3	30.7	30.3	0.4	3,090.9	2,640.0
2017 Mar.	3,283.0	2,840.9	252.7	212.6	211.8	0.8	40.0	39.8	0.2	3,030.4	2,547.5
Apr.	3,288.9	2,849.0	253.7	210.6	209.8	0.8	43.1	42.8	0.3	3,035.2	2,558.1
May	3,292.9	2,851.5	249.3	211.0	210.0	0.9	38.4	37.5	0.8	3,043.5	2,568.8
June	3,296.8	2,856.1	251.1	214.1	213.5	0.6	37.0	36.5	0.5	3,045.7	2,577.7
July	3,302.5	2,865.5	249.4	210.2	209.5	0.7	39.2	38.8	0.3	3,053.1	2,589.2
Aug.	3,308.9	2,869.6	242.8	207.6	207.0	0.6	35.2	35.0	0.2	3,066.1	2,601.2
Sep.	3,317.6	2,878.5	246.2	214.1	213.5	0.6	32.2	32.0	0.2	3,071.3	2,608.7
Oct.	3,326.1	2,887.3	248.0	215.3	214.7	0.6	32.7	32.6	0.2	3,078.1	2,616.7
Nov.	3,343.7	2,899.8	248.0	215.4	214.9	0.5	32.6	31.9	0.7	3,095.6	2,636.3
Dec.	3,332.6	2,894.4	241.7	210.9	210.6	0.3	30.7	30.3	0.4	3,090.9	2,640.0
2018 Jan.	3,339.3	2,905.2	249.7	217.4	216.8	0.6	32.3	31.9	0.4	3,089.6	2,645.2
Feb.	3,338.3	2,910.8	247.6	219.8	219.3	0.6	27.8	27.1	0.6	3,090.7	2,650.4
Mar.	3,342.5	2,919.9	253.5	225.6	224.9	0.7	27.9	27.6	0.2	3,089.0	2,653.3
Apr.	3,348.5	2,926.9	254.0	223.0	222.1	0.9	31.0	30.3	0.7	3,094.5	2,664.6
May	3,350.0	2,928.9	254.5	226.6	225.4	1.2	27.9	26.8	1.1	3,095.5	2,667.7
June	3,361.8	2,942.2	257.0	229.8	228.9	0.9	27.2	26.3	0.9	3,104.7	2,681.4
July	3,368.0	2,950.1	256.7	225.4	224.7	0.7	31.3	29.8	1.5	3,111.3	2,692.5
Aug.	3,368.5	2,957.0	250.5	223.9	223.1	0.8	26.6	25.7	0.9	3,118.0	2,700.6
	Changes *										
2009	+ 25.7	– 11.6	– 26.1	– 31.5	– 30.0	– 1.5	+ 5.5	+ 2.5	+ 2.9	+ 51.8	+ 36.6
2010	+ 130.5	+ 78.7	+ 80.4	– 23.4	– 23.5	+ 0.1	+ 103.8	+ 80.1	+ 23.7	+ 50.1	+ 14.9
2011	– 30.6	– 3.2	– 45.2	+ 33.6	+ 33.3	+ 0.2	– 78.7	– 57.0	– 21.7	+ 14.6	+ 9.4
2012	+ 21.0	+ 9.6	– 9.7	– 1.6	– 1.7	+ 0.1	– 8.2	– 3.8	– 4.3	+ 30.7	+ 10.9
2013	+ 4.4	+ 0.1	– 13.8	– 5.8	– 6.3	+ 0.5	– 8.0	– 7.0	– 1.1	+ 18.2	+ 17.6
2014	+ 36.7	+ 20.5	– 11.6	– 4.5	– 4.5	– 0.0	– 7.1	– 6.5	– 0.6	+ 48.3	+ 52.5
2015	+ 68.9	+ 54.1	+ 1.6	– 1.3	– 0.9	– 0.4	+ 2.9	+ 2.8	+ 0.1	+ 67.2	+ 73.9
2016	+ 43.7	+ 62.7	– 5.2	– 0.3	– 0.4	+ 0.1	– 4.9	– 4.8	– 0.2	+ 48.9	+ 79.8
2017	+ 57.0	+ 70.2	– 6.5	+ 5.6	+ 5.6	+ 0.0	– 12.1	– 12.4	+ 0.3	+ 63.5	+ 103.4
2017 Mar.	+ 3.9	+ 3.7	– 0.2	+ 2.8	+ 2.7	+ 0.1	– 3.0	– 3.1	+ 0.1	+ 4.1	+ 5.9
Apr.	+ 5.9	+ 8.1	+ 1.0	– 2.0	– 2.0	– 0.0	+ 3.0	+ 2.9	+ 0.1	+ 4.9	+ 10.6
May	+ 3.9	+ 2.5	– 4.0	+ 0.7	+ 0.5	+ 0.1	– 4.7	– 5.2	+ 0.5	+ 8.0	+ 7.8
June	+ 4.0	+ 4.6	+ 1.9	+ 3.3	+ 3.6	– 0.3	– 1.4	– 1.1	– 0.3	+ 2.1	+ 8.8
July	+ 5.6	+ 9.4	– 1.8	– 3.9	– 4.0	+ 0.1	+ 2.2	+ 2.4	– 0.2	+ 7.4	+ 11.4
Aug.	+ 6.4	+ 4.1	– 6.6	– 2.6	– 2.5	– 0.1	– 4.0	– 3.8	– 0.1	+ 13.0	+ 12.0
Sep.	+ 7.3	+ 8.9	+ 3.5	+ 6.5	+ 6.5	– 0.0	– 3.0	– 3.0	– 0.0	+ 3.9	+ 5.8
Oct.	+ 8.6	+ 8.8	+ 1.8	+ 1.2	+ 1.2	+ 0.0	+ 0.6	+ 0.6	+ 0.0	+ 6.8	+ 8.0
Nov.	+ 17.7	+ 12.6	+ 0.1	+ 0.2	+ 0.3	– 0.1	– 0.1	– 0.6	+ 0.5	+ 17.6	+ 17.8
Dec.	– 11.1	– 5.5	– 6.4	– 4.5	– 4.3	– 0.2	– 1.9	– 1.6	– 0.3	– 4.7	+ 3.6
2018 Jan.	+ 6.9	+ 11.0	+ 8.0	+ 6.5	+ 6.1	+ 0.3	+ 1.6	+ 1.6	– 0.1	– 1.2	+ 4.7
Feb.	– 1.0	+ 5.5	– 2.1	+ 2.4	+ 2.5	– 0.1	– 4.5	– 4.8	+ 0.3	+ 1.1	+ 5.0
Mar.	+ 4.2	+ 9.2	+ 5.9	+ 5.8	+ 5.7	+ 0.2	+ 0.1	+ 0.5	– 0.4	– 1.7	+ 2.9
Apr.	+ 6.4	+ 7.0	+ 0.5	– 2.6	– 2.8	+ 0.2	+ 3.1	+ 2.6	+ 0.5	+ 5.9	+ 11.7
May	+ 10.4	+ 10.8	+ 0.5	+ 3.6	+ 3.3	+ 0.3	– 3.1	– 3.5	+ 0.4	+ 9.9	+ 12.4
June	+ 11.8	+ 13.3	+ 2.5	+ 3.2	+ 3.5	– 0.3	– 0.7	– 0.5	– 0.2	+ 9.3	+ 13.6
July	+ 6.2	+ 7.9	– 0.3	– 4.5	– 4.3	– 0.2	+ 4.2	+ 3.6	+ 0.6	+ 6.5	+ 9.9
Aug.	+ 0.7	+ 7.1	– 6.2	– 1.5	– 1.5	+ 0.0	– 4.7	– 4.1	– 0.6	+ 6.9	+ 8.2

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Excluding debt securities arising from the exchange of equalisation claims (see also footnote 2). **2** Including debt securities arising from the exchange of equalisation claims.

IV. Banks

lending												
prises and households					to general government							
Loans						Loans						
Total	Medium-term	Long-term	Securities	Memo item: Fiduciary loans	Total	Total	Medium-term	Long-term	Securities [1]	Equalisation claims [2]	Memo item: Fiduciary loans	Period
End of year or month *												
2,022.0	222.0	1,800.0	235.8	42.8	440.3	308.2	29.7	278.5	132.1	–	4.5	2008
2,051.3	242.7	1,808.6	248.4	39.6	453.1	298.0	32.2	265.8	155.1	–	4.3	2009
2,070.0	238.1	1,831.8	235.7	30.7	487.3	301.2	36.1	265.1	186.1	–	3.1	2010
2,099.5	247.9	1,851.7	222.4	32.7	492.6	299.1	41.1	258.0	193.5	–	3.6	2011
2,119.5	249.7	1,869.8	191.4	31.4	533.4	292.7	39.4	253.3	240.7	–	3.5	2012
2,136.9	248.0	1,888.9	191.7	28.9	534.0	288.4	38.8	249.7	245.6	–	2.7	2013
2,172.7	251.7	1,921.0	204.2	24.4	532.9	283.1	33.5	249.6	249.8	–	2.1	2014
2,232.4	256.0	1,976.3	219.0	18.3	527.0	277.0	27.9	249.0	250.0	–	2.1	2015
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	2016
2,399.5	273.5	2,125.9	240.6	17.4	450.9	254.0	22.5	231.5	196.9	–	1.7	2017
2,322.0	264.4	2,057.6	225.5	18.4	482.9	267.3	24.6	242.7	215.6	–	1.7	2017 Mar.
2,331.2	265.4	2,065.9	226.8	18.4	477.2	265.1	23.6	241.5	212.0	–	1.7	Apr.
2,342.6	266.2	2,076.4	226.2	18.3	474.8	261.3	23.4	238.0	213.4	–	1.7	May
2,346.1	267.4	2,078.7	231.6	18.0	468.0	260.0	23.0	237.0	208.1	–	1.6	June
2,357.7	268.3	2,089.4	231.5	18.0	463.9	259.4	23.1	236.3	204.5	–	1.6	July
2,369.2	269.4	2,099.8	232.0	18.0	464.9	258.4	22.9	235.5	206.5	–	1.6	Aug.
2,376.0	269.6	2,106.3	232.7	17.9	462.7	257.0	22.4	234.6	205.7	–	1.6	Sep.
2,383.4	270.9	2,112.5	233.2	17.8	461.4	256.6	22.7	234.0	204.8	–	1.6	Oct.
2,397.7	274.4	2,123.3	238.6	17.8	459.3	255.4	22.8	232.6	204.0	–	1.6	Nov.
2,399.5	273.5	2,125.9	240.6	17.4	450.9	254.0	22.5	231.5	196.9	–	1.7	Dec.
2,405.7	274.8	2,130.8	239.5	17.4	444.4	250.9	22.0	228.9	193.6	–	1.5	2018 Jan.
2,414.1	275.1	2,139.0	236.3	17.5	440.3	250.3	21.9	228.4	190.1	–	1.5	Feb.
2,419.5	275.2	2,144.2	233.8	17.4	435.8	247.9	22.1	225.8	187.9	–	1.6	Mar.
2,428.6	277.1	2,151.5	236.0	17.3	430.0	245.9	21.9	224.1	184.0	–	1.5	Apr.
2,431.2	270.8	2,160.4	236.6	17.3	427.7	245.5	21.9	223.6	182.2	–	1.5	May
2,443.3	275.3	2,168.0	238.1	17.2	423.4	243.7	21.0	222.7	179.7	–	1.5	June
2,454.6	277.7	2,176.9	237.9	17.0	418.7	241.0	20.3	220.8	177.7	–	1.5	July
2,467.5	279.3	2,188.2	233.1	17.0	417.4	240.6	21.1	219.5	176.8	–	1.3	Aug.
Changes *												
+ 23.5	+ 17.3	+ 6.3	+ 13.1	– 3.9	+ 15.2	– 7.6	+ 2.5	– 10.2	+ 22.8	–	– 0.2	2009
+ 18.6	– 4.0	+ 22.6	– 3.8	– 1.7	+ 35.2	+ 3.5	+ 3.5	– 0.0	+ 31.7	–	– 0.3	2010
+ 22.6	+ 2.2	+ 20.4	– 13.2	– 1.0	+ 5.2	– 2.1	+ 4.9	– 7.0	+ 7.3	–	– 0.2	2011
+ 21.6	+ 1.5	+ 20.1	– 10.7	– 1.1	+ 19.8	– 6.6	– 1.9	– 4.7	+ 26.4	–	– 0.2	2012
+ 17.7	– 0.1	+ 17.8	– 0.1	– 2.5	+ 0.6	– 4.3	– 0.7	– 3.6	+ 4.9	–	– 0.8	2013
+ 39.9	+ 5.6	+ 34.3	+ 12.5	– 1.8	– 4.1	– 8.5	– 5.1	– 3.4	+ 4.3	–	– 0.2	2014
+ 59.0	+ 4.5	+ 54.6	+ 14.8	– 2.1	– 6.6	– 6.9	– 4.8	– 2.0	+ 0.2	–	+ 0.0	2015
+ 75.1	+ 9.7	+ 65.4	+ 4.7	– 0.9	– 30.9	– 7.3	– 4.0	– 3.3	– 23.6	–	– 0.4	2016
+ 87.6	+ 9.4	+ 78.2	+ 15.8	+ 0.1	– 39.9	– 10.6	– 1.3	– 9.3	– 29.4	–	– 0.1	2017
+ 5.5	+ 1.2	+ 4.3	+ 0.4	– 0.1	– 1.8	– 1.4	– 0.3	– 1.0	– 0.4	–	– 0.0	2017 Mar.
+ 9.3	+ 1.0	+ 8.3	+ 1.3	– 0.1	– 5.7	– 2.2	– 1.0	– 1.1	– 3.6	–	– 0.0	Apr.
+ 8.5	+ 0.8	+ 7.7	– 0.7	– 0.0	+ 0.1	– 1.3	– 0.2	– 1.1	+ 1.4	–	– 0.0	May
+ 3.4	+ 1.2	+ 2.2	+ 5.4	– 0.3	– 6.7	– 1.3	– 0.3	– 1.0	– 5.4	–	– 0.1	June
+ 11.4	+ 1.0	+ 10.4	– 0.1	– 0.0	– 4.0	– 0.4	+ 0.1	– 0.5	– 3.6	–	+ 0.0	July
+ 11.5	+ 1.1	+ 10.4	+ 0.5	– 0.0	+ 1.0	– 1.1	– 0.3	– 0.8	+ 2.0	–	– 0.0	Aug.
+ 6.6	+ 0.2	+ 6.4	– 0.8	– 0.1	– 2.0	– 1.2	– 0.4	– 0.8	– 0.8	–	– 0.0	Sep.
+ 7.4	+ 1.3	+ 6.1	+ 0.6	– 0.1	– 1.2	– 0.3	+ 0.2	– 0.5	– 0.9	–	– 0.0	Oct.
+ 12.4	+ 3.5	+ 9.0	+ 5.4	– 0.0	– 0.3	+ 0.5	+ 0.1	+ 0.4	– 0.8	–	–	Nov.
+ 1.7	– 0.9	+ 2.5	+ 2.0	– 0.4	– 8.3	– 1.3	– 0.3	– 1.0	– 7.1	–	+ 0.1	Dec.
+ 5.7	+ 1.6	+ 4.2	– 1.0	– 0.0	– 5.9	– 2.5	– 0.5	– 2.0	– 3.4	–	– 0.1	2018 Jan.
+ 8.2	+ 0.3	+ 8.0	– 3.2	– 0.0	– 3.9	– 0.4	– 0.1	– 0.3	– 3.5	–	– 0.0	Feb.
+ 5.4	+ 0.2	+ 5.2	– 2.5	– 0.1	– 4.6	– 2.4	+ 0.1	– 2.5	– 2.2	–	+ 0.0	Mar.
+ 9.1	+ 1.8	+ 7.3	+ 2.5	– 0.1	– 5.8	– 1.9	– 0.2	– 1.8	– 3.9	–	– 0.0	Apr.
+ 11.8	+ 2.6	+ 9.3	+ 0.6	– 0.0	– 2.6	– 0.8	+ 0.1	– 0.8	– 1.8	–	+ 0.0	May
+ 12.1	+ 4.5	+ 7.6	+ 1.5	– 0.1	– 4.3	– 1.8	– 0.9	– 0.8	– 2.6	–	– 0.1	June
+ 10.1	+ 2.5	+ 7.6	– 0.2	– 0.2	– 3.4	– 1.4	– 0.7	– 0.7	– 1.9	–	– 0.0	July
+ 13.1	+ 1.6	+ 11.5	– 4.9	– 0.0	– 1.3	– 0.4	+ 0.8	– 1.2	– 0.9	–	+ 0.0	Aug.

IV. Banks

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

€ billion

Period	Lending to domestic enterprises and households (excluding holdings of negotiable money market paper and excluding securities portfolios) [1]													
		of which:				Lending to enterprises and self-employed persons								
			Housing loans											
	Total	Mortgage loans, total	Total	Mortgage loans secured by residential real estate	Other housing loans	Total	of which: Housing loans	Manufacturing	Electricity, gas and water supply; refuse disposal, mining and quarrying	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Agriculture, forestry, fishing and aquaculture	Transportation and storage; post and telecommunications	Financial intermediation (excluding MFIs) and insurance companies
Lending, total														**End of year or quarter ***
2016	2,512.0	1,259.7	1,276.6	1,016.5	260.1	1,347.5	354.1	125.1	104.7	62.2	128.2	50.6	57.0	139.7
2017 June	2,559.7	1,280.1	1,297.8	1,033.7	264.1	1,377.8	360.9	131.5	108.3	65.7	130.8	51.0	54.7	141.5
Sep.	2,589.5	1,296.7	1,315.7	1,046.9	268.8	1,392.7	366.5	131.8	109.7	67.1	133.3	50.9	53.0	146.0
Dec.	2,610.1	1,304.3	1,326.6	1,053.0	273.6	1,403.1	368.5	131.3	112.6	67.3	133.3	50.2	51.5	147.9
2018 Mar.	2,644.4	1,317.6	1,338.2	1,061.5	276.7	1,429.5	373.4	136.0	115.2	69.4	137.5	50.1	51.2	151.4
June	2,672.2	1,333.8	1,357.5	1,074.2	283.3	1,445.5	380.1	139.2	114.2	71.9	136.5	50.5	51.0	152.8
Short-term lending														
2016	205.5	–	6.9	–	6.9	174.3	3.7	29.7	4.4	11.8	43.2	3.6	4.4	29.3
2017 June	213.6	–	6.7	–	6.7	183.3	3.5	34.7	4.7	13.7	43.3	4.0	4.6	28.1
Sep.	213.5	–	6.5	–	6.5	183.5	3.6	33.8	4.0	14.0	45.2	3.9	4.3	28.1
Dec.	210.6	–	6.5	–	6.5	180.8	3.6	32.3	4.0	13.6	45.2	3.4	4.0	27.4
2018 Mar.	224.9	–	6.8	–	6.8	195.3	3.8	36.6	5.0	14.9	48.4	3.5	4.2	29.1
June	228.9	–	7.1	–	7.1	199.2	4.0	36.7	4.8	16.6	47.3	3.9	4.2	28.5
Medium-term lending														
2016	264.1	–	34.5	–	34.5	186.4	13.5	23.6	5.5	10.5	17.2	4.5	11.2	41.8
2017 June	267.4	–	33.8	–	33.8	188.7	13.3	23.3	5.0	10.9	18.2	4.4	10.7	44.3
Sep.	269.6	–	33.9	–	33.9	190.2	13.6	23.1	5.1	11.2	18.2	4.4	10.4	45.6
Dec.	273.5	–	34.0	–	34.0	193.1	14.0	23.6	5.1	11.3	18.2	4.3	10.3	46.7
2018 Mar.	275.2	–	34.0	–	34.0	194.0	14.4	23.3	5.0	11.7	18.6	4.2	10.4	47.0
June	275.3	–	34.7	–	34.7	195.1	15.0	25.5	4.4	11.8	18.2	4.2	10.4	47.5
Long-term lending														
2016	2,042.4	1,259.7	1,235.1	1,016.5	218.6	986.8	336.9	71.8	94.8	39.9	67.7	42.5	41.4	68.6
2017 June	2,078.7	1,280.1	1,257.3	1,033.7	223.6	1,005.8	344.0	73.5	98.6	41.1	69.3	42.6	39.4	69.2
Sep.	2,106.3	1,296.7	1,275.3	1,046.9	228.3	1,018.9	349.3	74.9	100.5	41.9	69.9	42.6	38.3	72.2
Dec.	2,125.9	1,304.3	1,286.1	1,053.0	233.1	1,029.2	351.0	75.4	103.5	42.4	70.0	42.4	37.2	73.8
2018 Mar.	2,144.2	1,317.6	1,297.3	1,061.5	235.8	1,040.2	355.2	76.1	105.2	42.8	70.4	42.3	36.7	75.3
June	2,168.0	1,333.8	1,315.7	1,074.2	241.5	1,051.1	361.1	77.0	105.0	43.5	71.0	42.4	36.4	76.8
Lending, total														**Change during quarter ***
2017 Q2	+ 23.3	+ 12.7	+ 13.8	+ 11.2	+ 2.6	+ 11.1	+ 4.1	+ 2.1	+ 0.4	– 1.1	– 0.6	+ 0.7	– 1.3	+ 0.4
Q3	+ 29.5	+ 15.3	+ 17.8	+ 12.6	+ 5.2	+ 14.5	+ 5.7	+ 0.1	+ 1.1	+ 1.2	+ 2.4	+ 0.4	– 1.7	+ 2.0
Q4	+ 18.7	+ 9.7	+ 12.7	+ 7.8	+ 4.9	+ 8.9	+ 4.1	– 0.4	+ 1.0	+ 0.2	+ 0.2	– 0.6	– 1.5	+ 1.5
2018 Q1	+ 33.6	+ 10.6	+ 11.1	+ 8.1	+ 3.0	+ 26.0	+ 4.8	+ 4.7	+ 1.7	+ 2.0	+ 4.2	+ 0.3	– 0.3	+ 2.4
Q2	+ 37.0	+ 15.4	+ 17.8	+ 11.8	+ 6.0	+ 23.1	+ 6.6	+ 4.1	– 0.6	+ 2.9	– 0.6	+ 1.1	+ 0.1	+ 1.6
Short-term lending														
2017 Q2	+ 2.1	–	– 0.1	–	– 0.1	+ 2.3	– 0.1	+ 1.1	+ 0.2	+ 0.1	– 1.4	+ 0.3	+ 0.3	– 0.4
Q3	– 0.1	–	– 0.2	–	– 0.2	+ 0.2	+ 0.0	– 0.9	– 0.7	+ 0.3	+ 1.8	– 0.2	– 0.3	+ 0.0
Q4	– 2.8	–	– 0.0	–	– 0.0	– 2.6	+ 0.0	– 1.4	– 0.0	– 0.4	– 0.0	– 0.4	– 0.3	– 0.8
2018 Q1	+ 14.3	–	+ 0.3	–	+ 0.3	+ 14.4	+ 0.3	+ 4.1	+ 0.9	+ 1.3	+ 3.3	+ 0.4	+ 0.1	+ 1.7
Q2	+ 4.0	–	+ 0.3	–	+ 0.3	+ 4.0	+ 0.1	+ 0.3	– 0.2	+ 1.7	– 1.3	+ 0.4	+ 0.1	– 0.6
Medium-term lending														
2017 Q2	+ 3.0	–	– 0.1	–	– 0.1	+ 1.9	– 0.0	–	+ 0.0	– 0.4	+ 0.2	– 0.1	– 0.1	+ 1.3
Q3	+ 2.4	–	+ 0.2	–	+ 0.2	+ 1.5	+ 0.3	– 0.2	+ 0.2	+ 0.3	+ 0.0	+ 0.1	– 0.3	+ 1.3
Q4	+ 3.9	–	+ 0.1	–	+ 0.1	+ 2.8	+ 0.3	+ 0.5	– 0.1	+ 0.1	– 0.0	– 0.1	– 0.1	+ 1.1
2018 Q1	+ 2.0	–	+ 0.0	–	+ 0.0	+ 1.2	+ 0.4	– 0.2	– 0.1	+ 0.4	+ 0.4	– 0.0	– 0.1	+ 0.1
Q2	+ 8.9	–	+ 0.6	–	+ 0.6	+ 7.3	+ 0.6	+ 3.0	– 0.4	+ 0.4	+ 0.2	+ 0.1	+ 0.3	+ 0.6
Long-term lending														
2017 Q2	+ 18.2	+ 12.7	+ 14.0	+ 11.2	+ 2.9	+ 6.9	+ 4.2	+ 1.0	+ 0.2	– 0.8	+ 0.6	+ 0.5	– 1.5	– 0.5
Q3	+ 27.2	+ 15.3	+ 17.8	+ 12.6	+ 5.2	+ 12.8	+ 5.4	+ 1.3	+ 1.7	+ 0.7	+ 0.5	+ 0.4	– 1.2	+ 0.7
Q4	+ 17.6	+ 9.7	+ 12.6	+ 7.8	+ 4.8	+ 8.7	+ 3.8	+ 0.5	+ 1.1	+ 0.5	+ 0.3	– 0.1	– 1.1	+ 1.1
2018 Q1	+ 17.4	+ 10.6	+ 10.8	+ 8.1	+ 2.7	+ 10.3	+ 4.2	+ 0.7	+ 0.9	+ 0.4	+ 0.5	– 0.1	– 0.4	+ 0.6
Q2	+ 24.1	+ 15.4	+ 16.9	+ 11.8	+ 5.1	+ 11.7	+ 5.8	+ 0.8	+ 0.1	+ 0.7	+ 0.6	+ 0.6	– 0.3	+ 1.6

* Excluding lending by foreign branches. Breakdown of lending by building and loan associations by areas and sectors estimated. Statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional; subsequent alterations, which appear in the following Monthly Report, are

IV. Banks

Lending to employees and other individuals												Lending to non-profit institutions		
Services sector (including the professions)				Memo items:				Other lending						
	of which:								of which:					
Total	Housing enterprises	Holding companies	Other real estate activities	Lending to self-employed persons [2]	Lending to craft enterprises	Total	Housing loans	Total	Instalment loans [3]	Debit balances on wage, salary and pension accounts	Total	of which: Housing loans	Period
End of year or quarter *													**Lending, total**	
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
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	2017 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.
718.8	217.2	44.1	188.5	414.4	48.2	1,200.0	961.1	239.0	173.3	8.4	14.9	3.7	2018 Mar.
729.3	221.8	47.3	190.7	415.5	48.3	1,211.8	973.7	238.1	173.0	8.4	14.9	3.8	June
												Short-term lending	
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
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	2017 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.
53.5	10.2	7.9	10.7	23.7	5.8	29.0	3.0	26.1	1.5	8.4	0.6	–	2018 Mar.
57.2	10.7	10.2	10.6	23.5	5.7	29.2	3.1	26.1	1.5	8.4	0.5	–	June
												Medium-term lending	
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
72.1	11.5	8.8	18.6	32.8	3.6	78.1	20.5	57.7	52.9	–	0.5	0.0	2017 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.
73.9	12.6	9.3	18.3	32.8	3.4	80.7	19.7	61.0	56.5	–	0.5	0.0	2018 Mar.
73.0	13.0	9.7	19.2	31.0	3.4	79.6	19.7	59.9	55.4	–	0.5	0.0	June
												Long-term lending	
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
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	2017 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.
591.3	194.5	27.0	159.4	357.9	39.1	1,090.3	938.5	151.9	115.3	–	13.7	3.7	2018 Mar.
599.1	198.1	27.4	160.9	361.1	39.2	1,103.0	950.9	152.1	116.0	–	13.9	3.7	June
Change during quarter *													**Lending, total**	
+ 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	2017 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
+ 11.0	+ 2.5	+ 1.9	+ 2.9	+ 3.6	+ 0.5	+ 7.5	+ 6.3	+ 1.2	+ 1.8	– 0.2	+ 0.2	+ 0.0	2018 Q1
+ 14.5	+ 4.8	+ 3.2	+ 2.2	+ 3.8	+ 0.1	+ 14.0	+ 11.1	+ 2.8	+ 3.2	– 0.0	– 0.0	+ 0.0	Q2
												Short-term lending	
+ 2.2	+ 0.6	– 0.0	+ 0.8	–	– 0.0	– 0.1	– 0.1	– 0.0	– 0.0	– 0.3	– 0.1	+ 0.0	2017 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
+ 2.6	+ 0.1	+ 1.0	+ 0.4	+ 0.4	+ 0.8	– 0.3	+ 0.1	– 0.4	– 0.1	– 0.2	+ 0.1	– 0.0	2018 Q1
+ 3.7	+ 0.6	+ 2.3	– 0.2	– 0.2	– 0.1	+ 0.1	+ 0.1	+ 0.0	+ 0.0	– 0.0	– 0.2	–	Q2
												Medium-term lending	
+ 1.0	+ 0.2	+ 0.1	+ 0.8	+ 0.1	+ 0.0	+ 1.1	– 0.1	+ 1.2	+ 1.3	–	+ 0.0	+ 0.0	2017 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
+ 0.8	+ 0.4	+ 0.1	+ 0.2	+ 0.1	– 0.2	+ 0.8	– 0.4	+ 1.2	+ 1.3	–	– 0.0	+ 0.0	2018 Q1
+ 3.1	+ 0.7	+ 0.4	+ 1.0	+ 0.4	+ 0.0	+ 1.6	+ 0.0	+ 1.5	+ 1.5	–	– 0.0	+ 0.0	Q2
												Long-term lending	
+ 7.4	+ 2.7	+ 0.7	+ 2.4	+ 3.3	+ 0.0	+ 11.3	+ 9.8	+ 1.4	+ 1.6	–	+ 0.0	+ 0.0	2017 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
+ 7.7	+ 2.0	+ 0.8	+ 2.3	+ 3.0	– 0.1	+ 7.0	+ 6.6	+ 0.4	+ 0.6	–	+ 0.1	+ 0.0	2018 Q1
+ 7.7	+ 3.6	+ 0.6	+ 1.4	+ 3.5	+ 0.1	+ 12.3	+ 11.0	+ 1.3	+ 1.6	–	+ 0.1	+ 0.0	Q2

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

IV. Banks

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

€ billion

Period	Deposits, total	Sight deposits	Time deposits 1,2					Savings deposits 3	Bank savings bonds 4	Memo item:		
			Total	for up to and including 1 year	for more than 1 year 2					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos
					Total	for up to and including 2 years	for more than 2 years					
	Domestic non-banks, total											**End of year or month***
2015	3,224.7	1,673.7	898.4	243.0	655.4	37.3	618.1	596.5	56.1	29.3	20.5	0.5
2016	3,326.7	1,798.2	889.6	232.4	657.3	47.2	610.1	588.5	50.4	28.8	18.3	0.9
2017	3,420.9	1,941.0	853.2	207.6	645.6	57.3	588.3	582.9	43.7	30.0	16.3	1.6
2017 Sep.	3,380.7	1,891.7	861.9	218.7	643.2	55.3	587.9	581.8	45.3	30.0	15.8	1.8
Oct.	3,396.5	1,916.8	853.4	212.7	640.7	54.5	586.2	581.5	44.8	29.9	15.7	1.1
Nov.	3,426.8	1,944.0	857.5	212.4	645.0	55.3	589.7	581.0	44.3	30.1	15.1	1.6
Dec.	3,420.9	1,941.0	853.2	207.6	645.6	57.3	588.3	582.9	43.7	30.0	16.3	1.6
2018 Jan.	3,428.9	1,949.3	854.1	211.5	642.6	55.8	586.8	582.4	42.9	30.4	16.1	1.4
Feb.	3,425.8	1,949.6	851.6	209.9	641.8	54.4	587.4	582.2	42.3	30.9	15.9	1.1
Mar.	3,421.8	1,948.0	850.7	212.9	637.8	52.6	585.2	581.3	41.8	31.5	15.8	0.6
Apr.	3,439.5	1,971.4	846.3	210.7	635.6	50.7	584.9	580.5	41.3	31.9	15.1	0.9
May	3,471.4	2,002.6	847.7	210.8	636.9	51.9	585.0	580.2	40.9	32.4	14.8	0.7
June	3,473.1	1,996.6	856.7	221.2	635.6	51.4	584.2	579.3	40.6	32.6	15.3	0.7
July	3,473.2	2,002.6	852.3	218.3	634.0	52.0	582.1	578.2	40.0	32.8	14.9	1.5
Aug.	3,485.0	2,020.0	847.9	215.1	632.8	53.8	579.0	577.6	39.5	33.1	14.9	0.5
												Changes*
2016	+ 104.7	+ 124.5	– 6.9	– 8.9	+ 2.0	+ 10.2	– 8.2	– 7.9	– 5.0	– 0.5	– 2.1	+ 0.3
2017	+ 103.1	+ 142.8	– 27.5	– 24.7	– 2.8	+ 10.1	– 12.8	– 5.6	– 6.7	+ 0.4	– 2.0	+ 0.8
2017 Sep.	+ 4.3	+ 7.5	– 2.5	– 1.3	– 1.2	+ 0.1	– 1.3	– 0.6	– 0.1	– 0.1	– 0.9	+ 1.1
Oct.	+ 15.7	+ 25.1	– 8.5	– 6.0	– 2.5	– 0.8	– 1.8	– 0.3	– 0.5	– 0.0	– 0.1	– 0.6
Nov.	+ 30.3	+ 27.2	+ 4.0	– 0.3	+ 4.2	+ 0.8	+ 3.4	– 0.5	– 0.5	+ 0.1	– 0.6	+ 0.4
Dec.	– 5.9	– 3.0	– 4.2	– 4.8	+ 0.6	+ 2.0	– 1.4	+ 1.9	– 0.6	– 0.1	+ 1.2	+ 0.0
2018 Jan.	+ 7.6	+ 8.0	+ 0.9	+ 3.9	– 3.0	– 1.3	– 1.7	– 0.4	– 0.8	+ 0.4	– 0.2	– 0.2
Feb.	– 3.1	+ 0.3	– 2.5	– 1.7	– 0.8	– 1.4	+ 0.5	– 0.3	– 0.6	+ 0.5	– 0.2	– 0.3
Mar.	– 4.0	– 1.7	– 0.9	+ 3.0	– 3.9	– 1.8	– 2.1	– 0.9	– 0.5	+ 0.5	– 0.2	– 0.5
Apr.	+ 18.6	+ 23.4	– 3.5	– 1.3	– 2.2	– 1.9	– 0.3	– 0.8	– 0.5	+ 0.4	– 0.6	+ 0.2
May	+ 31.9	+ 31.3	+ 1.4	+ 0.1	+ 1.3	+ 1.3	+ 0.0	– 0.3	– 0.5	+ 0.5	– 0.3	– 0.2
June	+ 1.8	– 6.0	+ 9.1	+ 10.3	– 1.2	– 0.5	– 0.7	– 0.9	– 0.4	+ 0.3	+ 0.5	– 0.0
July	+ 0.1	+ 6.1	– 4.4	– 2.9	– 1.5	+ 0.6	– 2.1	– 1.0	– 0.6	+ 0.2	– 0.3	+ 0.8
Aug.	+ 11.9	+ 17.3	– 4.3	– 3.2	– 1.1	+ 1.9	– 3.1	– 0.6	– 0.5	+ 0.5	– 0.0	– 1.0
	Domestic government											**End of year or month***
2015	197.4	57.6	132.6	87.7	44.9	10.2	34.7	3.7	3.5	27.9	2.7	0.5
2016	199.8	57.9	133.5	79.5	54.0	16.6	37.4	3.9	4.5	27.1	2.5	–
2017	201.7	58.9	134.7	65.8	69.0	27.4	41.5	3.6	4.4	25.7	2.3	–
2017 Sep.	210.5	58.8	143.4	77.5	66.0	24.1	41.9	3.7	4.5	25.9	2.3	–
Oct.	207.6	60.0	139.5	72.6	67.0	24.4	42.6	3.7	4.4	25.8	2.3	0.0
Nov.	211.1	61.1	142.2	72.3	69.9	25.8	44.1	3.6	4.2	25.8	2.3	0.0
Dec.	201.7	58.9	134.7	65.8	69.0	27.4	41.5	3.6	4.4	25.7	2.3	–
2018 Jan.	202.1	55.0	139.0	69.6	69.4	27.0	42.4	3.7	4.4	26.1	2.4	–
Feb.	204.3	58.8	137.5	68.7	68.7	26.2	42.5	3.7	4.4	26.1	2.4	–
Mar.	205.9	57.2	140.6	72.2	68.4	25.2	43.2	3.7	4.4	26.0	2.3	–
Apr.	205.1	56.9	140.2	72.3	67.9	23.8	44.1	3.7	4.4	26.0	2.3	–
May	215.9	62.8	145.0	74.7	70.3	25.1	45.2	3.8	4.3	26.0	2.2	–
June	221.4	63.3	150.0	79.3	70.7	24.9	45.8	3.8	4.3	25.8	2.2	–
July	214.9	57.0	149.9	77.3	72.6	25.8	46.8	3.8	4.3	25.7	2.2	0.7
Aug.	223.9	62.7	153.2	79.1	74.0	25.7	48.3	3.8	4.3	25.7	2.2	–
												Changes*
2016	+ 3.1	+ 0.3	+ 2.0	– 6.7	+ 8.7	+ 6.4	+ 2.3	+ 0.1	+ 0.7	– 0.8	– 0.2	– 0.5
2017	– 1.0	+ 1.6	– 2.4	– 14.1	+ 11.7	+ 10.7	+ 0.9	– 0.3	+ 0.1	– 1.1	– 0.3	± 0.0
2017 Sep.	– 3.8	– 2.4	– 1.5	– 2.7	+ 1.2	+ 0.6	+ 0.6	+ 0.0	+ 0.0	– 0.0	– 0.2	–
Oct.	– 3.5	+ 1.1	– 4.5	– 5.0	+ 0.4	+ 0.2	+ 0.2	– 0.1	– 0.1	– 0.1	– 0.0	+ 0.0
Nov.	+ 4.1	+ 1.6	+ 2.6	– 0.2	+ 2.9	+ 1.5	+ 1.4	– 0.1	– 0.0	+ 0.0	– 0.0	–
Dec.	– 11.1	– 2.1	– 9.2	– 6.5	– 2.7	+ 1.6	– 4.3	+ 0.1	+ 0.2	– 0.2	– 0.0	– 0.0
2018 Jan.	+ 0.4	– 3.9	+ 4.3	+ 3.8	+ 0.5	– 0.4	+ 0.8	+ 0.0	– 0.0	+ 0.4	+ 0.0	–
Feb.	+ 2.2	+ 3.8	– 1.5	– 0.9	– 0.7	– 0.8	+ 0.1	– 0.0	– 0.0	+ 0.0	– 0.0	–
Mar.	+ 1.6	– 1.6	+ 3.2	+ 3.5	– 0.3	– 1.0	+ 0.7	+ 0.0	– 0.0	– 0.1	– 0.1	–
Apr.	– 0.8	– 0.3	– 0.5	+ 0.0	– 0.5	– 1.4	+ 0.9	– 0.0	+ 0.0	–	– 0.0	–
May	+ 10.8	+ 5.9	+ 4.8	+ 2.4	+ 2.4	+ 1.3	+ 1.1	+ 0.1	– 0.1	–	– 0.0	–
June	+ 5.3	+ 0.5	+ 4.9	+ 4.5	+ 0.4	– 0.2	+ 0.6	+ 0.0	– 0.0	– 0.2	– 0.0	–
July	– 6.4	– 6.3	– 0.1	– 2.0	+ 1.9	+ 0.9	+ 1.0	– 0.0	+ 0.0	– 0.0	– 0.0	+ 0.7
Aug.	+ 9.1	+ 5.7	+ 3.3	+ 1.9	+ 1.4	– 0.1	+ 1.5	+ 0.0	– 0.0	+ 0.1	+ 0.0	– 0.7

***** 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** Including subordinated liabilities and liabilities arising from registered debt securities. **2** Including deposits under savings and loan contracts (see

IV. Banks

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

€ billion

Period	Deposits, total	Sight deposits	Time deposits [1,2]					Savings deposits [3]	Bank savings bonds [4]	Memo item:		
			Total	for up to and including 1 year	for more than 1 year [2]					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos
					Total	for up to and including 2 years	for more than 2 years					
	Domestic enterprises and households											**End of year or month***
2015	3,027.3	1,616.1	765.8	155.3	610.5	27.1	583.5	592.7	52.6	1.4	17.8	–
2016	3,127.0	1,740.3	756.2	152.8	603.3	30.6	572.7	584.6	45.9	1.7	15.8	0.9
2017	3,219.2	1,882.1	718.5	141.9	576.6	29.9	546.8	579.3	39.3	4.3	14.0	1.6
2017 Sep.	3,170.2	1,832.9	718.5	141.2	577.2	31.2	546.1	578.1	40.8	4.1	13.5	1.8
Oct.	3,188.8	1,856.9	713.8	140.1	573.7	30.1	543.5	577.8	40.3	4.1	13.4	1.1
Nov.	3,215.7	1,882.9	715.3	140.1	575.2	29.5	545.6	577.5	40.1	4.3	12.8	1.6
Dec.	3,219.2	1,882.1	718.5	141.9	576.6	29.9	546.8	579.3	39.3	4.3	14.0	1.6
2018 Jan.	3,226.8	1,894.3	715.1	142.0	573.2	28.7	544.5	578.8	38.6	4.4	13.8	1.4
Feb.	3,221.5	1,890.8	714.2	141.1	573.0	28.2	544.9	578.5	38.0	4.9	13.6	1.1
Mar.	3,215.8	1,890.8	710.1	140.7	569.4	27.4	542.1	577.6	37.4	5.5	13.5	0.6
Apr.	3,234.4	1,914.4	706.1	138.5	567.7	26.9	540.8	576.8	37.0	5.9	12.8	0.9
May	3,255.5	1,939.8	702.7	136.1	566.6	26.8	539.7	576.4	36.6	6.4	12.6	0.7
June	3,251.8	1,933.3	706.7	141.8	564.9	26.5	538.4	575.5	36.3	6.9	13.1	0.7
July	3,258.2	1,945.7	702.4	141.0	561.4	26.1	535.3	574.5	35.7	7.0	12.8	0.8
Aug.	3,261.1	1,957.3	694.7	135.9	558.8	28.1	530.7	573.8	35.3	7.4	12.7	0.5
												Changes*
2016	+ 101.7	+ 124.2	– 8.9	– 2.2	– 6.7	+ 3.8	– 10.5	– 8.0	– 5.7	+ 0.3	– 1.9	+ 0.9
2017	+ 104.1	+ 141.3	– 25.1	– 10.6	– 14.4	– 0.7	– 13.8	– 5.3	– 6.7	+ 1.6	– 1.7	+ 0.8
2017 Sep.	+ 8.1	+ 9.9	– 1.0	+ 1.4	– 2.4	– 0.6	– 1.9	– 0.6	– 0.2	– 0.0	– 0.7	+ 1.1
Oct.	+ 19.2	+ 23.9	– 4.0	– 1.0	– 3.0	– 1.0	– 2.0	– 0.2	– 0.4	+ 0.0	– 0.1	– 0.7
Nov.	+ 26.2	+ 25.6	+ 1.4	– 0.0	+ 1.4	– 0.6	+ 2.0	– 0.4	– 0.4	+ 0.1	– 0.6	+ 0.4
Dec.	+ 5.2	– 0.9	+ 5.0	+ 1.8	+ 3.3	+ 0.4	+ 2.9	+ 1.8	– 0.7	+ 0.1	+ 1.3	+ 0.1
2018 Jan.	+ 7.2	+ 11.8	– 3.4	+ 0.1	– 3.5	– 0.9	– 2.6	– 0.5	– 0.8	+ 0.0	– 0.2	– 0.2
Feb.	– 5.3	– 3.5	– 1.0	– 0.8	– 0.2	– 0.6	+ 0.4	– 0.2	– 0.6	+ 0.5	– 0.2	– 0.3
Mar.	– 5.6	– 0.1	– 4.1	– 0.5	– 3.6	– 0.8	– 2.8	– 1.0	– 0.5	+ 0.6	– 0.1	– 0.5
Apr.	+ 19.4	+ 23.7	– 3.0	– 1.3	– 1.7	– 0.5	– 1.2	– 0.8	– 0.5	+ 0.4	– 0.6	+ 0.2
May	+ 21.1	+ 25.3	– 3.4	– 2.3	– 1.1	– 0.0	– 1.1	– 0.4	– 0.4	+ 0.5	– 0.3	– 0.2
June	– 3.6	– 6.5	+ 4.2	+ 5.8	– 1.6	– 0.3	– 1.3	– 0.9	– 0.4	+ 0.5	+ 0.5	– 0.0
July	+ 6.6	+ 12.4	– 4.2	– 0.8	– 3.4	– 0.4	– 3.1	– 1.0	– 0.6	+ 0.2	– 0.3	+ 0.1
Aug.	+ 2.8	+ 11.6	– 7.7	– 5.1	– 2.6	+ 2.0	– 4.6	– 0.7	– 0.5	+ 0.4	– 0.0	– 0.4
	of which: Domestic enterprises											**End of year or month***
2015	1,029.8	502.8	506.5	99.8	406.7	14.4	392.3	7.1	13.3	1.3	14.0	–
2016	1,032.4	518.3	494.1	98.3	395.8	17.4	378.4	6.9	13.2	1.6	13.0	0.9
2017	1,039.6	558.9	461.0	92.9	368.2	17.2	351.0	6.8	12.8	2.7	11.6	1.6
2017 Sep.	1,028.0	546.3	462.0	90.9	371.1	18.7	352.4	6.9	12.9	2.8	11.0	1.8
Oct.	1,038.4	561.0	457.7	90.0	367.7	17.8	349.8	6.9	12.9	2.8	10.9	1.1
Nov.	1,047.0	567.1	459.8	90.6	369.3	17.3	352.0	6.9	13.1	2.9	10.4	1.6
Dec.	1,039.6	558.9	461.0	92.9	368.2	17.2	351.0	6.8	12.8	2.7	11.6	1.6
2018 Jan.	1,051.4	573.9	458.0	93.6	364.4	16.0	348.4	6.9	12.6	2.6	11.4	1.4
Feb.	1,036.8	560.8	456.5	92.5	364.0	15.5	348.6	7.0	12.5	2.7	11.2	1.1
Mar.	1,026.9	555.0	452.5	92.1	360.5	14.9	345.6	7.0	12.4	2.8	11.1	0.6
Apr.	1,034.1	566.2	448.6	89.6	359.0	14.6	344.4	7.1	12.3	2.9	10.5	0.9
May	1,042.4	578.3	444.6	87.0	357.7	14.6	343.0	7.2	12.3	2.9	10.2	0.7
June	1,030.4	562.4	448.5	92.7	355.8	14.2	341.6	7.2	12.4	2.9	10.7	0.7
July	1,033.0	569.8	444.0	91.5	352.5	14.0	338.5	7.2	12.1	2.6	10.4	0.8
Aug.	1,028.5	573.1	436.2	86.3	349.9	16.3	333.6	7.2	12.0	2.5	10.3	0.5
												Changes*
2016	+ 4.6	+ 15.9	– 11.2	– 1.2	– 10.1	+ 3.2	– 13.2	– 0.2	+ 0.1	+ 0.2	– 0.9	+ 0.9
2017	+ 19.5	+ 40.2	– 20.0	– 4.7	– 15.4	– 0.2	– 15.2	– 0.0	– 0.6	+ 0.8	– 1.3	+ 0.8
2017 Sep.	+ 2.1	+ 2.4	– 0.6	+ 2.0	– 2.6	– 0.5	– 2.1	+ 0.1	+ 0.2	– 0.0	– 0.7	+ 1.1
Oct.	+ 11.0	+ 14.7	– 3.7	– 0.8	– 2.9	– 0.8	– 2.0	– 0.0	– 0.0	–	– 0.1	– 0.7
Nov.	+ 7.9	+ 5.7	+ 2.1	+ 0.5	+ 1.5	– 0.5	+ 2.1	+ 0.1	+ 0.1	+ 0.1	– 0.5	+ 0.4
Dec.	– 5.7	– 8.2	+ 3.0	+ 2.3	+ 0.7	– 0.1	+ 0.7	– 0.1	– 0.3	– 0.2	+ 1.3	+ 0.1
2018 Jan.	+ 11.5	+ 14.6	– 3.0	+ 0.7	– 3.8	– 0.9	– 2.9	+ 0.1	– 0.2	– 0.1	– 0.2	– 0.2
Feb.	– 14.5	– 13.0	– 1.5	– 1.2	– 0.3	– 0.5	+ 0.2	+ 0.1	– 0.1	+ 0.1	– 0.2	– 0.3
Mar.	– 9.9	– 5.9	– 4.0	– 0.4	– 3.6	– 0.6	– 3.0	+ 0.0	– 0.1	+ 0.2	– 0.1	– 0.5
Apr.	+ 8.1	+ 11.2	– 3.0	– 1.6	– 1.4	– 0.3	– 1.1	+ 0.1	– 0.1	+ 0.0	– 0.6	+ 0.2
May	+ 8.3	+ 12.1	– 3.9	– 2.7	– 1.3	+ 0.1	– 1.3	+ 0.1	+ 0.0	+ 0.0	– 0.3	– 0.2
June	– 11.9	– 15.9	+ 4.1	+ 5.8	– 1.8	– 0.4	– 1.4	– 0.0	– 0.0	+ 0.0	+ 0.5	– 0.0
July	+ 2.7	+ 7.4	– 4.4	– 1.2	– 3.3	– 0.2	– 3.0	– 0.0	– 0.3	– 0.2	– 0.3	+ 0.1
Aug.	– 4.5	+ 3.4	– 7.8	– 5.2	– 2.6	+ 2.3	– 4.9	+ 0.1	– 0.1	– 0.1	– 0.1	– 0.4

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

IV. Banks

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

€ billion

Period	Deposits of domestic households and non-profit institutions, total	Sight deposits						Time deposits [1,2]					
		Total	by creditor group					Total	by creditor group				
			Domestic households				Domestic non-profit institutions		Domestic households				
			Total	Self-employed persons	Employees	Other individuals			Total	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	
2018 Mar.	2,189.0	1,335.8	1,298.8	223.3	920.1	155.4	37.0	257.6	243.7	22.1	184.3	37.2	
Apr.	2,200.2	1,348.3	1,310.8	228.2	926.6	156.0	37.5	257.5	243.7	21.8	184.7	37.3	
May	2,213.1	1,361.5	1,323.2	231.2	935.5	156.5	38.3	258.1	244.3	21.7	185.3	37.2	
June	2,221.4	1,370.9	1,332.7	228.7	946.4	157.5	38.2	258.2	244.4	21.7	185.6	37.1	
July	2,225.2	1,375.9	1,338.7	235.3	946.2	157.2	37.2	258.4	244.5	21.5	185.9	37.1	
Aug.	2,232.5	1,384.1	1,346.4	243.2	950.9	152.3	37.7	258.6	244.5	21.4	186.3	36.7	
	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	
2018 Mar.	+ 4.3	+ 5.8	+ 5.7	– 2.8	+ 8.3	+ 0.2	+ 0.1	– 0.1	– 0.1	– 0.6	+ 0.6	– 0.1	
Apr.	+ 11.3	+ 12.5	+ 12.0	+ 5.0	+ 6.4	+ 0.6	+ 0.5	– 0.0	– 0.0	– 0.4	+ 0.3	+ 0.0	
May	+ 12.8	+ 13.2	+ 12.4	+ 3.0	+ 8.8	+ 0.5	+ 0.8	+ 0.6	+ 0.6	– 0.0	+ 0.6	– 0.0	
June	+ 8.3	+ 9.4	+ 9.5	– 2.5	+ 10.9	+ 1.1	– 0.1	+ 0.1	+ 0.2	– 0.0	+ 0.3	– 0.1	
July	+ 3.9	+ 5.0	+ 6.0	+ 6.5	– 0.2	– 0.3	– 1.0	+ 0.2	+ 0.1	– 0.2	+ 0.3	– 0.0	
Aug.	+ 7.3	+ 8.2	+ 7.7	+ 3.2	+ 4.6	– 0.1	+ 0.5	+ 0.2	– 0.0	– 0.3	+ 0.4	– 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

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
2018 Mar.	205.9	8.3	4.1	1.3	2.8	0.1	12.9	45.6	11.3	18.8	14.2	1.2	13.1
Apr.	205.1	8.4	4.1	1.4	2.7	0.1	13.0	45.0	11.2	18.1	14.4	1.2	13.0
May	215.9	8.8	4.5	1.4	2.8	0.1	12.9	45.7	10.8	19.3	14.4	1.2	13.0
June	221.4	9.3	4.9	1.6	2.6	0.1	12.7	49.3	11.3	22.4	14.4	1.2	13.0
July	214.9	10.0	5.1	2.2	2.6	0.1	12.7	47.9	11.6	20.4	14.8	1.2	13.0
Aug.	223.9	10.6	6.1	1.7	2.6	0.1	12.7	48.0	10.7	21.4	14.7	1.2	12.9
	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
2018 Mar.	+ 1.6	– 0.4	– 0.3	– 0.1	– 0.1	– 0.0	– 0.0	+ 5.1	+ 1.0	+ 4.6	– 0.4	– 0.0	– 0.0
Apr.	– 0.8	+ 0.1	+ 0.0	+ 0.1	– 0.0	– 0.0	+ 0.1	– 0.7	– 0.1	– 0.7	+ 0.1	– 0.0	– 0.1
May	+ 10.8	+ 0.3	+ 0.4	– 0.0	+ 0.0	–	– 0.0	+ 0.7	– 0.5	+ 1.2	– 0.0	– 0.0	+ 0.0
June	+ 5.3	+ 0.5	+ 0.4	+ 0.2	– 0.2	– 0.0	– 0.2	+ 3.6	+ 0.5	+ 3.1	– 0.0	+ 0.0	– 0.0
July	– 6.4	+ 0.7	+ 0.1	+ 0.6	+ 0.0	– 0.0	– 0.0	– 1.3	+ 0.3	– 2.1	+ 0.4	– 0.0	–
Aug.	+ 9.1	+ 0.6	+ 1.1	– 0.5	+ 0.0	– 0.0	+ 0.0	+ 0.2	– 0.9	+ 1.0	+ 0.0	– 0.0	+ 0.1

***** 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

Domestic non-profit institutions	by maturity: up to and including 1 year	more than 1 year [2]: Total	of which: up to and including 2 years	of which: more than 2 years	Savings deposits [3]: Total	Savings deposits [3]: Domestic households	Savings deposits [3]: Domestic non-profit institutions	Bank savings bonds [4]	Memo item: Fiduciary loans	Memo item: Subordinated liabilities (excluding negotiable debt securities) [5]	Memo item: Liabilities arising from repos	Period
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
13.9	48.6	209.0	12.5	196.5	570.5	562.8	7.7	25.1	2.6	2.4	–	2018 Mar.
13.9	48.8	208.7	12.3	196.4	569.7	562.0	7.7	24.7	3.0	2.4	–	Apr.
13.8	49.2	208.9	12.2	196.7	569.2	561.5	7.7	24.3	3.5	2.4	–	May
13.8	49.1	209.1	12.3	196.8	568.3	560.6	7.7	23.9	4.0	2.4	–	June
13.9	49.5	208.9	12.2	196.7	567.3	559.7	7.6	23.6	4.4	2.4	–	July
14.1	49.6	208.9	11.8	197.1	566.6	559.0	7.6	23.2	5.0	2.4	–	Aug.
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
+ 0.0	– 0.1	– 0.0	– 0.2	+ 0.2	– 1.0	– 1.0	+ 0.0	– 0.4	+ 0.4	+ 0.0	–	2018 Mar.
+ 0.0	+ 0.3	– 0.3	– 0.2	– 0.1	– 0.8	– 0.8	– 0.0	– 0.4	+ 0.4	– 0.0	–	Apr.
– 0.0	+ 0.4	+ 0.2	– 0.1	+ 0.3	– 0.5	– 0.5	– 0.0	– 0.4	+ 0.5	+ 0.0	–	May
– 0.0	– 0.1	+ 0.2	+ 0.1	+ 0.1	– 0.9	– 0.9	– 0.0	– 0.4	+ 0.5	+ 0.0	–	June
+ 0.1	+ 0.3	– 0.1	– 0.1	– 0.0	– 1.0	– 0.9	– 0.0	– 0.3	+ 0.4	+ 0.0	–	July
+ 0.2	+ 0.1	+ 0.0	– 0.3	+ 0.4	– 0.7	– 0.7	– 0.0	– 0.4	+ 0.5	+ 0.0	–	Aug.

registered debt securities. **2** Including deposits under savings and loan contracts (see Table IV.12). **3** Excluding deposits under savings and loan contracts (see also footnote 2). **4** Including liabilities arising from non-negotiable bearer debt securities. **5** Included in time deposits.

Local government and local government associations (including municipal special-purpose associations): Total	Sight deposits	Time deposits [3]: for up to and including 1 year	Time deposits [3]: for more than 1 year	Savings deposits and bank savings bonds [2,4]	Memo item: Fiduciary loans	Social security funds: Total	Sight deposits	Time deposits: for up to and including 1 year	Time deposits: for more than 1 year	Savings deposits and bank savings bonds [2]	Memo item: Fiduciary loans	Period
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
55.4	27.6	7.9	14.2	5.6	0.0	96.6	14.2	44.1	37.2	1.1	–	2018 Mar.
55.4	27.9	7.6	14.3	5.6	0.0	96.3	13.6	45.0	36.5	1.1	–	Apr.
61.0	32.6	8.2	14.6	5.6	0.0	100.4	14.9	45.8	38.6	1.1	–	May
60.5	31.0	9.3	14.6	5.6	0.0	102.3	16.1	45.9	39.2	1.1	–	June
56.7	27.4	9.1	14.5	5.6	0.0	100.4	12.9	45.6	40.7	1.1	–	July
63.2	32.6	10.1	14.8	5.7	0.0	102.2	13.3	45.9	41.8	1.1	–	Aug.
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
– 2.0	– 1.9	– 0.3	+ 0.2	+ 0.1	–	– 1.1	– 0.4	– 0.7	– 0.0	– 0.0	–	2018 Mar.
+ 0.1	+ 0.3	– 0.3	+ 0.1	+ 0.0	–	– 0.4	– 0.6	+ 0.9	– 0.7	– 0.0	–	Apr.
+ 5.5	+ 4.7	+ 0.5	+ 0.2	+ 0.1	–	+ 4.2	+ 1.3	+ 0.7	+ 2.1	– 0.0	–	May
– 0.5	– 1.7	+ 1.2	+ 0.0	– 0.0	–	+ 1.7	+ 1.2	+ 0.0	+ 0.6	– 0.0	–	June
– 3.9	– 3.6	– 0.2	– 0.1	+ 0.0	–	– 1.9	– 3.2	– 0.3	+ 1.6	– 0.0	–	July
+ 6.5	+ 5.1	+ 1.0	+ 0.3	+ 0.0	–	+ 1.8	+ 0.4	+ 0.3	+ 1.1	+ 0.0	–	Aug.

the following Monthly Report, are not specially marked. **1** Federal Railways Fund, Indemnification Fund, Redemption Fund for Inherited Liabilities, ERP Special Fund, German Unity Fund, Equalisation of Burdens Fund. **2** Including liabilities arising from non-negotiable bearer debt securities. **3** Including deposits under savings and loan contracts. **4** Excluding deposits under savings and loan contracts (see also footnote 3).

IV. Banks

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

€ billion

Period	Savings deposits [1]								Memo item: Interest credited on savings deposits	Bank savings bonds, [3] sold to			
		of residents					of non-residents				domestic non-banks		
			at 3 months' notice		at more than 3 months' notice								
	Total	Total	Total	of which: Special savings facilities [2]	Total	of which: Special savings facilities [2]	Total	of which: At 3 months' notice		non-banks, total	Total	of which: With maturities of more than 2 years	foreign non-banks
	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
2018 Apr.	587.7	580.5	539.7	341.4	40.8	29.8	7.3	6.4	0.1	46.2	41.3	30.0	4.9
May	587.4	580.2	539.6	340.6	40.6	29.5	7.2	6.4	0.1	44.8	40.9	29.9	3.9
June	586.4	579.3	539.1	339.4	40.1	29.1	7.2	6.3	0.1	44.5	40.6	29.8	4.0
July	585.4	578.2	538.6	337.4	39.7	28.7	7.1	6.3	0.1	44.0	40.0	29.5	4.0
Aug.	584.7	577.6	538.4	336.7	39.2	28.3	7.1	6.3	0.1	43.5	39.5	29.3	4.0
	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
2018 Apr.	– 0.8	– 0.8	– 0.3	– 1.3	– 0.5	– 0.5	– 0.0	– 0.0	.	– 0.5	– 0.5	– 0.3	+ 0.0
May	– 0.4	– 0.3	– 0.1	– 0.8	– 0.2	– 0.3	– 0.0	– 0.0	.	– 1.4	– 0.5	– 0.1	– 0.9
June	– 1.0	– 0.9	– 0.4	– 1.2	– 0.5	– 0.4	– 0.0	– 0.0	.	– 0.4	– 0.4	– 0.2	+ 0.0
July	– 1.1	– 1.0	– 0.5	– 2.0	– 0.5	– 0.4	– 0.1	– 0.0	.	– 0.6	– 0.6	– 0.3	+ 0.0
Aug.	– 0.7	– 0.6	– 0.2	– 1.1	– 0.4	– 0.4	– 0.1	– 0.0	.	– 0.5	– 0.5	– 0.2	+ 0.0

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** 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	
		of which:				with maturities of								
						up to and including 1 year		more than 1 year up to and including 2 years						
	Total	Floating rate bonds [1]	Zero coupon bonds [1,2]	Foreign currency bonds [3,4]	Certificates of deposit	Total	of which: without a nominal guarantee [5]	Total	of which: without a nominal guarantee [5]	more than 2 years	Total	of which: with maturities of more than 2 years	negotiable debt securities	non-negotiable debt securities
	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
2018 Apr.	1,085.5	144.6	25.0	363.9	87.1	103.0	4.4	31.0	7.4	951.6	0.3	0.2	30.3	0.5
May	1,103.2	146.5	27.0	376.1	89.7	107.7	4.4	31.3	7.5	964.3	0.3	0.2	30.4	0.4
June	1,088.9	141.9	26.1	364.4	83.4	101.1	4.2	29.4	7.1	958.3	0.5	0.2	30.1	0.5
July	1,080.7	139.7	26.4	354.2	81.4	99.2	4.3	27.7	7.2	953.8	0.6	0.2	30.0	0.5
Aug.	1,085.9	139.8	27.5	351.3	82.8	101.9	4.3	28.0	7.2	956.0	0.8	0.2	30.2	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
2018 Apr.	+ 4.2	– 1.6	– 0.8	– 3.5	+ 3.5	+ 2.4	+ 0.1	– 1.3	+ 0.3	+ 3.1	+ 0.0	+ 0.0	+ 0.1	– 0.0
May	+ 17.6	+ 1.8	+ 2.0	+ 12.2	+ 2.5	+ 4.7	– 0.0	+ 0.3	+ 0.2	+ 12.7	+ 0.0	– 0.0	+ 0.2	– 0.0
June	– 14.3	– 4.6	– 0.9	– 11.7	– 6.3	– 6.6	– 0.2	– 1.8	– 0.4	– 5.9	+ 0.2	– 0.0	– 0.3	+ 0.0
July	– 8.1	– 2.2	+ 0.3	– 10.2	– 2.0	– 1.9	+ 0.1	– 1.7	+ 0.1	– 4.5	+ 0.1	+ 0.0	– 0.1	+ 0.0
Aug.	+ 5.2	+ 0.1	+ 1.1	– 2.9	+ 1.4	+ 2.7	+ 0.0	+ 0.3	+ 0.1	+ 2.2	+ 0.2	–	+ 0.2	+ 0.0

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Including 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 and 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
2018 June	20	232.9	41.6	0.0	16.2	12.0	107.2	25.4	25.6	2.6	22.8	170.8	10.5	3.1	11.6	7.1
July	20	233.5	42.0	0.0	15.9	12.1	107.4	25.5	25.6	2.7	23.5	170.8	10.4	3.1	11.6	7.3
Aug.	20	233.9	41.6	0.0	16.0	12.0	107.9	25.6	25.8	2.7	23.5	171.2	10.4	3.1	11.6	7.2
Private building and loan associations																
2018 June	12	162.5	25.7	–	7.1	9.0	83.2	22.0	11.6	1.7	20.3	111.2	10.2	3.1	8.0	4.4
July	12	163.0	26.2	–	6.8	9.1	83.3	22.0	11.7	1.7	21.0	111.1	10.2	3.1	7.9	4.5
Aug.	12	163.2	25.8	–	6.8	9.1	83.7	22.1	11.8	1.7	21.0	111.3	10.1	3.1	7.9	4.4
Public building and loan associations																
2018 June	8	70.4	15.9	0.0	9.1	3.0	24.0	3.4	13.9	0.9	2.5	59.6	0.3	–	3.7	2.8
July	8	70.6	15.9	0.0	9.1	3.0	24.1	3.5	14.0	0.9	2.6	59.7	0.3	–	3.7	2.8
Aug.	8	70.8	15.9	0.0	9.1	3.0	24.3	3.5	14.0	1.0	2.5	59.8	0.3	–	3.7	2.7

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		
							Allocations									
							Deposits under savings and loan contracts		Loans under savings and loan contracts 9							
	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	Total	of which: Applied to settlement of interim and bridging loans	Total	of which: Applied to settlement of interim and bridging loans	Newly granted interim and bridging loans and other building loans	Total	of which: Under allocated contracts	Total	of which: Repayments during quarter	Memo item: Housing bonuses received 12
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
2018 June	2.2	0.0	0.7	3.8	2.1	3.6	1.4	0.3	0.4	0.3	1.8	17.5	7.3	0.5	1.4	0.0
July	2.1	0.0	0.7	4.1	2.4	3.8	1.5	0.5	0.5	0.4	1.8	17.4	7.3	0.6		0.0
Aug.	2.2	0.0	0.6	3.6	2.0	3.3	1.2	0.4	0.4	0.3	1.7	17.3	7.3	0.5		0.0
Private building and loan associations																
2018 June	1.5	0.0	0.3	2.7	1.4	2.7	1.0	0.2	0.2	0.2	1.5	12.4	4.1	0.4	1.0	0.0
July	1.4	0.0	0.4	3.1	1.8	2.9	1.1	0.4	0.4	0.3	1.4	12.4	4.1	0.4		0.0
Aug.	1.4	0.0	0.3	2.6	1.3	2.6	0.9	0.3	0.3	0.2	1.4	12.2	4.0	0.4		0.0
Public building and loan associations																
2018 June	0.8	0.0	0.4	1.1	0.7	0.9	0.4	0.1	0.1	0.1	0.4	5.1	3.3	0.1	0.4	0.0
July	0.8	0.0	0.3	1.0	0.6	0.9	0.4	0.1	0.1	0.1	0.4	5.0	3.2	0.1		0.0
Aug.	0.8	0.0	0.3	1.0	0.7	0.8	0.3	0.1	0.1	0.1	0.4	5.1	3.3	0.1		0.0

***** Excluding assets and liabilities and/or transactions of foreign branches. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Including claims on building and loan associations, claims arising from registered debt securities and central bank credit balances. **2** Loans under savings and loan contracts and interim and bridging loans. **3** Including money market paper and small amounts of other securities issued by banks. **4** Including equalisation claims. **5** Including liabilities to building and loan associations. **6** Including small amounts of savings deposits. **7** Including participation rights capital and fund for general banking risks. **8** Total amount covered by the contracts; only contracts newly entered into, for which the contract fee has been fully paid. Increases in the sum contracted count as new contracts. **9** For disbursements of deposits under savings and loan contracts arising from the allocation of contracts see "Capital disbursed". **10** Including housing bonuses credited. **11** Only allocations accepted by the beneficiaries; including allocations applied to settlement of interim and bridging loans. **12** The amounts already credited to the accounts of savers or borrowers are also included in "Amounts paid into savings and loan accounts" and "Interest and repayments received on building loans". **13** See Table IV.2, footnote 1.

IV. Banks

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

€ billion

Period	Number of: German banks (MFIs) with foreign branches and/or foreign subsidiaries	Number of: foreign branches [1] and/or foreign subsidiaries	Balance sheet total [7]	Lending to banks (MFIs): Total	Lending to banks (MFIs): Credit balances and loans: Total	Lending to banks (MFIs): Credit balances and loans: German banks	Lending to banks (MFIs): Credit balances and loans: Foreign banks	Lending to banks (MFIs): Money market paper, securities [2,3]	Lending to non-banks (non-MFIs): Total	Lending to non-banks (non-MFIs): Loans: Total	Lending to non-banks (non-MFIs): Loans: to German non-banks	Lending to non-banks (non-MFIs): Loans: to foreign non-banks	Lending to non-banks (non-MFIs): Money market paper, securities [2]	Other assets [7]: Total	Other assets [7]: of which: Derivative financial instruments in the trading portfolio
	Foreign branches														**End of year or month ***
2015	51	198	1,842.9	526.0	508.7	161.3	347.5	17.3	635.1	511.6	14.0	497.6	123.6	681.8	499.0
2016	51	191	1,873.3	584.2	570.5	205.0	365.5	13.8	580.5	489.8	14.5	475.3	90.8	708.5	485.3
2017	52	187	1,647.8	493.9	484.1	197.1	287.0	9.8	528.8	443.2	13.1	430.1	85.6	625.1	402.9
2017 Oct.	51	187	1,788.9	579.0	567.0	185.8	381.1	12.1	558.7	477.1	13.5	463.6	81.5	651.2	418.3
Nov.	51	187	1,712.1	516.9	505.0	187.2	317.9	11.9	562.5	481.7	13.6	468.1	80.9	632.7	416.0
Dec.	52	187	1,647.8	493.9	484.1	197.1	287.0	9.8	528.8	443.2	13.1	430.1	85.6	625.1	402.9
2018 Jan.	50	184	1,741.4	508.5	496.7	201.0	295.7	11.8	536.6	454.7	13.2	441.5	81.9	696.3	444.0
Feb.	50	183	1,670.4	510.1	497.5	210.0	287.5	12.5	526.2	450.5	12.7	437.8	75.7	634.1	413.4
Mar.	50	183	1,594.2	507.4	495.1	188.2	306.8	12.4	506.8	426.9	12.9	414.0	79.9	580.0	385.2
Apr.	49	182	1,634.4	504.6	491.8	187.1	304.8	12.7	524.6	443.8	10.8	433.1	80.8	605.2	408.0
May	48	181	1,612.2	497.1	484.2	190.3	293.9	12.8	531.9	452.8	14.5	438.3	79.1	583.2	364.2
June	48	182	1,532.6	473.3	461.3	182.2	279.1	11.9	509.6	430.9	14.5	416.4	78.6	549.8	350.1
July	48	182	1,506.5	468.4	456.3	184.9	271.4	12.1	510.1	432.4	15.3	417.1	77.7	528.0	328.8
															Changes *
2016	± 0	– 7	+ 29.1	+ 49.3	+ 52.9	+ 43.7	+ 9.2	– 3.5	– 56.4	– 24.6	+ 0.5	– 25.1	– 31.8	+ 24.9	– 14.8
2017	+ 1	– 4	– 216.7	– 52.5	– 49.4	– 7.9	– 41.5	– 3.1	– 10.9	– 10.0	– 1.4	– 8.6	– 0.9	– 74.6	– 60.4
2017 Nov.	–	–	– 75.5	– 56.8	– 56.7	+ 1.3	– 58.0	– 0.1	+ 9.1	+ 9.3	+ 0.1	+ 9.2	– 0.2	– 17.3	+ 0.3
Dec.	+ 1	–	– 63.5	– 20.0	– 18.0	+ 9.9	– 27.9	– 2.0	– 29.8	– 35.0	– 0.5	– 34.5	+ 5.2	– 6.7	– 11.1
2018 Jan.	– 2	– 3	+ 95.9	+ 22.3	+ 20.2	+ 4.0	+ 16.2	+ 2.1	+ 17.0	+ 19.5	+ 0.1	+ 19.4	– 2.5	+ 73.5	+ 46.4
Feb.	–	– 1	– 72.6	– 2.9	– 3.6	+ 9.0	– 12.6	+ 0.7	– 16.0	– 9.2	– 0.5	– 8.8	– 6.7	– 63.8	– 33.9
Mar.	–	–	– 75.6	– 1.0	– 0.8	– 21.8	+ 21.0	– 0.2	– 17.5	– 21.8	+ 0.2	– 22.0	+ 4.3	– 53.6	– 26.9
Apr.	– 1	– 1	+ 39.1	– 7.0	– 7.3	– 1.2	– 6.2	+ 0.3	+ 13.6	+ 13.2	– 2.2	+ 15.3	+ 0.5	+ 24.1	+ 19.4
May	– 1	– 1	– 24.6	– 15.2	– 15.1	+ 3.2	– 18.3	– 0.1	– 2.1	+ 0.6	+ 3.8	– 3.1	– 2.8	– 24.4	– 50.3
June	–	+ 1	– 79.7	– 24.1	– 23.2	– 8.1	– 15.1	– 0.9	– 22.2	– 21.8	– 0.0	– 21.8	– 0.4	– 33.5	– 14.3
July	–	–	– 25.5	– 3.3	– 3.5	+ 2.7	– 6.2	+ 0.2	+ 2.8	+ 3.3	+ 0.8	+ 2.5	– 0.5	– 21.3	– 20.3
	Foreign subsidiaries														**End of year or month ***
2015	24	58	376.0	126.5	113.5	50.1	63.4	13.0	184.3	152.5	22.2	130.3	31.8	65.1	–
2016	20	53	320.5	82.1	72.2	21.4	50.8	9.9	161.4	130.3	22.6	107.7	31.2	76.9	–
2017	20	50	276.6	70.4	63.9	25.0	39.0	6.5	149.5	122.2	22.2	99.9	27.4	56.7	–
2017 Oct.	20	50	276.9	73.1	66.7	27.8	38.9	6.4	145.5	118.2	22.9	95.3	27.3	58.3	–
Nov.	20	50	277.3	74.1	67.5	27.8	39.7	6.6	145.5	117.9	22.6	95.3	27.6	57.7	–
Dec.	20	50	276.6	70.4	63.9	25.0	39.0	6.5	149.5	122.2	22.2	99.9	27.4	56.7	–
2018 Jan.	20	50	274.8	71.5	64.6	25.6	39.0	6.9	146.3	119.8	22.2	97.6	26.5	56.9	–
Feb.	20	50	273.9	73.0	66.4	26.6	39.8	6.6	147.0	120.3	22.7	97.7	26.6	53.9	–
Mar.	20	50	276.0	72.3	65.8	26.5	39.3	6.5	150.3	123.1	22.5	100.6	27.2	53.4	–
Apr.	20	50	267.7	64.4	58.0	23.6	34.3	6.4	147.7	120.7	21.7	99.0	27.0	55.7	–
May	20	50	274.5	67.0	60.5	26.3	34.1	6.6	149.3	121.6	21.8	99.8	27.6	58.2	–
June	20	48	269.1	64.2	57.9	24.5	33.4	6.3	148.8	122.5	21.9	100.5	26.3	56.1	–
July	19	47	248.5	62.2	56.0	24.5	31.5	6.3	136.5	112.6	13.5	99.1	23.8	49.8	–
															Changes *
2016	– 4	– 5	– 56.8	– 45.9	– 42.6	– 28.7	– 13.9	– 3.3	– 22.7	– 22.1	+ 0.4	– 22.4	– 0.6	+ 11.8	–
2017	–	– 3	– 33.3	– 4.9	– 2.4	+ 3.5	– 6.0	– 2.5	– 8.2	– 4.4	– 0.4	– 4.0	– 3.8	– 20.2	–
2017 Nov.	–	–	+ 1.5	+ 1.9	+ 1.6	+ 0.0	+ 1.5	+ 0.3	+ 0.3	+ 0.1	– 0.3	+ 0.4	+ 0.3	– 0.7	–
Dec.	–	–	+ 0.1	– 3.1	– 3.1	– 2.8	– 0.3	– 0.0	+ 4.3	+ 4.5	– 0.4	+ 4.8	– 0.2	– 1.0	–
2018 Jan.	–	–	+ 0.2	+ 2.5	+ 1.9	+ 0.7	+ 1.2	+ 0.6	– 2.6	– 1.7	– 0.0	– 1.7	– 0.8	+ 0.3	–
Feb.	–	–	– 2.1	+ 0.7	+ 1.1	+ 1.0	+ 0.1	– 0.4	+ 0.2	+ 0.2	+ 0.4	– 0.3	+ 0.1	– 3.0	–
Mar.	–	–	+ 2.9	– 0.2	– 0.2	– 0.1	– 0.1	– 0.0	+ 3.6	+ 3.0	– 0.1	+ 3.1	+ 0.5	– 0.5	–
Apr.	–	–	– 9.2	– 8.5	– 8.2	– 2.9	– 5.3	– 0.2	– 2.9	– 2.7	– 0.9	– 1.9	– 0.2	+ 2.2	–
May	–	–	+ 4.5	+ 1.2	+ 1.3	+ 2.7	– 1.4	– 0.1	+ 0.8	+ 0.1	+ 0.1	+ 0.0	+ 0.7	+ 2.5	–
June	–	– 2	– 5.4	– 2.9	– 2.6	– 1.8	– 0.8	– 0.3	– 0.5	+ 0.8	+ 0.1	+ 0.7	– 1.3	– 2.1	–
July	– 1	– 1	– 20.2	– 1.7	– 1.7	– 0.1	– 1.6	+ 0.0	– 12.2	– 9.7	– 8.4	– 1.3	– 2.5	– 6.4	–

***** In this table "foreign" also includes the country of domicile of the foreign branches and foreign subsidiaries. Statistical revisions have been eliminated from the changes. (Breaks owing to changes in the reporting population have not been eliminated from the flow figures for the foreign subsidiaries.) The figures for the latest date are always to be regarded as provisional; subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Several branches in a given

IV. Banks

Deposits									Money market paper and debt securities outstanding [5]	Working capital and own funds	Other liabilities [6,7]		Period
	of banks (MFIs)			of non-banks (non-MFIs)									
					German non-banks [4]								
Total	Total	German banks	Foreign banks	Total	Total	Short-term	Medium and long-term	Foreign non-banks			Total	of which: Derivative financial instruments in the trading portfolio	
End of year or month *												**Foreign branches**	
1,060.9	715.3	359.3	356.0	345.6	21.1	16.2	4.9	324.6	128.9	49.9	603.1	497.4	2015
1,136.5	800.9	424.9	376.0	335.6	15.4	11.8	3.6	320.2	100.6	51.2	585.1	481.0	2016
1,000.3	682.5	372.8	309.7	317.8	16.0	14.1	1.9	301.8	97.0	51.9	498.6	399.2	2017
1,127.3	768.4	379.7	388.7	358.9	14.1	11.4	2.7	344.8	98.4	49.8	513.3	412.8	2017 Oct.
1,051.4	695.8	352.4	343.4	355.6	16.0	13.1	2.8	339.6	95.1	49.4	516.2	412.2	Nov.
1,000.3	682.5	372.8	309.7	317.8	16.0	14.1	1.9	301.8	97.0	51.9	498.6	399.2	Dec.
1,040.4	688.7	379.5	309.2	351.8	15.6	14.0	1.6	336.2	109.6	51.4	539.9	442.8	2018 Jan.
1,013.9	653.6	383.8	269.8	360.3	14.9	13.2	1.6	345.4	105.7	51.4	499.5	413.3	Feb.
1,006.2	672.6	386.6	285.9	333.6	14.7	13.0	1.7	318.9	97.3	50.9	439.9	387.6	Mar.
1,015.5	678.3	389.4	288.9	337.2	14.8	13.2	1.6	322.5	99.6	51.1	468.2	399.6	Apr.
1,034.4	685.7	411.6	274.1	348.7	13.5	11.9	1.5	335.2	104.5	51.7	421.6	358.5	May
972.3	657.9	406.3	251.7	314.4	12.4	10.9	1.5	301.9	109.6	51.7	399.0	347.1	June
957.1	649.1	395.0	254.1	308.0	10.8	9.3	1.5	297.2	101.5	51.7	396.2	323.8	July
Changes *													
+ 66.8	+ 76.8	+ 65.6	+ 11.2	– 10.1	– 5.7	– 4.4	– 1.2	– 4.4	– 29.6	+ 1.2	– 18.1	– 17.3	2016
– 97.3	– 80.7	– 52.1	– 28.6	– 16.7	+ 0.6	+ 2.3	– 1.7	– 17.3	+ 5.2	+ 0.8	– 86.5	– 58.1	2017
– 70.5	– 67.4	– 27.3	– 40.1	– 3.1	+ 1.9	+ 1.8	+ 0.1	– 5.0	– 2.2	– 0.3	+ 2.9	+ 2.2	2017 Nov.
– 47.9	– 10.3	+ 20.4	– 30.6	– 37.7	+ 0.1	+ 1.0	– 0.9	– 37.7	+ 2.8	+ 2.5	– 17.6	– 10.8	Dec.
+ 48.2	+ 13.9	+ 6.7	+ 7.2	+ 34.2	– 0.4	– 0.1	– 0.3	+ 34.6	+ 15.0	– 0.5	+ 41.4	+ 49.2	2018 Jan.
– 31.1	– 39.4	+ 4.4	– 43.8	+ 8.3	– 0.8	– 0.8	+ 0.0	+ 9.1	– 5.6	– 0.0	– 40.4	– 32.9	Feb.
– 6.1	+ 20.5	+ 2.8	+ 17.7	– 26.6	– 0.2	– 0.2	+ 0.0	– 26.4	– 7.9	– 0.5	– 59.6	– 24.3	Mar.
+ 5.5	+ 2.0	+ 2.8	– 0.8	+ 3.5	+ 0.1	+ 0.2	– 0.1	+ 3.4	+ 1.2	+ 0.3	+ 28.2	+ 8.4	Apr.
+ 11.5	+ 0.3	+ 22.2	– 21.8	+ 11.2	– 1.3	– 1.3	– 0.0	+ 12.5	+ 2.5	+ 0.6	– 46.6	– 47.6	May
– 62.4	– 28.0	– 5.3	– 22.7	– 34.4	– 1.1	– 1.1	+ 0.0	– 33.3	+ 4.9	+ 0.0	– 22.5	– 11.6	June
– 13.9	– 7.6	– 11.3	+ 3.7	– 6.3	– 1.6	– 1.6	– 0.0	– 4.7	– 7.5	+ 0.0	– 2.9	– 22.3	July
End of year or month *												**Foreign subsidiaries**	
292.3	166.7	99.6	67.1	125.7	13.1	10.5	2.6	112.6	14.4	26.3	42.9	–	2015
247.0	134.3	71.8	62.5	112.7	12.2	6.7	5.5	100.5	13.6	23.8	36.0	–	2016
207.1	96.3	49.8	46.5	110.8	12.0	6.2	5.8	98.8	13.0	24.2	32.3	–	2017
208.6	99.9	53.3	46.7	108.7	11.7	5.9	5.8	97.0	12.9	23.1	32.3	–	2017 Oct.
207.8	98.1	53.3	44.8	109.7	11.9	6.1	5.8	97.8	12.9	23.1	33.6	–	Nov.
207.1	96.3	49.8	46.5	110.8	12.0	6.2	5.8	98.8	13.0	24.2	32.3	–	Dec.
206.0	96.1	50.3	45.8	110.0	12.1	6.3	5.9	97.8	13.0	24.0	31.7	–	2018 Jan.
205.2	94.1	50.6	43.6	111.1	12.0	6.2	5.8	99.1	13.8	23.6	31.3	–	Feb.
207.3	96.0	50.4	45.5	111.3	11.2	5.3	5.9	100.1	13.7	23.9	31.1	–	Mar.
200.4	90.3	48.5	41.7	110.1	11.6	5.7	5.9	98.6	13.4	23.8	30.1	–	Apr.
206.7	95.4	49.8	45.6	111.2	12.3	6.4	5.9	98.9	13.4	23.9	30.5	–	May
202.6	95.4	50.9	44.5	107.2	12.1	6.1	6.0	95.1	12.7	23.8	30.0	–	June
184.1	77.4	40.3	37.2	106.7	12.3	6.3	5.9	94.4	12.7	22.9	28.8	–	July
Changes *													
– 46.2	– 33.5	– 27.8	– 5.7	– 12.7	– 0.9	– 3.8	+ 2.9	– 11.9	– 0.8	– 2.5	– 7.3	–	2016
– 32.8	– 33.7	– 22.0	– 11.8	+ 0.9	– 0.2	– 0.5	+ 0.3	+ 1.1	– 0.6	+ 0.3	– 0.3	–	2017
– 0.0	– 1.4	+ 0.0	– 1.4	+ 1.4	+ 0.3	+ 0.3	– 0.0	+ 1.1	+ 0.0	– 0.1	+ 1.6	–	2017 Nov.
– 0.1	– 1.4	– 3.5	+ 2.0	+ 1.3	+ 0.0	+ 0.1	– 0.0	+ 1.3	+ 0.1	+ 1.1	– 1.1	–	Dec.
+ 0.6	+ 0.7	+ 0.5	+ 0.2	– 0.1	+ 0.2	+ 0.1	+ 0.1	– 0.3	– 0.0	– 0.2	– 0.1	–	2018 Jan.
– 1.7	– 2.4	+ 0.3	– 2.7	+ 0.7	– 0.2	– 0.1	– 0.1	+ 0.9	+ 0.8	– 0.4	– 0.8	–	Feb.
+ 2.4	+ 2.0	– 0.1	+ 2.1	+ 0.4	– 0.8	– 0.8	+ 0.1	+ 1.2	– 0.1	+ 0.3	+ 0.2	–	Mar.
– 7.7	– 6.2	– 1.9	– 4.3	– 1.5	+ 0.4	+ 0.3	+ 0.1	– 1.9	– 0.3	– 0.1	– 1.0	–	Apr.
+ 4.9	+ 4.4	+ 1.3	+ 3.1	+ 0.5	+ 0.8	+ 0.7	+ 0.0	– 0.3	+ 0.1	+ 0.1	– 0.5	–	May
– 4.2	– 0.1	+ 1.0	– 1.1	– 4.0	– 0.2	– 0.3	+ 0.0	– 3.8	– 0.7	– 0.1	– 0.5	–	June
– 18.2	– 17.8	– 10.6	– 7.2	– 0.4	+ 0.2	+ 0.2	– 0.0	– 0.6	– 0.0	– 0.9	– 1.1	–	July

country of domicile are regarded as a single branch. **2** Treasury bills, Treasury discount paper and other money market paper, debt securities. **3** Including own debt securities. **4** Excluding subordinated liabilities and non-negotiable debt securities. **5** Issues of negotiable and non-negotiable debt securities and money market paper. **6** Including subordinated liabilities. **7** See also Table IV.2, footnote 1.

V. Minimum reserves

1. Reserve maintenance in the euro area

€ billion

Maintenance period beginning in [1]	Reserve base [2]	Required reserves before deduction of lump-sum allowance [3]	Required reserves after deduction of lump-sum allowance [4]	Current accounts [5]	Excess reserves [6]	Deficiencies [7]
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 July	.	.	.	.	.	.
Aug.	12,710.2	127.1	126.7	1,348.7	1,222.0	0.0
Sep. p	12,705.7	127.1	126.7	...	...	...

2. Reserve maintenance in Germany

€ million

Maintenance period beginning in [1]	Reserve base [2]	German share of euro area reserve base as a percentage	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 July	.	.	.	.	.	.	.
Aug.	3,540,040	27.9	35,400	35,245	438,992	403,747	1
Sep.	3,537,002	27.8	35,370	35,216	...	...	...

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 July	.	.	.	.	.	.	.
Aug.	7,117	4,860	3,397	11,525	6,479	100	1,766
Sep.	7,195	4,905	3,303	11,554	6,510	93	1,655

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 July	.	.	.	.	.
Aug.	2,417,835	1,505	430,763	578,742	111,196
Sep.	2,421,759	666	428,594	577,771	108,207

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

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		
July 1	1.13	2013 Jan. 1	–0.13
		July 1	–0.38
2005 Jan. 1	1.21		
July 1	1.17	2014 Jan. 1	–0.63
		July 1	–0.73
2006 Jan. 1	1.37		
July 1	1.95	2015 Jan. 1	–0.83
2007 Jan. 1	2.70	2016 July 1	–0.88
July 1	3.19		
2008 Jan. 1	3.32		
July 1	3.19		

1 Pursuant to Section 247 of the Civil Code.

3. Eurosystem monetary policy operations allotted through tenders *

Date of settlement	Bid amount	Allotment amount	Fixed rate tenders: Fixed rate	Variable rate tenders: Minimum bid rate	Variable rate tenders: Marginal rate 1	Variable rate tenders: Weighted average rate	Running for ... days
	€ million		% per annum				
Main refinancing operations							
2018 Sep. 19	4,963	4,963	0.00	–	–	–	7
Sep. 26	6,434	6,434	0.00	–	–	–	7
Oct. 3	7,241	7,241	0.00	–	–	–	7
Oct. 10	7,302	7,302	0.00	–	–	–	7
Oct. 17	7,860	7,860	0.00	–	–	–	7
Long-term refinancing operations							
2018 June 28	2,266	2,266	2 ...	–	–	–	91
July 26	797	797	2 ...	–	–	–	98
Aug. 30	1,454	1,454	2 ...	–	–	–	91
Sep. 27	1,261	1,261	2 ...	–	–	–	84

***** Source: ECB. **1** Lowest or highest interest rate at which funds were allotted or collected. **2** Interest payment on the maturity date; the rate will be fixed at the average minimum bid rate of the main refinancing operations over the life of this operation.

4. Money market rates, by month *

% per annum

Monthly average	EONIA 1	EURIBOR 2: One-week funds	One-month funds	Three-month funds	Six-month funds	Nine-month funds	Twelve-month funds
2018 Mar.	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19
Apr.	– 0.37	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19
May	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19
June	– 0.36	– 0.38	– 0.37	– 0.32	– 0.27	– 0.21	– 0.18
July	– 0.36	– 0.38	– 0.37	– 0.32	– 0.27	– 0.22	– 0.18
Aug.	– 0.36	– 0.38	– 0.37	– 0.32	– 0.27	– 0.21	– 0.17
Sep.	– 0.36	– 0.38	– 0.37	– 0.32	– 0.27	– 0.21	– 0.17

***** Averages are Bundesbank calculations. Neither the Deutsche Bundesbank nor anyone else can be held liable for any irregularity or inaccuracy of the EONIA or the EURIBOR. **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 o

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 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2017 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
Mar.	0.27	65,081	1.30	216,572	0.05	72,699	1.01	26,676
Apr.	0.27	64,883	1.29	216,237	0.04	69,677	0.99	26,913
May	0.27	64,743	1.28	216,238	0.06	68,665	0.97	26,848
June	0.26	64,554	1.27	216,143	0.03	68,825	0.94	26,966
July	0.26	64,623	1.26	215,907	0.03	67,013	0.93	26,859
Aug.	0.25	64,215	1.25	216,126	0.04	69,064	0.92	27,206

End of month	Housing loans to households 3						Loans to households for consumption and other purposes 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 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2017 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.	2.31	3,869	1.95	25,474	2.65	1,147,522	7.07	48,468	3.84	87,842	3.92	312,671
Mar.	2.31	3,983	1.94	25,497	2.62	1,153,724	7.03	49,131	3.82	88,481	3.91	311,587
Apr.	2.32	3,933	1.93	25,480	2.60	1,157,212	6.99	48,590	3.79	89,131	3.90	312,321
May	2.31	4,024	1.93	25,609	2.58	1,162,731	7.04	48,209	3.76	84,759	3.89	312,220
June	2.27	4,139	1.92	25,721	2.56	1,169,692	7.03	48,827	3.74	85,404	3.88	311,756
July	2.27	4,217	1.90	25,586	2.54	1,174,210	7.00	48,360	3.75	85,994	3.86	312,593
Aug.	2.28	4,211	1.89	25,642	2.52	1,180,809	7.00	48,057	3.75	86,634	3.85	313,803

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 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2017 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	672,403
Mar.	2.39	145,640	1.87	139,810	2.18	672,250
Apr.	2.33	145,705	1.86	140,823	2.16	675,236
May	2.26	149,325	1.78	138,956	2.15	678,530
June	2.29	149,189	1.76	140,052	2.13	680,131
July	2.20	148,897	1.74	142,697	2.12	684,893
Aug.	2.22	148,026	1.74	144,009	2.11	688,709

***** 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 non-financial corporations domiciled in the euro area. The household sector comprises individuals (including sole proprietors) and non-profit institutions serving households. Non-financial corporations include all enterprises other than insurance corporations, 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). **o** 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 on 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	Households' deposits											
			with an agreed maturity of						redeemable at notice [8] of			
	Overnight		up to 1 year		over 1 year and up to 2 years		over 2 years		up to 3 months		over 3 months	
	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million
2017 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
Mar.	0.02	1,334,702	0.30	3,995	0.38	470	0.74	765	0.17	539,077	0.27	41,021
Apr.	0.02	1,347,466	0.31	4,240	0.32	552	0.60	712	0.17	538,787	0.26	40,559
May	0.02	1,360,605	0.36	4,235	0.42	446	0.62	587	0.16	538,616	0.27	40,277
June	0.02	1,370,363	0.30	4,294	0.51	597	0.66	737	0.16	538,165	0.26	39,811
July	0.02	1,375,299	0.27	5,005	0.40	626	0.63	693	0.16	537,703	0.26	39,331
Aug.	0.01	1,383,683	0.30	5,135	0.43	516	0.67	677	0.15	537,459	0.26	38,903

Reporting period	Non-financial corporations' deposits							
			with an agreed maturity of					
	Overnight		up to 1 year		over 1 year and up to 2 years		over 2 years	
	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
2017 Aug.	– 0.02	409,698	– 0.04	9,710	0.21	185.00	0.52	666.00
Sep.	– 0.02	414,461	– 0.08	10,040	0.09	351.00	0.37	704.00
Oct.	– 0.02	425,806	– 0.10	9,134	0.04	412.00	0.26	1,456.00
Nov.	– 0.02	428,784	– 0.08	9,337	0.09	897.00	0.22	1,237.00
Dec.	– 0.02	425,477	– 0.07	13,102	0.09	351.00	0.28	1,477.00
2018 Jan.	– 0.02	429,587	– 0.07	11,368	0.01	520.00	0.30	1,271.00
Feb.	– 0.02	419,428	– 0.09	8,751	0.11	186.00	0.32	932.00
Mar.	– 0.02	418,683	– 0.08	10,133	0.13	347.00	0.31	427.00
Apr.	– 0.03	430,412	– 0.11	8,954	0.06	314.00	0.35	815.00
May	– 0.03	440,268	– 0.04	9,576	0.11	490.00	0.34	587.00
June	– 0.03	424,633	– 0.10	11,185	0.06	240.00	0.23	447.00
July	– 0.02	429,934	– 0.13	11,466	0.08	354.00	0.29	754.00
Aug.	– 0.02	436,778	– 0.06	10,147	[16] .	[16] .	0.46	723.00

Reporting period	Loans to households											
	Loans for consumption [4] with an initial rate fixation of											
	Total (including charges)	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	
	Annual percentage rate of charge [10] % p.a.	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
2017 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.	5.70	5.68	8,315	7.09	1,451	6.15	258	4.28	3,497	6.72	4,560
Mar.	5.44	5.43	9,545	7.04	1,732	5.97	287	4.10	4,259	6.53	4,999
Apr.	5.66	5.64	9,413	7.17	1,772	6.14	290	4.27	3,912	6.64	5,211
May	5.87	5.85	9,002	7.40	1,846	6.12	292	4.42	3,737	6.91	4,973
June	5.87	5.85	9,052	7.39	1,870	6.25	279	4.39	3,737	6.92	5,036
July	6.02	6.00	9,543	7.42	2,140	6.64	312	4.57	3,715	6.93	5,516
Aug.	5.99	5.97	9,116	7.44	1,938	7.11	317	4.54	3,653	6.91	5,146

For footnotes * and 1 to 6, see p. 44•. **+** For 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. For 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 premiums. **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. **16** The value cannot be published because of confidentiality.

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 households for other purposes [5] with an initial rate fixation of									
	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] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
	Loans to households									
2017 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	5,062	1.77	1,470	1.77	2,161	2.50	753	1.99	2,148
Mar.	2.03	5,883	1.87	1,424	1.77	2,440	2.58	950	2.08	2,493
Apr.	2.12	5,995	2.02	1,826	1.95	2,612	2.65	1,008	2.09	2,375
May	2.04	5,257	1.84	1,476	1.87	2,165	2.48	737	2.07	2,355
June	2.06	6,370	1.93	1,713	1.87	2,607	2.58	903	2.07	2,860
July	2.06	6,380	1.88	2,123	1.94	2,532	2.35	910	2.08	2,938
Aug.	2.07	5,365	1.83	1,452	1.99	2,124	2.51	756	2.00	2,485
	of which: Loans to sole proprietors									
2017 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.	2.07	3,412	.	.	2.01	1,390	2.61	564	1.93	1,458
Mar.	2.07	4,103	.	.	1.87	1,645	2.65	741	2.02	1,717
Apr.	2.18	4,204	.	.	2.05	1,850	2.75	793	2.04	1,561
May	2.11	3,558	.	.	2.09	1,373	2.50	560	2.00	1,625
June	2.07	4,528	.	.	1.92	1,869	2.58	692	2.02	1,967
July	2.13	4,266	.	.	2.09	1,755	2.46	647	2.05	1,864
Aug.	2.13	3,553	.	.	2.12	1,431	2.56	563	1.98	1,559

Reporting period	Loans to households (cont'd)													
	Housing loans [3] with an initial rate fixation of													
	Total (including charges)	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 and up to 10 years		over 10 years	
	Annual percentage rate of charge [10] % p.a.	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
	Total loans												
2017 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
Mar.	1.94	1.89	20,592	1.95	3,981	2.05	2,256	1.73	1,773	1.74	7,047	1.98	9,516
Apr.	1.94	1.89	21,351	1.92	4,645	2.09	2,369	1.72	1,895	1.77	7,418	1.96	9,669
May	1.96	1.91	19,514	1.97	3,803	2.09	2,193	1.74	1,735	1.77	6,847	2.00	8,739
June	1.95	1.90	21,464	1.98	4,691	2.07	3,226	1.76	1,882	1.75	6,771	1.97	9,585
July	1.94	1.88	22,177	1.94	4,907	2.16	2,675	1.74	1,994	1.73	7,666	1.95	9,842
Aug.	1.93	1.87	20,492	1.96	3,401	2.13	2,337	1.70	1,753	1.71	6,973	1.97	9,429
	of which: Collateralised loans [11]												
2017 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
Mar.	.	1.81	9,154	.	.	1.96	831	1.61	871	1.67	3,271	1.94	4,181
Apr.	.	1.82	9,782	.	.	2.08	866	1.55	907	1.71	3,606	1.91	4,403
May	.	1.84	8,392	.	.	2.02	733	1.55	834	1.71	3,043	1.96	3,782
June	.	1.83	9,040	.	.	2.00	1,087	1.61	901	1.71	3,025	1.94	4,027
July	.	1.83	9,622	.	.	2.06	914	1.60	960	1.69	3,575	1.94	4,173
Aug.	.	1.82	8,423	.	.	2.02	807	1.54	792	1.65	2,910	1.96	3,914

For footnotes * and 1 to 6, see p. 44•. For footnotes + and 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] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million
2017 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
Mar.	8.31	39,818	8.36	31,844	14.87	4,340	3.41	71,713	3.43	71,381
Apr.	8.29	39,308	8.35	31,176	14.85	4,408	3.29	72,449	3.30	72,100
May	8.29	39,115	8.38	30,991	14.79	4,376	3.35	71,010	3.37	70,690
June	8.26	39,717	8.34	31,627	14.77	4,370	3.30	74,485	3.32	74,136
July	8.19	39,373	8.29	31,035	14.74	4,430	3.25	73,268	3.26	72,921
Aug.	8.20	39,040	8.27	30,862	14.73	4,390	3.21	72,775	3.23	72,415

Reporting period	Loans to non-financial corporations (cont'd)															
	Total		of which:		Loans up to €1 million [15] with an initial rate fixation of						Loans over €1 million [15] with an initial rate fixation of					
			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] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
Total loans																
2017 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	53,831	1.48	13,339	2.47	7,501	2.57	1,390	1.97	1,123	0.94	36,050	1.43	1,794	1.68	5,973
Mar.	1.42	69,102	1.52	18,706	2.48	8,966	2.52	1,744	1.93	1,470	1.09	44,944	1.50	3,379	1.74	8,599
Apr.	1.39	65,864	1.46	18,840	2.44	8,704	2.54	1,749	1.94	1,527	1.04	43,667	1.64	2,828	1.73	7,389
May	1.20	72,958	1.36	17,150	2.31	9,732	2.40	1,395	1.95	1,290	0.85	51,023	1.59	2,988	1.73	6,530
June	1.31	84,383	1.42	24,657	2.24	11,612	2.44	1,531	1.97	1,470	0.97	55,948	1.64	3,981	1.73	9,841
July	1.19	81,709	1.41	22,096	2.09	10,235	2.41	1,466	1.93	1,578	0.85	55,149	1.53	3,956	1.74	9,325
Aug.	1.18	66,070	1.41	16,122	2.05	9,272	2.44	1,316	1.86	1,311	0.85	44,950	1.73	2,130	1.64	7,091
of which: Collateralised loans [11]																
2017 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	6,461	.	.	1.96	428	2.77	134	1.79	324	1.30	3,638	1.54	457	1.88	1,480
Mar.	1.62	11,118	.	.	1.92	608	2.46	160	1.78	396	1.44	6,583	1.68	1,010	1.93	2,361
Apr.	1.57	8,174	.	.	1.91	620	2.50	152	1.83	434	1.26	4,155	2.07	764	1.77	2,049
May	1.61	7,425	.	.	1.93	540	2.47	158	1.77	354	1.38	4,223	1.82	639	1.92	1,511
June	1.68	12,565	.	.	1.88	647	2.60	182	1.82	380	1.42	7,324	2.60	1,202	1.83	2,830
July	1.55	9,982	.	.	1.95	707	2.74	155	1.81	468	1.25	5,263	1.81	1,205	1.85	2,184
Aug.	1.56	7,174	.	.	2.10	507	2.74	151	1.76	302	1.32	4,296	2.50	348	1.68	1,570

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 (amongst 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 fund shares/units	Financial derivatives	Insurance technical reserves	Non-financial assets	Remaining assets
Insurance corporations										
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	378.7	397.3	387.3	280.2	613.9	5.3	46.1	31.4	79.9
Q4	2,190.1	361.5	371.3	374.6	308.6	623.6	3.3	44.1	32.4	70.6
2017 Q1	2,189.3	355.4	377.5	367.6	297.7	635.7	2.8	50.4	32.5	69.7
Q2	2,177.9	343.9	378.8	365.2	301.9	643.7	3.1	49.1	32.6	59.6
Q3	2,187.4	331.1	386.0	370.9	305.5	650.3	3.1	49.5	32.7	58.3
Q4	2,211.6	320.8	386.9	354.2	336.1	671.1	2.9	48.2	34.3	57.3
2018 Q1	2,217.4	344.3	394.6	327.0	343.2	663.0	2.3	50.7	33.9	58.4
Q2	2,225.6	347.4	400.1	319.9	347.0	667.9	2.2	53.5	34.1	53.6
Life insurance										
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	242.9	203.0	241.2	47.0	445.8	4.0	10.2	18.7	34.0
Q4	1,197.3	231.3	182.7	223.0	50.7	456.9	2.1	9.6	19.1	21.9
2017 Q1	1,170.4	223.8	185.3	217.2	37.2	462.6	1.8	8.2	19.1	15.3
Q2	1,172.7	215.6	189.4	217.6	38.6	467.1	2.0	8.0	19.1	15.3
Q3	1,177.4	207.6	193.5	220.6	38.4	472.4	1.9	7.9	19.1	16.0
Q4	1,192.7	199.1	192.4	226.0	41.3	487.6	1.8	8.6	19.9	16.0
2018 Q1	1,187.5	213.0	199.0	206.9	43.1	480.8	1.2	8.5	19.4	15.5
Q2	1,194.9	216.1	202.0	200.9	46.3	486.0	1.1	8.8	19.5	14.2
Non-life insurance										
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	123.8	103.2	93.6	50.8	154.4	0.5	28.5	8.6	28.8
Q4	584.2	118.9	98.9	91.8	56.8	152.5	0.5	26.8	9.0	29.0
2017 Q1	606.5	120.2	102.4	92.0	56.9	157.3	0.3	34.0	9.1	34.2
Q2	603.3	116.7	103.9	91.2	58.5	160.3	0.4	33.2	9.1	30.1
Q3	602.5	111.8	106.2	92.9	58.5	162.8	0.4	32.5	9.2	28.4
Q4	606.6	111.5	108.0	82.2	70.8	165.9	0.4	31.4	9.7	26.5
2018 Q1	622.7	120.1	112.5	75.1	72.3	166.8	0.3	34.5	9.8	31.4
Q2	621.2	120.0	115.2	72.9	73.3	167.3	0.3	35.6	9.8	27.0
Reinsurance 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	182.3	13.8	0.8	7.3	4.0	17.0
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	11.4	89.8	58.4	203.6	15.9	0.8	8.1	4.3	20.2
Q2	401.9	11.6	85.5	56.5	204.8	16.3	0.8	7.9	4.4	14.2
Q3	407.5	11.7	86.3	57.5	208.6	15.1	0.9	9.2	4.4	13.9
Q4	412.3	10.2	86.5	45.9	223.9	17.6	0.7	8.2	4.7	14.7
2018 Q1	407.2	11.2	83.1	45.0	227.8	15.3	0.8	7.6	4.8	11.6
Q2	409.5	11.3	82.8	46.1	227.4	14.6	0.8	9.1	4.8	12.4
Pension funds 5										
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
2016 Q3 1	608.0	107.7	63.5	29.3	19.1	326.2	–	6.3	35.4	20.5
Q4	609.6	106.4	61.1	29.7	19.9	328.1	–	6.7	37.0	20.8
2017 Q1	617.0	103.4	60.3	30.1	20.3	337.7	–	6.7	37.5	20.9
Q2	624.5	102.7	60.6	30.3	20.7	344.3	–	6.8	38.1	21.1
Q3	633.7	100.6	61.7	30.3	21.2	353.1	–	7.0	38.6	21.3
Q4	645.5	96.0	63.5	30.6	21.6	364.5	–	7.1	40.3	21.8
2018 Q1	646.8	94.8	63.1	31.0	22.0	366.1	–	7.2	40.6	21.9
Q2	652.7	95.2	62.8	31.5	22.9	369.9	–	7.3	41.1	22.1

1 Data as of Q3 2016 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 Q2 2016 data are based on Solvency I supervisory data from the Federal Financial Supervisory Authority (BaFin), supplemented by estimates and Bundesbank calculations. In case of pension funds, occasional data breaks are due to changes in the calculation basis. **2** Accounts receivable to monetary financial institutions, including registered bonds, borrowers' note loans and registered Pfandbriefe. **3** Including deposits retained 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 fund reserves [3]	Non-life [4]			
Insurance corporations										
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	2,190.1	30.7	70.3	441.0	1,494.4	1,313.3	181.1	2.3	151.4	–
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	2,211.6	28.3	62.6	465.9	1,521.1	1,333.7	187.4	2.2	131.6	–
2018 Q1	2,217.4	28.0	61.9	460.3	1,538.6	1,333.3	205.3	1.5	127.0	–
Q2	2,225.6	27.7	64.0	456.9	1,553.0	1,347.4	205.6	1.9	122.1	–
Life insurance										
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	1,197.3	4.1	25.0	116.3	993.7	993.7	–	1.2	56.9	–
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	1,192.7	4.1	12.8	122.2	1,006.6	1,006.6	–	1.1	45.9	–
2018 Q1	1,187.5	4.0	13.3	119.8	1,006.9	1,006.9	–	0.7	42.7	–
Q2	1,194.9	4.1	13.0	119.6	1,016.9	1,016.9	–	0.8	40.6	–
Non-life insurance										
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	584.2	1.1	6.3	130.4	390.1	300.5	89.7	0.2	56.2	–
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	606.6	1.1	6.7	141.2	405.6	309.7	95.9	0.1	51.9	–
2018 Q1	622.7	1.1	7.7	141.2	422.7	311.1	111.6	0.0	50.0	–
Q2	621.2	1.1	8.1	140.5	424.3	314.3	110.1	0.1	47.1	–
Reinsurance [5]										
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	412.3	23.1	43.1	202.6	108.8	17.4	91.4	1.0	33.8	–
2018 Q1	407.2	22.9	40.8	199.3	109.0	15.4	93.7	0.8	34.4	–
Q2	409.5	22.5	43.0	196.9	111.7	16.2	95.5	1.1	34.3	–
Pension funds [6]										
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
2016 Q3 [1]	608.0	–	6.4	6.7	536.0	536.0	–	–	3.3	55.6
Q4	609.6	–	6.8	6.9	546.0	546.0	–	–	2.4	47.5
2017 Q1	617.0	–	6.9	7.0	552.9	552.9	–	–	2.5	47.8
Q2	624.5	–	6.9	7.1	558.7	558.7	–	–	2.5	49.4
Q3	633.7	–	6.9	7.2	565.2	565.2	–	–	2.5	51.9
Q4	645.5	–	7.1	7.4	576.1	576.1	–	–	2.5	52.4
2018 Q1	646.8	–	7.2	7.4	579.5	579.5	–	–	2.6	50.0
Q2	652.7	–	7.3	7.5	585.7	585.7	–	–	2.6	49.6

1 Data as of Q3 2016 are based on Solvency II supervisory data. Up to and including Q2 2016 data are based on Solvency I supervisory data from the Federal Financial Supervisory Authority (BaFin), supplemented by estimates and Bundesbank calculations. In case of pension funds, occasional data breaks are due to changes in the calculation basis. **2** Including deposits retained on ceded business as well as registered bonds, borrowers' note loans and registered Pfandbriefe. **3** As of Q3 2016 insurance technical reserves "life" pursuant to Solvency II taking account of transitional measures. Up to and including Q2 2016 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 Q3 2016 insurance technical reserves "non-life" pursuant to Solvency II. Up to and including Q2 2016 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					Purchases					
		Domestic debt securities [1]					Residents					
	Sales = total purchases	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 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.	5,636	5,264	12,736	2,054	– 9,526	372	1,898	– 5,017	5,725	1,190	3,738	
Mar.	25,191	17,065	11,318	820	4,927	8,125	18,942	1,950	7,268	9,724	6,249	
Apr.	– 9,403	– 12,541	– 469	7,199	– 19,271	3,138	8,824	– 2,582	5,172	6,234	– 18,228	
May	20,653	20,327	6,728	2,570	11,028	327	1,462	– 1,553	7,676	– 4,661	19,192	
June	– 13,265	– 12,897	– 10,982	– 2,030	115	– 369	5,727	– 7,009	6,353	6,383	– 18,993	
July	– 3,540	– 9,880	– 7,055	3,563	– 6,389	6,340	12,206	– 3,117	5,835	9,488	– 15,746	
Aug.	16,295	10,891	2,640	– 3,890	12,142	5,404	5,483	– 1,567	4,562	2,488	10,811	

€ million

Period	Shares							
		Sales		Purchases				
				Residents				
	Sales = total purchases	Domestic shares [8]	Foreign shares [9]	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 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.	15,184	1,122	14,062	15,596	– 3,709	19,305	– 412	
Mar.	– 939	1,023	– 1,962	– 7,256	– 3,672	– 3,584	6,317	
Apr.	2,843	3,219	– 376	– 33	– 2,546	2,513	2,876	
May	16,950	1,175	15,775	16,363	1,156	15,207	587	
June	8,160	6,593	1,567	8,066	2,250	5,816	94	
July	4,644	549	4,095	4,709	257	4,452	– 65	
Aug.	4,707	193	4,514	6,254	477	5,777	– 1,547	

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 including 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

2. Sales of debt securities issued by residents *

€ million, nominal value

Period	Total	Bank debt securities [1]					Corporate bonds (non-MFIs) [2]	Public debt securities
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special-purpose credit institutions	Other bank debt securities		
	Gross sales [3]							
2006	925,863	622,055	24,483	99,628	139,193	358,750	29,975	273,834
2007	1,021,533	743,616	19,211	82,720	195,722	445,963	15,043	262,872
2008	1,337,337	961,271	51,259	70,520	382,814	456,676	95,093	280,974
2009	1,533,616	1,058,815	40,421	37,615	331,566	649,215	76,379	398,423
2010	1,375,138	757,754	36,226	33,539	363,828	324,160	53,654	563,731
2011	1,337,772	658,781	31,431	24,295	376,876	226,180	86,615	592,376
2012	1,340,568	702,781	36,593	11,413	446,153	208,623	63,259	574,529
2013	1,433,628	908,107	25,775	12,963	692,611	176,758	66,630	458,891
2014	1,362,056	829,864	24,202	13,016	620,409	172,236	79,873	452,321
2015	1,359,422	852,045	35,840	13,376	581,410	221,417	106,676	400,700
2016 [4]	1,206,483	717,002	29,059	7,621	511,222	169,103	73,370	416,110
2017 [4]	1,047,822	619,199	30,339	8,933	438,463	141,466	66,289	362,333
2018 Jan.	92,293	59,191	3,459	1,002	42,821	11,910	3,144	29,958
Feb.	96,820	59,349	3,387	564	43,208	12,189	3,434	34,036
Mar.	100,288	58,524	3,781	1,229	44,183	9,331	6,202	35,561
Apr.	123,774	67,848	1,487	97	58,169	8,094	27,752	28,175
May	97,205	61,722	3,459	63	46,110	12,089	5,306	30,178
June	90,599	59,456	5,737	364	42,846	10,509	4,220	26,923
July	106,400	65,758	3,016	784	53,034	8,925	6,455	34,187
Aug.	101,600	64,709	1,549	184	50,391	12,584	5,293	31,597
	of which: Debt securities with maturities of more than four years [5]							
2006	337,969	190,836	17,267	47,814	47,000	78,756	14,422	132,711
2007	315,418	183,660	10,183	31,331	50,563	91,586	13,100	118,659
2008	387,516	190,698	13,186	31,393	54,834	91,289	84,410	112,407
2009	361,999	185,575	20,235	20,490	59,809	85,043	55,240	121,185
2010	381,687	169,174	15,469	15,139	72,796	65,769	34,649	177,863
2011	368,039	153,309	13,142	8,500	72,985	58,684	41,299	173,431
2012	421,018	177,086	23,374	6,482	74,386	72,845	44,042	199,888
2013	372,805	151,797	16,482	10,007	60,662	64,646	45,244	175,765
2014	420,006	157,720	17,678	8,904	61,674	69,462	56,249	206,037
2015	414,593	179,150	25,337	9,199	62,237	82,379	68,704	166,742
2016 [4]	375,859	173,900	24,741	5,841	78,859	64,460	47,818	154,144
2017 [4]	357,506	170,357	22,395	6,447	94,852	46,663	44,891	142,257
2018 Jan.	37,248	26,777	2,697	967	19,026	4,087	1,626	8,845
Feb.	27,037	11,485	2,917	254	4,196	4,118	2,194	13,358
Mar.	40,145	18,509	3,400	1,080	11,579	2,450	4,095	17,542
Apr.	49,383	12,888	1,187	22	8,840	2,839	25,454	11,040
May	24,413	11,107	2,333	63	5,804	2,906	3,425	9,881
June	32,355	20,213	4,237	84	12,615	3,277	2,251	9,891
July	28,315	10,970	3,016	604	5,273	2,078	4,707	12,638
Aug.	27,181	12,138	1,305	133	4,488	6,212	2,962	12,081
	Net sales [6]							
2006	129,423	58,336	– 12,811	– 20,150	44,890	46,410	15,605	55,482
2007	86,579	58,168	– 10,896	– 46,629	42,567	73,127	– 3,683	32,093
2008	119,472	8,517	15,052	– 65,773	25,165	34,074	82,653	28,302
2009	76,441	– 75,554	858	– 80,646	25,579	– 21,345	48,508	103,482
2010	21,566	– 87,646	– 3,754	– 63,368	28,296	– 48,822	23,748	85,464
2011	22,518	– 54,582	1,657	– 44,290	32,904	– 44,852	– 3,189	80,289
2012	– 85,298	– 100,198	– 4,177	– 41,660	– 3,259	– 51,099	– 6,401	21,298
2013	– 140,017	– 125,932	– 17,364	– 37,778	– 4,027	– 66,760	1,394	– 15,479
2014	– 34,020	– 56,899	– 6,313	– 23,856	– 862	– 25,869	10,497	12,383
2015	– 65,147	– 77,273	9,271	– 9,754	– 2,758	– 74,028	25,300	– 13,174
2016 [4]	21,951	10,792	2,176	– 12,979	16,266	5,327	18,177	– 7,020
2017 [4]	2,669	5,954	6,389	– 4,697	18,788	– 14,525	6,828	– 10,114
2018 Jan.	– 8,981	3,064	1,643	– 998	3,302	– 883	21	– 12,067
Feb.	1,784	10,154	544	143	10,663	– 1,196	1,225	– 9,596
Mar.	14,572	9,345	2,792	751	8,127	– 2,326	– 428	5,655
Apr.	– 15,565	751	50	– 639	3,478	– 2,138	5,636	– 21,952
May	21,542	8,519	3,037	– 1,827	5,950	1,358	1,258	11,765
June	– 11,298	– 10,143	2,597	– 869	– 6,515	– 5,356	– 627	– 528
July	– 9,530	– 6,298	1,570	– 107	– 7,834	73	3,562	– 6,794
Aug.	11,892	2,687	886	– 481	– 1,396	3,679	– 3,774	12,979

***** For definitions, see the explanatory notes in Statistical Supplement 2 – Capital market statistics on pp. 23 ff. **1** Excluding registered bank debt securities. **2** Including cross-border financing within groups from January 2011. **3** Gross sales means only initial sales of newly issued securities. **4** Sectoral reclassification of debt securities. **5** Maximum maturity according to the terms of issue. **6** Gross sales less redemptions.

VIII. Capital market

3. Amounts outstanding of debt securities issued by residents *

€ million, nominal value

End of year or month/ Maturity in years	Total	Bank debt securities					Corporate bonds (non-MFIs)	Public debt securities
		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 1,570,490	147,529	232,954	544,517	1 645,491	250,774	1 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 1,414,349	145,007	147,070	574,163	1 548,109	1 220,456	1 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	2 302,543	1,617,244
2018 Feb.	3,083,510	1,184,139	143,460	57,149	665,177	318,354	303,790	1,595,582
Mar.	3,098,082	1,193,483	146,252	57,900	673,304	316,027	303,362	1,601,237
Apr.	3,082,517	1,194,234	146,302	57,260	676,782	313,889	308,998	1,579,285
May	3,104,059	1,202,753	149,339	55,434	682,732	315,248	310,256	1,591,050
June	3,092,761	1,192,610	151,936	54,564	676,217	309,892	309,629	1,590,522
July	3,083,231	1,186,312	153,506	54,457	668,383	309,965	313,191	1,583,728
Aug.	3,092,960	1,185,591	154,392	53,976	666,987	1 310,236	1 2 310,662	1,596,707
Breakdown by remaining period to maturity 3							**Position at end-August 2018**	
less than 2	1,027,889	450,074	43,494	20,927	280,137	105,513	66,796	511,019
2 to less than 4	599,653	266,726	37,824	11,693	150,022	67,184	47,545	285,383
4 to less than 6	478,552	185,079	34,749	6,810	98,632	44,890	44,617	248,856
6 to less than 8	307,734	121,709	20,025	6,573	65,911	29,200	32,053	153,972
8 to less than 10	249,470	79,400	15,148	6,035	33,848	24,369	15,195	154,876
10 to less than 15	119,231	33,828	1,866	371	19,245	12,347	22,526	62,878
15 to less than 20	78,309	18,123	424	1,118	12,905	3,677	6,383	53,803
20 and more	232,120	30,653	862	448	6,287	23,056	75,548	125,920

***** Including debt securities temporarily held in the issuers' portfolios. **1** Sectoral reclassification of debt securities. **2** Adjustments due to change of domicile of issuers. **3** Calculated from month under review until final maturity for debt securities falling due en bloc and until mean maturity of the residual amount outstanding for debt securities not falling due en bloc.

4. Shares in circulation issued by residents *

€ million, nominal value

Period	Share capital = circulation at end of period under review	Net increase or net decrease (–) during period under review	Change in domestic public limited companies' capital due to							Memo item: Share circulation at market values (market capitalisation) level at end of period under review 2
			cash payments and exchange 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
2018 Feb.	179,778	1,026	1,094	7	19	–	0	– 28	– 66	1,887,325
Mar.	180,086	308	553	24	2	–	0	– 239	– 31	1,874,136
Apr.	180,359	273	239	64	11	–	– 5	– 1	– 36	1,939,502
May	179,930	– 429	142	18	5	–	– 548	– 10	– 36	1,929,120
June	180,298	368	258	228	16	–	– 7	– 52	– 75	1,867,155
July	179,955	– 344	215	24	3	–	– 344	– 100	– 141	1,929,117
Aug.	180,004	47	171	112	13	–	– 89	– 13	– 147	1,898,601

***** 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 Herausgebergemeinschaft Wertpapier-Mitteilungen and Deutsche Börse AG.

VIII. Capital market

5. Yields and indices on German securities

Period	Yields on debt securities outstanding issued by residents [1]							Price indices [2,3]			
		Public debt securities			Bank debt securities			Debt securities		Shares	
			Listed Federal securities								
	Total	Total	Total	With a residual maturity of 9 to 10 years [4]	Total	With a residual maturity of more than 9 years and up to 10 years	Corporate bonds (non-MFIs)	German bond index (REX)	iBoxx € Germany price index	CDAX share price index	German share index (DAX)
	% per annum							Average daily rate	End-1998 = 100	End-1987 = 100	End-1987 = 1,000
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
2018 Apr.	0.5	0.4	0.4	0.5	0.6	1.0	2.3	139.85	108.02	579.61	12,612.11
May	0.5	0.4	0.3	0.5	0.6	1.0	2.3	141.11	109.76	572.08	12,604.89
June	0.4	0.3	0.2	0.3	0.6	1.0	2.4	141.29	109.87	557.27	12,306.00
July	0.3	0.2	0.2	0.3	0.5	0.9	2.5	140.83	108.50	580.49	12,805.50
Aug.	0.3	0.2	0.2	0.3	0.5	0.9	2.5	141.24	109.06	567.19	12,364.06
Sep.	0.4	0.3	0.3	0.4	0.6	1.1	2.7	140.34	108.01	556.11	12,246.73

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 and similar, 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 outstanding 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

€ million

Period	Sales								Purchases					
		Open-end domestic mutual funds [1] (sales receipts)							Residents					
			Mutual funds open to the general public							Credit institutions including building and loan associations [2]		Other sectors [3]		
				of which:										
	Sales = total purchases	Total	Total	Money market funds	Securities-based funds	Real estate funds	Specialised funds	Foreign funds [4]	Total	Total	of which: Foreign mutual fund shares	Total	of which: Foreign mutual fund shares	Non-residents [5]
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
2018 Feb.	7,429	8,628	1,860	– 22	955	520	6,768	– 1,199	7,439	– 92	– 1,141	7,531	– 58	– 10
Mar.	8,732	8,718	– 937	222	– 1,923	493	9,656	14	11,397	813	– 239	10,584	253	– 2,666
Apr.	8,430	8,351	1,860	– 66	1,401	223	6,491	80	11,470	961	469	10,509	– 389	– 3,039
May	5,064	1,859	1,215	– 225	934	275	644	3,205	5,430	1,217	732	4,213	2,473	– 366
June	7,914	6,787	1,068	66	352	479	5,719	1,127	7,547	– 459	– 781	8,006	1,908	367
July	7,640	5,476	1,163	– 57	587	308	4,313	2,164	7,318	607	66	6,711	2,098	323
Aug.	7,844	8,402	1,519	– 27	783	407	6,884	– 559	7,764	– 219	– 328	7,983	– 231	80

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	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
Acquisition of financial assets									
Currency and deposits	30.93	40.40	52.76	6.96	19.02	– 0.75	27.52	– 18.68	0.06
Debt securities	– 1.20	– 3.40	– 5.65	– 0.95	– 0.65	– 1.05	– 3.01	0.65	0.55
Short-term debt securities	– 0.84	– 0.58	– 2.26	0.23	– 1.89	– 0.26	– 0.34	– 0.12	– 0.02
Long-term debt securities	– 0.36	– 2.81	– 3.39	– 1.18	1.24	– 0.78	– 2.67	0.77	0.57
Memo item:									
Debt securities of domestic sectors	0.64	– 2.68	– 2.80	– 0.54	– 0.04	– 1.07	– 1.15	0.11	0.47
Non-financial corporations	– 0.80	0.67	– 0.56	0.85	– 0.72	– 0.56	– 0.14	– 0.01	0.32
Financial corporations	1.86	– 2.53	– 0.41	– 0.35	0.67	– 0.14	– 0.59	0.19	0.31
General government	– 0.42	– 0.82	– 1.82	– 1.03	0.01	– 0.37	– 0.43	– 0.07	– 0.15
Debt securities of the rest of the world	– 1.83	– 0.72	– 2.85	– 0.41	– 0.61	0.02	– 1.86	0.54	0.08
Loans	27.15	10.01	39.45	25.43	5.50	2.73	5.79	0.16	– 9.06
Short-term loans	34.68	2.59	20.00	14.28	– 0.61	– 0.45	6.79	4.13	– 10.73
Long-term loans	– 7.52	7.42	19.45	11.15	6.11	3.18	– 1.00	– 3.97	1.68
Memo item:									
Loans to domestic sectors	6.26	– 4.70	18.09	9.04	– 0.02	– 1.43	10.49	2.19	– 7.93
Non-financial corporations	1.26	– 11.78	9.53	0.23	2.88	– 0.28	6.70	0.12	– 9.12
Financial corporations	4.80	6.89	8.27	8.74	– 2.97	– 1.22	3.72	2.07	1.19
General government	0.20	0.20	0.29	0.07	0.07	0.07	0.07	0.00	0.00
Loans to the rest of the world	20.89	14.71	21.36	16.38	5.52	4.16	– 4.70	– 2.03	– 1.13
Equity and investment fund shares	54.54	74.50	49.97	17.47	– 0.40	16.68	16.22	27.57	43.27
Equity	38.14	68.66	41.42	18.72	1.79	14.41	6.50	24.05	42.29
Listed shares of domestic sectors	– 10.40	22.91	– 3.82	– 4.34	– 2.05	1.91	0.65	21.74	– 2.70
Non-financial corporations	– 8.04	22.59	– 3.76	– 4.25	– 2.26	1.96	0.80	21.64	– 2.90
Financial corporations	– 2.36	0.31	– 0.06	– 0.09	0.21	– 0.04	– 0.14	0.10	0.20
Listed shares of the rest of the world	2.05	10.84	7.09	1.63	10.26	– 5.14	0.34	– 0.21	6.10
Other equity [1]	46.49	34.92	38.15	21.42	– 6.42	17.64	5.51	2.53	38.89
Investment fund shares	16.40	5.83	8.55	– 1.24	– 2.18	2.26	9.71	3.52	0.98
Money market fund shares	0.21	0.36	– 0.46	– 0.28	0.00	– 1.07	0.89	– 0.63	– 0.03
Non-MMF investment fund shares	16.19	5.47	9.01	– 0.96	– 2.19	3.34	8.83	4.15	1.01
Insurance technical reserves	2.94	1.12	3.89	0.85	1.31	1.25	0.49	0.94	1.37
Financial derivatives	– 1.42	22.74	14.92	3.91	4.13	3.42	3.47	3.13	– 2.13
Other accounts receivable	42.02	– 5.68	94.66	73.82	– 22.45	22.06	21.23	26.02	15.94
Total	154.96	139.68	250.00	127.49	6.47	44.34	71.70	39.79	50.00
External financing									
Debt securities	7.78	23.71	8.56	7.57	– 0.52	0.96	0.55	2.79	2.36
Short-term securities	1.96	– 0.15	0.60	5.47	– 0.42	– 2.62	– 1.83	2.54	1.48
Long-term securities	5.82	23.85	7.95	2.11	– 0.10	3.58	2.37	0.24	0.89
Memo item:									
Debt securities of domestic sectors	1.70	10.82	7.13	3.31	1.24	0.76	1.83	2.48	1.65
Non-financial corporations	– 0.80	0.67	– 0.56	0.85	– 0.72	– 0.56	– 0.14	– 0.01	0.32
Financial corporations	2.05	10.06	9.13	3.18	2.08	1.48	2.39	2.19	1.38
General government	0.02	0.01	0.01	– 0.01	0.02	0.00	0.00	0.01	– 0.01
Households	0.42	0.08	– 1.45	– 0.71	– 0.14	– 0.16	– 0.42	0.29	– 0.05
Debt securities of the rest of the world	6.08	12.89	1.42	4.26	– 1.76	0.20	– 1.28	0.31	0.71
Loans	54.41	32.75	90.15	48.53	11.97	18.59	11.06	49.31	47.55
Short-term loans	40.67	0.37	20.35	11.30	3.06	7.96	– 1.97	24.44	18.60
Long-term loans	13.74	32.38	69.80	37.24	8.91	10.63	13.03	24.87	28.95
Memo item:									
Loans from domestic sectors	23.73	14.47	51.80	26.18	7.98	10.42	7.22	35.99	17.60
Non-financial corporations	1.26	– 11.78	9.53	0.23	2.88	– 0.28	6.70	0.12	– 9.12
Financial corporations	29.29	23.07	45.50	19.75	5.77	13.75	6.23	28.92	26.09
General government	– 6.82	3.18	– 3.23	6.20	– 0.68	– 3.04	– 5.71	6.94	0.63
Loans from the rest of the world	30.68	18.28	38.35	22.36	4.00	8.16	3.84	13.32	29.95
Equity	16.67	11.18	17.86	3.23	6.06	5.69	2.88	1.58	11.86
Listed shares of domestic sectors	7.42	27.31	6.93	– 4.55	2.68	3.43	5.36	19.82	4.46
Non-financial corporations	– 8.04	22.59	– 3.76	– 4.25	– 2.26	1.96	0.80	21.64	– 2.90
Financial corporations	11.70	– 2.10	9.53	– 0.78	6.21	0.26	3.83	– 5.23	4.50
General government	0.11	0.07	0.51	0.07	0.13	0.16	0.15	0.16	0.15
Households	3.66	6.74	0.65	0.41	– 1.39	1.05	0.59	3.26	2.71
Listed shares of the rest of the world	– 1.40	– 25.79	– 2.59	4.88	– 1.28	– 1.47	– 4.71	8.91	6.20
Other equity [1]	10.65	9.66	13.53	2.91	4.66	3.74	2.23	– 27.15	1.20
Insurance technical reserves	5.60	3.60	7.25	1.81	1.81	1.81	1.81	1.81	1.81
Financial derivatives and employee stock options	– 10.81	– 0.13	3.69	2.60	2.23	1.00	– 2.12	1.72	3.50
Other accounts payable	22.73	28.83	– 4.06	27.86	– 26.51	– 8.46	3.04	19.79	27.82
Total	96.37	99.94	123.45	91.61	– 4.96	19.59	17.22	76.99	94.90

1 Including unlisted shares.

IX. Financial accounts

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

End of year/quarter; € billion

Item	2015	2016	2017	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
Financial assets									
Currency and deposits	463.1	514.9	556.2	517.2	525.5	532.8	556.2	527.2	539.7
Debt securities	47.8	44.8	38.8	43.9	42.8	41.9	38.8	39.2	39.7
Short-term debt securities	6.0	5.5	3.3	5.8	3.9	3.6	3.3	3.1	3.1
Long-term debt securities	41.7	39.3	35.6	38.1	39.0	38.3	35.6	36.0	36.6
Memo item:									
Debt securities of domestic sectors	23.3	20.8	18.2	20.3	20.2	19.3	18.2	18.2	18.7
Non-financial corporations	3.6	4.4	3.9	5.3	4.6	4.1	3.9	3.8	4.1
Financial corporations	14.5	12.0	11.7	11.6	12.3	12.3	11.7	11.9	12.2
General government	5.2	4.4	2.5	3.4	3.3	3.0	2.5	2.4	2.3
Debt securities of the rest of the world	24.4	24.0	20.7	23.6	22.7	22.6	20.7	21.0	21.1
Loans	511.6	523.1	556.3	548.5	550.4	551.4	556.3	556.5	549.4
Short-term loans	409.4	414.3	431.1	428.5	426.1	424.7	431.1	435.7	426.3
Long-term loans	102.2	108.8	125.2	120.0	124.3	126.6	125.2	120.9	123.0
Memo item:									
Loans to domestic sectors	335.8	331.1	349.2	340.1	340.1	338.7	349.2	351.3	343.7
Non-financial corporations	233.3	221.6	231.1	221.8	224.7	224.4	231.1	231.2	222.3
Financial corporations	95.9	102.8	111.0	111.5	108.5	107.3	111.0	113.1	114.3
General government	6.5	6.7	7.0	6.8	6.9	7.0	7.0	7.0	7.0
Loans to the rest of the world	175.8	192.0	207.1	208.4	210.3	212.7	207.1	205.2	205.7
Equity and investment fund shares	1,890.8	1,938.8	2,079.0	2,020.5	2,007.0	2,035.8	2,079.0	2,071.3	2,118.6
Equity	1,738.9	1,778.9	1,908.9	1,859.7	1,848.9	1,874.5	1,908.9	1,900.4	1,945.8
Listed shares of domestic sectors	273.0	292.3	332.2	304.1	304.1	322.7	332.2	349.4	338.5
Non-financial corporations	266.6	286.2	325.3	298.6	297.9	315.9	325.3	342.2	330.9
Financial corporations	6.3	6.1	6.8	5.5	6.2	6.9	6.8	7.1	7.6
Listed shares of the rest of the world	32.3	44.4	48.4	48.4	56.3	47.8	48.4	48.3	53.7
Other equity [1]	1,433.6	1,442.2	1,528.3	1,507.2	1,488.5	1,503.9	1,528.3	1,502.8	1,553.6
Investment fund shares	151.9	159.9	170.1	160.8	158.2	161.4	170.1	170.9	172.8
Money market fund shares	1.4	1.9	1.5	1.7	1.7	0.6	1.5	0.9	0.9
Non-MMF investment fund shares	150.6	158.0	168.6	159.1	156.4	160.7	168.6	170.0	172.0
Insurance technical reserves	48.8	50.2	54.2	51.3	52.4	53.5	54.2	55.4	56.6
Financial derivatives	42.7	60.1	51.3	55.7	52.1	51.6	51.3	50.7	44.8
Other accounts receivable	927.6	962.0	1,033.1	1,044.5	991.1	1,038.8	1,033.1	1,088.1	1,107.7
Total	3,932.5	4,094.0	4,368.9	4,281.5	4,221.4	4,305.8	4,368.9	4,388.4	4,456.5
Liabilities									
Debt securities	156.8	183.8	210.6	189.7	188.1	210.2	210.6	185.4	189.0
Short-term securities	3.0	2.9	3.4	8.3	7.9	5.3	3.4	5.9	7.4
Long-term securities	153.7	180.9	207.2	181.4	180.2	205.0	207.2	179.4	181.6
Memo item:									
Debt securities of domestic sectors	58.7	72.1	82.8	74.8	75.4	80.0	82.8	79.6	80.1
Non-financial corporations	3.6	4.4	3.9	5.3	4.6	4.1	3.9	3.8	4.1
Financial corporations	40.0	51.9	64.3	54.4	55.9	61.0	64.3	61.2	61.5
General government	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Households	15.0	15.7	14.4	15.0	14.8	14.8	14.4	14.4	14.3
Debt securities of the rest of the world	98.1	111.7	127.8	114.9	112.7	130.3	127.8	105.8	108.9
Loans	1,452.1	1,481.4	1,559.8	1,528.6	1,535.7	1,550.3	1,559.8	1,607.1	1,665.2
Short-term loans	559.4	562.8	578.9	573.9	573.9	580.7	578.9	602.8	632.2
Long-term loans	892.6	918.6	980.8	954.8	961.7	969.6	980.8	1,004.3	1,032.9
Memo item:									
Loans from domestic sectors	1,119.7	1,129.0	1,176.5	1,154.1	1,161.1	1,169.5	1,176.5	1,211.3	1,225.3
Non-financial corporations	233.3	221.6	231.1	221.8	224.7	224.4	231.1	231.2	222.3
Financial corporations	834.4	853.7	895.1	873.5	877.4	888.5	895.1	922.4	944.9
General government	52.0	53.7	50.3	58.8	59.0	56.6	50.3	57.7	58.0
Loans from the rest of the world	332.4	352.4	383.3	374.5	374.6	380.8	383.3	395.8	439.9
Equity	2,695.7	2,773.4	3,054.5	2,895.0	2,916.4	3,001.4	3,054.5	2,949.1	2,970.7
Listed shares of domestic sectors	626.4	664.0	756.6	696.5	697.8	737.6	756.6	745.7	735.0
Non-financial corporations	266.6	286.2	325.3	298.6	297.9	315.9	325.3	342.2	330.9
Financial corporations	150.1	154.7	180.2	161.3	166.4	173.4	180.2	163.6	164.5
General government	43.4	44.4	51.8	47.0	46.7	51.0	51.8	48.7	49.0
Households	166.2	178.7	199.2	189.7	186.8	197.4	199.2	191.1	190.7
Listed shares of the rest of the world	756.3	803.7	925.3	865.4	879.1	906.1	925.3	881.6	907.0
Other equity [1]	1,313.0	1,305.7	1,372.6	1,333.0	1,339.5	1,357.7	1,372.6	1,321.9	1,328.7
Insurance technical reserves	255.9	259.5	266.7	261.3	263.1	264.9	266.7	268.6	270.4
Financial derivatives and employee stock options	42.0	38.2	26.9	35.4	32.7	31.3	26.9	26.7	28.2
Other accounts payable	1,009.7	1,044.3	1,054.1	1,078.9	1,023.9	1,054.5	1,054.1	1,079.2	1,102.9
Total	5,612.1	5,780.5	6,172.5	5,988.9	5,959.9	6,112.7	6,172.5	6,116.0	6,226.2

1 Including unlisted shares.

IX. Financial accounts

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

€ billion

Item	2015	2016	2017	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
Acquisition of financial assets									
Currency and deposits	96.67	114.85	103.43	12.35	30.16	18.03	42.89	16.67	43.35
Currency	25.51	21.17	16.99	3.64	5.57	2.46	5.32	6.34	10.53
Deposits	71.16	93.68	86.45	8.72	24.59	15.58	37.57	10.33	32.82
Transferable deposits	100.96	105.26	99.72	13.26	29.95	20.65	35.86	12.14	33.90
Time deposits	– 9.22	1.28	– 4.03	– 1.59	– 2.32	– 2.47	2.34	1.15	1.98
Savings deposits (including savings certificates)	– 20.58	– 12.87	– 9.24	– 2.96	– 3.04	– 2.61	– 0.64	– 2.95	– 3.06
Debt securities	– 18.40	– 12.80	– 8.14	– 1.36	– 1.49	– 2.28	– 3.01	– 1.00	0.52
Short-term debt securities	0.75	– 0.16	– 0.20	0.37	0.18	– 0.34	– 0.41	– 0.37	– 0.01
Long-term debt securities	– 19.15	– 12.63	– 7.93	– 1.72	– 1.67	– 1.94	– 2.60	– 0.63	0.53
Memo item:									
Debt securities of domestic sectors	– 10.06	– 4.14	– 5.09	0.01	– 0.67	– 1.88	– 2.56	– 0.01	0.16
Non-financial corporations	0.36	– 0.01	– 1.43	– 0.66	– 0.22	– 0.14	– 0.40	0.08	– 0.23
Financial corporations	– 7.42	– 2.48	– 2.68	1.01	– 0.17	– 1.55	– 1.97	0.07	0.61
General government	– 2.99	– 1.65	– 0.99	– 0.33	– 0.28	– 0.18	– 0.19	– 0.17	– 0.22
Debt securities of the rest of the world	– 8.34	– 8.66	– 3.05	– 1.37	– 0.82	– 0.41	– 0.45	– 0.98	0.36
Equity and investment fund shares	47.95	45.78	55.13	12.11	12.32	14.08	16.62	17.73	8.00
Equity	16.62	21.65	14.69	3.40	2.21	5.11	3.97	7.35	2.73
Listed shares of domestic sectors	4.17	9.37	0.90	0.15	– 0.18	0.89	0.04	4.27	2.55
Non-financial corporations	3.88	6.09	0.54	0.48	– 1.42	1.01	0.47	3.12	1.63
Financial corporations	0.28	3.28	0.36	– 0.33	1.24	– 0.12	– 0.43	1.15	0.92
Listed shares of the rest of the world	8.00	6.94	9.66	2.25	1.69	2.94	2.77	1.47	– 0.88
Other equity [1]	4.45	5.35	4.13	1.00	0.70	1.28	1.15	1.61	1.06
Investment fund shares	31.33	24.13	40.44	8.70	10.11	8.97	12.65	10.38	5.27
Money market fund shares	– 0.57	– 0.53	– 0.28	– 0.22	0.04	– 0.16	0.05	– 0.40	– 0.03
Non-MMF investment fund shares	31.90	24.66	40.72	8.92	10.08	9.12	12.60	10.79	5.29
Non-life insurance technical reserves and provision for calls under standardised guarantees	20.09	15.58	20.23	4.14	4.18	4.17	7.75	4.22	4.24
Life insurance and annuity entitlements	31.69	24.82	37.18	12.47	9.21	7.43	8.08	13.38	8.60
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	30.85	32.58	30.84	11.89	8.59	6.87	3.49	4.11	4.84
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	– 19.50	– 27.34	10.34	– 10.20	– 0.94	– 26.55	14.47	– 14.08
Total	191.54	201.31	211.33	61.94	52.77	47.35	49.27	69.59	55.47
External financing									
Loans	38.20	47.46	55.55	7.90	16.64	18.56	12.45	10.81	20.12
Short-term loans	– 3.17	– 4.31	– 2.19	– 0.35	– 0.34	– 1.09	– 0.40	– 0.02	0.11
Long-term loans	41.36	51.76	57.74	8.25	16.98	19.66	12.85	10.83	20.01
Memo item:									
Mortgage loans	35.63	41.92	47.41	6.12	13.31	15.84	12.15	9.00	15.79
Consumer loans	5.44	9.78	11.25	2.41	3.25	3.41	2.19	1.78	4.34
Entrepreneurial loans	– 2.88	– 4.24	– 3.11	– 0.62	0.07	– 0.68	– 1.89	0.04	– 0.01
Memo item:									
Loans from monetary financial institutions	39.35	42.87	49.99	7.10	15.54	16.93	10.42	11.00	17.65
Loans from other financial institutions	– 1.16	4.59	5.57	0.80	1.10	1.63	2.03	– 0.19	2.47
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	– 0.23	0.74	0.11	0.06	0.02	0.54	0.02	0.00
Total	37.06	47.23	56.29	8.02	16.70	18.58	12.99	10.83	20.12

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/quarter; € billion

Item	2015	2016	2017	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
Financial assets									
Currency and deposits	2,094.8	2,208.7	2,311.0	2,221.8	2,252.0	2,270.0	2,311.0	2,327.6	2,371.0
Currency	153.2	174.4	191.3	178.0	183.6	186.0	191.3	197.7	208.2
Deposits	1,941.6	2,034.4	2,119.6	2,043.8	2,068.4	2,084.0	2,119.6	2,130.0	2,162.8
Transferable deposits	1,082.4	1,188.0	1,287.7	1,201.2	1,231.2	1,251.8	1,287.7	1,299.8	1,333.7
Time deposits	246.8	248.7	245.4	247.9	245.6	243.1	245.4	246.6	248.6
Savings deposits (including savings certificates)	612.4	597.7	586.5	594.7	591.7	589.1	586.5	583.6	580.5
Debt securities	139.8	127.4	120.5	126.7	125.4	123.6	120.5	117.7	118.1
Short-term debt securities	2.9	2.7	2.5	3.1	3.2	2.9	2.5	2.1	2.0
Long-term debt securities	136.9	124.7	118.0	123.6	122.2	120.7	118.0	115.6	116.0
Memo item:									
Debt securities of domestic sectors	89.4	85.6	82.5	86.1	86.2	85.1	82.5	81.2	81.4
Non-financial corporations	13.4	13.9	12.5	13.3	13.0	12.9	12.5	12.4	12.1
Financial corporations	69.5	66.7	66.1	68.2	68.9	68.1	66.1	65.1	65.7
General government	6.5	5.0	3.9	4.6	4.3	4.1	3.9	3.7	3.5
Debt securities of the rest of the world	50.3	41.8	37.9	40.6	39.3	38.5	37.9	36.4	36.7
Equity and investment fund shares	1,040.7	1,106.2	1,216.3	1,153.9	1,156.6	1,191.3	1,216.3	1,196.6	1,215.3
Equity	555.9	588.3	640.1	613.0	609.4	630.6	640.1	624.5	629.0
Listed shares of domestic sectors	188.9	200.8	226.4	213.0	211.1	223.7	226.4	217.3	214.2
Non-financial corporations	158.7	169.8	190.3	180.4	177.5	188.4	190.3	182.5	180.8
Financial corporations	30.3	31.0	36.1	32.6	33.6	35.4	36.1	34.8	33.4
Listed shares of the rest of the world	74.8	86.8	101.0	93.1	92.7	96.5	101.0	97.7	102.9
Other equity [1]	292.2	300.8	312.7	306.9	305.6	310.3	312.7	309.5	311.9
Investment fund shares	484.8	517.8	576.2	540.9	547.2	560.7	576.2	572.1	586.3
Money market fund shares	3.4	2.8	2.7	2.7	2.8	2.6	2.7	2.3	2.3
Non-MMF investment fund shares	481.4	515.0	573.5	538.2	544.4	558.1	573.5	569.8	584.1
Non-life insurance technical reserves and provision for calls under standardised guarantees	324.3	339.9	360.1	344.0	348.2	352.3	360.1	364.3	368.6
Life insurance and annuity entitlements	919.5	947.8	991.4	962.4	973.2	981.9	991.4	1,004.8	1,013.4
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	786.6	819.2	850.1	827.3	832.1	839.7	850.1	854.2	859.0
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	31.1	32.4	32.2	31.7	31.1	31.5	31.8
Total	5,342.8	5,581.8	5,880.4	5,668.6	5,719.6	5,790.6	5,880.4	5,896.8	5,977.2
Liabilities									
Loans	1,606.6	1,654.7	1,711.9	1,662.6	1,680.5	1,699.1	1,711.9	1,722.6	1,737.9
Short-term loans	60.9	56.6	54.4	56.3	55.9	54.8	54.4	54.4	54.5
Long-term loans	1,545.8	1,598.1	1,657.5	1,606.3	1,624.6	1,644.3	1,657.5	1,668.2	1,683.4
Memo item:									
Mortgage loans	1,153.8	1,195.8	1,247.4	1,202.0	1,218.3	1,234.7	1,247.4	1,257.4	1,275.0
Consumer loans	191.9	201.8	211.8	204.2	207.4	210.6	211.8	212.8	213.4
Entrepreneurial loans	260.9	257.0	252.7	256.4	254.8	253.8	252.7	252.5	249.5
Memo item:									
Loans from monetary financial institutions	1,514.9	1,558.3	1,610.0	1,565.4	1,582.3	1,599.2	1,610.0	1,620.9	1,633.7
Loans from other financial institutions	91.8	96.4	101.9	97.2	98.3	99.9	101.9	101.8	104.2
Loans from general government and rest of the world	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial derivatives	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts payable	15.1	15.4	16.6	16.6	16.4	16.7	16.6	17.6	17.2
Total	1,621.7	1,670.1	1,728.5	1,679.2	1,697.0	1,715.8	1,728.5	1,740.3	1,755.0

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

X. Public finances in Germany

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

Period	General government	Central government	State government	Local government	Social security funds	General government	Central government	State government	Local government	Social security funds
	€ billion					As a percentage of GDP				
	Deficit/surplus[1]									
2012	– 0.9	– 16.1	– 5.5	+ 2.2	+ 18.4	– 0.0	– 0.6	– 0.2	+ 0.1	+ 0.7
2013	– 4.0	– 7.4	– 2.5	+ 0.5	+ 5.4	– 0.1	– 0.3	– 0.1	+ 0.0	+ 0.2
2014	+ 16.7	+ 13.7	+ 0.1	– 0.2	+ 3.1	+ 0.6	+ 0.5	+ 0.0	– 0.0	+ 0.1
2015 **p**	+ 23.9	+ 14.7	+ 2.2	+ 4.3	+ 2.7	+ 0.8	+ 0.5	+ 0.1	+ 0.1	+ 0.1
2016 **p**	+ 28.7	+ 11.5	+ 4.2	+ 4.8	+ 8.2	+ 0.9	+ 0.4	+ 0.1	+ 0.2	+ 0.3
2017 **p**	+ 34.0	+ 6.1	+ 8.3	+ 9.5	+ 10.1	+ 1.0	+ 0.2	+ 0.3	+ 0.3	+ 0.3
2016 H1 **p**	+ 19.5	+ 7.6	+ 3.5	+ 1.7	+ 6.6	+ 1.2	+ 0.5	+ 0.2	+ 0.1	+ 0.4
H2 **p**	+ 9.3	+ 3.8	+ 0.7	+ 3.1	+ 1.6	+ 0.6	+ 0.2	+ 0.0	+ 0.2	+ 0.1
2017 H1 **p**	+ 19.8	+ 1.5	+ 5.1	+ 6.2	+ 7.0	+ 1.2	+ 0.1	+ 0.3	+ 0.4	+ 0.4
H2 **p**	+ 14.2	+ 4.6	+ 3.2	+ 3.3	+ 3.1	+ 0.9	+ 0.3	+ 0.2	+ 0.2	+ 0.2
2018 H1 **pe**	+ 48.1	+ 19.5	+ 13.1	+ 6.5	+ 9.0	+ 2.9	+ 1.2	+ 0.8	+ 0.4	+ 0.5
	Debt level[2]								End of year or quarter	
2012	2,202.9	1,387.9	684.1	147.5	1.2	79.9	50.3	24.8	5.3	0.0
2013	2,188.1	1,390.4	663.2	150.5	1.3	77.4	49.2	23.5	5.3	0.0
2014	2,189.6	1,396.5	657.6	152.0	1.4	74.5	47.5	22.4	5.2	0.0
2015 **p**	2,159.7	1,372.6	654.3	152.4	1.4	70.8	45.0	21.5	5.0	0.0
2016 **p**	2,143.9	1,366.8	637.5	153.9	1.1	67.9	43.3	20.2	4.9	0.0
2017 **p**	2,092.8	1,351.3	611.1	148.5	0.8	63.9	41.2	18.6	4.5	0.0
2016 Q1 **p**	2,168.3	1,382.5	647.6	154.6	1.2	70.5	44.9	21.0	5.0	0.0
Q2 **p**	2,171.8	1,391.1	644.1	154.3	1.1	69.7	44.7	20.7	5.0	0.0
Q3 **p**	2,165.4	1,381.1	644.7	155.1	1.0	69.0	44.0	20.5	4.9	0.0
Q4 **p**	2,143.9	1,366.8	637.5	153.9	1.1	67.9	43.3	20.2	4.9	0.0
2017 Q1 **p**	2,117.3	1,351.0	627.5	152.5	1.2	66.3	42.3	19.7	4.8	0.0
Q2 **p**	2,111.1	1,353.6	620.3	152.0	0.9	65.7	42.1	19.3	4.7	0.0
Q3 **p**	2,104.5	1,353.0	618.3	150.4	0.8	64.8	41.7	19.0	4.6	0.0
Q4 **p**	2,092.8	1,351.3	611.1	148.5	0.8	63.9	41.2	18.6	4.5	0.0
2018 Q1 **p**	2,069.9	1,338.6	600.4	148.0	1.0	62.7	40.5	18.2	4.5	0.0
Q2 **p**	2,052.3	1,329.3	597.1	144.2	0.9	61.5	39.8	17.9	4.3	0.0

Sources: Federal Statistical Office and Bundesbank calculations. **1** The deficit/surplus in accordance with ESA 2010 corresponds to the Maastricht definition. **2** Quarterly GDP ratios are based on the national output of the four preceding quarters.

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

Period	Revenue				Expenditure							Deficit/ surplus	Memo item: Total tax burden [1]
		of which:				of which:							
	Total	Taxes	Social contributions	Other	Total	Social benefits	Compensation of employees	Intermediate consumption	Gross capital formation	Interest	Other		
	€ billion												
2012	1,220.9	624.9	454.3	141.7	1,221.8	645.5	212.3	126.5	61.5	63.1	112.8	– 0.9	1,083.7
2013	1,259.0	651.0	465.0	143.0	1,263.0	666.4	217.8	133.0	60.1	55.5	130.2	– 4.0	1,120.3
2014	1,308.5	673.6	482.0	153.0	1,291.8	691.1	224.4	137.7	60.1	47.0	131.6	+ 16.7	1,160.2
2015 **p**	1,356.5	704.2	500.8	151.5	1,332.6	721.7	229.8	143.8	64.1	42.3	130.9	+ 23.9	1,212.0
2016 **p**	1,415.5	738.7	523.9	152.9	1,386.8	755.2	237.8	150.1	68.2	37.4	138.0	+ 28.7	1,269.5
2017 **p**	1,473.8	772.5	548.6	152.8	1,439.8	784.5	246.7	156.3	72.4	33.8	146.1	+ 34.0	1,327.9
	As a percentage of GDP												
2012	44.3	22.7	16.5	5.1	44.3	23.4	7.7	4.6	2.2	2.3	4.1	– 0.0	39.3
2013	44.5	23.0	16.5	5.1	44.7	23.6	7.7	4.7	2.1	2.0	4.6	– 0.1	39.6
2014	44.5	22.9	16.4	5.2	44.0	23.5	7.6	4.7	2.0	1.6	4.5	+ 0.6	39.5
2015 **p**	44.5	23.1	16.4	5.0	43.7	23.7	7.5	4.7	2.1	1.4	4.3	+ 0.8	39.8
2016 **p**	44.8	23.4	16.6	4.8	43.9	23.9	7.5	4.8	2.2	1.2	4.4	+ 0.9	40.2
2017 **p**	45.0	23.6	16.7	4.7	43.9	23.9	7.5	4.8	2.2	1.0	4.5	+ 1.0	40.5
	Percentage growth rates												
2012	+ 3.2	+ 4.4	+ 2.7	+ 0.0	+ 1.1	+ 1.8	+ 1.8	+ 2.0	+ 0.2	– 6.5	– 0.3	.	+ 3.6
2013	+ 3.1	+ 4.2	+ 2.4	+ 1.0	+ 3.4	+ 3.2	+ 2.6	+ 5.1	– 2.2	– 12.0	+ 15.4	.	+ 3.4
2014	+ 3.9	+ 3.5	+ 3.6	+ 6.9	+ 2.3	+ 3.7	+ 3.1	+ 3.5	– 0.1	– 15.4	+ 1.1	.	+ 3.6
2015 **p**	+ 3.7	+ 4.5	+ 3.9	– 0.9	+ 3.2	+ 4.4	+ 2.4	+ 4.5	+ 6.6	– 9.9	– 0.6	.	+ 4.5
2016 **p**	+ 4.4	+ 4.9	+ 4.6	+ 0.9	+ 4.1	+ 4.6	+ 3.5	+ 4.4	+ 6.5	– 11.7	+ 5.5	.	+ 4.7
2017 **p**	+ 4.1	+ 4.6	+ 4.7	– 0.1	+ 3.8	+ 3.9	+ 3.8	+ 4.1	+ 6.2	– 9.5	+ 5.9	.	+ 4.6

Source: Federal Statistical Office. * Figures in accordance with ESA 2010. **1** Taxes and social contributions plus customs duties and levies from banks to the Single Resolution Fund established at the European level.

X. Public finances in Germany

3. General government: budgetary development (as per the government finance statistics)

€ billion

Period	Central, state and local government [1]									Social security funds [2]			General government, total		
	Revenue			Expenditure											
		of which:			of which: [3]										
	Total [4]	Taxes	Financial transactions [5]	Total [4]	Personnel expenditure	Current grants	Interest	Fixed asset formation	Financial transactions [5]	Deficit/ surplus	Revenue [6]	Expenditure	Deficit/ surplus	Revenue	Expenditure	Deficit/ surplus
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	843.4	251.3	320.5	43.4	49.0	11.8	+ 18.7	601.8	594.8	+ 7.1	1,355.0	1,329.2	+ 25.8
2017 p	900.0	734.5	7.9	872.1	261.6	325.9	42.0	52.3	13.8	+ 27.9	630.9	621.6	+ 9.4	1,416.7	1,379.4	+ 37.3
2016 Q1 p	206.1	169.9	1.4	206.0	60.0	81.2	17.7	8.4	2.2	+ 0.1	143.0	146.6	– 3.6	322.2	325.7	– 3.5
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	210.4	62.0	78.8	14.5	12.3	2.4	– 3.3	148.3	149.7	– 1.4	328.2	332.9	– 4.7
Q4 p	232.6	189.2	2.1	233.2	68.1	83.1	7.7	17.2	4.8	– 0.6	160.1	152.2	+ 7.8	365.3	358.1	+ 7.2
2017 Q1 p	216.0	180.4	0.9	200.1	62.9	80.3	13.8	10.2	1.9	+ 15.9	150.3	155.1	– 4.8	338.0	326.9	+ 11.1
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	219.6	180.4	3.5	215.4	64.4	78.1	14.5	13.4	4.2	+ 4.3	154.8	155.7	– 0.9	346.1	342.7	+ 3.3
Q4 p	243.8	196.3	2.1	244.4	69.8	85.1	6.9	19.2	4.1	– 0.6	168.2	158.0	+ 10.2	383.4	373.8	+ 9.6
2018 Q1 p	223.3	189.1	1.0	207.9	61.1	81.0	11.5	8.8	2.5	+ 15.4	156.1	160.8	– 4.7	350.4	339.7	+ 10.7

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 the government finance 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
2017 p	357.8	352.8	+ 5.0	397.7	385.8	+ 11.8	260.3	249.1	+ 11.2
2016 Q1 p	81.1	82.7	– 1.6	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	88.2	– 3.0	91.5	90.0	+ 1.5	60.7	60.7	+ 0.1
Q4 p	90.9	93.9	– 3.0	104.3	104.4	– 0.0	76.3	68.0	+ 8.3
2017 Q1 p	88.2	83.3	+ 4.8	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	93.1	– 4.6	98.9	91.4	+ 7.5	63.4	61.5	+ 1.9
Q4 p	99.5	96.2	+ 3.3	104.7	109.2	– 4.5	77.2	69.1	+ 8.2
2018 Q1 p	87.9	84.4	+ 3.5	100.0	92.7	+ 7.3	54.9	60.3	– 5.3

Source: Bundesbank calculations based on Federal Statistical Office data. **1** Any amounts of the Bundesbank's profit distribution exceeding the reference value that were used to repay parts of the debt of central government's special funds are not included here. **2** Including the local authority level of the city states Berlin, Bremen and Hamburg. **3** Quarterly data of core budgets and off-budget entities which are assigned to the general government sector. Annual figures up to and including 2011: excluding off-budget entities, but including special accounts and special-purpose associations based on the calculations of the Federal Statistical Office. For the following years: Bundesbank supplementary estimations.

X. Public finances in Germany

5. Central, state and local government: tax revenue

€ million

Period	Total	Central and state government and European Union				Local government 3	Balance of untransferred tax shares 4	Memo item: Amounts deducted in the Federal budget 5
		Total	Central government 1	State government 1	European Union 2			
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	705,797	606,965	316,854	260,837	29,273	98,648	+ 186	27,836
2017	734,540	629,458	336,730	271,046	21,682	105,158	– 76	27,368
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	25,169	– 332	6,512
Q3	169,374	145,700	76,638	61,573	7,489	23,839	– 165	7,584
Q4	189,186	164,382	83,919	72,608	7,855	32,518	– 7,714	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	195,537	170,139	92,507	71,019	6,613	34,060	– 8,662	6,471
2018 Q1	189,457	159,974	83,370	69,413	7,191	19,173	+ 10,310	6,398
Q2	194,715	166,191	88,450	71,995	5,745	29,064	– 540	6,592
2017 July	.	49,764	25,831	21,617	2,315	.	.	3,022
Aug.	.	45,045	24,526	19,112	1,408	.	.	2,222
2018 July	.	51,041	26,535	22,230	2,276	.	.	3,060
Aug.	.	46,753	24,878	19,374	2,501	.	.	2,260

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

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

€ million

Period	Total 1	Joint taxes									Central government taxes 7	State government taxes 7	EU customs duties	Memo item: Local government share in joint taxes
		Income taxes 2					Turnover taxes 5			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
2018 Q1	172,111	81,713	48,059	17,640	9,418	6,595	59,248	45,272	13,977	291	23,752	5,836	1,271	12,136
Q2	178,102	86,322	51,395	14,889	9,302	10,736	55,801	41,220	14,581	2,215	26,474	6,170	1,119	11,912
2017 July	52,839	21,603	16,904	– 187	187	4,699	18,927	14,476	4,451	1,874	8,254	1,757	424	3,075
Aug.	47,884	18,421	15,769	– 591	20	3,223	19,037	14,339	4,699	333	7,700	1,960	433	2,839
2018 July	54,358	22,042	18,240	– 644	– 506	4,952	19,320	14,304	5,016	2,020	8,634	1,942	401	3,317
Aug.	49,872	17,559	16,451	– 457	48	1,517	20,665	15,476	5,189	293	8,834	2,009	510	3,118

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.

X. Public finances in Germany

7. Central, state and local government: individual taxes

€ million

Period	Central government taxes [1]								State government taxes [1]				Local government taxes		
	Energy tax	Solidarity surcharge	Tobacco tax	Insurance tax	Motor vehicle tax	Electricity tax	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]	of which: 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	65,319	50,103	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	68,522	52,899	13,966
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	17,045	13,679	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	17,118	13,670	3,082
2018 Q1	4,865	4,587	2,425	6,388	2,602	1,725	591	569	3,576	1,431	479	350	17,638	13,880	3,291
Q2	10,158	5,127	3,485	2,442	2,360	1,805	466	631	3,270	2,166	470	264	18,827	14,548	3,853
2017 July	3,614	1,133	1,207	665	718	531	174	211	1,089	441	135	92	.	.	.
Aug.	3,456	971	1,324	1,300	720	530	167	–766	1,199	531	144	86	.	.	.
2018 July	3,504	1,171	1,558	776	709	532	176	209	1,197	487	169	88	.	.	.
Aug.	3,447	1,038	1,248	1,337	765	581	184	235	1,259	505	158	88	.	.	.

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: Contributions [3]	of which: Payments from central government	Total	of which: Pension payments	of which: Pensioners' health insurance		Total	Deposits [5]	Securities	Equity interests, mortgages and other loans [6]	Real estate	
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	299,826	211,424	87,502	299,297	255,261	18,028	+ 529	35,366	33,740	1,335	238	53	4,032
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
2018 Q1	74,368	51,726	22,489	75,482	64,885	4,569	– 1,114	34,219	32,775	1,146	240	58	4,029
Q2	77,824	55,186	22,451	75,747	64,742	4,557	+ 2,077	36,244	34,963	983	241	57	4,033

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 subsequently. **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.

X. Public finances in Germany

9. Federal Employment Agency: budgetary development*

€ million

Period	Revenue				Expenditure							Deficit/ surplus	Deficit-offsetting grant or loan from central government
	Total 1	of which:			Total	of which:							
		Contributions	Insolvency compensation levy	Central government subscriptions		Unemployment benefit 2	Short-time working benefits 3	Job promotion 4	Re-integration payment 5	Insolvency benefit payment	Administrative expenditure 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	–
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	–
2018 Q1	9,167	7,926	151	–	9,546	3,826	415	1,742	.	174	2,625	– 379	–
Q2	9,713	8,523	152	–	8,471	3,431	245	1,752	.	161	2,209	+ 1,243	–

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 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:							
		Contributions 2	Central government funds 3		Hospital treatment	Pharmaceuticals	Medical treatment	Dental treatment 4	Therapeutical treatment and aids	Sickness benefits	Administrative expenditure 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	233,814	216,227	14,500	230,773	72,303	37,389	38,792	14,070	14,776	12,281	10,912	+ 3,041
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
2018 Q1	57,788	53,670	3,625	59,854	19,028	9,569	10,045	3,656	3,763	3,370	2,614	– 2,067
Q2	59,796	55,571	3,625	60,060	18,677	9,591	10,049	3,639	3,904	3,294	2,821	– 264

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 employment. **3** Federal grant and liquidity assistance. **4** Including dentures. **5** Net, i.e. after deducting reimbursements for expenses for levying contributions incurred by other social security funds.

X. Public finances in Germany

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

€ million

Period	Revenue 1		Expenditure 1						Deficit/ surplus	
				of which:						
	Total	of which: Contributions 2	Total	Non-cash care benefits	Inpatient care	Nursing benefit	Contributions to pension insurance 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	36,305	36,248	38,862	4,609	13,014	10,010	1,611	1,606	–	2,557
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
2018 Q1	8,961	8,948	10,146	1,192	3,233	2,603	496	424	–	1,185
Q2	9,338	9,322	10,118	1,160	3,217	2,658	509	389	–	780

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
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
Q2	+ 43,602	– 5,954	– 166	– 6,139

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
		Bundesbank	Domestic MFIs pe	Other domestic financial corporations pe	Other domestic creditors 1	
2011	2,125,337	11,785	606,137	206,631	53,983	1,246,801
2012	2,202,864	12,126	630,053	199,132	60,157	1,301,397
2013	2,188,128	12,438	637,529	190,555	43,994	1,303,612
2014	2,189,569	12,774	608,040	190,130	44,949	1,333,675
2015	2,159,746	85,952	595,457	186,661	45,028	1,246,649
2016	2,143,904	205,391	572,779	179,755	41,737	1,144,242
2017 p	2,092,781	319,159	521,035	175,617	41,039	1,035,932
2016 Q1	2,168,305	108,746	610,257	183,160	41,396	1,224,746
Q2	2,171,800	142,139	598,990	181,372	39,602	1,209,695
Q3	2,165,378	172,567	585,591	179,359	38,912	1,188,949
Q4	2,143,904	205,391	572,779	179,755	41,737	1,144,242
2017 Q1 p	2,117,281	239,495	558,767	178,219	39,561	1,101,238
Q2 p	2,111,075	265,130	545,118	176,514	39,305	1,085,010
Q3 p	2,104,519	290,214	532,727	176,646	39,474	1,065,459
Q4 p	2,092,781	319,159	521,035	175,617	41,039	1,035,932
2018 Q1 p	2,069,912	329,387	502,112	176,495	38,493	1,023,425
Q2 p	2,052,296	344,279	483,251	179,856	38,102	1,006,808

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

X. Public finances in Germany

14. Maastricht debt by instrument

€ million

Period (end of year or quarter)	Total	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 subsectors	Claims vis-à-vis other government subsectors
General government								
2011	2,125,337	10,429	116,289	1,345,967	171,584	481,068	.	.
2012	2,202,864	9,742	106,945	1,441,406	124,399	520,372	.	.
2013	2,188,128	10,592	85,836	1,470,698	100,363	520,638	.	.
2014	2,189,569	12,150	72,618	1,501,494	95,770	507,536	.	.
2015	2,159,746	14,303	65,676	1,499,098	85,041	495,627	.	.
2016 Q1	2,168,305	11,976	69,372	1,491,129	104,405	491,423	.	.
Q2	2,171,800	12,181	76,710	1,485,041	111,114	486,754	.	.
Q3	2,165,378	15,370	77,249	1,491,971	98,096	482,692	.	.
Q4	2,143,904	15,845	69,715	1,484,378	91,352	482,615	.	.
2017 Q1 p	2,117,281	12,891	60,798	1,479,234	88,577	475,781	.	.
Q2 p	2,111,075	15,196	54,362	1,486,948	83,379	471,191	.	.
Q3 p	2,104,519	16,161	48,197	1,489,630	82,589	467,943	.	.
Q4 p	2,092,781	14,651	48,789	1,484,691	83,476	461,175	.	.
2018 Q1 p	2,069,912	12,540	48,449	1,479,750	71,071	458,101	.	.
Q2 p	2,052,296	12,773	54,968	1,466,057	66,701	451,798	.	.
Central government								
2011	1,344,082	10,429	104,121	1,017,210	138,112	74,210	1,908	11,382
2012	1,387,857	9,742	88,372	1,088,796	88,311	112,636	1,465	11,354
2013	1,390,440	10,592	78,996	1,113,029	64,970	122,852	2,696	10,303
2014	1,396,496	12,150	64,230	1,141,973	54,388	123,756	1,202	12,833
2015	1,372,604	14,303	49,512	1,139,039	45,256	124,494	2,932	13,577
2016 Q1	1,382,473	11,976	49,030	1,138,051	58,381	125,035	2,853	10,025
Q2	1,391,131	12,181	59,399	1,129,874	65,168	124,508	2,803	11,367
Q3	1,381,054	15,370	61,408	1,134,326	46,832	123,117	2,634	9,042
Q4	1,366,840	15,845	55,208	1,124,445	50,004	121,338	2,238	8,478
2017 Q1 p	1,350,988	12,891	45,510	1,124,430	48,082	120,075	2,465	7,469
Q2 p	1,353,600	15,196	40,225	1,132,686	44,682	120,811	2,547	8,136
Q3 p	1,352,975	16,161	34,216	1,136,873	45,235	120,490	2,674	10,160
Q4 p	1,351,290	14,651	36,297	1,132,542	47,758	120,041	2,935	10,603
2018 Q1 p	1,338,592	12,540	35,921	1,133,358	37,206	119,567	2,953	9,864
Q2 p	1,329,322	12,773	42,883	1,120,469	34,069	119,128	2,885	10,645
State government								
2011	654,143	–	12,404	330,924	11,015	299,801	12,246	3,174
2012	684,123	–	18,802	355,756	12,314	297,252	13,197	2,968
2013	663,225	–	6,847	360,706	11,573	284,099	12,141	2,655
2014	657,633	–	8,391	361,916	19,003	268,323	14,825	2,297
2015	654,287	–	16,169	362,376	18,510	257,232	15,867	4,218
2016 Q1	647,567	–	20,347	355,304	21,563	250,352	12,358	4,230
Q2	644,144	–	17,318	357,069	23,456	246,301	13,860	4,061
Q3	644,655	–	15,848	359,618	26,149	243,040	11,685	3,871
Q4	637,471	–	14,515	361,996	16,054	244,907	11,408	3,376
2017 Q1 p	627,512	–	15,308	356,832	15,301	240,071	10,407	3,527
Q2 p	620,263	–	14,167	356,647	14,516	234,933	11,180	3,578
Q3 p	618,271	–	14,021	355,342	16,095	232,813	13,313	3,581
Q4 p	611,072	–	12,543	354,941	15,753	227,836	14,325	3,609
2018 Q1 p	600,408	–	12,583	349,945	13,947	223,932	13,307	3,740
Q2 p	597,128	–	12,144	349,086	14,271	221,626	14,388	3,777
Local government								
2011	143,439	–	–	381	23,692	119,366	3,504	360
2012	147,499	–	–	423	24,801	122,275	3,124	802
2013	150,536	–	–	646	25,441	124,449	2,523	530
2014	151,995	–	–	1,297	26,126	124,572	1,959	734
2015	152,386	–	–	2,047	27,004	123,335	2,143	463
2016 Q1	154,614	–	–	2,076	26,916	125,622	2,348	476
Q2	154,257	–	–	2,453	26,476	125,328	2,216	503
Q3	155,086	–	–	2,455	26,794	125,838	2,123	527
Q4	153,914	–	–	2,404	26,529	124,982	1,819	566
2017 Q1 p	152,462	–	–	2,645	25,566	124,251	1,959	610
Q2 p	151,995	–	–	2,672	25,376	123,947	1,950	644
Q3 p	150,360	–	–	2,687	24,589	123,083	1,851	664
Q4 p	148,487	–	–	2,947	24,101	121,439	1,600	714
2018 Q1 p	147,961	–	–	2,427	22,873	122,661	1,765	719
Q2 p	144,150	–	–	2,561	22,274	119,314	1,913	724

For footnotes see end of table.

X. Public finances in Germany

14. Maastricht debt by instrument (cont'd)

€ million

Period (end of year or quarter)	Total	Currency and deposits [1]	Debt securities by original maturity: Short-term debt securities (up to one year)	Debt securities by original maturity: Long-term debt securities (more than one year)	Loans by original maturity: Short-term loans (up to one year)	Loans by original maturity: Long-term loans (more than one year)	Memo item: [2] Debt vis-à-vis other government subsectors	Memo item: [2] Claims vis-à-vis other government subsectors
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	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	–	3,226
Q2 **p**	895	–	–	–	290	605	–	3,318
Q3 **p**	750	–	–	–	184	566	–	3,433
Q4 **p**	792	–	–	–	247	545	–	3,934
2018 Q1 **p**	975	–	–	–	424	551	–	3,702
Q2 **p**	883	–	–	–	383	500	–	4,040

Source: 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 subsectors also comprise securities holdings purchased on the market. No entry for general government as debt and claims are consolidated between different government subsectors.

15. Maastricht debt of central government by instrument and category

€ million

Period (end of year or quarter)	Total [1]	Currency and deposits [2]: Total [1]	Currency and deposits [2]: of which: [3] Federal day bond	Debt securities: Total [1]	Debt securities: of which: [3] Federal bonds (Bunds)	Federal notes (Bobls)	Inflation-linked Federal bonds (Bunds) [4]	Inflation-linked Federal notes (Bobls) [4]	Capital indexation of inflation-linked securities	Federal Treasury notes (Schätze) [5]	Treasury discount paper (Bubills) [6]	Federal savings notes	Loans [1]
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	1,372,604	14,303	1,070	1,188,551	663,296	232,387	59,942	14,553	5,607	96,389	18,536	1,305	169,750
2016	1,366,840	15,845	1,010	1,179,653	670,245	221,551	51,879	14,585	3,602	95,727	23,609	737	171,342
2017 **p**	1,351,290	14,651	966	1,168,840	693,687	203,899	58,365	14,490	4,720	91,013	10,037	289	167,800
2016 Q1	1,382,473	11,976	1,051	1,187,081	666,565	225,678	61,893	14,603	4,395	98,232	20,526	1,205	183,416
Q2	1,391,131	12,181	1,033	1,189,273	675,794	220,840	49,675	14,550	3,099	99,417	28,369	1,108	189,676
Q3	1,381,054	15,370	1,021	1,195,734	664,034	231,375	50,869	14,570	3,097	102,053	30,626	922	169,949
Q4	1,366,840	15,845	1,010	1,179,653	670,245	221,551	51,879	14,585	3,602	95,727	23,609	737	171,342
2017 Q1 **p**	1,350,988	12,891	995	1,169,939	674,049	213,371	53,838	14,535	3,362	95,148	14,910	619	168,158
Q2 **p**	1,353,600	15,196	986	1,172,911	687,278	205,203	55,842	14,465	4,507	93,795	14,431	487	165,493
Q3 **p**	1,352,975	16,161	977	1,171,089	684,134	215,029	56,905	14,490	4,092	91,893	11,851	398	165,726
Q4 **p**	1,351,290	14,651	966	1,168,840	693,687	203,899	58,365	14,490	4,720	91,013	10,037	289	167,800
2018 Q1 **p**	1,338,592	12,540	951	1,169,279	699,638	193,811	60,778	14,455	4,421	94,282	9,031	219	156,773
Q2 **p**	1,329,322	12,773	941	1,163,353	710,784	185,042	62,863	–	4,276	92,639	15,049	141	153,196

Sources: Federal Republic of Germany – Finance Agency, Federal Statistical Office, and Bundesbank calculations. **1** Comprises all of central government, i.e. all off-budget entities in addition to the core budget, including the 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	2015	2016	2017	2015	2016	2017	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
	Index 2010 = 100			Annual percentage change									
At constant prices, chained													
I. Origin of domestic product													
Production sector (excluding construction)	112.6	118.0	120.8	2.5	4.8	2.4	3.2	4.2	– 0.6	2.6	3.5	1.7	3.2
Construction	103.7	105.5	108.0	0.0	1.8	2.4	– 0.8	6.0	0.3	1.8	2.3	1.8	2.3
Wholesale/retail trade, transport and storage, hotel and restaurant services	109.2	110.6	114.3	1.5	1.3	3.4	1.1	5.1	2.2	3.5	2.8	1.9	2.4
Information and communication	128.5	132.9	137.6	2.2	3.4	3.6	2.1	4.4	3.2	3.4	3.4	3.7	4.8
Financial and insurance activities	104.1	104.5	105.0	– 0.8	0.4	0.4	0.7	0.5	0.3	0.4	0.5	0.3	0.8
Real estate activities	104.4	104.5	105.6	0.2	0.0	1.1	– 0.4	1.4	0.4	1.3	1.4	0.9	1.2
Business services [1]	108.3	109.5	112.3	2.0	1.0	2.6	0.6	4.2	0.9	2.9	2.3	1.7	3.0
Public services, education and health	105.5	108.2	109.7	2.3	2.6	1.4	2.4	2.2	1.2	1.4	0.8	1.4	1.5
Other services	100.0	98.9	100.1	0.9	– 1.1	1.2	– 1.1	2.7	0.1	1.4	0.4	0.1	1.4
Gross value added	108.6	111.1	113.5	1.5	2.2	2.2	1.5	3.5	0.7	2.3	2.3	1.5	2.4
Gross domestic product [2]	108.8	111.3	113.7	1.7	2.2	2.2	1.4	3.4	0.9	2.2	2.2	1.4	2.3
II. Use of domestic product													
Private consumption [3]	106.2	108.4	110.3	1.7	2.1	1.8	1.5	2.1	1.8	2.1	1.1	1.6	1.0
Government consumption	108.1	112.3	114.1	2.9	4.0	1.6	3.2	1.7	1.4	1.5	1.7	0.8	1.0
Machinery and equipment	111.3	113.8	118.0	4.1	2.2	3.7	– 2.2	4.2	1.7	4.1	4.7	4.7	5.4
Premises	108.2	112.3	115.6	– 1.4	3.8	2.9	1.5	5.8	1.6	3.0	1.8	1.4	3.2
Other investment [4]	118.5	124.7	126.3	5.4	5.2	1.3	3.3	2.2	1.2	0.4	1.5	0.4	0.4
Changes in inventories [5,6]	.	.	.	– 0.3	0.2	0.1	0.4	0.0	0.3	0.1	– 0.1	0.0	0.6
Domestic demand	106.3	109.5	111.7	1.6	3.0	2.0	2.1	2.4	2.0	2.2	1.5	1.5	2.2
Net exports [6]	.	.	.	0.2	– 0.5	0.3	– 0.6	1.1	– 0.9	0.1	0.8	– 0.1	0.4
Exports	124.9	127.8	133.7	5.3	2.3	4.6	2.5	7.3	1.8	4.9	4.7	2.2	4.2
Imports	120.6	125.5	131.6	5.6	4.1	4.8	4.4	5.7	4.5	5.5	3.7	2.7	4.1
Gross domestic product [2]	108.8	111.3	113.7	1.7	2.2	2.2	1.4	3.4	0.9	2.2	2.2	1.4	2.3
At current prices (€ billion)													
III. Use of domestic product													
Private consumption [3]	1,630.9	1,675.6	1,732.2	2.3	2.7	3.4	2.7	3.9	3.4	3.6	2.7	3.0	2.6
Government consumption	587.4	615.5	638.9	4.2	4.8	3.8	3.9	3.4	3.4	3.9	4.4	3.2	3.6
Machinery and equipment	201.2	206.5	215.2	5.0	2.6	4.2	– 1.9	4.4	2.1	4.5	5.7	5.1	6.0
Premises	290.7	307.1	326.6	0.4	5.6	6.4	3.6	8.7	4.8	6.5	5.8	5.6	7.8
Other investment [4]	113.6	120.4	123.9	6.9	6.0	2.9	4.6	3.5	2.8	2.1	3.1	2.6	2.6
Changes in inventories [5]	– 19.1	– 12.8	– 7.2	.	.	.	.	.	.	.	.	.	.
Domestic use	2,804.7	2,912.3	3,029.5	2.5	3.8	4.0	3.3	4.2	4.0	4.3	3.6	3.4	4.3
Net exports	244.1	247.5	247.8	.	.	.	.	.	.	.	.	.	.
Exports	1,428.7	1,450.2	1,541.9	6.5	1.5	6.3	2.3	9.0	3.9	6.5	6.0	2.7	4.9
Imports	1,184.6	1,202.8	1,294.1	4.1	1.5	7.6	4.0	9.9	8.0	7.2	5.5	3.1	5.2
Gross domestic product [2]	3,048.9	3,159.8	3,277.3	3.8	3.6	3.7	2.6	4.3	2.5	4.2	4.0	3.2	4.2
IV. Prices (2010 = 100)													
Private consumption	106.2	106.9	108.6	0.6	0.7	1.6	1.1	1.8	1.5	1.6	1.6	1.4	1.6
Gross domestic product	108.6	110.1	111.8	2.0	1.4	1.5	1.2	0.9	1.6	2.0	1.8	1.8	1.8
Terms of trade	102.1	103.9	102.8	2.6	1.7	– 1.0	0.3	– 2.3	– 1.2	– 0.1	– 0.5	0.3	– 0.4
V. Distribution of national income													
Compensation of employees	1,542.9	1,601.0	1,668.8	3.9	3.8	4.2	3.8	4.2	4.4	4.3	4.1	4.6	4.7
Entrepreneurial and property income	736.9	762.7	787.6	5.0	3.5	3.3	– 0.0	5.4	– 1.5	5.4	3.3	– 0.1	3.0
National income	2,279.8	2,363.7	2,456.4	4.2	3.7	3.9	2.7	4.6	2.5	4.7	3.9	2.9	4.1
Memo item: Gross national income	3,114.6	3,222.4	3,346.3	4.0	3.5	3.8	2.6	4.4	2.8	4.3	3.8	3.1	4.2

Source: Federal Statistical Office; figures computed in August 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 institutions 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 **o**

	Production sector, total	of which: Construction	of which: Energy	of which: Industry Total	of which: by main industrial grouping: Intermediate goods	Capital goods	Durable goods	Non-durable goods	of which: by economic sector: Manufacture of basic metals and fabricated metal products	Manufacture 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	99.6
2016	101.6	105.3	98.7	101.1	100.9	101.3	102.7	101.0	101.6	101.0	99.6	102.1
2017	104.9	108.7	98.8	104.8	104.9	105.0	106.9	103.0	106.2	107.0	104.1	105.3
2017 Q2	104.4	111.1	93.8	104.1	105.4	104.0	105.6	100.4	107.0	104.6	101.8	106.0
Q3	106.5	116.6	92.4	105.8	107.4	104.7	106.3	105.2	107.8	109.5	103.0	105.2
Q4	110.0	122.3	104.6	108.2	104.6	111.3	109.6	107.1	106.7	111.6	115.9	104.8
2018 Q1	102.7	87.8	105.1	105.2	106.1	104.3	108.9	104.7	107.3	108.3	100.5	109.5
Q2 **r**	107.5	113.6	90.5	107.7	108.0	107.6	105.4	107.4	110.1	107.6	104.9	110.8
2017 Aug. **2**	101.2	112.3	93.0	99.9	103.5	96.4	98.2	102.6	102.2	104.3	94.9	95.7
Sep.	111.5	118.4	93.0	111.8	110.2	113.6	119.0	108.4	112.5	115.0	112.4	116.1
Oct.	109.6	120.9	103.0	108.1	109.8	106.4	114.1	108.2	112.0	109.6	103.1	108.2
Nov.	116.0	123.4	104.3	115.6	111.6	119.3	117.7	113.2	115.0	117.4	115.9	122.4
Dec.	104.3	122.7	106.6	100.9	92.4	108.2	97.1	99.8	93.2	107.9	128.6	83.8
2018 Jan.	95.7	75.2	106.0	98.5	102.4	93.8	102.7	102.8	101.5	102.0	87.9	99.4
Feb.	98.8	83.0	101.6	101.4	102.6	100.7	105.4	99.4	104.9	104.3	97.1	105.3
Mar.	113.6	105.1	107.7	115.6	113.3	118.4	118.5	112.0	115.5	118.7	116.6	123.9
Apr. **r**	105.1	109.6	92.5	105.3	106.0	105.5	103.2	103.0	108.6	103.9	100.3	112.3
May **r**	106.7	114.1	90.2	106.7	108.2	104.8	102.8	109.6	109.4	105.9	101.7	108.2
June **r**	110.6	117.1	88.9	111.1	109.8	112.6	110.3	109.6	112.3	112.9	112.7	112.0
July **2,x**	108.3	123.3	93.5	106.9	108.6	104.8	98.4	110.9	109.8	109.1	104.9	101.1
Aug. **2,x,p**	101.1	114.8	94.6	99.2	102.6	93.4	94.7	110.7	103.5	104.3	98.4	80.3
	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	– 0.2
2016	+ 1.8	+ 5.7	– 1.4	+ 1.4	+ 1.1	+ 1.6	+ 3.0	+ 1.2	+ 1.8	+ 1.3	– 0.1	+ 2.5
2017	+ 3.2	+ 3.2	+ 0.1	+ 3.7	+ 4.0	+ 3.7	+ 4.1	+ 2.0	+ 4.5	+ 5.9	+ 4.5	+ 3.1
2017 Q2	+ 3.4	+ 5.2	+ 2.7	+ 3.1	+ 3.4	+ 3.3	+ 4.7	+ 1.3	+ 4.0	+ 5.9	+ 4.3	+ 2.1
Q3	+ 4.1	+ 3.2	– 1.8	+ 4.8	+ 5.2	+ 4.8	+ 6.1	+ 2.9	+ 6.3	+ 6.7	+ 4.7	+ 5.0
Q4	+ 4.7	+ 3.3	+ 0.3	+ 5.3	+ 6.3	+ 5.4	+ 3.1	+ 3.2	+ 5.9	+ 7.4	+ 7.2	+ 5.7
2018 Q1	+ 3.9	+ 3.5	+ 0.6	+ 4.2	+ 3.8	+ 4.3	+ 2.6	+ 5.4	+ 3.9	+ 5.9	+ 4.9	+ 4.3
Q2 **r**	+ 2.9	+ 2.2	– 3.5	+ 3.5	+ 2.4	+ 3.5	– 0.2	+ 7.0	+ 2.9	+ 2.8	+ 3.1	+ 4.6
2017 Aug. **2**	+ 4.4	+ 3.0	± 0.0	+ 5.0	+ 5.3	+ 5.7	+ 7.4	+ 2.2	+ 6.1	+ 6.8	+ 3.3	+ 9.4
Sep.	+ 4.0	+ 3.9	– 2.6	+ 4.5	+ 5.0	+ 4.4	+ 5.6	+ 2.9	+ 6.1	+ 5.4	+ 5.3	+ 4.6
Oct.	+ 2.1	+ 3.2	+ 0.9	+ 2.0	+ 4.4	+ 0.6	+ 2.3	+ 0.7	+ 5.0	+ 3.5	+ 3.8	– 2.7
Nov.	+ 5.7	+ 3.7	– 0.7	+ 6.5	+ 6.8	+ 7.1	+ 4.8	+ 4.2	+ 4.9	+ 7.7	+ 5.2	+ 11.8
Dec.	+ 6.3	+ 2.9	+ 0.7	+ 7.7	+ 7.9	+ 8.6	+ 2.1	+ 4.9	+ 8.1	+ 11.5	+ 12.1	+ 9.1
2018 Jan.	+ 6.1	+ 16.6	– 4.6	+ 5.8	+ 5.0	+ 6.0	+ 3.7	+ 7.3	+ 4.9	+ 6.4	+ 5.6	+ 5.4
Feb.	+ 2.1	– 1.3	+ 2.0	+ 2.6	+ 3.5	+ 1.6	+ 0.6	+ 4.2	+ 4.2	+ 5.2	+ 2.5	– 0.4
Mar.	+ 3.6	– 0.6	+ 5.0	+ 4.3	+ 3.0	+ 5.4	+ 3.6	+ 4.7	+ 2.8	+ 6.1	+ 6.4	+ 7.6
Apr. **r**	+ 1.9	+ 0.3	– 3.0	+ 2.6	+ 0.8	+ 3.8	– 2.5	+ 4.4	+ 2.9	+ 0.9	+ 2.9	+ 4.9
May **r**	+ 3.6	+ 4.2	– 4.9	+ 4.1	+ 3.7	+ 3.0	– 0.3	+ 9.2	+ 2.7	+ 3.8	+ 3.0	+ 3.5
June **r**	+ 3.3	+ 2.2	– 2.6	+ 3.7	+ 2.8	+ 3.6	+ 2.1	+ 7.5	+ 2.9	+ 3.7	+ 3.3	+ 5.3
July **2,x**	+ 1.5	+ 3.4	+ 2.4	+ 1.0	± 0.0	+ 0.7	– 3.1	+ 6.0	+ 1.1	– 0.1	+ 3.0	– 2.7
Aug. **2,x,p**	– 0.1	+ 2.2	+ 1.7	– 0.7	– 0.9	– 3.1	– 3.6	+ 7.9	+ 1.3	± 0.0	+ 3.7	– 16.1

Source of the unadjusted figures: Federal Statistical Office. ***** For explanatory notes, see Statistical Supplement 4 – Seasonally adjusted business statistics, Tables II.10 to II.12. **o** Using JDemetra+ 2.2.1 (X13). **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

3. Orders received by industry *

Adjusted for working-day variations **o**

Period	Industry		of which: Intermediate goods		Capital goods		Consumer goods		of which: Durable goods		Non-durable goods	
	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change
Total												
2013	95.2	+ 2.4	100.0	– 0.9	92.6	+ 4.6	92.5	+ 2.0	95.2	+ 2.4	91.7	+ 2.0
2014	97.8	+ 2.7	100.6	+ 0.6	96.2	+ 3.9	96.8	+ 4.6	95.8	+ 0.6	97.1	+ 5.9
2015	99.8	+ 2.0	99.8	– 0.8	99.8	+ 3.7	99.8	+ 3.1	99.7	+ 4.1	99.8	+ 2.8
2016	100.7	+ 0.9	98.9	– 0.9	101.9	+ 2.1	100.6	+ 0.8	105.3	+ 5.6	99.0	– 0.8
2017	108.6	+ 7.8	109.4	+ 10.6	108.5	+ 6.5	105.7	+ 5.1	116.5	+ 10.6	102.2	+ 3.2
2017 Aug.	99.0	+ 9.8	104.9	+ 16.6	94.2	+ 5.7	107.9	+ 8.2	115.3	+ 21.2	105.5	+ 4.1
Sep.	110.3	+ 11.0	108.9	+ 11.8	111.8	+ 11.4	107.0	+ 6.2	126.2	+ 13.3	100.7	+ 3.5
Oct.	112.9	+ 9.0	113.6	+ 11.5	112.9	+ 7.9	109.7	+ 6.4	127.9	+ 5.3	103.7	+ 6.8
Nov.	114.8	+ 10.9	118.2	+ 13.8	113.1	+ 9.5	111.4	+ 8.1	129.8	+ 17.0	105.4	+ 4.8
Dec.	115.2	+ 9.1	103.4	+ 14.0	125.2	+ 7.2	94.5	+ 4.2	108.6	+ 12.2	89.8	+ 1.2
2018 Jan.	110.9	+ 9.9	115.7	+ 10.5	107.9	+ 9.7	111.3	+ 8.8	112.6	+ 5.2	110.8	+ 10.0
Feb.	110.3	+ 4.1	110.9	+ 2.3	110.1	+ 5.9	108.7	– 1.4	112.2	+ 3.1	107.6	– 2.8
Mar.	121.6	+ 3.8	121.2	+ 4.1	122.9	+ 3.6	113.6	+ 2.8	123.6	– 2.3	110.4	+ 4.9
Apr.	108.4	+ 1.6	116.0	+ 7.4	104.7	– 1.7	101.5	– 0.6	114.1	+ 2.6	97.3	– 1.8
May	109.9	+ 5.9	114.1	+ 7.1	107.6	+ 5.1	106.7	+ 5.0	121.3	+ 10.0	101.8	+ 3.2
June	111.5	+ 0.7	115.0	+ 3.7	110.2	– 1.1	105.3	+ 1.3	121.3	+ 3.1	99.9	+ 0.4
July	106.9	+ 1.0	114.7	+ 5.4	101.7	– 2.0	109.6	+ 1.8	120.3	+ 10.6	106.1	– 1.2
Aug. **p**	98.4	– 0.6	103.9	– 1.0	94.0	– 0.2	106.5	– 1.3	117.2	+ 1.6	103.1	– 2.3
From the domestic market												
2013	97.0	+ 0.5	102.8	– 1.3	92.3	+ 2.1	95.2	+ 1.2	100.4	+ 0.9	93.4	+ 1.3
2014	98.1	+ 1.1	101.7	– 1.1	95.2	+ 3.1	97.1	+ 2.0	100.4	± 0.0	96.0	+ 2.8
2015	99.8	+ 1.7	99.8	– 1.9	99.7	+ 4.7	99.8	+ 2.8	99.7	– 0.7	99.8	+ 4.0
2016	99.8	± 0.0	97.6	– 2.2	101.9	+ 2.2	98.0	– 1.8	103.1	+ 3.4	96.3	– 3.5
2017	107.0	+ 7.2	107.1	+ 9.7	107.8	+ 5.8	101.7	+ 3.8	108.7	+ 5.4	99.3	+ 3.1
2017 Aug.	101.2	+ 9.3	107.0	+ 16.6	95.4	+ 3.1	106.3	+ 8.9	110.9	+ 12.5	104.8	+ 7.7
Sep.	107.5	+ 10.7	105.9	+ 13.0	109.4	+ 9.7	104.5	+ 5.9	121.1	+ 7.1	98.9	+ 5.4
Oct.	111.0	+ 7.7	112.4	+ 10.8	110.2	+ 5.2	108.7	+ 7.1	128.7	+ 8.9	101.9	+ 6.3
Nov.	112.7	+ 9.3	114.1	+ 10.9	111.7	+ 7.9	111.6	+ 10.0	123.1	+ 10.5	107.7	+ 9.7
Dec.	101.3	+ 1.4	98.4	+ 12.7	106.1	– 5.8	86.2	– 0.1	89.0	+ 2.4	85.2	– 1.0
2018 Jan.	107.8	+ 8.8	113.4	+ 11.0	104.0	+ 7.5	101.8	+ 4.0	103.1	+ 0.4	101.3	+ 5.2
Feb.	105.6	– 3.5	108.1	– 0.9	103.5	– 6.2	105.3	+ 0.5	109.5	+ 7.1	103.9	– 1.7
Mar.	119.7	+ 4.3	119.4	+ 5.9	121.6	+ 3.1	109.0	+ 3.5	122.1	+ 5.2	104.6	+ 3.0
Apr.	105.0	– 4.6	108.7	+ 2.7	103.0	– 11.4	97.9	+ 4.9	115.5	+ 13.3	91.9	+ 1.7
May	106.5	+ 5.1	110.2	+ 6.4	103.4	+ 3.4	106.2	+ 10.1	127.6	+ 29.3	99.0	+ 3.4
June	107.7	– 0.9	111.4	+ 5.6	105.4	– 6.6	101.5	+ 1.6	113.2	+ 5.6	97.5	+ 0.1
July	109.8	+ 2.4	113.7	+ 5.1	107.1	+ 0.4	105.4	+ 0.6	109.4	+ 6.9	104.1	– 1.5
Aug. **p**	98.1	– 3.1	102.3	– 4.4	93.8	– 1.7	103.5	– 2.6	116.8	+ 5.3	99.0	– 5.5
From abroad												
2013	93.9	+ 3.9	97.1	– 0.4	92.8	+ 6.2	90.5	+ 2.7	91.0	+ 3.6	90.4	+ 2.5
2014	97.5	+ 3.8	99.5	+ 2.5	96.7	+ 4.2	96.5	+ 6.6	92.0	+ 1.1	97.9	+ 8.3
2015	99.8	+ 2.4	99.8	+ 0.3	99.8	+ 3.2	99.8	+ 3.4	99.8	+ 8.5	99.8	+ 1.9
2016	101.5	+ 1.7	100.4	+ 0.6	101.9	+ 2.1	102.6	+ 2.8	107.1	+ 7.3	101.1	+ 1.3
2017	109.8	+ 8.2	111.9	+ 11.5	109.0	+ 7.0	108.9	+ 6.1	122.8	+ 14.7	104.4	+ 3.3
2017 Aug.	97.3	+ 10.1	102.7	+ 16.7	93.4	+ 7.2	109.2	+ 7.7	118.8	+ 28.9	106.1	+ 1.6
Sep.	112.5	+ 11.2	112.1	+ 10.6	113.2	+ 12.2	109.0	+ 6.4	130.3	+ 18.5	102.1	+ 2.1
Oct.	114.4	+ 10.1	114.9	+ 12.2	114.5	+ 9.6	110.4	+ 5.7	127.3	+ 2.5	105.0	+ 7.0
Nov.	116.4	+ 12.1	122.7	+ 16.9	113.9	+ 10.5	111.3	+ 6.6	135.2	+ 22.4	103.6	+ 1.2
Dec.	125.7	+ 14.3	108.8	+ 15.3	136.7	+ 14.6	100.9	+ 7.2	124.3	+ 18.7	93.3	+ 2.9
2018 Jan.	113.3	+ 10.9	118.2	+ 10.1	110.3	+ 11.0	118.6	+ 12.2	120.3	+ 8.9	118.0	+ 13.4
Feb.	113.9	+ 10.2	113.9	+ 5.9	114.1	+ 13.9	111.4	– 2.6	114.3	+ 0.2	110.4	– 3.6
Mar.	123.0	+ 3.3	123.1	+ 2.2	123.7	+ 3.9	117.2	+ 2.4	124.8	– 7.4	114.8	+ 6.3
Apr.	111.0	+ 6.5	123.8	+ 12.1	105.8	+ 5.1	104.3	– 4.2	112.9	– 4.8	101.5	– 4.1
May	112.4	+ 6.3	118.4	+ 8.0	110.2	+ 6.2	107.0	+ 1.4	116.2	– 2.8	104.0	+ 3.1
June	114.4	+ 2.0	118.8	+ 1.7	113.1	+ 2.3	108.2	+ 0.9	127.8	+ 1.5	101.8	+ 0.7
July	104.7	– 0.1	115.8	+ 5.8	98.4	– 3.5	112.8	+ 2.5	129.0	+ 13.1	107.6	– 1.0
Aug. **p**	98.7	+ 1.4	105.7	+ 2.9	94.2	+ 0.9	108.9	– 0.3	117.6	– 1.0	106.2	+ 0.1

Source of the unadjusted figures: Federal Statistical Office. * At current prices; for explanatory notes, see Statistical Supplement 4 – Seasonally adjusted business statistics, Tables II.14 to II.16. **o** Using JDemetra+ 2.2.1 (X13).

XI. Economic conditions in Germany

4. Orders received by construction *

Adjusted for working-day variations o

Period	Total		Breakdown by type of construction										Breakdown by client 1			
			Building													
	Total		Total		Housing construction		Industrial construction		Public sector construction		Civil engineering		Industry		Public sector 2	
	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change
2014	118.5	– 0.5	127.2	+ 0.6	146.6	+ 4.3	126.8	– 0.9	90.6	– 3.5	109.9	– 1.8	121.8	– 0.1	104.0	– 3.4
2015	124.2	+ 4.8	133.6	+ 5.0	165.4	+ 12.8	124.3	– 2.0	98.5	+ 8.7	114.8	+ 4.5	122.6	+ 0.7	109.3	+ 5.1
2016	142.2	+ 14.5	153.8	+ 15.1	193.5	+ 17.0	143.0	+ 15.0	107.5	+ 9.1	130.8	+ 13.9	137.1	+ 11.8	127.0	+ 16.2
2017	152.2	+ 7.0	164.6	+ 7.0	203.9	+ 5.4	153.5	+ 7.3	120.3	+ 11.9	139.8	+ 6.9	147.1	+ 7.3	136.7	+ 7.6
2017 July	164.0	+ 7.4	167.7	+ 2.5	203.9	+ 4.6	159.6	+ 0.7	120.4	+ 2.6	160.4	+ 13.2	155.1	+ 7.6	157.1	+ 8.8
Aug.	145.3	+ 4.6	152.9	+ 2.9	184.8	+ 0.4	142.3	+ 0.5	121.5	+ 22.0	137.7	+ 6.6	138.9	+ 4.9	135.9	+ 6.7
Sep.	151.8	+ 5.1	163.7	+ 1.3	200.0	– 11.3	148.2	+ 11.3	138.3	+ 15.0	140.0	+ 9.9	144.9	+ 11.7	139.5	+ 9.8
Oct.	141.2	– 2.8	152.7	– 2.7	203.3	+ 4.6	131.0	– 11.5	117.8	+ 6.8	129.7	– 2.9	132.5	– 8.6	125.3	– 0.6
Nov.	140.7	+ 10.7	158.1	+ 13.2	188.6	– 0.4	157.1	+ 29.0	101.3	+ 6.5	123.2	+ 7.6	152.9	+ 22.9	108.9	+ 3.9
Dec.	166.7	+ 27.0	199.5	+ 32.8	247.1	+ 43.2	196.0	+ 27.4	116.3	+ 21.9	133.9	+ 19.1	174.7	+ 23.9	126.2	+ 20.4
2018 Jan.	123.8	+ 9.1	135.6	+ 8.5	170.0	+ 10.0	129.5	+ 5.7	86.0	+ 15.6	112.0	+ 9.7	130.3	+ 4.7	98.6	+ 14.8
Feb.	154.2	+ 18.3	157.6	+ 9.2	186.6	+ 6.0	154.8	+ 11.3	108.7	+ 11.6	150.8	+ 29.8	167.1	+ 31.2	127.9	+ 11.4
Mar.	180.7	+ 0.9	186.9	– 1.8	228.8	– 6.1	169.6	– 1.5	155.7	+ 11.5	174.6	+ 4.2	168.4	+ 2.0	174.0	+ 4.1
Apr.	169.0	+ 2.3	174.9	+ 2.6	234.0	+ 14.4	156.6	– 6.1	113.0	– 1.5	163.2	+ 2.0	155.9	+ 1.2	156.3	– 2.9
May	177.3	+ 14.1	182.6	+ 12.4	216.0	+ 6.8	177.3	+ 24.0	132.9	– 6.5	172.0	+ 15.9	174.9	+ 26.3	164.2	+ 6.6
June	183.4	+ 5.8	190.3	+ 1.2	237.0	– 0.6	170.2	+ 3.5	158.1	– 0.7	176.4	+ 11.3	168.4	+ 7.9	177.1	+ 7.6
July	176.8	+ 7.8	189.8	+ 13.2	235.5	+ 15.5	178.7	+ 12.0	133.1	+ 10.5	163.7	+ 2.1	177.2	+ 14.2	152.7	– 2.8

Source of the unadjusted figures: Federal Statistical Office. * At current prices; excluding value added tax; for explanatory notes, see Statistical Supplement 4 – Seasonally adjusted business statistics, Table II.21. o Using the Census X-12-ARIMA method, version 0.2.8. 1 Excluding housing construction orders. 2 Including road construction.

5. Retail trade turnover *

Adjusted for calendar variations o

Period	Total				of which:											
					In stores by enterprises main product range										Retail sale via mail order houses or via internet as well as other retail sale 2	
					Food, beverages, tobacco 1		Textiles, clothing, foodwear and leather goods		Information and communications equipment		Construction and flooring materials, household appliances, furniture		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles			
	At current prices		At 2010 prices 3		At current prices											
	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change
2014	96.5	+ 1.6	96.4	+ 1.2	97.3	+ 2.0	99.9	+ 1.8	99.2	– 0.8	97.6	– 0.5	95.0	+ 7.1	83.3	+ 1.8
2015	4 100.1	+ 3.7	4 100.1	+ 3.8	100.1	+ 2.9	100.2	+ 0.3	100.2	+ 1.0	100.2	+ 2.7	100.0	+ 5.3	4 100.0	+ 20.0
2016	102.5	+ 2.4	102.1	+ 2.0	101.7	+ 1.6	101.0	+ 0.8	99.9	– 0.3	101.5	+ 1.3	103.9	+ 3.9	109.8	+ 9.8
2017 5	107.5	+ 4.9	105.1	+ 2.9	105.6	+ 3.8	108.3	+ 7.2	107.0	+ 7.1	103.6	+ 2.1	107.9	+ 3.8	120.6	+ 9.8
2017 Aug.	103.0	+ 3.9	101.2	+ 1.9	103.7	+ 3.0	99.5	+ 7.0	97.9	+ 10.0	98.2	+ 1.0	104.4	+ 3.6	110.7	+ 9.4
Sep.	105.7	+ 7.0	102.9	+ 5.0	102.5	+ 5.1	118.7	+ 21.1	103.3	+ 11.7	99.8	+ 3.5	106.2	+ 3.7	117.2	+ 12.6
Oct.	110.3	+ 2.3	107.0	+ 0.6	105.9	+ 2.6	119.6	– 5.6	109.9	+ 3.1	109.6	+ 1.6	109.1	+ 2.5	122.1	+ 2.8
Nov.	114.8	+ 5.7	111.2	+ 3.8	108.0	+ 4.7	112.5	+ 4.9	124.0	+ 7.9	110.7	+ 3.0	113.6	+ 4.6	151.3	+ 13.9
Dec.	129.2	+ 4.0	125.3	+ 2.4	125.2	+ 4.3	128.1	+ 3.3	162.7	+ 2.6	113.1	+ 2.7	123.2	+ 4.7	154.5	+ 7.9
2018 Jan.	100.3	+ 4.2	97.8	+ 2.6	99.2	+ 4.8	89.4	+ 0.6	110.9	– 1.0	90.9	+ 4.2	107.9	+ 6.5	120.0	+ 6.7
Feb.	96.3	+ 2.3	93.6	+ 1.1	98.1	+ 3.9	78.6	– 4.1	93.0	+ 1.5	88.8	– 0.6	104.8	+ 5.3	108.9	+ 2.6
Mar.	110.8	+ 1.2	106.9	– 0.1	110.1	+ 4.0	100.6	– 9.7	104.5	+ 2.5	106.7	– 5.0	113.3	+ 3.8	126.7	+ 6.0
Apr.	112.8	+ 5.5	108.4	+ 3.8	111.9	+ 3.8	120.2	+ 10.0	91.4	– 1.7	113.5	+ 4.5	113.1	+ 7.3	122.1	+ 7.4
May	110.2	+ 2.5	105.7	+ 0.7	111.9	+ 5.0	110.0	– 1.0	90.0	+ 0.2	106.0	– 1.2	107.9	+ 1.0	119.5	+ 4.0
June	109.3	+ 3.3	105.0	+ 1.2	111.4	+ 6.1	106.2	– 4.0	100.4	+ 5.2	101.2	– 1.4	109.3	+ 2.6	114.4	+ 1.8
July	109.9	+ 2.3	106.6	+ 0.7	110.0	+ 2.4	105.2	– 2.3	97.1	– 4.6	102.5	– 1.8	115.1	+ 5.3	122.4	+ 8.8
Aug.	106.0	+ 2.9	102.5	+ 1.3	106.7	+ 2.9	98.8	– 0.7	96.8	– 1.1	97.3	– 0.9	109.3	+ 4.7	115.0	+ 3.9

Source of the unadjusted figures: Federal Statistical Office. * Excluding value added tax; for explanatory notes, see Statistical Supplement 4 – Seasonally adjusted business statistics, Table II.24. o Using the Census X-12-ARIMA method, version 0.2.8. 1 Including stalls and markets. 2 Not in stores, stalls or markets. 3 Values at current prices deflated with retail price indices at 2010 weights. 4 As of May 2015 integration of a larger online retail sales-based enterprise that founded a business establishment in Germany in May 2015. 5 As of January 2017 figures are provisional, in some cases revised, and particularly uncertain in recent months due to estimates for missing reports.

XI. Economic conditions in Germany

6. Labour market *

Period	Employment [1]		Employment subject to social contributions [2]					Solely jobs exempt from social contributions [2]	Short-time workers [3]		Unemployment [4]		Unemployment rate [4,5] in %	Vacancies, [4,6] thousands
			Total		of which:					of which:		of which:		
	Thousands	Annual percentage change	Thousands	Annual percentage change	Production sector	Services excluding temporary employment	Temporary employment		Total	Cyclically induced	Total	Assigned to the legal category of the Third Book of the Social Security Code (SGB III)		
					Thousands									
2013	42,319	+ 0.6	29,713	+ 1.3	8,783	19,958	743	5,017	191	77	2,950	970	6.9	457
2014	42,670	+ 0.8	30,197	+ 1.6	8,860	20,332	770	5,029	134	49	2,898	933	6.7	490
2015	43,071	+ 0.9	30,823	+ 2.1	8,938	20,840	806	4,856	130	44	2,795	859	6.4	569
2016	43,642	+ 1.3	31,508	+ 2.2	9,028	21,407	834	4,804	128	42	2,691	822	6.1	655
2017	44,269	+ 1.4	32,234	+ 2.3	9,146	21,980	868	4,742	113	24	2,533	[7] 855	5.7	731
2015 Q3	43,290	+ 1.0	30,928	+ 2.1	8,974	20,865	840	4,868	47	33	2,759	827	6.3	595
Q4	43,485	+ 1.2	31,333	+ 2.3	9,049	21,204	837	4,829	101	46	2,655	775	6.0	604
2016 Q1	43,087	+ 1.4	31,077	+ 2.4	8,929	21,131	793	4,785	312	50	2,892	932	6.6	610
Q2	43,563	+ 1.3	31,350	+ 2.2	8,988	21,298	820	4,823	59	47	2,674	782	6.1	653
Q3	43,842	+ 1.3	31,593	+ 2.1	9,056	21,431	858	4,827	46	35	2,651	808	6.0	682
Q4	44,076	+ 1.4	32,014	+ 2.2	9,137	21,770	866	4,781	93	36	2,547	766	5.8	677
2017 Q1	43,729	+ 1.5	31,790	+ 2.3	9,040	21,697	830	4,728	307	41	2,734	[7] 987	6.2	671
Q2	44,195	+ 1.5	32,064	+ 2.3	9,110	21,857	852	4,762	36	25	2,513	822	5.6	717
Q3	44,479	+ 1.5	32,324	+ 2.3	9,172	22,011	892	4,766	28	16	2,504	833	5.6	763
Q4	44,672	+ 1.4	32,759	+ 2.3	9,263	22,354	900	4,711	79	15	2,381	780	5.3	771
2018 Q1	44,385	+ 1.5	32,563	+ 2.4	9,214	22,279	843	4,664	179	22	2,525	909	5.7	760
Q2	[8] 44,794	[8] + 1.4	[9] 32,786	[9] + 2.3	[9] 9,295	[9] 22,403	[9] 841	[9] 4,698	...	[9] 10	2,325	760	[10] 5.1	794
Q3	...	...	...	...	...	...	...	...	...	...	2,311	784	5.1	828
2015 May	43,012	+ 0.8	30,718	+ 2.0	8,901	20,776	794	4,875	57	44	2,762	815	6.3	557
June	43,150	+ 0.9	30,771	+ 2.0	8,915	20,788	819	4,902	59	45	2,711	782	6.2	572
July	43,191	+ 0.9	30,744	+ 2.1	8,934	20,724	840	4,908	49	35	2,773	830	6.3	589
Aug.	43,250	+ 1.0	30,988	+ 2.2	8,993	20,901	846	4,841	40	26	2,796	851	6.4	597
Sep.	43,429	+ 1.1	31,333	+ 2.2	9,076	21,153	850	4,810	51	39	2,708	799	6.2	600
Oct.	43,517	+ 1.1	31,368	+ 2.3	9,068	21,206	846	4,814	61	47	2,649	764	6.0	612
Nov.	43,554	+ 1.3	31,389	+ 2.5	9,060	21,247	842	4,846	66	52	2,633	764	6.0	610
Dec.	43,385	+ 1.3	31,150	+ 2.5	8,964	21,167	798	4,843	177	39	2,681	798	6.1	591
2016 Jan.	42,993	+ 1.3	30,983	+ 2.3	8,906	21,073	784	4,774	343	48	2,920	961	6.7	581
Feb.	43,049	+ 1.4	31,069	+ 2.4	8,923	21,127	793	4,769	343	50	2,911	947	6.6	614
Mar.	43,218	+ 1.4	31,209	+ 2.2	8,954	21,217	804	4,782	252	52	2,845	888	6.5	635
Apr.	43,386	+ 1.3	31,314	+ 2.2	8,983	21,279	809	4,806	67	55	2,744	817	6.3	640
May	43,580	+ 1.3	31,410	+ 2.3	9,000	21,337	826	4,838	57	45	2,664	774	6.0	655
June	43,724	+ 1.3	31,443	+ 2.2	9,010	21,339	846	4,865	54	42	2,614	754	5.9	665
July	43,704	+ 1.2	31,378	+ 2.1	9,007	21,273	853	4,863	43	31	2,661	805	6.0	674
Aug.	43,810	+ 1.3	31,675	+ 2.2	9,076	21,486	865	4,802	50	38	2,684	830	6.1	685
Sep.	44,011	+ 1.3	32,007	+ 2.2	9,157	21,729	869	4,768	46	35	2,608	787	5.9	687
Oct.	44,093	+ 1.3	32,045	+ 2.2	9,154	21,773	871	4,767	50	39	2,540	756	5.8	691
Nov.	44,140	+ 1.3	32,069	+ 2.2	9,147	21,807	876	4,794	52	40	2,532	756	5.7	681
Dec.	43,994	+ 1.4	31,848	+ 2.2	9,063	21,731	835	4,794	178	30	2,568	785	5.8	658
2017 Jan.	43,644	+ 1.5	31,707	+ 2.3	9,017	21,648	825	4,719	370	43	2,777	[7] 1,010	6.3	647
Feb.	43,694	+ 1.5	31,774	+ 2.3	9,032	21,690	828	4,706	335	42	2,762	1,014	6.3	675
Mar.	43,850	+ 1.5	31,930	+ 2.3	9,078	21,777	838	4,722	216	40	2,662	935	6.0	692
Apr.	44,024	+ 1.5	32,013	+ 2.2	9,101	21,831	838	4,748	39	27	2,569	861	5.8	706
May	44,205	+ 1.4	32,131	+ 2.3	9,124	21,900	859	4,775	36	25	2,498	810	5.6	714
June	44,356	+ 1.4	32,165	+ 2.3	9,135	21,902	878	4,802	33	22	2,473	796	5.5	731
July	44,375	+ 1.5	32,128	+ 2.4	9,123	21,869	890	4,803	30	18	2,518	842	5.6	750
Aug.	44,445	+ 1.4	32,396	+ 2.3	9,189	22,060	896	4,739	28	15	2,545	855	5.7	765
Sep.	44,618	+ 1.4	32,732	+ 2.3	9,272	22,304	901	4,711	28	16	2,449	800	5.5	773
Oct.	44,683	+ 1.3	32,778	+ 2.3	9,274	22,355	901	4,696	27	16	2,389	772	5.4	780
Nov.	44,737	+ 1.4	32,830	+ 2.4	9,278	22,395	916	4,720	26	16	2,368	772	5.3	772
Dec.	44,595	+ 1.4	32,609	+ 2.4	9,202	22,319	867	4,722	183	12	2,385	796	5.3	761
2018 Jan.	44,320	+ 1.5	32,504	+ 2.5	9,191	22,249	841	4,660	256	21	2,570	941	5.8	736
Feb.	44,357	+ 1.5	32,551	+ 2.4	9,223	22,262	838	4,642	144	20	2,546	927	5.7	764
Mar.	44,479	+ 1.4	32,660	+ 2.3	9,253	22,334	837	4,656	136	24	2,458	859	5.5	778
Apr.	44,635	+ 1.4	[9] 32,771	[9] + 2.4	[9] 9,291	[9] 22,396	[9] 839	[9] 4,687	...	[9] 10	2,384	796	5.3	784
May	44,810	+ 1.4	[9] 32,830	[9] + 2.2	[9] 9,306	[9] 22,431	[9] 842	[9] 4,709	...	[9] 9	2,315	751	[10] 5.1	793
June	[8] 44,936	[8] + 1.3	[9] 32,854	[9] + 2.1	[9] 9,323	[9] 22,429	[9] 851	[9] 4,739	...	[9] 12	2,276	735	5.0	805
July	[8] 44,949	[8] + 1.3	[9] 32,832	[9] + 2.2	[9] 9,339	[9] 22,387	[9] 858	[9] 4,733	...	[9] 14	2,325	788	5.1	823
Aug.	[8] 45,010	[8] + 1.3	...	...	...	...	...	...	...	...	2,351	804	5.2	828
Sep.	...	...	...	...	...	...	...	...	...	...	2,256	759	5.0	834

Sources: Federal Statistical Office; Federal Employment Agency. * Annual and quarterly figures: averages; calculated by the Bundesbank; deviations from the official figures are due to rounding. **1** Workplace concept; averages. **2** Monthly figures: end of month. **3** Number within a given month. **4** Mid-month level. **5** Relative to the total civilian labour force. **6** Excluding government-assisted forms of employment and seasonal jobs, including jobs located abroad. **7** From January 2017 persons receiving additional income assistance (unemployment benefit and unemployment benefit II at the same time) shall be assigned to the legal category of the Third Book of the Social Security Code (SGB III). **8** Initial preliminary estimate by the Federal Statistical Office. **9** Unadjusted figures estimated by the Federal Employment Agency. In 2016 and 2017 the estimated values for Germany deviated from the final data by a maximum of 1.1% for employees subject to social contributions, by a maximum of 0.4% for persons solely in jobs exempt from social contributions, and by a maximum of 70.0% for cyclically induced short-time work. **10** From May 2018 calculated on the basis of new labour force figures.

XI. Economic conditions in Germany

7. Prices

Period	Harmonised Index of Consumer Prices						Memo item: Consumer price index (national concept)	Construction price index	Index of producer prices of industrial products sold on the domestic market [5]	Index of producer prices of agricultural products [5]	Indices of foreign trade prices		HWWI Index of World Market Prices of Raw Materials [6]	
	Total	of which: [1] Food [2]	Non-energy industrial goods	Energy [3]	Services	of which: Housing rents [4]					Exports	Imports	Energy [7]	Other raw materials [8]
	2015 = 100						2010 = 100	2015 = 100		2010 = 100	2015 = 100			
Index level														
2013	99.1	97.4	98.7	109.8	97.4	97.3	105.7	97.0	102.9	120.7	99.4	105.2	160.2	117.6
2014	99.9	98.8	99.2	107.5	98.8	98.8	106.6	98.6	101.9	111.1	99.1	102.9	142.8	108.3
2015	100.0	100.0	100.0	100.0	100.0	100.0	106.9	100.0	100.0	106.9	100.0	100.0	100.0	100.0
2016	100.4	101.3	101.0	94.6	101.2	101.2	107.4	101.9	98.4	106.6	99.0	96.7	83.2	98.4
2017	102.1	104.0	102.3	97.5	102.5	102.9	109.3	105.3	101.1	[9] 115.2	100.7	100.1	99.6	107.1
2016 Nov.	100.8	102.0	102.0	95.2	101.1	101.8	108.0	102.6	99.1	111.3	99.7	98.3	95.4	108.5
Dec.	101.8	102.6	101.6	97.3	102.8	102.0	108.8		99.6	113.1	100.3	100.1	106.6	114.0
2017 Jan.	101.0	103.2	100.7	98.2	101.0	102.2	108.1		100.3	114.8	100.7	100.8	108.9	115.9
Feb.	101.7	104.6	101.0	98.4	101.9	102.3	108.8	103.9	100.5	116.2	100.9	101.4	110.2	118.9
Mar.	101.8	103.4	102.6	97.5	102.0	102.4	109.0		100.6	117.6	100.9	101.1	99.7	116.4
Apr.	101.8	103.4	102.7	98.3	101.5	102.6	109.0		100.9	119.9	101.1	101.0	100.4	110.1
May	101.6	103.5	102.7	96.9	101.5	102.8	108.8	104.9	100.8	120.9	100.8	100.0	93.1	104.2
June	101.8	103.6	102.0	96.1	102.5	102.9	109.0		100.8	121.3	100.6	99.0	85.7	100.4
July	102.2	103.8	101.4	95.9	103.8	103.0	109.4		101.0	120.2	100.5	98.6	86.5	102.9
Aug.	102.4	103.8	101.8	96.3	103.8	103.1	109.5	105.7	101.1	121.2	100.3	98.6	90.1	103.3
Sep.	102.4	104.1	102.9	97.5	102.8	103.2	109.6		101.5	[9] 115.9	100.5	99.3	96.3	102.8
Oct.	102.3	104.8	103.2	97.4	102.2	103.3	109.6		101.6	114.3	100.6	99.9	101.6	102.7
Nov.	102.6	104.8	103.2	98.7	102.6	103.5	109.9	106.5	101.7	114.7	100.8	100.6	110.3	103.8
Dec.	103.4	105.5	102.8	98.5	104.2	103.6	110.6		101.9	114.3	100.8	100.8	113.7	103.6
2018 Jan.	102.4	106.2	101.8	98.9	102.4	103.9	109.8		102.4	110.6	101.1	101.4	115.9	105.4
Feb.	102.9	106.2	102.2	98.5	103.3	104.0	110.3	108.3	102.3	110.1	101.0	100.9	108.7	106.0
Mar.	103.3	106.4	103.2	97.9	103.7	104.1	110.7		102.4	111.4	101.1	100.8	109.5	104.9
Apr.	103.2	106.8	103.4	99.5	102.7	104.3	110.7		102.8	110.8	101.3	101.4	116.7	106.1
May	103.8	106.9	103.3	101.9	103.4	104.4	111.2	109.4	103.3	109.6	101.8	102.9	129.9	112.5
June	103.9	106.9	102.9	102.4	103.8	104.5	111.3		103.7	110.4	102.1	103.4	130.5	111.3
July	104.3	106.6	101.9	102.3	105.5	104.7	111.6		103.9	112.4	102.2	103.3	129.9	105.8
Aug.	104.3	106.4	102.5	103.1	105.0	104.8	111.7	111.0	104.2	115.5	102.4	103.3	130.5	105.7
Sep.	104.7	107.1	103.9	105.1	104.2	104.9	112.1		...	...	...	...	140.8	102.7
Annual percentage change														
2013	+ 1.6	+ 3.4	+ 0.7	+ 1.8	+ 1.5	+ 1.3	+ 1.5	+ 2.1	– 0.1	+ 1.1	– 0.6	– 2.5	– 4.0	– 8.6
2014	+ 0.8	+ 1.5	+ 0.5	– 2.1	+ 1.4	+ 1.6	+ 0.9	+ 1.6	– 1.0	– 8.0	– 0.3	– 2.2	– 10.9	– 7.9
2015	+ 0.1	+ 1.2	+ 0.8	– 7.0	+ 1.2	+ 1.2	+ 0.3	+ 1.4	– 1.9	– 3.8	+ 0.9	– 2.8	– 30.0	– 7.7
2016	+ 0.4	+ 1.3	+ 1.0	– 5.4	+ 1.2	+ 1.2	+ 0.5	+ 1.9	– 1.6	– 0.3	– 1.0	– 3.3	– 16.8	– 1.6
2017	+ 1.7	+ 2.7	+ 1.3	+ 3.1	+ 1.3	+ 1.7	+ 1.8	+ 3.3	+ 2.7	[9] + 8.1	+ 1.7	+ 3.5	+ 19.7	+ 8.8
2016 Nov.	+ 0.7	+ 1.5	+ 1.0	– 2.6	+ 1.0	+ 1.4	+ 0.8	+ 2.2	+ 0.1	+ 3.4	+ 0.1	+ 0.1	+ 6.5	+ 17.0
Dec.	+ 1.7	+ 2.4	+ 1.2	+ 2.4	+ 1.6	+ 1.6	+ 1.7		+ 1.0	+ 5.4	+ 1.1	+ 3.1	+ 37.5	+ 27.5
2017 Jan.	+ 1.9	+ 2.8	+ 1.0	+ 5.9	+ 1.1	+ 1.6	+ 1.9		+ 2.3	+ 7.5	+ 1.8	+ 5.2	+ 68.8	+ 31.4
Feb.	+ 2.2	+ 3.8	+ 1.1	+ 7.2	+ 1.3	+ 1.6	+ 2.2	+ 2.8	+ 3.0	+ 9.6	+ 2.4	+ 6.7	+ 72.2	+ 34.2
Mar.	+ 1.5	+ 2.2	+ 1.6	+ 5.2	+ 0.5	+ 1.6	+ 1.6		+ 3.2	+ 10.3	+ 2.3	+ 5.6	+ 37.9	+ 24.4
Apr.	+ 2.0	+ 1.8	+ 1.2	+ 5.0	+ 1.8	+ 1.7	+ 2.0		+ 3.3	+ 13.2	+ 2.6	+ 5.8	+ 33.7	+ 15.3
May	+ 1.4	+ 2.2	+ 1.3	+ 2.0	+ 1.0	+ 1.8	+ 1.5	+ 3.1	+ 2.8	+ 14.1	+ 2.1	+ 4.0	+ 12.7	+ 7.2
June	+ 1.5	+ 2.6	+ 1.3	– 0.1	+ 1.6	+ 1.8	+ 1.6		+ 2.4	+ 14.0	+ 1.6	+ 2.4	– 2.5	+ 1.5
July	+ 1.5	+ 2.5	+ 1.4	+ 0.8	+ 1.6	+ 1.8	+ 1.7		+ 2.4	+ 9.3	+ 1.5	+ 1.9	+ 2.5	+ 2.7
Aug.	+ 1.8	+ 2.9	+ 1.5	+ 2.1	+ 1.5	+ 1.7	+ 1.8	+ 3.4	+ 2.6	+ 13.6	+ 1.4	+ 2.0	+ 7.4	+ 4.8
Sep.	+ 1.8	+ 2.9	+ 1.4	+ 2.7	+ 1.4	+ 1.7	+ 1.8		+ 3.2	[9] + 10.7	+ 1.5	+ 2.8	+ 14.8	+ 6.0
Oct.	+ 1.5	+ 3.6	+ 1.2	+ 1.2	+ 1.0	+ 1.6	+ 1.6		+ 2.8	+ 5.1	+ 1.3	+ 2.5	+ 5.6	+ 2.9
Nov.	+ 1.8	+ 2.7	+ 1.2	+ 3.7	+ 1.5	+ 1.7	+ 1.8	+ 3.8	+ 2.6	+ 3.1	+ 1.1	+ 2.3	+ 15.6	– 4.3
Dec.	+ 1.6	+ 2.8	+ 1.2	+ 1.2	+ 1.4	+ 1.6	+ 1.7		+ 2.3	+ 1.1	+ 0.5	+ 0.7	+ 6.7	– 9.1
2018 Jan.	+ 1.4	+ 2.9	+ 1.1	+ 0.7	+ 1.4	+ 1.7	+ 1.6		+ 2.1	– 3.7	+ 0.4	+ 0.6	+ 6.4	– 9.1
Feb.	+ 1.2	+ 1.5	+ 1.2	+ 0.1	+ 1.4	+ 1.7	+ 1.4	+ 4.2	+ 1.8	– 5.2	+ 0.1	– 0.5	– 1.4	– 10.8
Mar.	+ 1.5	+ 2.9	+ 0.6	+ 0.4	+ 1.7	+ 1.7	+ 1.6		+ 1.8	– 5.3	+ 0.2	– 0.3	+ 9.8	– 9.9
Apr.	+ 1.4	+ 3.3	+ 0.7	+ 1.2	+ 1.2	+ 1.7	+ 1.6		+ 1.9	– 7.6	+ 0.2	+ 0.4	+ 16.2	– 3.6
May	+ 2.2	+ 3.3	+ 0.6	+ 5.2	+ 1.9	+ 1.6	+ 2.2	+ 4.3	+ 2.5	– 9.3	+ 1.0	+ 2.9	+ 39.5	+ 8.0
June	+ 2.1	+ 3.2	+ 0.9	+ 6.6	+ 1.3	+ 1.6	+ 2.1		+ 2.9	– 9.0	+ 1.5	+ 4.4	+ 52.3	+ 10.9
July	+ 2.1	+ 2.7	+ 0.5	+ 6.7	+ 1.6	+ 1.7	+ 2.0		+ 2.9	– 6.5	+ 1.7	+ 4.8	+ 50.2	+ 2.8
Aug.	+ 1.9	+ 2.5	+ 0.7	+ 7.1	+ 1.2	+ 1.6	+ 2.0	+ 5.0	+ 3.1	– 4.7	+ 2.1	+ 4.8	+ 44.8	+ 2.3
Sep.	+ 2.2	+ 2.9	+ 1.0	+ 7.8	+ 1.4	+ 1.6	+ 2.3		...	...	...	...	+ 46.2	– 0.1

Sources: Eurostat; Federal Statistical Office and Bundesbank calculation based on data from the Federal Statistical Office; for the Index of World Market Prices of Raw Materials: HWWI. **1** Deviations from the official figures are due to rounding. **2** Including alcoholic beverages and tobacco. **3** Electricity, gas and other fuels as well as transport fuels and lubricants. **4** Net rents. **5** Excluding value added tax. **6** For the euro area, in euro. **7** Coal, crude oil (Brent) and natural gas. **8** Food, beverages and tobacco as well as industrial raw materials. **9** From September 2017 onwards provisional figures.

XI. Economic conditions in Germany

8. Households' income *

Period	Gross wages and salaries [1]		Net wages and salaries [2]		Monetary social benefits received [3]		Mass income [4]		Disposable income [5]		Saving [6]		Saving ratio [7]
	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	As percentage
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	1,213.0	3.9	807.2	3.7	398.4	2.6	1,205.6	3.4	1,761.3	2.6	167.2	8.8	9.5
2015	1,261.4	4.0	837.2	3.7	416.5	4.5	1,253.7	4.0	1,805.7	2.5	174.8	4.5	9.7
2016	1,311.9	4.0	869.1	3.8	430.5	3.4	1,299.6	3.7	1,857.5	2.9	181.9	4.1	9.8
2017	1,366.6	4.2	902.9	3.9	444.8	3.3	1,347.7	3.7	1,922.0	3.5	189.8	4.3	9.9
2017 Q1	318.4	4.2	210.8	4.1	112.9	4.2	323.6	4.1	478.1	4.1	63.0	5.0	13.2
Q2	333.2	4.2	215.2	3.6	109.9	3.7	325.1	3.6	478.9	3.2	44.9	2.1	9.4
Q3	337.4	4.3	227.7	4.1	111.7	2.6	339.5	3.6	480.0	3.7	39.9	4.2	8.3
Q4	377.6	4.0	249.2	3.7	110.3	2.9	359.5	3.5	485.1	2.9	42.0	6.0	8.7
2018 Q1	333.6	4.8	220.8	4.8	115.1	2.0	335.9	3.8	494.5	3.5	66.9	6.2	13.5
Q2	349.6	4.9	225.8	4.9	112.2	2.1	338.0	4.0	494.0	3.2	48.9	8.8	9.9

Source: Federal Statistical Office; figures computed in August 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	101.7	1.7	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	107.2	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	111.5	2.8
2015	112.6	2.3	112.4	2.2	112.6	2.3	112.7	2.3	114.6	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	2.2	117.1	2.1	117.5	2.2	117.8	2.3	120.3	2.5
2017 Q1	109.0	2.5	108.8	2.5	109.1	2.5	116.8	2.5	113.4	2.5
Q2	110.1	2.1	109.8	2.1	110.2	2.4	117.6	2.4	117.6	2.6
Q3	119.9	2.1	119.6	2.0	120.0	2.0	118.3	2.1	118.4	2.6
Q4	130.6	2.0	130.3	1.9	130.7	2.0	118.6	2.2	131.4	2.4
2018 Q1	111.5	2.3	111.3	2.3	111.4	2.1	119.4	2.2	116.8	2.9
Q2	113.6	3.2	113.4	3.3	113.4	2.9	121.1	2.9	121.4	3.2
2018 Feb.	111.2	2.1	111.0	2.1	111.3	2.0	119.2	2.0	.	.
Mar.	112.2	2.7	111.9	2.8	111.7	2.2	119.7	2.3	.	.
Apr.	113.2	2.7	113.0	2.7	113.2	2.6	120.6	2.6	.	.
May	114.5	4.0	114.2	4.0	113.7	3.2	121.2	3.1	.	.
June	113.2	3.0	113.0	3.0	113.3	3.0	121.4	3.1	.	.
July	142.8	2.9	142.5	2.9	143.0	3.0	121.5	2.9	.	.
Aug.	113.3	2.7	113.1	2.7	113.5	2.7	121.6	2.8	.	.

1 Current data are normally revised on account of additional reports. **2** Excluding one-off payments and covenants (capital formation benefits, special payments, such as annual bonuses, holiday pay, Christmas bonuses (13th monthly salary payment) and retirement provisions). **3** Source: Federal Statistical Office; figures computed in August 2018.

XI. Economic conditions in Germany

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

End of year/half

Period	Assets									Equity and liabilities						
			of which:				of which:				Liabilities					
												Long-term		Short-term		
															of which:	
	Total assets	Non-current assets	Intangible assets	Tangible assets	Financial assets	Current assets	Inventories	Trade receivables	Cash 1	Equity	Total	Total	of which: Financial debt	Total	Financial debt	Trade payables
	Total (€ billion)															
2014	2,078.8	1,284.1	431.0	520.3	249.6	794.7	203.1	187.3	132.4	582.9	1,495.9	812.0	426.8	683.9	207.2	175.8
2015	2,225.6	1,394.0	470.7	564.7	273.1	831.6	215.5	190.5	136.0	633.3	1,592.3	860.4	465.3	731.9	222.7	180.3
2016	2,366.2	1,476.7	493.0	594.9	288.9	889.5	226.8	217.9	150.4	671.8	1,694.4	888.2	481.6	806.2	249.0	192.8
2017 p	2,399.9	1,489.1	500.0	602.9	291.3	910.8	230.6	226.5	159.3	758.8	1,641.1	866.4	496.4	774.7	236.4	195.7
2016 H1	2,255.6	1,380.4	462.4	549.3	272.0	875.2	226.6	195.1	140.4	607.1	1,648.5	894.8	464.6	753.7	243.8	174.9
H2	2,366.2	1,476.7	493.0	594.9	288.9	889.5	226.8	217.9	150.4	671.8	1,694.4	888.2	481.6	806.2	249.0	192.8
2017 H1	2,383.1	1,469.8	501.7	582.8	288.6	913.3	238.2	220.7	149.8	701.1	1,682.0	886.5	496.9	795.5	246.1	194.9
H2 p	2,399.9	1,489.1	500.0	602.9	291.3	910.8	230.6	226.5	159.3	758.8	1,641.1	866.4	496.4	774.7	236.4	195.7
	As a percentage of total assets															
2014	100.0	61.8	20.7	25.0	12.0	38.2	9.8	9.0	6.4	28.0	72.0	39.1	20.5	32.9	10.0	8.5
2015	100.0	62.6	21.2	25.4	12.3	37.4	9.7	8.6	6.1	28.5	71.5	38.7	20.9	32.9	10.0	8.1
2016	100.0	62.4	20.8	25.1	12.2	37.6	9.6	9.2	6.4	28.4	71.6	37.5	20.4	34.1	10.5	8.2
2017 p	100.0	62.1	20.8	25.1	12.1	38.0	9.6	9.4	6.6	31.6	68.4	36.1	20.7	32.3	9.9	8.2
2016 H1	100.0	61.2	20.5	24.4	12.1	38.8	10.0	8.7	6.2	26.9	73.1	39.7	20.6	33.4	10.8	7.8
H2	100.0	62.4	20.8	25.1	12.2	37.6	9.6	9.2	6.4	28.4	71.6	37.5	20.4	34.1	10.5	8.2
2017 H1	100.0	61.7	21.1	24.5	12.1	38.3	10.0	9.3	6.3	29.4	70.6	37.2	20.9	33.4	10.3	8.2
H2 p	100.0	62.1	20.8	25.1	12.1	38.0	9.6	9.4	6.6	31.6	68.4	36.1	20.7	32.3	9.9	8.2
	Groups with a focus on the production sector (€ billion) 2															
2014	1,655.6	989.4	276.5	411.9	236.0	666.2	185.7	140.3	98.9	451.4	1,204.2	644.0	318.6	560.2	185.6	122.4
2015	1,781.1	1,076.8	304.0	446.3	259.0	704.3	198.8	147.0	104.3	485.0	1,296.1	689.4	353.1	606.7	198.3	127.5
2016	1,908.6	1,145.8	322.1	472.9	270.8	762.8	209.7	169.9	115.4	514.1	1,394.5	714.8	369.4	679.7	223.1	140.9
2017 p	1,935.4	1,149.4	323.1	474.5	277.2	786.0	212.5	176.0	128.1	588.2	1,347.1	697.5	381.6	649.7	215.5	148.4
2016 H1	1,817.3	1,058.7	296.6	432.0	254.2	758.6	210.0	149.8	112.2	465.7	1,351.6	717.4	350.9	634.3	219.2	129.9
H2	1,908.6	1,145.8	322.1	472.9	270.8	762.8	209.7	169.9	115.4	514.1	1,394.5	714.8	369.4	679.7	223.1	140.9
2017 H1	1,921.2	1,136.9	324.7	463.5	273.1	784.3	224.2	171.9	125.3	550.0	1,371.2	708.2	378.1	663.0	224.3	153.1
H2 p	1,935.4	1,149.4	323.1	474.5	277.2	786.0	212.5	176.0	128.1	588.2	1,347.1	697.5	381.6	649.7	215.5	148.4
	As a percentage of total assets															
2014	100.0	59.8	16.7	24.9	14.3	40.2	11.2	8.5	6.0	27.3	72.7	38.9	19.2	33.8	11.2	7.4
2015	100.0	60.5	17.1	25.1	14.5	39.6	11.2	8.3	5.9	27.2	72.8	38.7	19.8	34.1	11.1	7.2
2016	100.0	60.0	16.9	24.8	14.2	40.0	11.0	8.9	6.1	26.9	73.1	37.5	19.4	35.6	11.7	7.4
2017 p	100.0	59.4	16.7	24.5	14.3	40.6	11.0	9.1	6.6	30.4	69.6	36.0	19.7	33.6	11.1	7.7
2016 H1	100.0	58.3	16.3	23.8	14.0	41.7	11.6	8.3	6.2	25.6	74.4	39.5	19.3	34.9	12.1	7.2
H2	100.0	60.0	16.9	24.8	14.2	40.0	11.0	8.9	6.1	26.9	73.1	37.5	19.4	35.6	11.7	7.4
2017 H1	100.0	59.2	16.9	24.1	14.2	40.8	11.7	9.0	6.5	28.6	71.4	36.9	19.7	34.5	11.7	8.0
H2 p	100.0	59.4	16.7	24.5	14.3	40.6	11.0	9.1	6.6	30.4	69.6	36.0	19.7	33.6	11.1	7.7
	Groups with a focus on the services sector (€ billion)															
2014	423.2	294.7	154.6	108.4	13.6	128.6	17.4	47.0	33.5	131.5	291.7	168.0	108.3	123.7	21.6	53.4
2015	444.5	317.3	166.7	118.3	14.1	127.2	16.7	43.5	31.6	148.3	296.2	171.0	112.2	125.2	24.4	52.7
2016	457.6	330.9	170.9	122.0	18.1	126.7	17.1	48.0	34.9	157.7	299.9	173.4	112.3	126.5	25.9	51.9
2017 p	464.5	339.7	176.9	128.4	14.1	124.8	18.1	50.4	31.3	170.6	293.9	168.9	114.8	125.0	20.9	47.3
2016 H1	438.3	321.7	165.8	117.3	17.8	116.6	16.6	45.3	28.2	141.4	296.9	177.4	113.6	119.4	24.7	45.0
H2	457.6	330.9	170.9	122.0	18.1	126.7	17.1	48.0	34.9	157.7	299.9	173.4	112.3	126.5	25.9	51.9
2017 H1	461.9	332.9	177.0	119.3	15.5	129.0	14.0	48.8	24.5	151.1	310.7	178.3	118.9	132.5	21.8	41.8
H2 p	464.5	339.7	176.9	128.4	14.1	124.8	18.1	50.4	31.3	170.6	293.9	168.9	114.8	125.0	20.9	47.3
	As a percentage of total assets															
2014	100.0	69.6	36.5	25.6	3.2	30.4	4.1	11.1	7.9	31.1	68.9	39.7	25.6	29.2	5.1	12.6
2015	100.0	71.4	37.5	26.6	3.2	28.6	3.8	9.8	7.1	33.4	66.6	38.5	25.3	28.2	5.5	11.9
2016	100.0	72.3	37.3	26.7	4.0	27.7	3.7	10.5	7.6	34.5	65.5	37.9	24.5	27.7	5.7	11.3
2017 p	100.0	73.1	38.1	27.6	3.0	26.9	3.9	10.9	6.7	36.7	63.3	36.4	24.7	26.9	4.5	10.2
2016 H1	100.0	73.4	37.8	26.8	4.1	26.6	3.8	10.3	6.4	32.3	67.7	40.5	25.9	27.3	5.6	10.3
H2	100.0	72.3	37.3	26.7	4.0	27.7	3.7	10.5	7.6	34.5	65.5	37.9	24.5	27.7	5.7	11.3
2017 H1	100.0	72.1	38.3	25.8	3.4	27.9	3.0	10.6	5.3	32.7	67.3	38.6	25.7	28.7	4.7	9.0
H2 p	100.0	73.1	38.1	27.6	3.0	26.9	3.9	10.9	6.7	36.7	63.3	36.4	24.7	26.9	4.5	10.2

***** Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. Excluding groups engaged in real estate activities. **1** Including cash equivalents. **2** Including groups in agriculture and forestry.

XI. Economic conditions in Germany

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

Period	Revenues		Operating income before depreciation and amortisation (EBITDA 1)		Operating income before depreciation and amortisation (EBITDA 1) as a percentage of revenues					Operating income (EBIT)		Operating income (EBIT) as a percentage of revenues				
					Weighted average		Distribution 2					Weighted average		Distribution 2		
							First quartile	Median	Third quartile					First quartile	Median	Third quartile
	€ billion 3	Annual percentage change 4	€ billion 3	Annual percentage change 4	%	Annual change in percentage points 4	%	%	%	€ billion 3	Annual percentage change 4	%	Annual change in percentage points 4	%	%	%
	Total															
2010	1,320.9	13.3	181.4	30.6	13.7	1.8	6.6	11.4	18.6	98.3	66.6	7.4	2.4	3.2	6.9	12.1
2011	1,414.3	8.5	175.9	0.5	12.4	– 1.0	5.5	11.0	17.4	93.8	– 4.1	6.6	– 0.9	2.7	6.6	12.0
2012	1,532.9	6.6	188.8	3.2	12.3	– 0.4	5.2	10.2	17.5	95.7	– 7.7	6.2	– 0.9	1.9	6.1	11.0
2013	1,541.0	– 0.6	187.1	– 2.8	12.1	– 0.3	5.1	10.3	18.3	99.5	5.5	6.5	0.4	1.9	5.9	10.9
2014	1,565.6	1.0	198.7	4.9	12.7	0.5	5.7	10.3	17.2	109.3	8.5	7.0	0.5	1.9	6.1	11.1
2015	1,635.3	6.9	196.1	– 1.0	12.0	– 1.0	6.1	10.6	17.8	91.6	– 16.3	5.6	– 1.5	1.7	6.6	11.3
2016	1,626.0	– 0.4	214.8	8.0	13.2	1.0	6.6	11.4	18.0	112.1	9.2	6.9	0.5	2.6	6.7	12.0
2017 p	1,722.8	5.2	244.5	14.5	14.2	1.2	6.8	11.0	18.0	143.9	33.2	8.4	1.7	2.5	6.8	12.2
2013 H1	762.7	– 0.2	93.4	– 3.6	12.2	– 0.4	3.4	9.3	16.5	53.8	– 7.6	7.1	– 0.6	0.6	4.9	10.7
H2	780.0	– 1.1	93.8	– 2.0	12.0	– 0.1	5.4	10.8	19.2	45.7	25.5	5.9	1.3	1.7	6.2	12.1
2014 H1	757.2	– 0.9	97.2	4.6	12.8	0.7	4.7	9.5	16.0	57.8	9.4	7.6	0.7	1.0	5.2	10.5
H2	808.7	2.9	101.5	5.2	12.6	0.3	5.4	10.8	19.1	51.5	7.6	6.4	0.3	1.7	7.1	12.0
2015 H1	815.2	8.7	102.9	5.7	12.6	– 0.4	4.8	10.2	17.6	59.1	1.3	7.2	– 0.5	1.1	5.8	10.9
H2	831.3	5.1	93.5	– 7.6	11.3	– 1.5	6.3	11.5	18.1	32.7	– 36.7	3.9	– 2.5	2.3	7.1	11.7
2016 H1	782.7	– 1.9	111.8	6.3	14.3	1.1	5.9	10.4	17.7	65.6	2.9	8.4	0.4	1.6	6.4	11.3
H2	843.3	1.1	103.0	9.8	12.2	1.0	6.8	11.9	19.1	46.4	21.0	5.5	0.8	2.9	7.5	12.5
2017 H1	844.9	6.8	125.8	14.4	14.9	1.0	5.6	10.1	17.2	78.5	29.3	9.3	1.6	1.8	5.8	11.6
H2 p	881.1	3.7	118.5	14.7	13.5	1.3	6.8	12.0	19.2	64.9	38.4	7.4	1.8	3.2	7.5	12.4
	Groups with a focus on the production sector 5															
2010	980.7	15.8	136.2	38.7	13.9	2.3	6.6	11.4	16.3	75.7	72.4	7.7	2.6	3.0	7.3	12.0
2011	1,079.0	10.6	130.0	– 1.7	12.1	– 1.5	5.5	11.3	16.4	74.1	– 4.9	6.9	– 1.1	2.1	6.8	11.5
2012	1,173.8	7.7	140.8	5.3	12.0	– 0.3	5.4	10.2	16.1	81.7	2.2	7.0	– 0.4	1.8	6.1	9.8
2013	1,179.0	– 0.8	138.7	– 2.6	11.8	– 0.2	4.4	10.3	15.5	74.5	– 5.8	6.3	– 0.3	1.3	5.7	10.0
2014	1,197.3	1.0	147.9	5.8	12.4	0.6	5.1	9.6	15.3	82.0	9.3	6.9	0.5	1.4	5.9	10.2
2015	1,282.4	7.0	143.9	– 2.7	11.2	– 1.1	6.1	10.4	15.5	65.1	– 20.3	5.1	– 1.8	1.8	6.5	10.0
2016	1,267.1	– 1.0	156.4	6.0	12.4	0.8	6.5	10.5	16.0	80.5	4.4	6.4	0.3	2.7	6.3	10.4
2017 p	1,362.8	5.5	182.2	16.8	13.4	1.3	6.7	11.0	15.8	109.6	41.0	8.0	2.0	2.9	6.7	10.5
2013 H1	588.8	– 0.1	71.7	– 4.8	12.2	– 0.6	3.1	9.3	15.0	43.1	– 10.9	7.3	– 0.9	0.6	5.3	9.7
H2	591.7	– 1.4	67.1	– 0.3	11.3	0.1	4.0	10.4	15.8	31.4	1.7	5.3	0.2	0.6	5.8	10.9
2014 H1	584.4	– 1.1	74.2	3.8	12.7	0.6	4.7	9.6	15.0	46.2	8.9	7.9	0.7	1.4	5.4	9.6
H2	613.1	3.0	73.7	7.8	12.0	0.5	4.4	9.8	15.8	35.8	9.8	5.8	0.4	0.7	6.3	10.7
2015 H1	636.4	8.7	80.1	7.8	12.6	– 0.1	5.1	10.0	15.4	48.7	4.8	7.7	– 0.3	2.1	6.1	10.0
H2	646.6	5.3	63.8	– 13.4	9.9	– 2.1	5.3	11.1	15.5	16.4	– 52.4	2.5	– 3.3	1.8	6.9	10.3
2016 H1	611.2	– 2.6	83.9	1.3	13.7	0.5	6.6	10.5	15.7	50.7	– 6.5	8.3	– 0.3	2.8	6.4	9.9
H2	655.9	0.5	72.5	11.9	11.1	1.1	6.1	11.2	16.0	29.8	34.8	4.6	0.9	2.4	6.3	10.5
2017 H1	678.6	7.2	98.4	18.6	14.5	1.4	5.9	9.9	16.0	63.9	37.5	9.4	2.1	2.2	5.8	10.5
H2 p	684.9	3.9	83.7	14.6	12.2	1.2	6.6	11.8	16.5	45.6	46.4	6.7	1.9	3.4	7.3	10.8
	Groups with a focus on the services sector															
2010	340.2	5.8	45.1	9.0	13.3	0.4	6.0	11.2	19.7	22.6	47.0	6.7	1.8	3.4	6.0	12.8
2011	335.3	1.7	45.9	7.6	13.7	0.8	6.0	10.4	20.7	19.7	– 0.7	5.9	– 0.1	3.2	6.2	13.8
2012	359.1	2.8	48.0	– 3.3	13.4	– 0.8	5.1	10.1	23.0	14.0	– 47.2	3.9	– 3.0	2.1	5.7	14.2
2013	362.0	– 0.1	48.4	– 3.4	13.4	– 0.5	5.2	10.5	21.6	25.0	84.4	6.9	3.0	2.4	5.9	12.5
2014	368.3	1.1	50.8	2.2	13.8	0.1	6.0	12.7	22.6	27.3	5.7	7.4	0.3	2.9	6.5	13.7
2015	352.9	6.4	52.2	4.8	14.8	– 0.2	6.1	11.4	22.1	26.4	– 1.6	7.5	– 0.6	1.4	6.7	14.1
2016	358.9	2.4	58.4	14.6	16.3	1.8	6.9	13.5	25.8	31.6	24.7	8.8	1.5	2.5	8.3	15.5
2017 p	360.0	3.8	62.3	7.7	17.3	0.6	7.3	11.6	23.0	34.3	10.0	9.5	0.5	2.4	7.2	15.1
2013 H1	173.9	– 0.5	21.7	1.1	12.5	0.2	3.9	8.1	19.2	10.7	12.8	6.2	0.7	0.9	4.6	12.8
H2	188.2	0.2	26.7	– 6.7	14.2	– 1.1	5.6	11.4	21.8	14.3	241.4	7.6	5.2	2.2	7.4	13.5
2014 H1	172.9	– 0.5	23.0	7.7	13.3	1.0	4.8	9.3	20.4	11.6	11.7	6.7	0.7	1.0	5.1	13.5
H2	195.6	2.5	27.8	– 2.2	14.2	– 0.7	6.4	13.5	23.8	15.7	1.5	8.1	– 0.1	3.6	8.1	18.0
2015 H1	178.9	8.4	22.8	– 2.2	12.7	– 1.5	4.4	10.9	21.5	10.3	– 15.7	5.8	– 1.6	– 0.5	4.5	14.2
H2	184.7	4.6	29.7	10.8	16.1	0.9	7.0	12.1	23.5	16.3	9.3	8.8	0.4	2.5	7.7	15.0
2016 H1	171.5	1.2	27.8	27.7	16.2	3.5	5.1	10.3	23.8	15.0	62.1	8.7	3.3	1.0	6.4	14.9
H2	187.4	3.6	30.6	4.6	16.3	0.2	7.4	13.7	24.4	16.6	2.7	8.8	– 0.1	4.0	9.0	17.2
2017 H1	166.3	4.8	27.4	– 0.2	16.5	– 0.8	5.3	10.5	21.2	14.6	– 0.8	8.8	– 0.5	1.3	5.8	14.6
H2 p	196.2	2.8	34.7	14.9	17.7	1.9	6.9	12.5	24.6	19.3	20.2	9.8	1.4	3.0	7.8	17.9

***** Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. Excluding groups engaged in real estate activities. **1** Earnings before interest, taxes, depreciation and amortisation. **2** Quantile data are based on the groups' unweighted return on sales. **3** Annual figures do not always match the sum of the two half-year figures. See Quality report on consolidated financial statement statistics, p. 3. **4** Adjusted for substantial changes in the basis of consolidation of large groups and in the reporting sample. See the explanatory notes in Statistical Supplement – Seasonally adjusted business statistics. **5** Including groups in agriculture and forestry.

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 Q4	2018 Q1 r	2018 Q2 r	2018 May r	2018 June	2018 July p
A. Current account	+ 308,770	+ 346,639	+ 355,088	+ 119,393	+ 81,627	+ 79,459	+ 13,370	+ 32,782	+ 31,930
1. Goods									
Exports	2,135,337	2,136,518	2,264,294	589,274	569,208	588,871	193,943	206,636	198,036
Imports	1,784,550	1,766,321	1,933,542	494,358	495,548	504,962	168,210	175,037	172,669
Balance	+ 350,785	+ 370,199	+ 330,755	+ 94,917	+ 73,660	+ 83,909	+ 25,733	+ 31,599	+ 25,366
2. Services									
Receipts	800,971	808,509	856,681	223,982	200,900	218,656	72,025	78,070	79,165
Expenditure	748,527	764,271	755,459	197,958	177,929	187,494	62,195	64,958	64,460
Balance	+ 52,443	+ 44,238	+ 101,224	+ 26,024	+ 22,971	+ 31,163	+ 9,830	+ 13,113	+ 14,705
3. Primary income									
Receipts	665,060	650,888	680,489	184,258	161,578	198,358	62,150	71,804	51,182
Expenditure	621,692	581,073	615,835	154,414	133,571	204,674	77,469	72,138	46,825
Balance	+ 43,368	+ 69,814	+ 64,654	+ 29,844	+ 28,006	– 6,315	– 15,319	– 334	+ 4,357
4. Secondary income									
Receipts	114,843	108,095	111,780	30,200	25,949	30,355	11,138	10,248	8,179
Expenditure	252,670	245,709	253,321	61,591	68,961	59,655	18,013	21,845	20,678
Balance	– 137,827	– 137,612	– 141,543	– 31,391	– 43,010	– 29,300	– 6,875	– 11,597	– 12,499
B. Capital account	+ 16,566	+ 3,132	– 26,207	+ 1,654	+ 2,563	+ 1,387	+ 252	+ 996	+ 1,137
C. Financial account (increase: +)	+ 267,248	+ 344,767	+ 395,402	+ 119,277	+ 125,386	+ 83,843	+ 29,783	+ 62,467	+ 4,995
1. Direct investment	+ 142,673	+ 177,293	+ 84,563	– 11,693	+ 123,408	+ 63,176	– 7,236	+ 27,329	– 23,206
By resident units abroad	+1,080,356	+ 521,802	+ 248,487	+ 33,855	+ 63,022	– 59,598	– 23,598	– 57,917	– 4,027
By non-resident units in the euro area	+ 937,683	+ 344,509	+ 163,924	+ 45,548	– 60,387	– 122,773	– 16,362	– 85,246	+ 19,179
2. Portfolio investment	+ 199,249	+ 478,497	+ 283,022	+ 67,409	+ 17,955	+ 40,551	+ 50,197	– 40,414	+ 40,629
By resident units abroad	+ 401,926	+ 387,046	+ 635,971	+ 86,197	+ 194,679	– 1,861	– 2,872	– 7,280	+ 43,757
Equity and investment fund shares	+ 15,478	+ 19,987	+ 173,845	+ 22,349	+ 55,391	+ 6,319	– 2,761	– 11,377	+ 26,121
Long-term debt securities	+ 378,796	+ 359,327	+ 396,387	+ 54,000	+ 110,786	+ 12,208	+ 7,415	– 6,603	+ 31,071
Short-term debt securities	+ 7,654	+ 7,733	+ 65,740	+ 9,848	+ 28,500	– 20,388	– 7,527	+ 10,701	– 13,435
By non-resident units in the euro area	+ 202,678	– 91,447	+ 352,949	+ 18,788	+ 176,723	– 42,412	– 53,069	+ 33,134	+ 3,128
Equity and investment fund shares	+ 208,634	+ 104,219	+ 487,080	+ 93,943	+ 125,434	+ 37,250	+ 20,675	+ 79,279	+ 3,070
Long-term debt securities	+ 33,199	– 242,180	– 142,811	– 28,803	+ 21,150	– 55,056	– 68,601	– 28,548	– 2,546
Short-term debt securities	– 39,158	+ 46,513	+ 8,679	– 46,354	+ 30,139	– 24,605	– 5,143	– 17,597	+ 2,604
3. Financial derivatives and employee stock options	+ 81,917	+ 18,431	+ 17,098	+ 4,469	– 4,503	+ 40,522	+ 15,547	+ 12,921	+ 5,257
4. Other investment	– 167,256	– 344,931	+ 12,120	+ 57,228	– 22,850	– 66,989	– 31,070	+ 54,763	– 13,690
Eurosystem	– 26,457	– 152,798	– 175,529	– 125,114	+ 3,843	– 27,445	+ 76	– 77,812	+ 69,327
General government	+ 20,154	+ 12,380	+ 18,760	+ 28,059	– 2,065	– 4,023	– 2,958	– 215	– 448
MFIs (excluding the Eurosystem)	– 120,160	– 123,767	+ 137,116	+ 109,621	– 20,215	– 40,365	– 39,269	+ 131,297	– 77,429
Enterprises and households	– 40,793	– 80,745	+ 31,772	+ 44,663	– 4,412	+ 4,843	+ 11,082	+ 1,492	– 5,140
5. Reserve assets	+ 10,664	+ 15,480	– 1,400	+ 1,865	+ 11,376	+ 6,585	+ 2,345	+ 7,869	– 3,995
D. Net errors and omissions	– 58,089	– 5,003	+ 66,522	– 1,769	+ 41,197	+ 2,999	+ 16,162	+ 28,690	– 28,072

* Source: ECB, according to the international standards of the International Monetary Fund's Balance of Payments Manual (sixth edition).

XII. External sector

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

€ million

Period	Current account						Balance of capital account [4]	Financial account (Net lending: +/net borrowing: -)		Errors and omissions [5]
	Total	Goods (f.o.b./f.o.b.) [1] Total	of which: Supplementary trade items [2]	Services [3]	Primary income	Secondary income		Total	of which: Reserve assets	
2003	+ 31,347	+ 130,021	– 2,105	– 48,708	– 18,920	– 31,047	+ 5,920	+ 47,559	– 445	+ 10,292
2004	+ 101,205	+ 153,166	– 6,859	– 38,713	+ 16,860	– 30,109	– 119	+ 112,834	– 1,470	+ 11,748
2005	+ 105,730	+ 157,010	– 6,068	– 40,600	+ 20,905	– 31,585	– 2,334	+ 96,436	– 2,182	– 6,960
2006	+ 135,959	+ 161,447	– 4,205	– 34,641	+ 41,453	– 32,300	– 1,328	+ 157,142	– 2,934	+ 22,511
2007	+ 169,636	+ 201,989	– 922	– 34,881	+ 36,332	– 33,804	– 1,597	+ 183,169	+ 953	+ 15,130
2008	+ 143,318	+ 184,521	– 3,586	– 31,467	+ 24,724	– 34,461	– 893	+ 121,336	+ 2,008	– 21,088
2009	+ 141,233	+ 141,167	– 6,064	– 19,648	+ 54,757	– 35,043	– 1,858	+ 129,693	+ 8,648	– 9,683
2010	+ 144,890	+ 161,146	– 5,892	– 27,041	+ 50,665	– 39,880	+ 1,219	+ 92,757	+ 1,613	– 53,351
2011	+ 165,078	+ 163,426	– 8,900	– 31,574	+ 68,235	– 35,010	+ 419	+ 120,857	+ 2,836	– 44,639
2012	+ 193,590	+ 200,401	– 10,518	– 32,775	+ 64,858	– 38,894	– 413	+ 151,417	+ 1,297	– 41,759
2013	+ 190,092	+ 212,662	– 3,663	– 41,376	+ 62,444	– 43,639	– 563	+ 225,360	+ 838	+ 35,831
2014	+ 218,965	+ 228,185	– 5,741	– 24,485	+ 56,549	– 41,283	+ 2,936	+ 240,116	– 2,564	+ 18,215
2015	+ 271,403	+ 261,135	– 2,565	– 16,910	+ 67,222	– 40,044	+ 534	+ 239,418	– 2,213	– 32,520
2016	+ 268,812	+ 267,999	– 1,845	– 19,948	+ 60,639	– 39,879	+ 3,468	+ 257,693	+ 1,686	– 14,587
2017	+ 257,724	+ 265,361	+ 1,256	– 20,874	+ 67,357	– 54,120	– 254	+ 279,967	– 1,269	+ 22,496
2015 Q3	+ 71,124	+ 67,467	+ 1,030	– 10,245	+ 20,490	– 6,587	+ 778	+ 68,864	– 1,455	– 3,038
Q4	+ 78,172	+ 64,632	– 435	– 2,391	+ 26,238	– 10,307	– 2,004	+ 68,701	– 272	– 7,467
2016 Q1	+ 66,589	+ 63,353	+ 566	– 3,042	+ 19,599	– 13,320	– 205	+ 40,617	+ 1,228	– 25,767
Q2	+ 69,819	+ 76,770	– 54	– 3,707	+ 125	– 3,370	+ 1,009	+ 62,621	+ 761	– 8,207
Q3	+ 61,051	+ 66,795	– 346	– 11,309	+ 16,175	– 10,610	+ 307	+ 59,558	– 261	– 1,801
Q4	+ 71,353	+ 61,082	– 2,012	– 1,889	+ 24,740	– 12,579	+ 2,356	+ 94,897	– 43	+ 21,188
2017 Q1	+ 67,578	+ 65,985	+ 2,402	– 2,921	+ 21,296	– 16,781	+ 616	+ 67,316	– 360	– 879
Q2	+ 53,573	+ 67,141	– 187	– 4,785	+ 3,058	– 11,841	– 727	+ 72,061	+ 385	+ 19,216
Q3	+ 63,145	+ 68,051	– 113	– 11,794	+ 17,922	– 11,035	+ 904	+ 54,979	+ 152	– 9,069
Q4	+ 73,428	+ 64,184	– 846	– 1,374	+ 25,082	– 14,463	– 1,047	+ 85,610	– 1,446	+ 13,229
2018 Q1	+ 71,112	+ 64,605	– 1,397	– 630	+ 21,620	– 14,483	+ 214	+ 69,348	+ 699	– 1,977
Q2	+ 64,148	+ 69,358	+ 848	– 3,608	+ 3,772	– 5,373	+ 85	+ 70,452	– 374	+ 6,218
2016 Mar.	+ 29,869	+ 27,234	– 124	– 1,546	+ 7,772	– 3,591	– 731	+ 21,501	– 64	– 7,638
Apr.	+ 28,952	+ 27,797	– 179	– 661	+ 3,533	– 1,718	+ 1,303	+ 26,217	+ 696	– 4,039
May	+ 17,745	+ 23,050	+ 409	– 838	– 3,921	– 546	+ 277	+ 14,290	+ 776	– 3,733
June	+ 23,122	+ 25,923	– 284	– 2,209	+ 513	– 1,106	– 571	+ 22,115	– 711	– 435
July	+ 18,927	+ 20,453	+ 413	– 3,460	+ 5,372	– 3,437	– 103	+ 17,363	+ 342	– 1,461
Aug.	+ 17,632	+ 20,933	– 435	– 4,807	+ 6,016	– 4,510	– 101	+ 17,217	+ 93	– 314
Sep.	+ 24,492	+ 25,409	– 324	– 3,042	+ 4,788	– 2,662	+ 511	+ 24,977	– 695	– 26
Oct.	+ 19,777	+ 20,598	+ 294	– 3,425	+ 6,117	– 3,513	– 117	+ 28,457	– 145	+ 8,797
Nov.	+ 25,394	+ 23,647	– 347	– 255	+ 6,949	– 4,948	– 69	+ 22,295	+ 140	– 3,031
Dec.	+ 26,182	+ 16,837	– 1,959	+ 1,790	+ 11,675	– 4,119	+ 2,541	+ 44,145	– 38	+ 15,422
2017 Jan.	+ 11,883	+ 15,705	+ 171	– 979	+ 6,851	– 9,693	– 145	+ 7,119	– 124	– 4,620
Feb.	+ 22,966	+ 22,275	+ 1,022	– 955	+ 6,280	– 4,634	+ 291	+ 14,387	– 216	– 8,871
Mar.	+ 32,729	+ 28,004	+ 1,209	– 987	+ 8,165	– 2,453	+ 470	+ 45,810	– 21	+ 12,611
Apr.	+ 16,017	+ 19,682	+ 21	– 1,181	+ 5,852	– 8,336	– 321	+ 21,216	– 2	+ 5,520
May	+ 15,153	+ 22,995	– 968	– 1,674	– 5,295	– 872	+ 85	+ 11,773	– 47	– 3,465
June	+ 22,402	+ 24,464	+ 760	– 1,930	+ 2,501	– 2,632	– 491	+ 39,072	+ 434	+ 17,160
July	+ 18,741	+ 21,046	+ 679	– 4,043	+ 6,159	– 4,420	+ 525	+ 14,479	+ 463	– 4,787
Aug.	+ 17,820	+ 21,530	– 765	– 5,392	+ 5,158	– 3,476	+ 174	+ 8,062	– 912	– 9,933
Sep.	+ 26,583	+ 25,476	– 27	– 2,359	+ 6,605	– 3,139	+ 204	+ 32,438	+ 602	+ 5,650
Oct.	+ 19,221	+ 20,764	+ 393	– 3,846	+ 6,527	– 4,224	– 206	+ 15,799	+ 1,176	– 3,216
Nov.	+ 26,146	+ 25,047	– 587	– 508	+ 6,868	– 5,260	– 536	+ 29,624	– 270	+ 4,015
Dec.	+ 28,062	+ 18,373	– 652	+ 2,980	+ 11,687	– 4,979	– 305	+ 40,187	– 2,353	+ 12,430
2018 Jan.	+ 20,211	+ 18,211	– 1,171	– 550	+ 7,601	– 5,052	+ 489	+ 27,562	– 121	+ 6,862
Feb.	+ 21,437	+ 20,698	+ 351	+ 710	+ 5,419	– 5,390	+ 19	+ 19,584	+ 583	– 1,872
Mar.	+ 29,463	+ 25,696	– 576	– 791	+ 8,600	– 4,041	– 294	+ 22,202	+ 236	– 6,967
Apr.	+ 23,791	+ 22,989	+ 97	– 576	+ 4,014	– 2,636	+ 357	+ 32,237	– 670	+ 8,089
May	+ 13,712	+ 21,907	+ 195	– 1,003	– 7,293	+ 102	+ 50	+ 17,352	+ 83	+ 3,590
June	+ 26,645	+ 24,462	+ 555	– 2,029	+ 7,050	– 2,839	– 321	+ 20,862	+ 213	– 5,461
July	+ 15,094	+ 18,442	+ 1,101	– 4,297	+ 5,613	– 4,664	– 203	+ 7,561	+ 266	– 7,329
Aug. p	+ 15,331	+ 18,190	+ 266	– 5,590	+ 6,544	– 3,812	+ 105	+ 14,480	– 640	– 956

1 Excluding freight and insurance costs of foreign trade. **2** For example, warehouse transactions for the account of residents, deductions of goods returned and deductions of exports and imports in connection with goods for processing. **3** Including freight and insurance costs of foreign trade. **4** Including net acquisition/disposal of non-produced non-financial assets. **5** Statistical errors and omissions resulting from the difference between the balance on the financial account and the balances on the current account and the capital account.

XII. External sector

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

€ million

Group of countries/country		2015	2016	2017	2018 Jan./July	Apr.	May	June	July	Aug. p
All countries [1]	Exports	1,193,555	1,203,833	1,278,935	773,797	110,231	109,067	115,584	111,036	105,232
	Imports	949,245	954,917	1,034,491	635,092	89,846	89,026	93,801	94,543	88,058
	Balance	+ 244,310	+ 248,916	+ 244,444	+ 138,705	+ 20,385	+ 20,041	+ 21,784	+ 16,493	+ 17,174
I. European countries	Exports	803,425	818,644	872,420	533,818	76,509	75,912	78,869	74,731	...
	Imports	653,782	657,753	707,727	437,439	61,925	62,049	64,594	64,450	...
	Balance	+ 149,643	+ 160,891	+ 164,694	+ 96,378	+ 14,584	+ 13,864	+ 14,275	+ 10,281	...
1. EU Member States (28)	Exports	692,493	705,548	749,700	461,080	66,152	65,692	67,686	64,553	...
	Imports	543,334	551,344	590,317	365,013	52,135	51,888	53,842	53,755	...
	Balance	+ 149,159	+ 154,204	+ 159,383	+ 96,066	+ 14,017	+ 13,804	+ 13,843	+ 10,798	...
Euro area (19) countries	Exports	434,075	441,092	471,647	292,945	41,916	40,846	43,057	41,511	...
	Imports	356,643	358,848	381,323	238,018	34,001	33,018	35,080	36,139	...
	Balance	+ 77,432	+ 82,244	+ 90,324	+ 54,927	+ 7,915	+ 7,828	+ 7,977	+ 5,372	...
of which:										
Austria	Exports	58,217	59,778	62,805	37,780	5,592	5,190	5,532	5,402	...
	Imports	37,250	38,543	41,119	25,171	3,749	3,467	3,653	3,728	...
	Balance	+ 20,967	+ 21,235	+ 21,686	+ 12,609	+ 1,843	+ 1,723	+ 1,879	+ 1,674	...
Belgium and Luxembourg	Exports	46,196	46,931	50,073	30,185	4,351	4,279	4,376	4,156	...
	Imports	40,116	40,960	44,040	29,178	4,403	3,842	3,998	4,660	...
	Balance	+ 6,079	+ 5,971	+ 6,033	+ 1,007	– 52	+ 437	+ 378	– 504	...
France	Exports	102,762	101,106	105,242	63,149	9,150	8,335	9,399	9,004	...
	Imports	66,819	65,651	64,149	38,236	5,663	5,095	5,602	5,890	...
	Balance	+ 35,943	+ 35,454	+ 41,093	+ 24,913	+ 3,487	+ 3,240	+ 3,797	+ 3,114	...
Italy	Exports	57,987	61,265	65,533	42,003	5,821	6,017	6,198	6,070	...
	Imports	49,038	51,737	55,897	35,964	4,984	5,181	5,644	5,521	...
	Balance	+ 8,949	+ 9,528	+ 9,636	+ 6,039	+ 837	+ 835	+ 555	+ 548	...
Netherlands	Exports	79,191	78,433	85,693	53,957	7,681	7,627	7,561	7,412	...
	Imports	87,889	83,142	91,212	57,174	7,821	7,999	8,007	8,310	...
	Balance	– 8,697	– 4,709	– 5,519	– 3,216	– 140	– 372	– 447	– 898	...
Spain	Exports	38,715	40,497	43,054	26,760	3,827	3,842	3,910	3,847	...
	Imports	26,442	27,870	31,605	19,727	3,021	2,767	2,984	2,636	...
	Balance	+ 12,273	+ 12,627	+ 11,449	+ 7,033	+ 806	+ 1,075	+ 926	+ 1,211	...
Other EU Member States	Exports	258,417	264,456	278,053	168,135	24,236	24,846	24,629	23,041	...
	Imports	186,691	192,496	208,994	126,995	18,134	18,870	18,762	17,616	...
	Balance	+ 71,727	+ 71,960	+ 69,060	+ 41,140	+ 6,102	+ 5,976	+ 5,867	+ 5,426	...
of which:										
United Kingdom	Exports	89,018	85,939	84,440	48,813	6,998	6,885	6,960	6,677	...
	Imports	38,414	35,654	37,178	21,664	2,918	4,020	2,994	2,797	...
	Balance	+ 50,604	+ 50,285	+ 47,263	+ 27,149	+ 4,081	+ 2,865	+ 3,966	+ 3,880	...
2. Other European countries	Exports	110,932	113,096	122,720	72,738	10,358	10,220	11,183	10,178	...
	Imports	110,448	106,409	117,409	72,426	9,790	10,160	10,752	10,695	...
	Balance	+ 484	+ 6,687	+ 5,310	+ 312	+ 567	+ 59	+ 431	– 517	...
of which:										
Switzerland	Exports	49,070	50,161	53,963	31,604	4,422	4,389	4,794	4,389	...
	Imports	42,089	43,896	45,773	26,725	3,735	3,555	3,946	4,214	...
	Balance	+ 6,981	+ 6,265	+ 8,190	+ 4,878	+ 686	+ 834	+ 848	+ 175	...
II. Non-European countries	Exports	387,398	382,486	403,385	237,960	33,431	32,860	36,385	35,955	...
	Imports	295,461	297,164	326,763	197,079	27,778	27,278	29,020	29,907	...
	Balance	+ 91,936	+ 85,322	+ 76,622	+ 40,881	+ 5,653	+ 5,582	+ 7,365	+ 6,048	...
1. Africa	Exports	23,897	24,434	25,557	13,100	1,812	1,882	2,021	2,042	...
	Imports	18,307	16,675	20,393	12,522	1,782	1,576	2,107	1,889	...
	Balance	+ 5,590	+ 7,759	+ 5,164	+ 578	+ 30	+ 306	– 86	+ 153	...
2. America	Exports	156,982	147,542	154,333	92,332	12,988	12,294	14,121	14,052	...
	Imports	85,582	83,499	89,378	54,179	8,112	7,957	7,842	8,009	...
	Balance	+ 71,400	+ 64,043	+ 64,955	+ 38,153	+ 4,876	+ 4,337	+ 6,279	+ 6,044	...
of which:										
United States	Exports	113,733	106,822	111,495	66,202	9,324	8,526	10,112	10,115	...
	Imports	60,217	57,968	61,099	37,083	5,539	5,473	5,225	5,403	...
	Balance	+ 53,516	+ 48,855	+ 50,396	+ 29,119	+ 3,786	+ 3,053	+ 4,887	+ 4,712	...
3. Asia	Exports	196,297	200,158	212,147	125,252	17,688	17,718	19,122	18,839	...
	Imports	188,621	193,979	213,134	128,269	17,624	17,368	18,775	19,710	...
	Balance	+ 7,676	+ 6,179	– 988	– 3,017	+ 64	+ 350	+ 347	– 871	...
of which:										
Middle East	Exports	39,518	36,659	33,159	16,041	2,384	2,111	2,563	2,349	...
	Imports	7,330	6,581	6,953	4,688	688	689	687	901	...
	Balance	+ 32,188	+ 30,079	+ 26,206	+ 11,353	+ 1,696	+ 1,422	+ 1,876	+ 1,448	...
Japan	Exports	16,968	18,307	19,531	11,653	1,427	1,564	1,673	2,003	...
	Imports	20,180	21,922	22,875	13,978	2,024	1,919	2,046	2,025	...
	Balance	– 3,213	– 3,615	– 3,344	– 2,325	– 597	– 355	– 374	– 22	...
People's Republic of China [2]	Exports	71,284	76,046	86,170	53,334	7,433	7,562	8,254	7,977	...
	Imports	91,930	94,172	100,727	59,174	7,778	7,741	8,412	9,275	...
	Balance	– 20,646	– 18,126	– 14,557	– 5,840	– 346	– 179	– 158	– 1,298	...
New industrial countries and emerging markets of Asia [3]	Exports	51,510	51,921	53,418	32,336	4,757	4,846	4,788	4,574	...
	Imports	42,478	42,966	50,868	30,507	4,357	4,342	4,775	4,520	...
	Balance	+ 9,032	+ 8,955	+ 2,550	+ 1,828	+ 400	+ 504	+ 13	+ 54	...
4. Oceania and polar regions	Exports	10,221	10,352	11,348	7,277	943	966	1,121	1,022	...
	Imports	2,951	3,011	3,857	2,110	260	376	296	300	...
	Balance	+ 7,271	+ 7,341	+ 7,491	+ 5,167	+ 683	+ 590	+ 825	+ 722	...

***** Source: Federal Statistical Office. Exports (f.o.b.) by country of destination, imports (c.i.f.) by country of origin. Individual countries and groups of countries according to the current position. **1** Including fuel and other supplies for ships and aircraft and other data not classifiable by region. **2** Excluding Hong Kong. **3** Brunei Darussalam, Hong Kong, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Taiwan and Thailand.

XII. External sector

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

€ million

Period	Services [1]								Primary income		
		of which:									
	Total	Transport	Travel [2]	Financial services	Charges for the use of intellectual property	Telecommunications, computer and information services	Other business services	Government goods and services [3]	Compensation of employees	Investment income	Other primary income [4]
2013	– 41,376	– 9,881	– 37,713	+ 8,056	+ 3,656	– 870	– 5,518	+ 3,073	+ 541	+ 60,681	+ 1,223
2014	– 24,485	– 6,902	– 37,653	+ 7,007	+ 3,549	+ 2,666	– 700	+ 2,971	+ 1,184	+ 54,473	+ 891
2015	– 16,910	– 5,258	– 36,595	+ 9,587	+ 4,830	+ 4,064	– 2,488	+ 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	– 20,874	– 4,047	– 43,588	+ 10,683	+ 6,494	+ 3,252	– 1,683	+ 2,092	– 36	+ 68,622	– 1,229
2016 Q4	– 1,889	– 1,888	– 7,385	+ 3,241	+ 2,366	+ 1,236	– 1,605	+ 596	+ 307	+ 21,418	+ 3,015
2017 Q1	– 2,921	– 1,257	– 6,332	+ 2,207	+ 1,029	+ 377	– 855	+ 551	+ 589	+ 21,868	– 1,162
Q2	– 4,785	– 407	– 10,675	+ 2,655	+ 1,538	+ 893	– 608	+ 625	– 203	+ 5,303	– 2,042
Q3	– 11,794	– 1,134	– 17,166	+ 2,746	+ 1,433	+ 512	+ 53	+ 545	– 620	+ 19,690	– 1,148
Q4	– 1,374	– 1,249	– 9,415	+ 3,076	+ 2,494	+ 1,470	– 274	+ 370	+ 197	+ 21,761	+ 3,123
2018 Q1	– 630	– 787	– 6,238	+ 2,684	+ 1,059	+ 867	– 314	+ 655	+ 559	+ 21,896	– 835
Q2	– 3,608	– 46	– 10,459	+ 2,219	+ 1,657	+ 1,515	– 703	+ 738	– 248	+ 6,112	– 2,092
2017 Oct.	– 3,846	– 453	– 5,790	+ 775	+ 1,240	– 5	– 266	+ 231	+ 52	+ 6,979	– 504
Nov.	– 508	– 400	– 2,372	+ 1,353	+ 586	+ 162	– 369	+ 174	+ 57	+ 7,151	– 340
Dec.	+ 2,980	– 396	– 1,253	+ 948	+ 668	+ 1,312	+ 362	– 35	+ 88	+ 7,632	+ 3,968
2018 Jan.	– 550	– 301	– 1,649	+ 842	+ 161	– 365	– 49	+ 191	+ 188	+ 7,806	– 393
Feb.	+ 710	– 249	– 1,577	+ 693	+ 762	+ 675	– 162	+ 218	+ 208	+ 5,446	– 235
Mar.	– 791	– 237	– 3,012	+ 1,149	+ 136	+ 557	– 103	+ 246	+ 162	+ 8,645	– 207
Apr.	– 576	– 46	– 2,230	+ 796	+ 456	+ 194	– 515	+ 247	– 79	+ 4,532	– 439
May	– 1,003	+ 46	– 3,775	+ 709	+ 780	+ 474	– 152	+ 243	– 80	– 5,905	– 1,307
June	– 2,029	– 46	– 4,455	+ 713	+ 421	+ 847	– 35	+ 248	– 89	+ 7,485	– 345
July	– 4,297	– 80	– 5,541	+ 773	+ 174	+ 62	– 587	+ 231	– 252	+ 6,213	– 348
Aug. p	– 5,590	– 229	– 6,763	+ 374	+ 957	– 70	– 515	+ 174	– 221	+ 7,078	– 313

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)

€ million

Period	General government				All sectors excluding general government [2]			
			of which:			of which:		
	Total	Total	Current international cooperation [1]	Current taxes on income, wealth, etc.	Total	Personal transfers between resident and non-resident households [3]	of which: Workers' remittances	
2013	– 43,639	– 28,923	– 4,733	+ 6,174	– 14,715	– 3,250	– 3,229	
2014	– 41,283	– 28,146	– 6,419	+ 8,105	– 13,137	– 3,477	– 3,451	
2015	– 40,044	– 23,965	– 6,805	+ 10,638	– 16,079	– 3,540	– 3,523	
2016	– 39,879	– 24,870	– 11,523	+ 10,994	– 15,009	– 4,214	– 4,196	
2017	– 54,120	– 23,688	– 11,496	+ 10,584	– 30,432	– 4,632	– 4,613	
2016 Q4	– 12,579	– 8,362	– 3,186	+ 1,325	– 4,217	– 1,055	– 1,049	
2017 Q1	– 16,781	– 7,604	– 2,995	+ 1,796	– 9,176	– 1,158	– 1,153	
Q2	– 11,841	– 1,706	– 1,500	+ 6,239	– 10,135	– 1,159	– 1,153	
Q3	– 11,035	– 5,432	– 1,557	+ 1,755	– 5,603	– 1,157	– 1,153	
Q4	– 14,463	– 8,946	– 5,444	+ 794	– 5,517	– 1,159	– 1,153	
2018 Q1	– 14,483	– 9,356	– 2,233	+ 1,655	– 5,127	– 1,291	– 1,286	
Q2	– 5,373	– 529	– 1,260	+ 6,154	– 4,844	– 1,287	– 1,286	
2017 Oct.	– 4,224	– 2,939	– 1,036	+ 108	– 1,285	– 387	– 384	
Nov.	– 5,260	– 2,807	– 1,685	+ 70	– 2,453	– 386	– 384	
Dec.	– 4,979	– 3,201	– 2,723	+ 615	– 1,778	– 386	– 384	
2018 Jan.	– 5,052	– 3,518	– 1,332	+ 230	– 1,534	– 430	– 429	
Feb.	– 5,390	– 3,679	– 558	+ 814	– 1,712	– 429	– 429	
Mar.	– 4,041	– 2,160	– 343	+ 612	– 1,881	– 432	– 429	
Apr.	– 2,636	– 994	– 314	+ 1,479	– 1,643	– 429	– 429	
May	+ 102	+ 1,640	– 281	+ 3,635	– 1,538	– 429	– 429	
June	– 2,839	– 1,176	– 665	+ 1,040	– 1,663	– 429	– 429	
July	– 4,664	– 2,833	– 857	+ 150	– 1,831	– 430	– 429	
Aug. p	– 3,812	– 2,539	– 557	+ 252	– 1,273	– 429	– 429	

1 Excluding capital transfers, where identifiable. Includes current international cooperation and other current transfers. **2** Includes insurance premiums and claims (excluding life insurance policies). **3** Transfers between resident and non-resident households.

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

€ million

Period	Total	Non-produced non-financial assets	Capital transfers
2013	– 563	+ 1,105	– 1,668
2014	+ 2,936	+ 2,841	+ 95
2015	+ 534	+ 2,366	– 1,832
2016	+ 3,468	+ 3,372	+ 96
2017	– 254	+ 3,021	– 3,275
2016 Q4	+ 2,356	+ 791	+ 1,565
2017 Q1	+ 616	+ 734	– 118
Q2	– 727	+ 384	– 1,111
Q3	+ 904	+ 1,531	– 627
Q4	– 1,047	+ 372	– 1,419
2018 Q1	+ 214	– 431	+ 645
Q2	+ 85	+ 99	– 14
2017 Oct.	– 206	– 6	– 200
Nov.	– 536	+ 78	– 614
Dec.	– 305	+ 300	– 605
2018 Jan.	+ 489	+ 118	+ 371
Feb.	+ 19	– 269	+ 288
Mar.	– 294	– 281	– 14
Apr.	+ 357	+ 505	– 148
May	+ 50	– 108	+ 158
June	– 321	– 297	– 24
July	– 203	+ 101	– 304
Aug. p	+ 105	+ 247	– 142

XII. External sector

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

€ million

Item	2015	2016	2017	2017 Q4	2018 Q1	2018 Q2	2018 June	2018 July	2018 Aug. p
I. Net domestic investment abroad (increase: +)	+ 270,235	+ 397,043	+ 363,024	+ 36,972	+ 156,350	+ 117,731	+ 38,686	– 17,352	+ 6,858
1. Direct investment	+ 116,141	+ 82,985	+ 111,797	+ 27,372	+ 42,552	+ 55,587	+ 31,220	+ 10,865	+ 3,014
Equity	+ 75,292	+ 70,623	+ 71,205	+ 22,786	+ 35,042	+ 58,113	+ 26,551	+ 14,492	+ 8,650
of which: Reinvestment of earnings [1]	+ 16,804	+ 10,867	+ 23,779	+ 3,009	+ 12,044	+ 5,656	+ 572	+ 1,214	+ 5,262
Debt instruments	+ 40,849	+ 12,362	+ 40,592	+ 4,585	+ 7,510	– 2,526	+ 4,669	– 3,627	– 5,636
2. Portfolio investment	+ 124,062	+ 98,236	+ 105,157	+ 23,329	+ 42,396	+ 6,146	+ 1,800	+ 11,120	+ 8,544
Shares [2]	+ 19,692	+ 17,254	+ 14,042	+ 5,695	+ 8,182	– 1,361	+ 1,042	+ 2,616	+ 3,699
Investment fund shares [3]	+ 35,750	+ 36,142	+ 47,747	+ 14,687	+ 8,585	+ 4,412	+ 1,127	+ 2,164	– 559
Long-term debt securities [4]	+ 74,342	+ 51,037	+ 47,101	+ 7,636	+ 25,157	+ 4,358	– 860	+ 4,405	+ 5,002
Short-term debt securities [5]	– 5,723	– 6,196	– 3,733	– 4,689	+ 473	– 1,262	+ 491	+ 1,935	+ 402
3. Financial derivatives and employee stock options [6]	+ 26,026	+ 32,535	+ 8,937	+ 4,038	+ 1,154	+ 9,583	+ 3,751	+ 1,417	+ 4,517
4. Other investment [7]	+ 6,219	+ 181,602	+ 138,402	– 16,321	+ 69,548	+ 46,788	+ 1,702	– 41,020	– 8,577
Monetary financial institutions [8]	– 90,288	+ 18,627	– 21,008	– 50,588	+ 41,060	+ 6,134	– 21,049	+ 10,408	– 2,486
Long-term	– 2,804	+ 44,980	+ 19,619	+ 5,438	– 1,407	– 494	– 4,438	+ 6,453	+ 828
Short-term	– 87,484	– 26,353	– 40,627	– 56,026	+ 42,467	+ 6,628	– 16,611	+ 3,955	– 3,314
Enterprises and households [9]	– 14,618	– 6,248	+ 7,927	+ 3,952	+ 13,383	– 7,625	+ 2,604	+ 12,813	– 5,156
Long-term	+ 19,127	+ 1,725	– 3,372	– 1,290	+ 1,660	+ 4,573	+ 1,812	+ 1,342	– 910
Short-term	– 33,744	– 7,974	+ 11,298	+ 5,241	+ 11,723	– 12,198	+ 792	+ 11,471	– 4,246
General government	– 12,239	– 1,268	– 5,154	+ 991	+ 1,523	– 4,915	+ 159	– 1,164	– 240
Long-term	– 7,591	– 7,595	– 3,730	– 489	– 310	– 832	– 734	+ 29	+ 54
Short-term	– 4,648	+ 6,327	– 1,424	+ 1,480	+ 1,833	– 4,083	+ 893	– 1,193	– 294
Bundesbank	+ 123,364	+ 170,491	+ 156,637	+ 29,324	+ 13,583	+ 53,195	+ 19,988	– 63,077	– 695
5. Reserve assets	– 2,213	+ 1,686	– 1,269	– 1,446	+ 699	– 374	+ 213	+ 266	– 640
II. Net foreign investment in the reporting country (increase: +)	+ 30,817	+ 139,350	+ 83,057	– 48,638	+ 87,001	+ 47,279	+ 17,823	– 24,914	– 7,622
1. Direct investment	+ 48,606	+ 51,816	+ 69,548	+ 12,040	+ 20,537	+ 23,454	+ 24,605	+ 3,560	+ 106
Equity	+ 10,567	+ 11,894	+ 24,077	+ 10,118	+ 2,089	+ 541	– 996	+ 1,166	+ 722
of which: Reinvestment of earnings [1]	– 1,524	+ 3,935	+ 9,216	+ 2,107	+ 2,671	+ 941	– 362	– 4	+ 973
Debt instruments	+ 38,039	+ 39,921	+ 45,471	+ 1,922	+ 18,449	+ 22,914	+ 25,600	+ 2,394	– 615
2. Portfolio investment	– 68,808	– 108,471	– 95,045	– 46,598	+ 7,592	– 17,519	– 18,540	– 15,497	+ 9,153
Shares [2]	+ 10,605	+ 342	– 1,126	– 821	+ 4,306	+ 3,548	+ 85	– 73	– 1,738
Investment fund shares [3]	+ 7,357	– 6,919	– 3,441	– 2,894	– 1,792	– 3,038	+ 367	+ 323	+ 80
Long-term debt securities [4]	– 96,048	– 97,281	– 70,559	– 40,436	+ 16,555	– 18,710	– 11,607	– 17,785	+ 10,880
Short-term debt securities [5]	+ 9,278	– 4,613	– 19,919	– 2,447	– 11,476	+ 682	– 7,385	+ 2,039	– 69
3. Other investment [7]	+ 51,019	+ 196,006	+ 108,554	– 14,080	+ 58,872	+ 41,344	+ 11,759	– 12,976	– 16,881
Monetary financial institutions [8]	– 41,165	+ 86,742	+ 17,476	– 67,367	+ 45,097	+ 19,374	– 43,806	+ 11,858	+ 5,528
Long-term	– 19,535	+ 5,774	+ 7,541	+ 5,550	– 7,418	+ 3,309	+ 2,048	+ 2,310	– 3,707
Short-term	– 21,630	+ 80,968	+ 9,935	– 72,917	+ 52,515	+ 16,065	– 45,854	+ 9,548	+ 9,235
Enterprises and households [9]	+ 18,920	+ 3,716	+ 17,557	+ 16,752	+ 4,463	+ 3,658	+ 11,542	+ 6,940	– 4,476
Long-term	+ 23,006	+ 8,579	+ 3,339	– 328	+ 1,879	+ 10,204	+ 9,417	+ 1,372	– 2,814
Short-term	– 4,085	– 4,863	+ 14,218	+ 17,079	+ 2,584	– 6,546	+ 2,125	+ 5,568	– 1,661
General government	– 11,105	– 5,309	– 6,313	– 12,219	+ 1,660	– 592	+ 401	+ 1,275	+ 2,326
Long-term	– 3,941	– 4,682	– 3,290	+ 170	– 1	+ 153	+ 117	– 27	+ 2
Short-term	– 7,164	– 626	– 3,023	– 12,389	+ 1,662	– 746	+ 284	+ 1,302	+ 2,323
Bundesbank	+ 84,369	+ 110,857	+ 79,834	+ 48,754	+ 7,652	+ 18,904	+ 43,623	– 33,049	– 20,260
III. Net financial account (net lending: +/net borrowing: -)	+ 239,418	+ 257,693	+ 279,967	+ 85,610	+ 69,348	+ 70,452	+ 20,862	+ 7,561	+ 14,480

1 Estimate based on data on direct investment stocks abroad and in the Federal Republic of Germany (see Special Statistical Publication 10). **2** Including participation certificates. **3** Including reinvestment of earnings. **4** Up to and including 2012 without accrued interest. Long-term: original maturity of more than one year or unlimited. **5** Short-term: original maturity up to one year. **6** Balance of transactions arising from options and financial futures contracts as well as employee stock options. **7** Includes in particular loans, trade credits as well as currency and deposits. **8** Excluding Bundesbank. **9** Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households.

XII. External sector

8. External position of the Bundesbank °

€ million

End of reporting period	External assets									External liabilities 3,4	Net external position (col. 1 minus col. 10)
	Total	Reserve assets					Other investment		Portfolio investment 2		
		Total	Gold and gold receivables	Special drawing rights	Reserve position in the IMF	Currency, deposits and securities	Total	of which: Clearing accounts within the ESCB 1			
	1	2	3	4	5	6	7	8	9	10	11
1999 Jan. 5	95,316	93,940	29,312	1,598	6,863	56,167	1,376	–	–	9,628	85,688
1999	141,958	93,039	32,287	1,948	6,383	52,420	48,919	26,275	–	7,830	134,128
2000	100,762	93,815	32,676	1,894	5,868	53,377	6,947	– 6,851	–	8,287	92,475
2001	76,147	93,215	35,005	2,032	6,689	49,489	– 17,068	– 30,857	–	10,477	65,670
2002	103,948	85,002	36,208	1,888	6,384	40,522	18,780	4,995	166	66,278	37,670
2003	95,394	76,680	36,533	1,540	6,069	32,538	18,259	4,474	454	83,329	12,065
2004	93,110	71,335	35,495	1,512	5,036	29,292	21,110	7,851	665	95,014	– 1,904
2005	130,268	86,181	47,924	1,601	2,948	33,708	43,184	29,886	902	115,377	14,891
2006	104,389	84,765	53,114	1,525	1,486	28,640	18,696	5,399	928	134,697	– 30,308
2007	179,492	92,545	62,433	1,469	949	27,694	84,420	71,046	2,527	176,569	2,923
2008	230,775	99,185	68,194	1,576	1,709	27,705	129,020	115,650	2,570	237,893	– 7,118
2009	323,286	125,541	83,939	13,263	2,705	25,634	190,288	177,935	7,458	247,645	75,641
2010	524,695	162,100	115,403	14,104	4,636	27,957	337,921	325,553	24,674	273,241	251,454
2011	714,662	184,603	132,874	14,118	8,178	29,433	475,994	463,311	54,065	333,730	380,932
2012	921,002	188,630	137,513	13,583	8,760	28,774	668,672	655,670	63,700	424,999	496,003
2013	721,741	143,753	94,876	12,837	7,961	28,080	523,153	510,201	54,834	401,524	320,217
2014	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	396,314	282,490
2015	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	481,787	318,921
2016	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	592,731	397,719
2017	1,142,845	166,842	117,347	13,987	4,294	31,215	923,765	906,941	52,238	671,359	471,486
2016 Jan.	807,971	164,656	111,126	15,055	5,197	33,278	599,427	587,000	43,888	473,104	334,867
Feb.	839,336	177,917	122,535	15,109	6,899	33,374	617,434	605,006	43,985	489,464	349,871
Mar.	837,375	171,266	117,844	14,730	6,730	31,962	621,617	609,190	44,491	492,119	345,256
Apr.	856,266	175,738	121,562	14,793	6,759	32,623	638,201	625,774	42,327	495,580	360,687
May	884,887	173,927	118,133	14,970	6,839	33,984	667,972	655,544	42,988	501,620	383,267
June	922,232	184,628	128,963	14,746	6,780	34,139	693,498	681,070	44,106	518,491	403,741
July	904,044	186,300	130,417	14,698	6,736	34,449	672,748	660,320	44,996	518,946	385,099
Aug.	918,692	183,951	128,171	14,685	6,642	34,452	689,906	677,479	44,834	525,347	393,345
Sep.	957,860	183,796	128,795	14,657	6,605	33,738	728,554	715,738	45,510	549,909	407,951
Oct.	947,718	181,623	126,245	14,708	6,631	34,039	720,795	708,029	45,300	543,001	404,717
Nov.	991,108	177,348	121,032	14,917	6,572	34,826	766,905	754,057	46,855	552,565	438,543
Dec.	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	592,731	397,719
2017 Jan.	1,034,804	177,256	121,656	14,806	6,523	34,270	809,862	795,621	47,687	577,969	456,835
Feb.	1,060,894	184,666	128,507	14,976	6,248	34,935	828,264	814,375	47,964	609,255	451,639
Mar.	1,075,039	181,898	126,158	14,886	6,183	34,671	843,892	829,751	49,249	623,579	451,460
Apr.	1,089,144	180,726	126,011	14,697	6,055	33,963	858,281	843,439	50,137	601,538	487,606
May	1,098,879	175,958	122,486	14,459	5,907	33,107	871,724	857,272	51,197	601,130	497,749
June	1,098,880	171,295	118,235	14,349	5,695	33,016	875,312	860,764	52,273	623,941	474,939
July	1,092,769	169,735	117,330	14,124	5,531	32,750	871,752	856,510	51,282	614,300	478,469
Aug.	1,089,883	171,044	119,770	14,071	5,530	31,673	867,696	852,511	51,143	623,104	466,780
Sep.	1,115,200	169,937	118,208	14,089	5,471	32,169	894,441	878,888	50,821	622,729	492,470
Oct.	1,085,916	172,047	118,569	14,208	5,446	33,824	862,772	848,443	51,097	604,141	481,775
Nov.	1,091,832	169,539	117,208	14,069	5,168	33,094	869,988	855,548	52,305	579,766	512,066
Dec.	1,142,845	166,842	117,347	13,987	4,294	31,215	923,765	906,941	52,238	671,359	471,486
2018 Jan.	1,114,634	164,944	117,008	13,776	4,166	29,994	896,525	882,043	53,165	618,843	495,792
Feb.	1,147,979	166,370	117,138	13,949	4,138	31,146	928,275	913,989	53,333	637,646	510,333
Mar.	1,157,102	165,830	116,630	13,906	4,114	31,181	937,348	923,466	53,924	678,869	478,233
Apr.	1,137,942	166,970	117,867	14,043	4,150	30,910	916,858	902,364	54,115	632,732	505,210
May	1,196,227	171,469	120,871	14,287	4,172	32,139	970,555	956,150	54,203	654,573	541,654
June	1,212,477	167,078	116,291	14,245	4,983	31,559	990,543	976,266	54,857	698,155	514,323
July	1,145,236	163,308	112,693	14,131	4,881	31,603	927,466	913,270	54,463	672,992	472,244
Aug.	1,142,982	162,346	111,986	14,208	4,879	31,273	926,771	912,448	53,864	644,807	498,174
Sep.	1,189,133	161,078	110,755	14,236	4,889	31,199	973,337	956,487	54,717	688,053	501,080

o Assets and liabilities vis-à-vis all countries within and outside the euro area. Up to December 2000 the levels at the end of each quarter are shown, owing to revaluations, at market prices; within each quarter, however, the levels are computed on the basis of cumulative transaction values. From January 2001 all end-of-month levels are valued at market prices. **1** Mainly net claims on TARGET2 balances (according to the respective country designation), since November 2000 also balances with non-euro area central banks within the ESCB. **2** Mainly long-term debt securities from issuers within the euro area. **3** Including estimates of currency in circulation abroad. **4** See Deutsche Bundesbank, Monthly Report, October 2014, p. 22. **5** Euro opening balance sheet of the Bundesbank as at 1 January 1999.

XII. External sector

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

€ million

End of year or month	Claims on non-residents							Liabilities vis-à-vis non-residents						
			Claims on foreign non-banks							Liabilities vis-à-vis foreign non-banks				
					from trade credits							from trade credits		
	Total	Balances with foreign banks	Total	from financial operations	Total	Credit terms granted	Advance payments effected	Total	Loans from foreign banks	Total	from financial operations	Total	Credit terms used	Advance payments received
All countries														
2014	835,476	280,176	555,301	365,738	189,562	174,764	14,798	963,495	154,960	808,534	639,186	169,348	102,535	66,813
2015	875,758	264,291	611,467	415,697	195,770	181,271	14,499	1,018,333	152,109	866,224	681,923	184,301	112,677	71,625
2016	870,375	243,728	626,646	416,534	210,112	195,934	14,179	1,045,869	131,535	914,333	717,688	196,646	124,059	72,587
2017	879,462	216,300	663,162	438,824	224,338	210,673	13,666	1,073,004	136,001	937,003	738,896	198,107	129,693	68,413
2018 Mar.	904,879	228,815	676,064	441,346	234,718	220,890	13,828	1,097,127	132,952	964,175	759,309	204,867	134,620	70,247
Apr.	902,159	226,492	675,668	447,451	228,217	214,343	13,874	1,086,714	126,092	960,622	763,887	196,735	125,846	70,889
May	893,057	217,728	675,329	450,281	225,048	211,060	13,988	1,095,399	129,565	965,833	769,452	196,381	124,483	71,898
June	897,781	215,723	682,058	447,376	234,682	220,361	14,321	1,130,077	137,373	992,705	784,491	208,214	136,433	71,780
July	909,598	227,451	682,147	451,542	230,605	215,987	14,618	1,138,487	142,643	995,844	792,830	203,014	130,806	72,208
Aug.	898,068	225,010	673,059	451,319	221,740	207,269	14,471	1,134,543	139,859	994,685	803,956	190,729	117,893	72,836
Industrial countries [1]														
2014	735,152	275,277	459,876	330,740	129,136	116,037	13,099	872,950	153,807	719,142	598,249	120,894	85,432	35,461
2015	767,018	260,389	506,629	373,705	132,924	119,877	13,047	918,524	147,252	771,272	644,228	127,044	91,130	35,914
2016	754,210	239,866	514,344	374,776	139,568	126,889	12,679	943,314	127,540	815,774	682,238	133,536	96,378	37,158
2017	761,078	212,247	548,830	396,409	152,422	140,229	12,193	969,214	129,153	840,060	701,848	138,212	104,583	33,629
2018 Mar.	783,096	224,723	558,373	398,065	160,308	148,102	12,206	984,827	121,642	863,185	720,607	142,578	108,180	34,398
Apr.	780,643	222,207	558,436	402,345	156,091	143,940	12,151	979,674	116,887	862,788	725,030	137,758	103,229	34,529
May	769,576	213,548	556,028	402,958	153,069	140,739	12,331	990,518	122,145	868,373	731,502	136,871	101,979	34,893
June	773,499	211,375	562,123	401,514	160,610	148,005	12,605	1,024,871	131,379	893,491	747,453	146,038	111,441	34,597
July	785,200	222,842	562,359	406,930	155,428	142,614	12,815	1,027,476	130,424	897,052	755,931	141,121	106,413	34,708
Aug.	776,874	220,355	556,519	407,140	149,380	136,739	12,640	1,024,132	127,111	897,021	766,476	130,545	95,410	35,135
EU Member States [1]														
2014	618,804	260,133	358,671	266,920	91,752	81,141	10,611	727,491	139,209	588,282	504,292	83,989	56,842	27,147
2015	630,450	242,362	388,088	293,629	94,459	83,964	10,495	751,636	136,375	615,261	530,824	84,437	58,686	25,751
2016	611,322	221,947	389,375	292,074	97,300	87,283	10,017	767,040	117,466	649,573	561,444	88,129	61,234	26,895
2017	605,152	192,336	412,815	305,890	106,925	97,037	9,889	796,346	112,898	683,448	587,325	96,123	71,906	24,217
2018 Mar.	623,052	204,057	418,995	305,562	113,433	103,483	9,950	812,202	108,362	703,840	604,123	99,717	74,803	24,914
Apr.	618,946	200,386	418,559	307,098	111,461	101,490	9,972	807,184	103,217	703,967	606,598	97,369	72,470	24,899
May	611,952	191,698	420,254	310,430	109,824	99,699	10,124	815,990	106,300	709,690	611,977	97,713	72,672	25,041
June	610,761	189,449	421,312	306,100	115,212	105,032	10,180	843,179	114,037	729,141	627,124	102,018	77,311	24,707
July	622,069	202,008	420,061	310,625	109,436	99,078	10,358	843,038	111,823	731,215	632,670	98,545	73,888	24,658
Aug.	615,502	198,865	416,636	312,447	104,189	94,019	10,170	842,739	111,955	730,784	639,592	91,191	66,378	24,813
of which: Euro area [2]														
2014	457,077	204,589	252,488	194,201	58,288	52,067	6,221	607,716	107,561	500,155	445,643	54,513	37,580	16,933
2015	468,303	195,218	273,085	211,614	61,471	54,892	6,579	605,579	94,369	511,210	458,386	52,824	38,178	14,646
2016	449,741	169,681	280,060	215,560	64,500	57,774	6,726	614,469	77,067	537,402	481,462	55,940	41,076	14,864
2017	451,112	148,460	302,652	230,442	72,211	64,753	7,458	634,898	74,496	560,402	495,566	64,836	50,038	14,798
2018 Mar.	457,092	156,608	300,485	225,837	74,648	67,098	7,549	649,780	68,277	581,503	515,229	66,274	50,736	15,539
Apr.	449,522	149,615	299,907	226,350	73,557	65,988	7,569	644,732	66,118	578,614	513,494	65,120	49,435	15,685
May	449,216	147,339	301,877	229,527	72,350	64,751	7,599	658,336	68,170	590,167	524,101	66,066	50,194	15,872
June	449,044	146,537	302,507	226,220	76,287	68,610	7,678	683,244	71,357	611,887	542,305	69,582	53,730	15,852
July	453,625	155,487	298,138	224,694	73,444	65,620	7,824	681,024	68,957	612,067	544,369	67,698	51,689	16,009
Aug.	451,040	153,236	297,804	228,319	69,485	61,846	7,639	682,293	68,371	613,923	551,666	62,256	46,120	16,136
Emerging economies and developing countries [3]														
2014	100,274	4,849	95,425	34,998	60,427	58,728	1,699	90,545	1,153	89,392	40,937	48,455	17,103	31,352
2015	107,753	3,094	104,659	41,992	62,667	61,215	1,452	95,639	886	94,752	37,495	57,257	21,547	35,711
2016	114,754	2,616	112,138	41,742	70,396	68,896	1,500	99,412	1,069	98,342	35,250	63,093	27,681	35,412
2017	116,755	2,619	114,136	42,373	71,764	70,291	1,472	97,759	1,110	96,650	36,848	59,802	25,110	34,692
2018 Mar.	119,921	2,509	117,412	43,153	74,259	72,637	1,622	101,834	1,138	100,695	38,502	62,194	26,410	35,783
Apr.	119,650	2,700	116,950	44,978	71,972	70,249	1,723	98,867	1,334	97,533	38,657	58,876	22,582	36,294
May	121,574	2,562	119,012	47,194	71,818	70,160	1,658	98,536	1,378	97,157	37,751	59,407	22,467	36,940
June	122,355	2,729	119,626	45,734	73,892	72,176	1,716	100,262	1,354	98,908	36,837	62,071	24,954	37,117
July	122,313	2,869	119,443	44,484	74,959	73,156	1,803	99,821	1,324	98,498	36,699	61,799	24,355	37,443
Aug.	119,091	2,864	116,227	44,051	72,177	70,346	1,831	98,689	1,315	97,374	37,280	60,094	22,444	37,651

* The assets and liabilities vis-à-vis non-residents of banks (MFIs) in Germany are shown in Table 4 of Section IV, "Banks". Statistical increases and decreases have not been eliminated; to this extent, the changes in totals are not comparable with the figures shown in Table XI.7. **1** From July 2013 including Croatia. **2** From January 2014 including Latvia; from January 2015 including Lithuania. **3** All countries that are not regarded as industrial countries. Up to June 2013 including Croatia.

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
2017 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
Apr.	1.5972	1.5622	7.7347	7.4479	132.16	9.6202	10.3717	1.1890	0.87212	1.2276
May	1.5695	1.5197	7.5291	7.4482	129.57	9.5642	10.3419	1.1780	0.87726	1.1812
June	1.5579	1.5327	7.5512	7.4493	128.53	9.4746	10.2788	1.1562	0.87886	1.1678
July	1.5792	1.5356	7.8504	7.4523	130.23	9.4975	10.3076	1.1622	0.88726	1.1686
Aug.	1.5762	1.5063	7.9092	7.4558	128.20	9.6161	10.4668	1.1413	0.89687	1.1549
Sep.	1.6189	1.5211	7.9930	7.4583	130.54	9.6205	10.4426	1.1286	0.89281	1.1659

* 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 Economic and Monetary Union

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

XII. External sector

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

1999Q1=100

Period	Effective exchange rate of the euro vis-à-vis the currencies of the group						Indicators of the German economy's price competitiveness						
	EER-19 1				EER-38 2		Based on the deflators of total sales 3 vis-à-vis				Based on consumer price indices vis-à-vis		
							26 selected industrial countries 4						
								of which:					
	Nominal	In real terms based on consumer price indices	In real terms based on the deflators of gross domestic product 3	In real terms based on unit labour costs of national economy 3	Nominal	In real terms based on consumer price indices	Total	Euro area countries	Non-euro area countries	37 countries 5	26 selected industrial countries 4	37 countries 5	56 countries 6
1999	96.3	96.1	96.1	96.0	96.5	95.8	97.8	99.5	95.8	97.6	98.2	98.0	97.7
2000	87.2	86.7	86.0	85.2	88.0	85.9	91.7	97.3	85.1	90.8	93.0	92.0	90.9
2001	87.8	87.1	86.5	86.0	90.6	86.9	91.6	96.4	85.9	90.1	93.0	91.4	90.8
2002	90.1	90.2	89.5	89.4	95.2	90.5	92.2	95.5	88.4	90.6	93.5	91.9	91.7
2003	100.7	101.2	100.4	100.5	107.1	101.4	95.6	94.5	97.5	94.7	97.0	96.5	96.7
2004	104.6	104.9	103.2	103.8	111.7	105.0	95.8	93.3	99.8	94.9	98.4	98.0	98.3
2005	102.9	103.4	101.0	101.8	109.6	102.4	94.6	91.9	98.8	92.8	98.4	96.9	96.5
2006	102.8	103.3	100.2	100.5	109.6	101.7	93.3	90.3	98.1	91.0	98.5	96.4	95.8
2007	106.1	106.0	102.0	102.7	113.0	103.6	94.2	89.5	101.9	91.2	100.7	97.8	96.9
2008	109.3	108.1	103.3	105.9	117.1	105.5	94.4	88.1	105.1	90.3	102.1	97.7	97.0
2009	110.7	108.8	104.2	110.8	120.2	106.5	94.6	88.8	104.4	90.9	101.7	97.9	97.4
2010	103.6	101.1	96.0	102.6	111.6	97.6	92.1	88.5	98.1	87.1	98.7	93.6	91.9
2011	103.3	100.1	93.8	101.2	112.3	97.0	91.8	88.4	97.4	86.2	98.1	92.7	91.3
2012	97.7	94.8	88.3	95.0	107.2	92.2	89.9	88.3	92.3	83.6	95.8	89.7	88.2
2013	101.0	97.7	91.0	97.7	111.8	95.0	92.2	88.8	97.6	85.5	98.1	91.4	90.1
2014	101.4	97.2	91.0	98.6	114.1	95.4	92.8	89.6	97.8	86.2	98.1	91.6	90.7
2015	91.7	87.6	82.9	88.4	105.7	86.9	90.0	90.5	89.2	82.5	94.1	86.4	85.8
2016	94.4	89.5	85.0	p 89.3	109.7	p 88.8	90.9	91.0	90.7	83.9	94.7	87.4	p 87.0
2017	96.6	91.4	85.9	p 90.0	112.0	p 90.0	92.2	91.2	93.6	84.7	96.0	88.6	p 87.8
2015 Oct.	93.0	88.8			108.1	88.7					94.5	87.1	86.9
Nov.	90.5	86.3	83.2	88.1	105.0	86.0	90.2	90.7	89.3	82.8	93.5	85.8	85.3
Dec.	91.9	87.5			107.1	87.5					93.7	86.2	85.9
2016 Jan.	93.0	88.4			108.9	p 88.6					93.9	86.7	p 86.7
Feb.	94.2	89.3	84.8	p 89.2	110.3	p 89.5	90.9	91.2	90.3	83.8	94.5	87.3	p 87.2
Mar.	93.6	88.8			109.0	p 88.5					94.5	87.0	p 86.7
Apr.	94.4	89.5			109.8	p 89.0					94.9	87.5	p 87.1
May	94.6	89.8	85.1	p 89.6	110.2	p 89.4	90.9	91.0	90.6	84.1	94.7	87.6	p 87.3
June	94.4	89.6			109.8	p 89.0					94.5	87.5	p 87.1
July	94.6	89.8			109.5	p 88.7					94.8	87.6	p 86.9
Aug.	94.9	90.0	85.3	p 89.5	110.0	p 89.0	91.0	91.0	91.0	84.1	95.0	87.6	p 87.0
Sep.	95.1	90.1			110.2	p 89.2					95.1	87.8	p 87.2
Oct.	95.1	90.3			110.0	p 89.0					95.4	87.9	p 87.1
Nov.	94.6	89.6	84.7	p 89.1	109.6	p 88.5	90.8	90.9	90.7	83.8	94.8	87.5	p 86.8
Dec.	93.7	89.0			108.6	p 87.8					94.7	87.3	p 86.5
2017 Jan.	93.9	89.1			109.0	p 88.0					94.5	87.2	p 86.4
Feb.	93.4	88.9	83.4	p 88.0	108.1	p 87.4	90.6	91.0	90.1	83.3	94.5	87.1	p 86.2
Mar.	94.0	89.2			108.5	p 87.5					94.7	87.2	p 86.2
Apr.	93.7	89.0			108.2	p 87.2					94.5	87.1	p 86.0
May	95.6	90.5	84.8	p 88.9	110.5	p 88.8	91.6	91.3	91.9	84.2	95.3	88.0	p 87.0
June	96.3	91.2			111.4	p 89.5					95.9	88.5	p 87.6
July	97.6	92.4			113.3	p 91.0					96.5	89.1	p 88.4
Aug.	99.0	93.6	87.7	p 91.6	115.0	p 92.3	93.1	91.4	95.9	85.8	97.2	89.8	p 89.2
Sep.	99.0	93.6			115.0	p 92.2					97.3	89.9	p 89.3
Oct.	98.6	93.1			114.8	p 91.9					97.1	89.5	p 89.0
Nov.	98.5	93.0	87.5	p 91.4	115.0	p 92.0	93.3	91.3	96.5	85.7	97.2	89.5	p 89.0
Dec.	98.8	93.3			115.3	p 92.1					97.5	89.8	p 89.3
2018 Jan.	99.4	93.9			116.1	p 92.7					97.6	89.8	p 89.4
Feb.	99.6	93.9	p 88.1	p 91.9	117.3	p 93.6	93.9	91.3	98.0	86.0	97.7	89.9	p 89.5
Mar.	99.7	94.2			117.7	p 93.9					97.8	90.0	p 89.7
Apr.	99.5	p 93.9			117.9	p 94.0					97.8	p 89.9	p 89.7
May	98.1	p 92.8	p 87.2	p 91.0	116.6	p 93.1	p 93.5	p 91.4	96.8	p 85.5	p 97.3	p 89.3	p 89.3
June	97.9	p 92.6			116.7	p 93.0					p 97.2	p 89.4	p 89.4
July	99.2	p 93.8			118.2	p 94.2					p 97.1	p 89.9	p 89.9
Aug.	99.0	p 93.5	...	...	119.0	p 94.6	...	...	...	...	p 96.9	p 89.6	p 90.0
Sep.	99.5	p 93.9			120.4	p 95.6					p 96.9	p 89.8	p 90.7

***** The effective exchange rate corresponds to the weighted external value of the currency concerned. The method of calculating the indicators of the German economy's price competitiveness is consistent with the procedure used by the ECB to compute the effective exchange rates of the euro (see Monthly Report, November 2001, pp. 50-53, May 2007, pp. 31-35 and August 2017, pp. 41-43). For more detailed information on methodology, see the ECB's Occasional Paper No 134 (www.ecb.eu). A decline in the figures implies an increase in competitiveness. **1** ECB calculations are based on the weighted averages of the changes in the bilateral exchange rates of the euro vis-à-vis the currencies of the following countries: Australia, Bulgaria, Canada, China, Croatia, Czechia, Denmark, Hong Kong, Hungary, Japan, Norway, Poland, Romania, Singapore, South Korea, Sweden, Switzerland, the United Kingdom and the United States. Where current price and wage indices were not available, estimates were used. **2** ECB calculations. Includes countries belonging to the group EER-19 (see footnote 1) and additionally Algeria, Argentina, Brazil, Chile, Iceland, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, Philippines, Russian Federation, South Africa, Taiwan, Thailand, Turkey and Venezuela. Due to the redenomination of the Venezuelan bolívar on 20 August 2018, the spot rate from 17 August 2018 is used since then. **3** Annual and quarterly averages. **4** Euro area countries (from 2001 including Greece, from 2007 including Slovenia, from 2008 including Cyprus and Malta, from 2009 including Slovakia, from 2011 including Estonia, from 2014 including Latvia, from 2015 including Lithuania) as well as Canada, Denmark, Japan, Norway, Sweden, Switzerland, the United Kingdom and the United States. **5** Euro area countries (see footnote 4) and countries belonging to the group EER-19. **6** Euro area countries and countries belonging to the group EER-38 (see footnote 2).

Overview of publications by the Deutsche Bundesbank

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

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

Annual Report

Financial Stability Review

Monthly Report

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

Monthly Report articles

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

May 2018
- The current economic situation in Germany

June 2018
- Outlook for the German economy – macroeconomic projections for 2018 and 2019 and an outlook for 2020
- Lower bound, inflation target and the anchoring of inflation expectations

July 2018
- The market for Federal securities: holder structure and the main drivers of yield movements

– The realignment of the Chinese economy and its global implications
– Trends in the financing structures of German non-financial corporations as reflected in the corporate financial statements statistics

August 2018
– The current economic situation in Germany

September 2018
– Models for short-term economic forecasts: an update
– The performance of German credit institutions in 2017

October 2018
– State government finances: comparison of developments, debt brakes and fiscal surveillance
– The macroeconomic impact of uncertainty
– Activities of multinational enterprise groups and national economic statistics
– The growing importance of exchange-traded funds in the financial markets

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 statistics[2]

Special Publications

Makro-ökonometrisches Mehr-Länder-Modell, November 1996[3]

Europäische Organisationen und Gremien im Bereich von Währung und Wirtschaft, May 1997[3]

Die Zahlungsbilanz der ehemaligen DDR 1975 bis 1989, August 1999[3]

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 2013[3]

Die Europäische Union: Grundlagen und Politikbereiche außerhalb der Wirtschafts- und Währungsunion, April 2005[3]

Die Deutsche Bundesbank – Aufgabenfelder, rechtlicher Rahmen, Geschichte, April 2006[3]

European economic and monetary union, April 2008

For footnotes, see p. 88•.

Special Statistical Publications

1 Banking statistics guidelines, January 2018[2, 4]

2 Banking statistics customer classification, January 2018[2]

3 Aufbau der bankstatistischen Tabellen, July 2013[2, 3]

4 Financial accounts for Germany 2011 to 2016, May 2017[2]

5 Extrapolated results from financial statements of German enterprises 1997 to 2015, December 2016[2]

6 Verhältniszahlen aus Jahresabschlüssen deutscher Unternehmen von 2014 bis 2015, May 2018[2, 3]

7 Notes on the coding list for the balance of payments statistics, September 2013[2]

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 2011[3]

Discussion Papers*

32/2018
The role of central bank knowledge and trust for the public's inflation expectations

33/2018
To sign or not to sign? On the response of prices to financial and uncertainty shocks

34/2018
What are the real effects of financial market liquidity? Evidence on bank lending from the euro area

35/2018
Mitigating counterparty risk

36/2018
Short-term forecasting economic activity in Germany: a supply and demand side system of bridge equations

37/2018
Equilibrium asset pricing in directed networks

38/2018
Oil price shocks and stock return volatility: New evidence based on volatility impulse response analysis

39/2018
Coordination failures, bank runs and asset prices

40/2018
Large mixed-frequency VARs with a parsimonious time-varying parameter structure

41/2018
Seasonal adjustment of daily time series

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 2014[2]

2a Solvency Regulation, December 2006[2]
Liquidity Regulation, December 2006[2]

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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.