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Abbreviations and symbols

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	Data unknown, not to be published or not meaningful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

Discrepancies in the totals are due to rounding.

■ Commentaries

■ Economic conditions

Underlying trends

German economy probably gained somewhat more momentum in Q2 than it had at beginning of year

Overall economic output probably gained somewhat more momentum in the second quarter of 2018 than it had at the beginning of the year. This is due in part to the fact that the special factors, which were having a dampening effect in the first quarter, are now petering out. The exceptionally virulent wave of flu, which is likely to have had a negative impact on economic activity in the first three months of the year, was no longer a factor in the second quarter. A countermovement is also expected to be seen in government consumption, which showed a marked decline in the first quarter for the first time in several years. Industrial activity gained traction again on the back of the recovery in export trade. Even though it is unlikely that the high growth rates seen last year will be achieved, the manufacturing sector could be gaining greater prominence again as a key driver of economic activity. Owing to the ongoing excellent labour market situation and the strong wage growth, private consumption probably remained a cornerstone of economic growth. Finally, activity in the flourishing construction sector probably expanded significantly, despite the existing capacity constraints.

Industry

Strong rise in industrial output

German industrial output in May 2018 grew strongly by a seasonally adjusted 2¾% on the month. The average for April and May was thus slightly higher than in the first quarter of 2018 (+¼%). Manufacturers of pharmaceutical products, in particular, reported considerable growth in output. In line with this, consumer goods output expanded most strongly overall (+1½%). By contrast, manufacturers of capital goods were only able to increase their produc-

tion volume by a marginal extent (+¼%). The strong increase in motor vehicle production, in particular, was the decisive factor behind the positive overall result, while German mechanical engineering firms had to cope with sharp production cutbacks. Intermediate goods output remained well below the level of the first quarter (-½%).

After declining for four consecutive months after the turn of the year, industrial orders rose sharply again in May 2018 by a seasonally adjusted 2½% compared with the figure for April, which had undergone a marked upward revision. However, the average inflow of new orders in April and May was still clearly below the level of the previous quarter (-1%). This was due to the decline in orders from Germany (-1¾%) and, in particular, from the euro area (-5¼%). Demand for industrial products from non-euro area countries grew strongly, however (+2¾%). Excluding the rather irregular influx of new large orders, however, the overall order intake contracted to a much lesser extent on the whole (-¼%), and the gap between the inflow of orders from the euro area and non-euro area countries is narrowing for the most part. With regard to the individual sectors, only manufacturers of capital goods were affected by the weaker demand (-3¼%). By contrast, producers of intermediate and consumer goods received significantly more new orders (+2% and +1¼%, respectively). The order situation in German industry has probably remained very favourable on the whole. This is also indicated by the backlog of orders, which in May 2018 significantly exceeded the level of the first quarter.

New orders pointing upwards again

Industrial sales rose strongly in May 2018 on the month by a seasonally adjusted 1%, following the path set by industrial output, albeit to a lesser extent. The average for April and May was thus perceptibly higher than the level recorded in the first quarter (+½%). With regard to the regional distribution of sales, a strong

Strong growth in industrial sales and exports in May

Economic conditions in Germany*

Seasonally adjusted

Period	Orders received (volume)				
	Industry; 2015 = 100			Main construction; 2010=100	
	Total	of which			
Domestic		Foreign			
2017 Q3	108.1	105.9	109.8	127.7	
Q4	111.9	107.3	115.4	140.7	
2018 Q1	109.5	105.0	112.9	138.4	
Mar	108.6	105.6	110.9	127.7	
Apr	106.9	101.0	111.3	131.0	
May	109.7	105.3	113.1	...	
	Output; 2015 = 100				
	Industry				
	Total	of which			
		Inter-mediate goods	Capital goods		
	2017 Q3	105.7	105.9	106.0	109.2
	Q4	106.7	107.3	107.0	109.3
	2018 Q1	106.8	106.4	107.1	109.4
	Mar	107.3	106.2	108.3	109.2
	Apr	105.6	104.4	106.8	110.4
	May	108.4	107.5	107.8	113.8
	Foreign trade; € billion			Memo item Current account balance in € billion	
	Exports	Imports	Balance		
	2017 Q3	320.57	258.54	62.03	67.51
	Q4	329.98	265.67	64.31	68.20
2018 Q1	327.88	265.56	62.32	71.96	
Mar	109.47	87.87	21.60	22.93	
Apr	109.16	90.15	19.01	21.45	
May	111.08	90.77	20.31	19.45	
	Labour market				
	Employment	Vacancies ¹	Un-employment	Un-employment rate in %	
	Number in thousands				
	2017 Q4	44 477	769	2 466	5.5
	2018 Q1	44 672	784	2 396	5.4
	Q2	...	793	2 356	5.2
	Apr	44 747	788	2 369	5.3
	May	44 784	793	2 357	5.2
	June	...	797	2 342	5.2
		Prices			
Import prices		Producer prices of industrial products	Construction prices ²	Harmonised consumer prices	
2010 = 100			2015 = 100		
2017 Q4		102.2	105.7	118.4	102.7
2018 Q1		102.2	106.3	120.4	103.1
Q2	...	107.2	121.7	103.7	
Apr	102.6	106.7	.	103.2	
May	104.3	107.3	.	103.9	
June	...	107.5	.	104.1	

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

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increase was seen in countries outside the euro area in particular, owing mainly to the buoyant demand for motor vehicles in these countries. By contrast, sales of German industrial enterprises in the euro area went up only slightly, whereas domestic turnover even posted a decline. Broken down by sector, sales of intermediate and capital goods rose significantly. Producers of consumer goods, on the other hand, saw a considerable drop in sales. In line with the sharp rise in foreign industrial sales, nominal exports also increased considerably in May by a seasonally adjusted 1¾% on the month. The average for April and May was also significantly higher than the level recorded in the first quarter of 2018 (+¾%). In price-adjusted terms, growth was, however, significantly lower at ¼%. Seasonally adjusted nominal imports increased at a more moderate pace in May compared with the previous month (+¾%). Taking the average of April and May, however, they were up significantly on the level of the first quarter (+2¼%). The sharp rise in energy prices was nonetheless the decisive factor behind the growth. After adjustment for price effects, the increase was therefore lower (+1%).

Construction

Construction output continued on its upward trajectory in May 2018, rising steeply by a seasonally adjusted 3% on the month. On an average of April and May, it was also up significantly on the level of the first quarter (+2½%). This increase was due to very strong growth in the main construction sector (+7%), while construction activity in the finishing trades fell short of the prior-quarter level (-¾%). The construction boom in Germany is therefore continuing. The order intake in the main construction sector in April – figures are available up to then – fell sharply by 5¼% on the level of the first quarter, which was particularly marked by a number of large orders. That said, the equipment utilisation of construction firms as well as their range of orders were – according to the

Construction boom continuing

Ifo Institute – only slightly down on their peak levels and the share of companies reporting production hold-ups due to staffing shortages once again reached a new record level.

Labour market

Further marked rise in employment; outlook positive

Employment continued to grow substantially in May 2018. The particularly high growth rates seen in the months around the turn of the year were no longer achieved, however. There were 37,000 more persons in work in seasonally adjusted terms than in the previous month. Over the last twelve months, total employment has risen by 593,000 persons, or 1.3%. As in the past, the continued expansion in total employment was due primarily to the strong increase of 770,000 persons in jobs subject to social security contributions between April 2017 and April 2018. The number of self-employed persons showed a further fall, while the number of persons working exclusively in low-paid part-time jobs stabilised. The leading indicators of labour demand, such as the BA-X job index of the Federal Employment Agency (BA) and the Ifo employment barometer, remain at a high level. According to the indicators, however, firms might have been somewhat more reluctant to hire new staff than in recent months. For example, the labour market barometer of the Institute for Employment Research (IAB) for the coming months is indicating that the high demand for labour will stabilise.

Further decline in unemployment

Seasonally adjusted unemployment continued to fall slightly in June month on month. There were 2.34 million persons registered as unemployed with the Federal Employment Agency, 15,000 fewer than in May. The unemployment rate held firm at 5.2%. On the whole, there were 197,000 fewer persons registered as unemployed than in the same month last year. Total underemployment showed a somewhat stronger decrease during this same period, which was due to a simultaneous decline in the number of persons taking part in labour market policy measures. The un-

employment component of the IAB labour market barometer sank once again and is now only slightly in positive territory. This suggests that unemployment could decline to a lesser extent in the next three months.

Prices

In June 2018, crude oil prices almost maintained the high level they had previously reached despite production expansions. They were only 2% lower than in the previous month, but exceeded the previous year's level by almost two-thirds. Crude oil prices were still fluctuating at around the US\$75 mark in the first half of July, before falling to US\$72 at the end of the reporting period. Crude oil futures for deliveries six months ahead were being traded without any notable discount, while deliveries 12 months ahead were being traded at a discount of US\$1½.

Crude oil prices still fairly high

Import prices rose sharply in May in seasonally adjusted terms, which was not due solely to the energy component. Even excluding energy, the depreciation of the euro was making itself clearly felt. Producer prices, for which data are already available for June, showed a similar pattern, albeit in a weaker form. The annual growth rate increased recently both in the case of import and producer prices to around 3%.

Marked rise in import prices excluding energy

Consumer prices (HICP) rose in June by a seasonally adjusted 0.2% on the month. Energy prices continued to rise moderately, probably as a result of the widening of margins at refineries. Food prices also went up slightly. In the case of industrial goods excluding energy, the price increase was somewhat stronger again for the first time in several months. Prices for services remained unchanged despite price reductions in travel services. This was due in part to a moderate increase in rents. Annual headline HICP inflation fell from +2.2% to +2.1% overall (CPI likewise from +2.2% to +2.1%), and excluding energy and food from +1.5% to +1.1%. HICP as a whole is expected

Moderate rise in consumer prices in June

to continue to grow by 2% in the coming months.

■ Public finances¹

Local government finances

Slightly higher deficit at start of year amid strong tax receipts ...

In the first quarter of this year, the local government core budgets and off-budget entities posted a deficit of €5½ billion. This represents a fall of €½ billion on the start of last year. Revenue rose considerably by 4% (€2 billion). Of this, tax revenue increased sharply by 5½% (€1 billion), which was primarily attributable to the 8% boost in local business tax after deducting shares accruing to other government levels. By contrast, transfers from state government rose at a more subdued pace overall (+2½%, or €½ billion).

... and increased fixed asset formation

At 4½% (€2½ billion), the rise in spending was slightly more pronounced than the increase in revenue. Spending on personnel went up by the same rate (by €½ billion). Although the effect of the collective wage agreement's second adjustment stage, which came into force in February 2017, had more or less dissipated, the agreed upgrades to a higher pay grade and the switchover to a new pay scheme appear to still be making themselves felt. Moreover, there is likely to have been a further marked increase in staffing levels. Growth in other operating expenditure remained moderate at 2½% (€½ billion). Spending on social benefits stagnated: while spending on social assistance, in particular, went up, this was offset by the fact that expenditure on benefits for asylum seekers fell sharply again and spending on accommodation costs for recipients of unemployment benefit II decreased. Following subdued developments overall last year, fixed asset formation surged by 16% (just under €1 billion) at the start of the year.

Personnel expenditure is set to continue rising over 2018 as a whole. The reason for this is the collective wage agreement of April 2018, under

which pay rates were initially raised by an average of 3.2% from March onwards. In addition, it is possible that other operating expenditure and social benefits will rise more sharply again later in the year. In view of the surpluses generated in recent years, the extensive funding for investment provided by central government and the much lamented shortcomings of the local transport and education infrastructure, fixed asset formation is expected to be given a continued boost.² Further dynamic developments are also expected on the revenue side. According to the May tax estimate, local government tax revenue (including amounts attributable to city states) is expected to increase significantly by 5%. Transfers from state government will probably also rise markedly. The latter development is supported by growth in tax revenue at the state government level as well as by higher funds from central government to cover accommodation costs for recipients of unemployment benefit II. Overall, local government budgets could therefore run a high cash surplus, as in the previous year. The medium-term outlook also remains extremely positive in this regard.

The usual seasonal deficit at the start of the year³ was covered to a large extent by the reserves, which many local authorities had topped up with cash surpluses from the previous year. According to the preliminary debt statistics, liabilities increased by only €½ billion (to just over €142½ billion) as against year-end

Very positive outlook for year as a whole and in medium term amid significant revenue growth

Debt rose only slightly in Q1

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.

² The altogether high surplus notwithstanding, some municipalities will probably still be subject to restrictions on increasing investment due to budgetary rules. For example, local government finances in North Rhine-Westphalia are particularly strained and characterised by high cash advances. While there was a clear cash surplus (€3 billion) throughout the federal state last year, capital depletion was identified in many municipalities (in the case of double-entry booking), which limits scope for investment.

³ In the first quarter, local authorities initially receive only minimal funding from their shares in income tax, which is offset in the final quarter.

2017. While credit market debt fell by €1½ billion (to €93½ billion), cash advances rebounded significantly by almost €2 billion (to €45½ billion).⁴ Cash advances are actually only intended to bridge liquidity shortfalls over the course of the year. The persistently high level of cash advances suggests that some local government budgets are still strained. These cases are concentrated in a small number of federal states.

Statutory health insurance scheme

Result largely unchanged in Q1

In the first quarter of 2018, the statutory health insurance (SHI) scheme⁵ recorded its usual seasonal deficit. At €2 billion, this was broadly on a par with deficit levels seen in the previous two years. The health fund recorded a slight year-on-year improvement in the deficit, which amounted to €2½ billion, while the surplus recorded by the health insurance institutions dipped marginally to just under €½ billion.

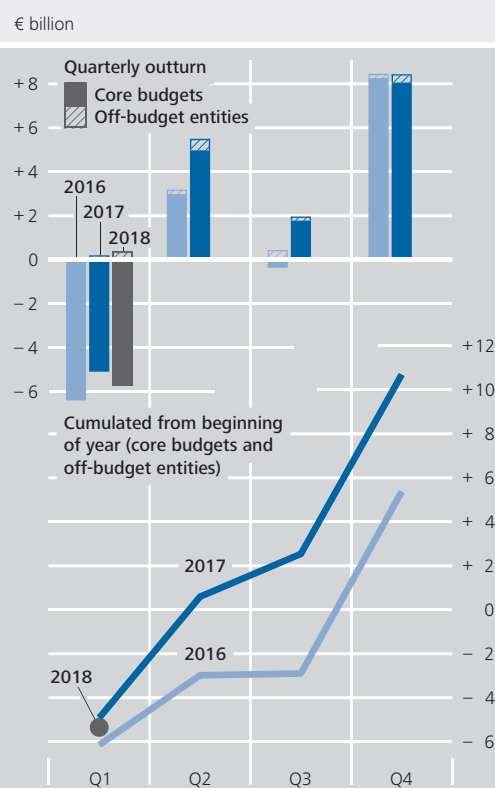
Health insurance institutions' surplus down somewhat in face of slightly lower supplementary contribution rates

The health insurance institutions' revenue, which mainly consists of transfers from the health fund, grew by just under 3½%. At the same time, supplementary contribution rates were slightly lower.⁶ Expenditure grew at a marginally higher rate. Growth in spending on hospital treatment, a particularly large expenditure item, was comparatively moderate (+2%), much as it was for outpatient treatment (+2½%), which had risen very sharply in the previous year. By contrast, spending on pharmaceuticals, remedies and therapeutic appliances, and sickness benefit increased at an above-average rate.

Slight improvement in health fund due to absence of special transfer to health insurance institutions

The health fund's revenue rose by just over 3½%. Despite the slight decline in the average supplementary contribution rate, growth in receipts from contributions was slightly stronger at 4%. This was primarily due to what were, overall, substantial increases in higher *per capita* earnings subject to compulsory contributions and employment, which resulted in a rise of 4½% in employees' contributions. Growth in

Local government fiscal deficit/surplus



Source: Federal Statistical Office.
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pension contributions was less pronounced as the pension increase in mid-2017 was lower and the number of pension recipients is currently only edging upwards. Other revenue more or less stagnated on account of the central government grant remaining constant at its new standard level. The fund's expenditure, which largely comprises predetermined pay-

⁴ Caution should be exercised when considering changes in sub-categories. In the preliminary debt statistics for the final quarter of 2017, it would appear that, for a large number of municipalities, the allocation of liabilities to these categories had been revised. The borrower's note loans taken out to safeguard liquidity were assigned to regular budgetary loans (as bonds for comparable purposes previously were). This triggers a purely methodology-based decline in outstanding cash advances compared with the non-revised figures for previous quarters. The 2017 annual statistics, which will be published in August, should enable proper classification by funding type. See Landtag Nordrhein-Westfalen, Drucksache 17/2537 of 7 May 2018.

⁵ Health insurance institutions and health fund (consolidated).

⁶ The average supplementary contribution rate decreased slightly by 0.03 percentage point. Taken by itself, this reduced the growth rate of contribution receipts by 0.2 percentage point.

Finances of the statutory health insurance scheme*



Source: Federal Ministry of Health. * Health fund and health insurance institutions (consolidated). Preliminary quarterly figures (KV45). The final annual figures differ from the total of the reported preliminary quarterly figures, as the latter are not revised subsequently.

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ments to the health insurance institutions, increased at a slightly slower pace than revenue.

Based on the assumptions provided by the group of SHI estimators in autumn 2017, the health fund was expected to run a slight deficit for the year as a whole. This is the result of reserve-financed transfers to the innovation and structural funds (around €½ billion). However, income subject to contributions could develop more favourably and expenditure⁷ could rise more moderately than expected at that time. In addition, the average supplementary contribution rate is somewhat higher than the rate deemed necessary by the Federal Ministry

of Health last autumn to cover relevant expenditure. All in all, this raises the prospect of a significant surplus for the health insurance institutions and the SHI scheme as a whole this year, too.

Under draft legislation, next year will see parity funding extended to supplementary contributions and contributions reduced for self-employed persons. This parity, according to which enterprises will pay half of supplementary contributions in future, will have no direct impact on the SHI scheme's finances. By contrast, the relief for self-employed persons will lead to revenue shortfalls of almost €1 billion. Moreover, additional funds were earmarked in the coalition agreement, not least for additional nursing staff.⁸ Looking ahead, demographic developments will rein in revenue and put pressure on healthcare expenditure. It would therefore appear pertinent to achieve further efficiency gains in order to limit contribution burdens.

Future burdens stemming from new measures

Public long-term care insurance scheme

The core area⁹ of the public long-term care insurance scheme recorded a deficit of €1 billion in the first quarter of 2018. The further deterioration by €½ billion compared with the result at the start of the previous year is ultimately due to the fact that, at that time, the effects of the benefit expansions introduced under the second Act to Strengthen Long-term Care (*Pflegestärkungsgesetz II*) on expenditure had not yet fully unfolded.

Further marked deterioration in Q1

Renewed considerable surplus a possibility for year as a whole

⁷ The Federal Ministry of Health's slightly lower estimate is taken as a basis here.

⁸ A draft bill prepared by ministry officials for an act to boost nursing staff levels envisages increased spending by the health insurance institutions, which is already expected to amount to around €1½ billion in 2020. In addition, the health fund is to take €½ billion per year from 2019 to 2022 from its reserves and increase its deficit by paying this into the hospital structures fund.

⁹ The developments outlined here and below exclude the long-term care provident fund. This fund is currently generating surpluses as planned to accumulate assets.

Continued strong expenditure growth outstrips substantial rise in revenue

Total revenue rose by just over 4½%. As in the case of the SHI scheme, this was driven by strong growth in employees' contributions. However, climbing by 11½% following the entry into force of the second Act to Strengthen Long-term Care, the increase in expenditure was once again considerably higher. With the exception of fully inpatient care, this affected all bigger benefit areas. An increase of 8% was recorded for the benefits in kind that are larger expenditure items. In the case of cash benefits, spending rose by as much as 21%. Both care allowance payments and pension contribution payments for those providing care for a relative went up significantly.

Deficit expansion for year as a whole, too; new burdens and contribution rate increase on horizon

A further deficit increase is on the cards for the year as a whole as well, although expenditure growth is set to slow down considerably in subsequent quarters (deficit in 2017: €2½ billion). In the absence of further benefit increases, the deficit would fall slightly next year. However, the draft bill prepared by ministry officials for an act to boost nursing staff levels as part of the coalition deal envisages additional spending of just under €½ billion per year.¹⁰ All things considered, the distributable reserves, which amounted to €7 billion at the end of 2017, could therefore fall to their statutory lower limit of just over €1½ billion at present by as early as next year. Against this backdrop, the possibility of significantly increasing the contribution rate is currently being floated, with additional receipts first being used to generate a surplus again and top up the reserves. However, given the stronger rise in spending expected in the longer term, these improvements are likely to be only short-lived.

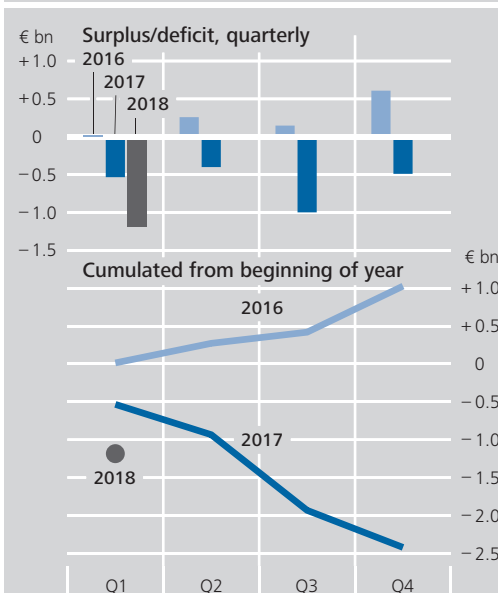
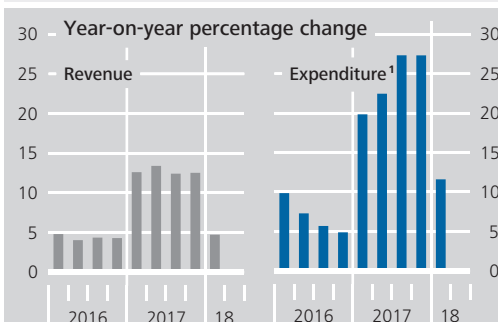
■ Securities markets

Bond market

High net sales in the German bond market

At €102.9 billion, gross issuance in the German bond market in May 2018 was lower than the previous month's figure (€128.4 billion). After deducting the lower redemptions and taking

Finances of the public long-term care insurance scheme*



Source: Federal Ministry of Health. * Preliminary quarterly figures (PV45). The final annual figures differ from the total of the reported preliminary quarterly figures, as the latter are not revised subsequently. ¹ Including the transfers to the long-term care provident fund.

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account of changes in issuers' holdings of their own debt securities, net issuance of domestic debt securities came to €20.3 billion. The outstanding volume of foreign debt securities in Germany rose by €0.5 billion during the reporting month, which meant that the outstanding volume of debt instruments in the German market increased by €20.8 billion overall.

During the reporting month, the public sector issued debt securities worth €11.0 billion net (following net redemptions of €19.3 billion in

Rise in public sector capital market debt

¹⁰ The lion's share of the additional expenditure would be borne by the SHI scheme.

Sales and purchases of debt securities

€ billion

Item	2017	2018	
	May	April	May
Sales			
Domestic debt securities ¹	28.5	– 12.5	20.3
of which			
Bank debt securities	10.8	– 0.5	6.7
Public debt securities	16.6	– 19.3	11.0
Foreign debt securities ²	10.8	3.1	0.5
Purchases			
Residents	14.7	8.8	1.3
Credit institutions ³	3.9	– 2.6	– 1.6
Deutsche Bundesbank	12.8	5.2	7.7
Other sectors ⁴	– 2.0	6.2	– 4.8
of which			
Domestic debt securities	– 9.5	1.2	– 4.2
Non-residents ²	24.5	– 18.2	19.5
Total sales/purchases	39.2	– 9.4	20.8

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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April). Central government was the main issuer of new securities (€13.0 billion), chiefly in the form of two-year Federal Treasury notes (Schätze) to the tune of €5.7 billion and five-year Federal notes (Bobl) in the amount of €3.0 billion. It also issued ten and 30-year Bunds totalling €2.5 billion and €1.8 billion respectively. State governments redeemed their own bonds to the net value of €2.0 billion.

Domestic credit institutions raised their capital market debt by €6.7 billion net in May, following net redemptions of €0.5 billion in April. Increases were seen primarily in the outstanding volume of mortgage Pfandbriefe (€3.0 billion) and debt securities issued by specialised credit institutions (€5.7 billion), which include, for example, public promotional banks. This contrasted with net redemptions of public Pfandbriefe (€1.8 billion) and other bank debt securities that can be structured flexibly (€0.1 billion).

Net issuance of bank debt securities

Domestic enterprises issued bonds with a net value of €2.6 billion in the reporting month, compared with €7.2 billion one month earlier. On balance, these issuances were attributable to both other financial institutions and non-financial corporations.

Rise in enterprises' capital market debt

Foreign investors were the main buyers of bonds in May (€19.5 billion). The Deutsche Bundesbank also purchased debt securities for €7.7 billion net, predominantly in the context of the asset purchase programmes. By contrast, domestic non-banks and domestic credit institutions sold bonds in the amount of €4.8 billion and €1.6 billion net respectively.

Purchases of debt securities

Equity market

In the month under review, domestic enterprises issued new shares totalling €1.2 billion net in the German equity market. The volume of foreign equities in the German market fell by €3.1 billion over the same period. On balance, shares were purchased chiefly by domestic credit institutions (€1.2 billion), but also by foreign investors (€0.6 billion). This contrasted with net sales by domestic non-banks totalling €3.7 billion.

Net issuance in the German equity market

Mutual funds

In May, German mutual funds recorded muted net inflows of €1.9 billion (April: €8.4 billion). On balance, retail funds were the chief beneficiaries (€1.2 billion). Mixed securities funds were the main issuers of new shares (€1.7 billion), but funds of funds and equity funds also placed new shares on the market (€0.9 billion and €0.4 billion, respectively). Bond funds, on the other hand, recorded outflows of funds amounting to €0.9 billion. The outstanding volume of foreign mutual fund units sold in Germany rose by €3.2 billion in the reporting month. Domestic non-banks were the main buyers of mutual fund shares in May (€4.2 billion). These were primarily foreign securities on

German mutual funds record muted inflows

balance. Resident credit institutions acquired shares for €1.2 billion net, while foreign investors sold mutual fund shares for €0.3 billion net.

■ Balance of payments

Current account surplus down

Germany's current account recorded a surplus of €12.6 billion in May 2018, putting it €10.9 billion below the level of the previous month. This was chiefly attributable to a lower invisible current transactions balance, which comprises services as well as primary and secondary income, compounded by a narrower surplus in the goods account.

Narrower surplus in goods account

In the month under review, the surplus in the goods account was down on the month, falling by €1.2 billion to €21.5 billion. In this context, exports of goods fell more sharply than imports.

Turnaround in invisible current transactions

Germany recorded a deficit of €8.9 billion in invisible current transactions in May, compared with a surplus of €0.8 billion one month earlier. This deterioration was mainly caused by a decline in the primary income balance which outweighed the upturn in the secondary income balance. Moreover, the deficit in the services account widened. The primary income account saw net expenditure in the amount of €7.4 billion, compared with net income of €4.0 billion in April. The turnaround was largely attributable to higher dividend payments on portfolio investments by non-residents. The increase in general government revenue from current taxes on income and wealth that primarily took place as a result of this was instrumental in improving the secondary income balance, generating a virtually balanced result of €0.1 billion, compared with a deficit of €2.6 billion in the previous month. In the services account, the deficit widened by €1.0 billion to €1.6 billion. Small increases in a number of items had the effect of pushing up revenue, but the increase in expenditure, largely on the back of higher spending on travel, was weightier.

Major items of the balance of payments

€ billion

Item	2017*	2018	
	May	April	MayP
I Current account	+ 15.2	+ 23.5	+ 12.6
1 Goods ¹	+ 23.0	+ 22.7	+ 21.5
Exports (fob)	109.6	110.0	108.3
Imports (fob)	86.6	87.4	86.8
Memo item			
Foreign trade ²	+ 21.8	+ 20.1	+ 19.7
Exports (fob)	110.5	110.3	109.1
Imports (cif)	88.7	90.2	89.4
2 Services ³	- 1.7	- 0.6	- 1.6
Receipts	22.3	21.7	22.7
Expenditure	23.9	22.3	24.3
3 Primary income	- 5.3	+ 4.0	- 7.4
Receipts	16.9	17.0	16.4
Expenditure	22.2	13.0	23.8
4 Secondary income	- 0.9	- 2.6	+ 0.1
II Capital account	+ 0.1	+ 0.4	- 0.5
III Financial account			
(increase: +)	+ 11.8	+ 30.2	- 3.0
1 Direct investment	+ 6.8	+ 13.5	- 2.1
Domestic investment			
abroad	+ 9.6	+ 8.0	+ 1.6
Foreign investment			
in the reporting country	+ 2.8	- 5.4	+ 3.7
2 Portfolio investment	- 14.4	+ 19.2	- 19.5
Domestic investment			
in foreign securities	+ 12.0	+ 0.8	+ 0.2
Shares ⁴	+ 0.7	- 2.4	- 3.5
Investment fund			
shares ⁵	+ 0.5	+ 0.1	+ 3.2
Long-term debt			
securities ⁶	+ 12.2	+ 3.8	+ 1.0
Short-term debt			
securities ⁷	- 1.4	- 0.7	- 0.5
Foreign investment			
in domestic securities	+ 26.5	- 18.4	+ 19.7
Shares ⁴	+ 1.3	+ 2.9	+ 0.6
Investment fund shares	+ 0.6	- 3.0	- 0.3
Long-term debt			
securities ⁶	+ 16.1	- 18.4	+ 11.5
Short-term debt			
securities ⁷	+ 8.5	+ 0.2	+ 8.0
3 Financial derivatives ⁸	+ 1.4	+ 1.6	+ 4.1
4 Other investment ⁹	+ 18.1	- 3.4	+ 14.5
Monetary financial			
institutions ¹⁰	- 6.3	- 29.4	- 6.6
of which			
Short-term	- 8.1	- 28.4	- 10.3
Enterprises and			
households ¹¹	+ 7.3	+ 5.3	- 8.0
General government	+ 3.6	- 3.1	- 1.0
Bundesbank	+ 13.6	+ 23.8	+ 30.1
5 Reserve assets	0.0	- 0.7	+ 0.1
IV Errors and omissions ¹²	- 3.5	+ 6.4	- 15.1

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.

Deutsche Bundesbank

*Inflows in
portfolio
investment*

Against the backdrop of a spike in market uncertainty and a slight waning in the momentum of the global economy, German cross-border portfolio investment posted net capital imports of €19.5 billion in May, compared with net capital exports totalling €19.2 billion in April. This was mainly due to net purchases of German securities in the amount of €19.7 billion by foreign investors, who acquired both German government bonds (€6.7 billion) and private sector bonds (€4.8 billion), with a particular appetite for bank bonds, whilst also buying large amounts of money market paper (€8 billion). Alongside purchasing shares to the tune of €0.6 billion net, they disposed of mutual fund shares worth €0.3 billion on balance. Domestic investors acquired modest amounts of foreign securities (€0.2 billion), purchasing mutual fund shares (€3.2 billion) and debt securities (€0.5 billion), while parting with shares (€3.5 billion).

*Direct investment
sees net
capital imports*

In May, direct investment likewise generated net capital imports, in this instance amounting to €2.1 billion, compared with net capital exports of €13.5 billion in April. Direct investment funds flowing into Germany gave rise to capital imports totalling €3.7 billion, with foreign companies augmenting their equity stakes in Germany only marginally (€0.2 billion), but capital inflows through intra-group lending (€3.5 billion) – here executed solely in the shape of financial credits – had a greater impact on de-

velopments. Domestic enterprises supplied their group units abroad with a net €1.6 billion worth of funds, doing so by bolstering their equity capital (€4.1 billion). By contrast, the redemption of trade credits within the scope of credit transactions with affiliated companies led to a shifting of funds to Germany (€2.5 billion).

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 €14.5 billion in May, as opposed to net capital imports of €3.4 billion one month previously. This result arose primarily from outflows in the banking system (€23.5 billion), driven by the increase in the Bundesbank's net claims (€30.1 billion). On the one hand, there was a significant rise in its TARGET2 claims (€53.8 billion), but on the other hand, there were higher deposits on the part of foreign counterparties at the Bundesbank (€23.6 billion). Conversely, credit institutions recorded net capital imports (€6.6 billion), chiefly as a result of higher short-term liabilities. Non-banks also experienced net capital inflows (€9.0 billion), thanks to the activities of enterprises and households (€8.0 billion) as well as to those of general government (€1.0 billion).

The Bundesbank's reserve assets rose slightly – at transaction values – by €0.1 billion in May.

*Outflows in
other investment*

Reserve assets

The market for Federal securities: holder structure and the main drivers of yield movements

German government bonds play a key role in the euro area's spot and futures markets, and have become a major benchmark for the price of other financial instruments in the euro area. Their good availability and high liquidity have typically made German Federal securities an important and attractive investment instrument for national and international investors alike. This attractiveness is reflected in a broad international and sectoral holder structure. From a central bank perspective, the market for government bonds has taken on far greater significance over the past few years. The ECB Governing Council's decision to purchase public sector securities (public sector purchase programme, or PSPP) turned this segment of the bond market into a key area of engagement for monetary policy. Under the PSPP, the Bundesbank purchased just under one-quarter of the total outstanding volume of Federal securities up to the end of 2017, sharply altering the holder structure. Holders from non-euro area countries were the main sellers of Federal securities to the Bundesbank. Within the euro area, the securities were sold chiefly by monetary financial institutions (MFIs), ie investors with access to the deposit facility. Against this backdrop, possible effects of the purchase programme manifested in sectoral portfolio adjustments and the exchange rate. Generally speaking, the purchases reduced the freely tradable volume of Federal securities in free float; this spread to availability (scarcity premium) and market liquidity (liquidity premium). Over the longer term, the yield on ten-year Federal bonds (Bunds) was shaped by scarcity premiums, expectations regarding key interest rates, and international determinants.

The importance of the bond market to the central bank

Market for Federal securities: an important segment of the international bond market

The market for Federal securities is an important segment of the international bond market. Being highly liquid, German government securities play a key role in the euro area's spot and futures markets, and have become a major benchmark for the price of other financial instruments in the euro area.¹

Bond market a key transmission channel for monetary policy

From a central bank perspective, the bond markets and hence the market for Federal securities have grown in importance over the past few years.² The Eurosystem's initial response to the financial and sovereign debt crisis was to start lowering the key interest rates and introducing a host of non-standard measures in 2007. As of June 2014 – with key interest rates near 0% – the ECB then adopted unconventional measures intended to further increase the degree of monetary policy accommodation. Alongside targeted longer-term refinancing operations, these included a series of asset purchase programmes, which, when the expanded asset purchase programme (APP) was adopted, ultimately also envisaged the purchase of public sector securities under a dedicated programme (PSPP) from March 2015 (see the box on pages 17 to 19). This made the bond market an important area of engagement for monetary policy. As monetary policy transmission also flows through the bond market, central banks consider it important to understand which transmission channels are activated by the measures. Changes in the holder structure can provide indications of this. In addition, unwanted side effects such as the relative scarcity of Federal securities or a possible deterioration in market liquidity, as influenced by the purchases, have to be monitored.

Market developments and holder structure of Federal securities

Federal securities are an important tool for Federal Government borrowing. Their share in the total volume outstanding in the German bond market has risen by 10 percentage points to just over 35% since the launch of monetary union in 1999.³ Issuance follows a fixed calendar set by Federal Republic of Germany – Finance Agency (see the box on pages 23 to 25). It peaked in 2009 and 2010, during the financial and economic crisis. As central government's budgetary situation subsequently improved, net issuance dropped significantly and has hovered around the zero mark since 2014. Since then, at just under €200 billion each year, the Finance Agency has refinanced roughly one-sixth of outstanding central government debt using securities with a maturity of between six months and 30 years.

Federal securities typically have a very broad investor base. Demand for German government bonds comes from all sectors inside and outside Germany. The launch of monetary union fundamentally altered the market environment for bonds issued by the domestic public sector. Within the euro area, the currency-specific advantage of issuing securities in Deutsche Mark fell away, meaning that German public sector issuance has since competed directly with public sector debtors of the partner countries in the euro area. However, thanks to their high

Outstanding volume and issuance of Federal securities

Federal securities highly relevant to international investors

¹ Futures on two-year, five-year and ten-year Federal securities are the most traded contracts on Eurex Frankfurt AG. In 2017, a total of 85% of bond futures traded had Federal securities as the underlying. Italian (8%) and French (7%) securities follow far behind. For information on the importance of the futures market for the benchmark status of German Federal securities, see also J W Ejsing and J Sihvonen (2009), Liquidity premia in German government bonds, ECB Working Paper No 1081.

² See Deutsche Bundesbank, The macroeconomic impact of quantitative easing in the euro area, Monthly Report, June 2016, pp 29-53.

³ Aside from the rise in outstanding Federal securities, another factor was the decrease in outstanding public Pfandbriefe and other bank debt securities. The outstanding volume of bonds issued by specialised credit institutions and enterprises without a banking licence increased.

Public sector purchase programme

On 22 January 2015, the Governing Council of the European Central Bank (ECB) announced the launch of an expanded asset purchase programme (APP), which broadened the existing covered bond purchase programme (CBPP3; launched in October 2014) and the asset-backed securities purchase programme (ABSPP; launched in November 2014) to include securities issued by the public sector (public sector purchase programme – PSPP; launched in March 2015).¹ The corporate sector purchase programme (CSPP) was added to the APP in June 2016. The objective of the purchase programmes is to provide significant monetary policy accommodation, thus contributing to an inflation rate of below, but close to, 2% over the medium term. Initially, monthly net asset purchases (purchases minus reinvestments of maturing assets) under the APP amounted to €60 billion; the volume was then raised to €80 billion and has since been scaled back to €30 billion. The PSPP is by far the biggest component of the APP.

¹ Press release on the decision taken by the Governing Council of the ECB on 22 January 2015: http://www.ecb.europa.eu/press/pr/date/2015/html/pr150122_1.en.html

² For a complete list of all eligible issuers, see <https://www.ecb.europa.eu/mopo/implement/omt/html/pspp.en.html>

³ Bonds that do not meet the minimum credit rating requirements can continue to be used as collateral for monetary policy operations where the issuing member state has successfully completed a (regular) review under a financial assistance programme. However, on 22 June 2016, the Governing Council of the ECB decided that Greek bonds which would otherwise fall under this regulation cannot be purchased under the PSPP until Greece can demonstrate reinforced debt sustainability and fulfil additional risk management considerations established by the ECB.

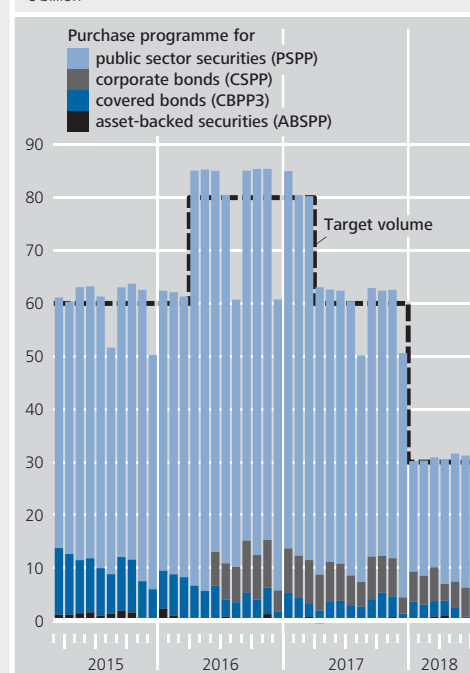
⁴ The parameters of the programme are regularly reviewed and updated if necessary. For instance, on 8 December 2016, the Governing Council of the ECB resolved on cutting the initial minimum remaining maturity from two years to one year. In addition, purchases of securities with a yield to maturity below the deposit facility rate were deemed permissible to the extent necessary.

Under the PSPP, the European Central Bank and the Eurosystem national central banks (NCBs) acquire securities issued by central governments, agencies as well as international organisations and multilateral development banks (supranational bonds) located in the euro area.² Moreover, since January 2016, regional and local government bonds, such as the debt of the German federal states, have been eligible for purchase under the PSPP.

There are detailed rules and restrictions designed to keep risk to a minimum for purchases under the PSPP. All securities must be eligible as collateral for monetary policy operations, have minimum ratings from external credit rating agencies accepted in the Eurosystem,³ be denominated in euro and have a remaining maturity of between 1 and 31 years.⁴

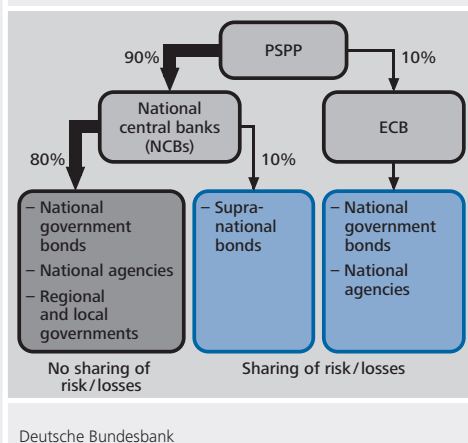
Net purchases under the asset purchase programme (APP)

€ billion



Source: ECB.
Deutsche Bundesbank

Public sector purchase programme (PSPP)



As a result of the prohibition of monetary financing under Article 123 of the Treaty on the Functioning of the European Union, central banks may purchase government bonds on the secondary market only. In addition, there is a blackout period prior to and following an announced auction on the primary market before the bonds are available for purchase on the secondary market. There is an issue share limit of 33% per bond,⁵ subject to verification on a case-by-case basis that holding such an amount would not lead to Eurosystem central banks having a blocking minority in the event of an orderly restructuring of the issuer.

One of the peculiarities of the PSPP is that the distribution of profits and possible losses arising from the securities purchased is governed by rules differing from those for the other programmes included in the APP. Under the PSPP, only 20% of the securities purchased are subject to joint liability at the Eurosystem level. This is broken down into purchases by the ECB (10%) and purchases of supranational bonds by the NCBs (10%). The remaining securities purchased by the NCBs are not subject to a regime of risk sharing.⁶

The implementation of the PSPP is based on a decentralised specialisation approach.

Each NCB purchases public sector bonds in line with its share of the ECB's capital key⁷ (the Bundesbank's current share is 25.6%), with each NCB only buying bonds from its own jurisdiction. The ECB purchases bonds from all jurisdictions.

The allocation of the purchase volumes in the PSPP is subject to a clear set of rules. There is no discretionary scope for tactical deviations to support individual government bond markets. The monthly targets are based on the shares of the individual member states' national bonds in the total volume at the end of the programme.

However, the monthly purchase volumes of national bonds by individual member states may, at times, differ from their capital key. A number of factors at play here are of a purely temporary nature. For instance, the Eurosystem and thus the Bundesbank, too, take account of the fact that market liquidity can vary seasonally and that bond-specific offer volumes may deviate from original expectations. In addition, all repayments on holdings that have already been accumulated are reinvested for a period of three months after the due date. This can also lead to temporary deviations. A conscious decision was taken at the beginning of the PSPP to keep purchasing behaviour

⁵ At the start of the programme, the Governing Council of the ECB initially set the limit at 25% and subsequently raised it to 33% with its decision of 5 November 2015.

⁶ At the beginning of the programme, the share of supranational bonds stood at 12% but was then cut to 10% in April 2016. The share of securities subject to joint liability remained unchanged at 20%.

⁷ The ECB's capital comes from the NCBs of all member states of the European Union (EU); each NCB's share is calculated from its share in the total population and gross domestic product of the EU. As not all EU member states have adopted the euro and only the central banks of the euro area member states have to pay the full amount of their capital share, the euro area member states thus have a higher share of the ECB's actual paid-up capital than stipulated by the capital key. It is this higher modified capital share per NCB that is relevant for purchases under the PSPP. For more information, see <https://www.ecb.europa.eu/ecb/orga/capital/html/index.en.html>

flexible in this way in order to ensure the smooth implementation of the programme.

However, other factors cause more persistent deviations from the capital key. For example, if there is an insufficient quantity of existing national bonds or if these bonds do not have the minimum rating required under the PSPP, the NCB concerned makes substitute purchases of debt instruments issued by supranational institutions in order to fulfil its share of purchases based on the capital key. As a result, these NCBs have a lower share of purchases of national bonds. To ensure that the stipulated total volume of national bonds remains constant at 90% and the total monthly volume does not fluctuate, the relative share of national bonds of NCBs that do not need to conduct substitute purchases of supranational bonds automatically increases. For this reason, the share of German bonds in the entire PSPP holdings of national bonds is currently somewhat higher than Germany's corresponding share in the capital key. However, this does not mean a departure from the principle that purchases generally follow the capital key. Gearing purchases to the capital key reflects the overarching guiding principle to preserve a single monetary policy.

The majority of the Bundesbank's PSPP purchases on the secondary market are conducted in bilateral operations whereby the specific approach depends on the market in question. As a rule, before conducting a purchase transaction, the Bundesbank approaches a large number of counterparties via the common trading platforms and asks them to submit price quotations. In the case of low-volume bonds from issuers that are not regularly active on the capital market (for instance, smaller federal states or agencies), the purchase volume is strongly influenced by the supply of the specific asset. In addition, the Bundesbank has recently started using (twice monthly) auctions to purchase less liquid securities of

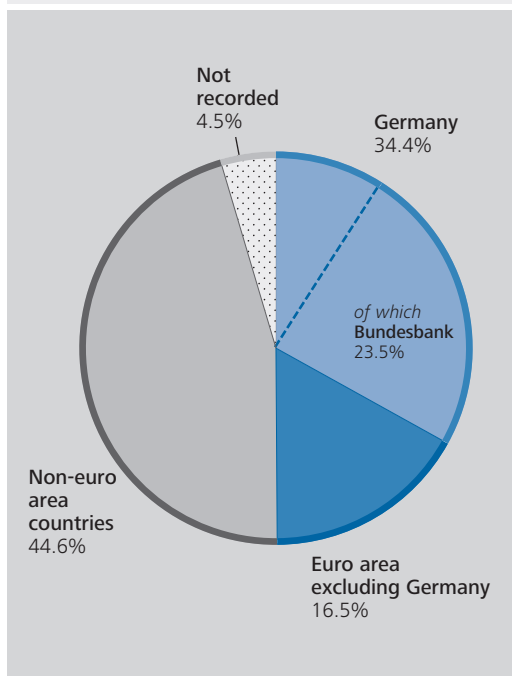
government agencies as well as of regional and local governments.

As at 30 June 2018, the Eurosystem's holdings of assets purchased under the PSPP had a book value of €2,068 billion, of which around €492 billion were German bonds. This means, on average, around €590 million net of German bonds were acquired each day. Holdings have continued to be built up in line with the requirements defined above. However, in the summer months and at the end of the year, especially, the targets – as mentioned above – are reduced and reallocated to other months in order to take account of the lower market liquidity.

The Bundesbank makes a certain amount of assets that it has purchased under the PSPP available for securities lending. It thereby helps ensure that the market for German Federal bonds (Bunds) remains highly liquid. For this purpose, it uses three demand-driven lending facilities. Clearstream Banking Luxembourg (CBL) offers Automated Securities Lending (ASL) to ensure that borrowers' trades which would otherwise fail are settled on the settlement date, and its strategic lending facility ASLplus enables longer-term operations (maximum term of 35 days) to be concluded at a fixed minimum rate. In addition, the Bundesbank also lends its PSPP holdings via bilateral procedures. The individual design of such procedures may vary within a specified risk framework but the maximum term amounts to seven days. At present, the Bundesbank provides 460 different securities from the PSPP for lending, of which 63 are Federal securities. In June 2018, on average across all Eurosystem lending facilities, around €65 billion worth of bonds were lent to market participants.

Holder structure of Federal securities as at end-2017*

%



Sources: ESCB (SHSS database) and Bundesbank calculations.
* Holder structure of all outstanding Federal securities excluding FMSW bonds and central government off-budget entities.
Deutsche Bundesbank

the respective holder according to the reporting template shown in the table on page 21. It seems most investors from non-euro area countries also trade German government securities via their own branches or authorised financial institutions within the euro area and accordingly hold the securities in safe custody at resident reporting custodians. One likely reason for this is that better market liquidity is ensured during trading hours at the main trading venue. The SHSS thus facilitate a detailed analysis of the holder structure for German government securities.

The Eurosystem's purchases under the PSPP led to sharp shifts in the established holder structure of Federal securities. The Bundesbank built up holdings of just under 24% of outstanding German government securities up until the end of 2017.⁴ On the basis of changes in holdings as shown in the SHSS, it is possible to deduce which investor groups were net sellers in the market. This, in turn, illustrates the transmission channels through which the purchase programme acts.

Change in the holder structure under the PSPP sheds light on transmission channel

credit quality and liquidity plus their benchmark status, German government securities remained a highly relevant and attractive investment proposition for international, non-European investors especially. Federal securities also continue to play a key role for the reserve assets of foreign central banks.

At the end of 2014 – that is, prior to the launch of the PSPP – investors from non-euro area countries held just under 60% of the outstanding Federal securities.⁵ This high share, reflecting the importance of German government securities to international investors, was split fairly evenly between the private and public sectors. The public sector notably includes foreign central banks, which use Federal securities as a strategic investment (eg as reserve assets). Just over one-fifth was held by non-German euro area residents, almost all in the private sector. By comparison, German investors held a relatively small share of just under 12%. A little more than half of this (7%) was attributable to the private sector.

Non-residents the main holders

Regional and sectoral breakdown of the holder structure of Federal securities

The holder structure of Federal securities can be examined in detail on the basis of the European Securities Holdings Statistics by Sector (SHSS), which are collected in the Eurosystem. The SHSS capture both the proprietary and customer securities holdings of all reporting account-keeping institutions in the euro area. Data from these statistics were available up to the end of 2017 as this article went to press. The SHSS do not include the holdings of the ECB or the euro area national central banks. Combined with the Bundesbank's holdings, just over 95% of the total outstanding volume of Federal securities was captured at the end of 2017 and assigned to the sector and country of

⁴ At the end of 2017, the Bundesbank held €263 billion worth of Federal securities. By the end of June 2018, these holdings had increased to €271 billion.

⁵ The unrecorded share can probably also be attributed to non-euro area investors for the most part.

Holder structure of Federal securities*

%

Holder	2014	2015	2016	2017
Geographical breakdown				
Germany (incl Bundesbank)	11.6	17.9	26.4	34.4
Euro area excl Germany	20.6	20.0	18.4	16.5
Non-euro area countries	59.8	55.0	48.2	44.6
Not recorded	8.0	7.1	6.9	4.5
Sectoral breakdown				
Private sector				
Germany	7.0	6.8	6.1	5.4
Financial investors	6.0	6.0	5.4	4.9
of which MFIs (banks)	1.6	1.6	1.2	0.8
Investment funds	3.2	3.3	3.1	2.9
Insurance corporations and pension funds	1.1	1.2	1.1	1.2
Non-financial investors	1.0	0.8	0.7	0.5
Euro area excl Germany	19.9	19.5	18.0	16.1
Financial investors	19.6	19.2	17.7	15.9
of which MFIs (banks)	3.4	2.2	2.0	-0.1
Investment funds	7.9	8.7	7.4	7.1
Insurance corporations and pension funds	7.8	7.9	8.0	8.3
Non-financial investors	0.4	0.3	0.3	0.2
Non-euro area countries	31.7	32.2	27.9	25.4
Public sector (central bank and general government)				
Total (all countries)	33.5	34.3	41.1	48.6
Bundesbank (PSPP)	0.0	6.4	15.4	23.5
Free float estimate (from ... to ...)¹	49.7-58.6	49.5-58.6	42.9-52.0	37.4-47.0

Sources: ESCB (SHSS database) and Bundesbank calculations. * Holdings at year-end based on nominal values. Securities issued by FMS Wertpapiermanagement and central government's off-budget entities are not included. The figures for "euro area excl Germany" do not contain any own holdings of the ECB or the euro area national central banks. ¹ The upper limit of the free float range is calculated as the sum of the total private sector; the lower limit reduces this figure by excluding insurance corporations and pension funds.

Deutsche Bundesbank

Main PSPP
sellers from
non-euro area
countries

Non-euro area investors significantly scaled back their holdings of Federal securities between the end of 2014 and the end of 2017, reducing them by a total of just over 15 percentage points.⁶ Public sector holders from these countries had a major part to play in this decline. This can presumably mainly be put down to sales by China's public sector. This notion is backed up at the very least by the fact that Chinese foreign exchange reserves – the precise composition of which is unknown – shrank by US\$700 billion between the end of 2014 and the end of 2017.⁷ It is unlikely that these sales were triggered by the start of the PSPP alone. Instead, they coincided with spells of mounting capital outflows from China, which also put the renminbi under pressure.⁸ The remaining (private) investors from non-euro area countries reduced their share of Federal securities by just over 6 percentage points, with investors from the United States and United Kingdom dominating this group.⁹

The private sector in the euro area excluding Germany has likewise pared back its percentage share of Federal securities since the end of

Euro area:
mainly banks
reduced their
holdings

6 The aggregate of the PSPP purchases also shows the dominant role of sellers from non-euro area countries. See R S J Koijen, F Koulischer, B Nguyen and M Yogo (2016, revised in 2018), Inspecting the mechanism of quantitative easing in the euro area, Banque de France Working Paper No 601.

7 See People's Bank of China (PBC), The time-series data of China's foreign exchange reserves, 7 June 2018: <http://www.safe.gov.cn/wps/portal/english/Data>. See C J Neely, Chinese foreign exchange reserves, policy choices and the U.S. economy, Federal Reserve Bank of St Louis Working Paper 2017-001A, p 1: "Although the exact composition of the Chinese foreign exchange reserves is confidential, observers estimate that about 67 percent of the value consists of dollar-denominated assets, mostly U.S. Treasury securities but also many U.S. agency and corporate bonds."

8 See Deutsche Bundesbank, The Eurosystem's bond purchases and the exchange rate of the euro, Monthly Report, January 2017, pp 13-39.

9 The financial centres of London and New York are also behind the high figures in the United Kingdom and United States; many institutional investors are resident there and hold domestic securities on behalf of clients. In these cases, the SHSS data shed no light on the end investor. The SHSS data for non-euro area countries cannot be broken down in more detail, for example by financial and non-financial investors.

2014, with the decrease coming to just under 4 percentage points. Within the sector, financial investors constituted the largest investor group. Investment funds, in particular, initially increased their shares in Federal securities in the run-up to, and at the start of, the asset purchase programme before subsequently becoming net sellers from 2016 onwards and reducing their shares to just over 7% at last count. However, insurance corporations' and pension funds' share in Federal securities rose to a little more than 8%, leading them to supplant investment funds as the largest investor group among financial investors. By contrast, banks from the euro area excluding Germany considerably reduced their comparatively small share, even establishing a small net short position at the end of 2017, on aggregate. A similar picture emerges for German private investors. As is the case with the other euro area investors, insurance corporations' and pension funds' share remained broadly constant, whereas domestic banks scaled back their holdings over this period.

Signs that portfolio adjustment is homogeneous in regional terms, ...

Viewed as a global aggregate, the private sector's behaviour was fairly homogeneous. Private financial and non-financial investors, regardless of their home region, have made similar cutbacks to their percentage shares in Federal securities since the launch in the PSPP (between the end of 2014 and end of 2017). Relative to the holdings at the end of 2014, the decline in the private sector ranged from 19% (euro area excluding Germany) through 20% (non-euro area countries) to 23% (Germany).

... but mixed within the financial private sector

When broken down by sector, the figures for the private sector show that private financial investors behaved very heterogeneously. There were significant portfolio shifts. Euro area banks, for example, reduced their percentage shares in Federal securities almost completely (-86%), whereas investment funds made only slight changes (-10%). Insurance corporations and pension funds, on the other hand, even upped their shares (+7%).¹⁰ These varied reactions can also be explained by institutional fac-

tors. Unlike the other two sectors, euro area banks have access to the deposit facility, which can be a cheaper and safe alternative to investing in Federal securities.¹¹ In this sense, the PSPP also had an impact within the euro area via sectoral portfolio adjustments. Based on (absolute) transaction volumes, the portfolio effect was by far the greatest amongst investors from non-euro area countries.¹² In keeping with this, the share of absolute sales was low in the euro area private sector, on account of the small share of just under 27% of the outstanding volume prior to the launch of the PSPP. For the non-euro area countries, the reallocations could also have spread to affect exchange rate developments, in cases where bond sellers shifted into other currencies.¹³

The share of freely tradable bonds (free float) declined under the PSPP. If free float is defined as the stock available to the private sector except for pension funds and insurance corporations, the volume of securities in free float came to less than 40% at the end of 2017.¹⁴ This represents a decrease of just over 10 percentage points during the purchase programme, which may affect general availability and market liquidity.

Declining share of freely tradable securities

¹⁰ For the euro area as a whole, see R S J Koijen, F Koulischer, B Nguyen and M Yogo (2017), Euro-area quantitative easing and portfolio rebalancing, *American Economic Review*, Vol 107, No 5, pp 621-627.

¹¹ The present analysis does not allow for a statement on how the individual sectors have adjusted their portfolios overall (portfolio rebalancing) under the influence of the PSPP.

¹² There is no sectoral breakdown for investors from non-euro area countries, which means that this statement only holds under the assumption that private financial investors from non-euro area countries and from the euro area reacted in similar ways.

¹³ See Deutsche Bundesbank (2017), op cit.

¹⁴ Free float normally refers to the stock that is freely available for trading. It is not possible to gain a clear and complete picture of the investment motives of the sectors. For one thing, the banking sector is also required by regulation to hold highly liquid bonds. For another, sovereign funds tend to be more yield-focused, but are not distinguished from reserve assets in the SHSS.

Federal Government issuance activities and procedures

In Germany, the Federal Ministry of Finance is responsible for the Federal Government's debt management. The primary close-to-market and operational debt management tasks include managing Federal Government borrowing and liquidity, which has been entrusted to Federal Republic of Germany – Finance Agency (referred to here as the "Finance Agency") in Frankfurt am Main since June 2001. The Federal Government, represented by the Federal Ministry of Finance, is the sole shareholder of the Finance Agency. The main task of the Finance Agency is to provide timely, cost-effective and low-risk debt management services for the Federal Government, in particular through the initial issuance of securities in the primary market. At the same time, the Finance Agency's work is intended to cement and further extend the status of Germany's Federal Government as a benchmark issuer in the euro area.

Bundesbank the government's fiscal agent

As the government's fiscal agent, the Bundesbank performs technical debt management duties for the Federal Government, conducting auctions of Federal securities, carrying out market management operations on the German stock exchanges, and settling the Federal Government's securities transactions. These tasks are completed on behalf of and for the account of the Federal Government in coordination with the Finance Agency. It should be noted that, as the Federal Government's fiscal agent, the Bundesbank provides banking services which are strictly separate from its monetary and foreign exchange policy tasks. The Bundesbank does not grant loans when auctioning Federal securities in the primary

market, nor does it take Federal securities into its own portfolio. On account of its fiscal agent role, the same applies to secondary market transactions.

Auctions: the main primary market procedure

The primary market is where securities are issued for the first time. It is where the Federal Government covers more than 90% of its annual borrowing requirements by issuing Federal securities in auctions. The Federal Government only commissions a bank syndicate as an alternative channel for issuing Federal securities for a handful of special Federal securities, such as the two US dollar-denominated bonds which were issued in 2005 and 2009 and have since been repaid.

Issuance planning

Market participants and investors value an issuer's continuity, transparency and reliability, and this ultimately pays off for the borrower in the form of favourable borrowing conditions. Auctions of Federal securities planned by the Federal Government over the course of a calendar year are therefore announced by the Finance Agency at the end of the previous year in an annual issuance calendar. The annual preview contains precise details on the Federal securities which will be put up for auction, such as the auction date, the planned issuance volume and the exact maturity date. Additionally, a quarterly issuance calendar is published, which may contain deviations from the annual preview. As an issuer, the Federal Government strives to conduct its announced issuance activities according to its published schedules. However, these plans

may need to be adjusted if borrowing requirements, the Federal Government's liquidity position, or the capital market situation as a whole change significantly during the course of the year.

Maturity profile

The Federal Government's commitment to continuity and reliability means offering Federal securities with an overall balanced maturity profile. First, it weighs the generally lower borrowing costs of revolving short-term debt against the certainty that borrowing in the long-term maturity segment can offer. Second, it takes into account the fact that offering a broad spectrum of maturities on a regular basis allows investors to invest in accordance with their respective duration goals. That way, the Federal Government can be sure of attracting a broad investor base. This is why Federal securities are put up for auction across all maturities: six-month Treasury discount paper ("Bubills") in the money market segment, and in the capital market segment, two-year Federal Treasury notes ("Schätze"), five-year Federal notes ("Bobs") and mainstay ten-year and thirty-year Federal bonds ("Bunds"). Inflation-linked Federal securities ("Bund-Linker") are also auctioned on a regular basis.

Bund Issues Auction Group

Members of the Bund Issues Auction Group, who have been approved by the Finance Agency, are eligible to bid in Federal Government auctions. The group currently comprises 36 credit institutions and investment firms which are established in a member state of the European Union. To remain in the auction group, members must subscribe to at least 0.05% of the total issuance allotted, weighted by maturity, in auctions in any one calendar year. Member in-

stitutions which fail to subscribe to this minimum share are required to leave the group at the end of the year. Apart from the minimum share requirement, members have no additional obligations. For instance, they are not expected to provide any market making services in the secondary market – ie quote bid and ask prices for Federal securities or provide mandatory reporting and advisory services for the issuer. On 30 June and 31 December each year, the Finance Agency publishes a list ranking Bund Issues Auction Group members by their share of the weighted issuance volume allotted, without quoting percentages.

Operational implementation

Federal Government auctions take place on the Bund Bidding System (BBS) electronic auction platform provided by the Bundesbank. The Bundesbank is responsible for technical implementation of the auction process; in other words, it announces the auction and the invitation to bid, monitors bidders' submissions on the day of the auction and publishes the auction results. The Finance Agency and the Federal Ministry of Finance both have direct links to the BBS, and they make the economic decisions – ie they determine the allotment conditions such as allotment prices and volumes on the day of the auction. Once the deadline for bids has passed, it is generally the case that the allotment decision is made and the auction results are announced via the BBS and financial information providers within the space of two minutes.

Auction procedure

Allotment is based on what is known as the multiple price method, meaning that the accepted price bids are allotted at the price specified in the respective bid. Non-competitive bids are filled at the weighted

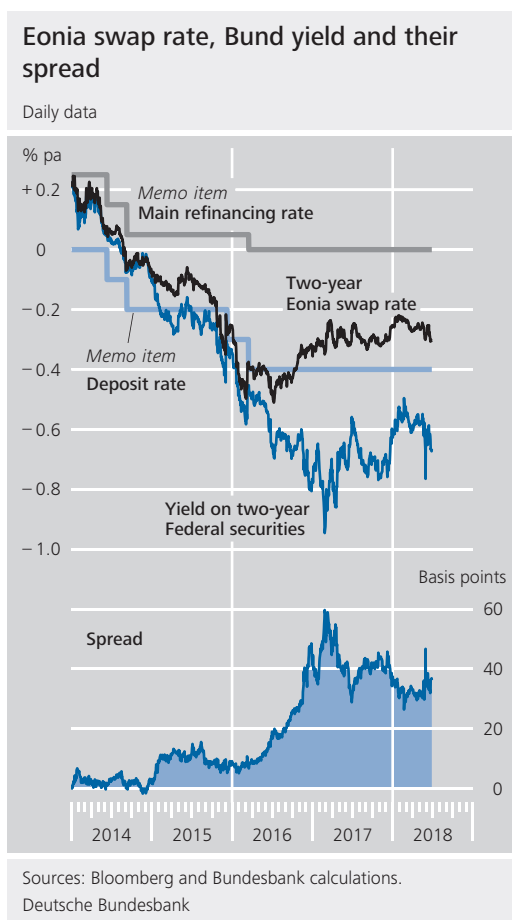
average price of the bids accepted. Bids above the lowest price accepted are allotted in full; those below the lowest price accepted are not considered. Bids at the lowest price accepted and non-competitive bids can be allotted *pro rata* – in other words, bids can also be filled here, albeit only to a limited extent. March 2018 saw the Federal Government use the BBS's new multi-ISIN auction functionality for the first time. This enables multiple Federal securities to be offered to investors in parallel as part of a single auction.

Secondary market activities

The Finance Agency sets aside a share of the securities issued in each auction as proprietary holdings of the Federal Government for secondary market operations. This amount is not defined in advance and varies from one auction to the next. On average, around 20% of the issuance volume is set aside for this purpose. Following the auction, these securities are gradually fed into the market by the Finance Agency in the context of secondary market activities. As a result, counterparties can still purchase Federal securities from the issuer after they have been issued in the primary market. In addition, the issuer might find it beneficial to smooth its borrowing to a degree over time. However, secondary market activities also include secondary market operations on the German stock exchanges, which entail the Bundesbank buying and selling listed Federal securities for the Federal Government's account. These operations aim to achieve fair prices which do not discriminate between different market participants (nor between institutional investors and retail customers) and to maintain liquid trading with low bid-ask spreads. The Bundesbank assists in setting a "Bundesbank reference price" on the Frankfurt Stock Exchange for every listed Federal security on every

trading day, which provides an important benchmark, especially for the retail business. This institutional framework plays a part in ensuring that Federal securities can be traded at robust prices that are in line with the market every trading day.

The Federal Government's proprietary holdings can also be used by the Finance Agency to collateralise securities repurchase agreements (repos) and interest rate swap transactions, as well as for securities lending. The Federal Government's securities transactions are settled via the cash and safe custody accounts it maintains with the Bundesbank.



two instruments therefore does not stem materially from different levels of credit quality. However, contracts based on Eonia swap rates cannot be used as stores of value – unlike government bonds, which are considered safe. This is because, during the term of the contract, only the net interest cash flows based on the notional amount (which is not invested) are swapped. The spread between the Eonia swap rate and bond yield thus also contains a premium for the scarcity of safe investments in times of high excess liquidity.

By way of example, the scarcity premium can be illustrated by the yield spread between two-year Eonia swap rates and the yield in the two-year maturity category. It is apparent that there is a close connection between Eonia swap rates and bond yields over a longer horizon. But what is striking is that in 2016 only the yield on two-year Bunds systematically fell, leading to the yield spread between the two instruments widening to 60 basis points at its peak by early 2017.

Growing scarcity since early 2016

Scarcity premiums for short-term bonds

Federal securities have become more scarce for the private sector as a direct side effect of the asset purchase programmes, and their prices have risen. A key question is which investor group is willing to pay the scarcity premiums on Federal securities.

Here, the scarcity premium is defined as the spread between interest rates on swap contracts pegged to the Eonia ("Eonia swap rates" for short) and yields on matched-maturity Bunds.¹⁵ It is worth comparing these two interest rates because Eonia, being the reference interest rate for swap contracts, is an average rate for overnight money in euro interbank transactions which is calculated on the basis of actual transactions. Owing to its short maturity of one day, overnight money has negligible default risk. An interest rate spread between the

Possible reasons for this wider spread include the relevant liquidity regulations for banks (Basel III) and the European Market Infrastructure Regulation (EMIR), which, taken in isolation, could have induced stronger and relatively price-inelastic demand for short-term

Possible reasons for the widened spread: regulation, ...

Greater scarcity one side effect of the APP

Scarcity premium: the spread between Eonia swap rates and matched-maturity Bund yields

¹⁵ The Eonia (euro overnight index average) is closely linked to the Eurosystem's key interest rates because, in times of a structural liquidity deficit, it is heavily geared towards the main refinancing rate or – in times of high excess liquidity – towards the deposit rate. Interest rate swaps are contracts in which two counterparties agree to exchange a series of fixed interest cash flows for floating interest cash flows at predefined future points in time. The interest cash flows stem from an underlying (but uninvested) amount of money and the agreed fixed and floating interest rates, with the level of the floating interest rate being adjusted at predefined future points in time over the term of the contract. The fixed interest rate is agreed between the counterparties at the beginning of the contract such that the present value of the net payment is zero.

bonds amongst institutional investors.¹⁶ This effect is mitigated by the fact that central bank liquidity can also count towards regulatory requirements and excess liquidity has increased under the PSPP. This is why investors without access to the deposit facility, in particular, are more loath to part with Federal securities. They are willing to pay higher prices for these securities and to accept lower yields. Additionally, the Finance Agency reduced its previously planned issue volume owing to the sound budgetary position in the final quarter of 2016.

... asset
purchase
programme ...

The Eurosystem's asset purchase programmes have probably increased the scarcity of Federal securities across almost all maturities, with both direct and indirect effects likely to be playing a role. The direct effects include purchases of short, medium and long-term German government securities under the PSPP.

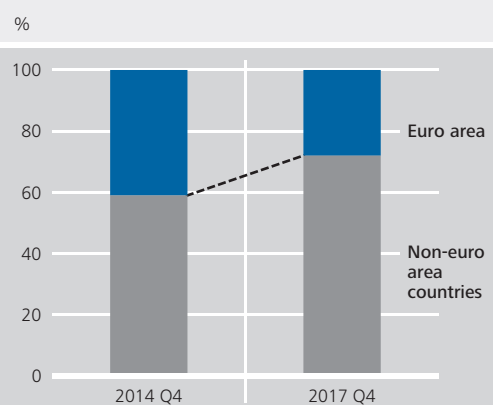
... and excess
liquidity

Indirect effects are likely to hit short-term securities first and foremost; they are connected with the mounting excess liquidity caused by the purchase programmes. It is presumed that chiefly market participants without access to the deposit facility – ie non-MFIs and the investors from non-euro area countries that dominate among sellers – invest funds in short-term Federal securities. MFIs appear to offer institutional investors such poor terms for deposits in times of high excess liquidity that the investors prefer to park their funds directly in Federal securities. Furthermore, investors with no access to the deposit facility also, of their own accord, avoid concentration risk stemming from bank deposits with individual institutions and invest funds in short-term Federal securities instead.

Mainly non-euro
area investors
use short-term
securities as a
safe store of
value

This assumption is backed up by the holder structure. In the case of Federal securities with an original maturity of up to two years, there was a considerable percentage rise in the share of non-euro area investors (without access to the deposit facility) over the duration of the asset purchase programme, although the share of non-euro area countries' holdings of all Fed-

Change in holder structure of short-term Federal securities*



Sources: ESCB (SHSS database) and Bundesbank calculations.
* Proportion of short-term Federal securities listed in the SHSS at nominal prices with an original maturity of up to two years.
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eral securities fell over the same period.¹⁷ By contrast, euro area banks with access to the deposit facility reduced their holdings of short-term Federal paper. This means that some banks, unlike insurers, took advantage of the high prices of Federal securities to collect the yield spread between Federal securities and the expected rate of return on funds in the deposit facility. As mentioned above, the interest rate spread between Federal securities and the Eonia swap rate is also attributable to institutional factors in that the banking system does not have to compete for deposits from institu-

¹⁶ One regulatory ratio for banks is the liquidity coverage ratio (LCR). The LCR is a balance sheet ratio of unencumbered high quality liquid assets (HQLA) – which include Federal securities – to total assets. The LCR was phased in over time. The harmonised liquidity requirement for banks has applied EU-wide since 1 October 2015. Another ratio used in banking supervision is the structural liquidity ratio (or net stable funding ratio (NSFR)). It is defined as the ratio of sustainable funding (including equity capital and long-term liabilities) over the required stable funding. However, the NSFR rule only entered into force after the period analysed here. The EU regulation on OTC derivatives, central counterparties and trade repositories (European Market Infrastructure Regulation, or EMIR) of 2012 also contains rules on OTC derivatives trading. It requires open derivatives positions, ie positions where claims and liabilities have not yet been settled, to be collateralised – for example, by government bonds or cash deposits. The regulation entered into force on 1 September 2017 and will be phased in up until 1 September 2020.

¹⁷ See also the speech by Benoît Cœuré of 3 April 2017 entitled "Bond scarcity and the ECB's asset purchase programme" at https://www.ecb.europa.eu/press/key/date/2017/html/sp170403_1.en.html

tional investors when excess liquidity levels are high, thus pressuring them, by way of unattractive overall conditions, into investing in Federal securities. For the reasons given above, the observed scarcity premium probably declines in an environment of receding excess liquidity.

Market liquidity in the context of the purchase programmes

High liquidity important for effective implementation of the PSPP

High market liquidity is important for the effective implementation of the PSPP. However, the decline in Federal securities in free float reduced the volumes available for trading and thus, potentially, market liquidity. However, market liquidity is a multifaceted concept, and academic researchers, market participants and policymakers have yet to reach a consensus on how to measure it. Typically, there are three dimensions of market liquidity: “width” (cost of executing a trade at a given volume), “depth” (the tradable volume at a given price) and “resiliency” (the half-life of random price fluctuations). In view of the complexity of the concept, no individual ratio covers all aspects of market liquidity.

Declining trading volumes and more fragmented trading point to decrease in liquidity

Federal securities trading activity has been in decline since the 2000s, notably due to the effects of the financial and economic crisis. In the spot market, according to Finance Agency statistics, annual gross trading volumes transacted by the members of the Bund Issues Auction Group fell from more than €7,000 billion in 2005 to less than €5,000 billion in 2017.¹⁸ Although the outstanding bond volume rose from 2005 onwards, 2016 saw the lowest trading volume in the spot market. The PSPP may also have played a part in this development. In the Eurex futures market, the volume of futures contracts with Federal securities as the underlying has also been lower since the financial crisis. Against this backdrop, trading in both the spot and futures markets has also grown somewhat more fragmented. This is borne out by

the fact that trades have involved increasingly smaller transaction volumes over time. In particular, large transactions have become more expensive and thus less frequent.

Quantitative analyses are made more difficult by the fact that bonds are mostly traded over-the-counter (OTC); in other words, trading is conducted in a decentralised manner directly between market participants. Compared with listed shares, bond trading is therefore more fragmented, and scarcely any data on prices and volumes are available that are representative of the market. In addition to traditional bilateral telephone trading, more and more OTC transactions are being conducted on electronic trading platforms.

Decentralised trading structure makes quantitative analysis difficult

Individual operators of electronic trading platforms use a central order book with limits (known as a limit order book) to settle bond purchases. Buying and selling bids with the respective prices and quantities are collected in these limit order books. Since every bid is binding, a robust picture of the market is obtained which allows in-depth analyses. However, relatively low volumes are traded on trading platforms compared with OTC trading, which means that the results need to be put into perspective.

Limit order book as a further source of data

A ratio known as order book illiquidity, which can be determined on the basis of information on the limit order book, is of interest when analysing liquidity. This ratio contains the liquidity dimensions width in the numerator and depth in the denominator. The width of the order book corresponds to the average bid-ask spread of the five closest buy and sell orders. The depth of the order book, meanwhile, is derived from the total volume of these five bid and ask prices, respectively. Order book illiquidity rises as bid-ask spreads widen and volumes

Order book illiquidity contains the liquidity dimensions width and depth

¹⁸ When calculating volumes traded, trades transacted between members of the Bund Issues Auction Group are counted twice for statistical purposes. Transactions in which no member of the group is involved, on the other hand, are not included in the statistics.

decline.¹⁹ This makes it more informative than a simple spread of the bid and ask prices that are closest together.

Increase in order book illiquidity since 2016

In the data used here, which are from the trading platform MTS (Mercato telematico dei Titoli di Stato) for the period from January 2014 to the end of June 2018, the difference between the simple bid-ask spread (between the best buying and selling price) and the order book illiquidity becomes clear. The simple bid-ask spread shows no clear trend. In contrast to this simple spread, it may be seen that the order book illiquidity for ten-year Bunds increased from the beginning of 2016. This was primarily due to the decline in order book depth. The corresponding width across the five best prices increased only slightly. The calculations based on the order book entries thus confirm the indications that the market liquidity for larger trading volumes has deteriorated.²⁰

The Eurosystem uses securities lending to counter short-term illiquidity

Spikes in the simple bid-ask spread as well as in order book illiquidity were found at the end of both 2016 and 2017. These spikes coincide with strong negative secured money market rates in the repo market over the balance sheet dates. However, these year-end effects were of a rather temporary nature and had no lasting impact on the repo market itself or on the liquidity of the government bond market. Ultimately, the Eurosystem's securities lending facilities, through which a certain amount of the securities purchased by the Eurosystem are made available for securities lending, are likely to have also contributed to this.²¹ The lending plays a part in the fact that when demand for a specific paper is high, its supply can be temporarily increased. In this way, the market for German Federal securities as a whole can be kept highly liquid (see the box on pages 17 to 19).

In general, the functioning of the Bund market is not impaired

There is no indication of a fundamental impairment of the effective functioning of the market as a result of the PSPP in the segment considered here of recently issued ("on-the-run") bonds. Only in connection with larger trading volumes have some cases of deteriorating li-

Market liquidity

9 March 2015 = 100,¹ five-day moving averages



Sources: MTS and ECB calculations. ¹ Date of the first bond purchases under the PSPP. ² Order book illiquidity is a quotient of the width of order book liquidity (average bid-ask spread of the five closest buy and sell orders in the order book) and the depth of order book liquidity (sum of the volumes offered at these five bid and ask prices in the order book).

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quidity been observed since 2016. Beyond the on-the-run bonds considered here, there are also signs that the depth and resiliency of liquidity decrease in bonds purchased by the central bank, particularly older ones.²²

Factors affecting the development of Bund yields

In the period after the PSPP was launched, liquidity and scarcity premiums rose somewhat on the whole in the Bund market. However, it is important for monetary policy to identify general macro, financial market and economic variables which have an impact on Bund yields. For this reason, it makes sense to take a some-

Factors affecting the development of Bund yields over a longer term

¹⁹ See ECB, Euro area sovereign bond market liquidity since the start of the PSPP, Economic Bulletin, Issue 2/2018, Box 2. Details may be found here on how to determine order book illiquidity and the underlying data of the provider MTS. The second-most recently issued ten-year Bund is considered in each case.

²⁰ The rise in order book illiquidity is not reflected in the euro area aggregate. In the euro area as a whole, the share of APP purchases in relation to the outstanding volume is lower than for German paper, however.

²¹ For information on the role of the Eurosystem's securities lending in the repo market, see W Arrata, B Nguyen, I Rahmouni-Rousseau and M Vari (2017), Eurosystem's asset purchases and money market rates, Banque de France Working Paper No 652.

²² See K Schlepper, H Hofer, R Riordan and A Schrimpf, Scarcity effects of QE: a transaction-level analysis in the Bund market, Deutsche Bundesbank Discussion Paper, No 06/2017.

what longer view in order to examine factors affecting the development of Bund yields beyond the PSPP. To this end, the previously mentioned special developments arising in connection with the PSPP (scarcity and liquidity premium) are also taken into consideration. In addition, factors such as monetary policy as a whole (interest rate movements and PSPP), international effects and safe haven flows are also looked at more closely.

Bund yields down considerably overall, but yields also up at times

In conjunction with global interest rates, Bund yields fell considerably overall in the last few years. Yields also rose strongly at times, however. Two examples of phases of strongly increasing yields are the taper tantrum in the United States in 2013, which also affected Bund yields, and the Bund tantrum in spring 2015. The following analysis therefore also examines the extent to which the selected determinants may, during the two tantrum phases, have given rise to special factors which contributed to the temporary surges in yields.

Determinants of the estimation: ...

... slope of the Eonia swap rate curve measures policy rates expectations, ...

The following individual factors are taken into account:

- According to the expectations hypothesis of the term structure, the slope of the Eonia swap rate curve at the short end, calculated as the two-year Eonia swap rate minus the one-month Eonia swap rate (Slope_Eonia), is an indicator of future changes to short-term interest rates over the next two years and thus also of the expected path of future key interest rates.²³ Because central banks take economic activity and price developments into account when setting interest rate policy, this could indirectly also reflect the economic and inflation outlook. The slope of the Eonia swap rate curve is expected to have a positive impact on the (ten-year) Bund yield (Bund_Interest).

... the US interest rate measures the interest rate relationship, ...

- The interest rate relationship with the United States is measured in terms of the yield of ten-year US Treasuries (US_Interest). US yields lagged by one stock exchange trading

day are used to capture a potential impact of US yields on Bund yields in order to allow for the time difference between the USA and Germany. The impact of US yields is expected to be positive.

- The particularly high market liquidity of Bunds is measured as the difference between the yield of bonds issued by public promotional banks, such as Kreditanstalt für Wiederaufbau (KfW), and German Bunds. This means that, in contrast to the bid-ask spread, it is not an absolute but a relative measure of market liquidity. This measure takes into account not only the particularly high market liquidity of ten-year benchmark bonds, but also the general, maturity-independent liquidity advantage of Bunds. To this end, first the yield spread between the bonds of public promotional banks and Bunds is calculated for every full-year maturity between one and ten years.²⁴ A principal component analysis is then carried out to calculate the first principal component of the maturity-specific spreads, which then serves as a measure of the maturity-independent liquidity premium of Bunds (PC_Liquidity).²⁵ It is expected to have a negative impact on Bund yields.
- A potential scarcity of Bunds is interpreted as a response to excess demand which, like the liquidity premium, drives yields below

... the yield spread of government-guaranteed bank bonds measures the liquidity premium on Bunds, ...

²³ According to the expectations theory of the term structure, the long-term interest rate is dependent only on the current short-term interest rate and the expected future short-term interest rates, whereas possible term premiums are disregarded. As term premiums play only a minor role in the short-term maturity spectrum, the slope of the yield curve in this segment probably mainly reflects the expected path of the short-term interest rate. This is in line, for example, with empirical evidence on US swap rates; see S Sundaresan, Z Wang and W Yang (2017), Dynamics of the expectation and risk premium in the OIS term structure, Kelley School of Business Research Paper No 17-41. See also SP Lloyd (2018), Overnight index swap market-based measures of monetary policy expectations, Bank of England Staff Working Paper No 709.

²⁴ Data are not available for six-year bonds issued by public promotional banks. The yield spreads can therefore only be calculated for the other full-year maturities.

²⁵ The first principal component explains 84% of the total variance.

... Eonia swap spreads measure potential scarcity premiums, ...

the risk-free interest rate. The resulting scarcity premiums are reflected, for example, in the repo market²⁶ and in the difference between Eonia swap rates and Bund yields, which was discussed above in connection with the holder structure. In order to quantify general, maturity-independent scarcity premiums, the difference between the respective Eonia swap rates (as a measure of the risk-free interest rate) and Bund yields is calculated for each full-year maturity between one and ten years. As a measure of the scarcity premium, the first principal component of these maturity-specific Eonia spreads is factored into the estimation (PC_Scarcity).²⁷ It should have a negative impact on yields.²⁸

... and the VDAX measures equity market uncertainty

- Lastly, the estimation takes into account the possible impact on Bund yields that may result from portfolio shifts by investors following a change in equity market uncertainty. The VDAX volatility index, which measures the implied volatility of the DAX calculated from options, is used as a measure of equity market uncertainty. The VDAX should have a negative effect on Bund yields.

This estimation is based on daily data, whereby all of the variables are measured in first differences in order to rule out the possibility of non-stationarity. The observation period from the beginning of 2012 until 23 May 2018 is selected such that it covers the impact of the sovereign debt crisis as well as the two tantrum phases. In order to avoid autocorrelation in the residuals, all estimations are supplemented by a lagged term for the Bund yield.

Scarcity premiums and slope of the Eonia swap rate curve are the key explanatory factors

The selected determinants explain 65% of the total dispersion of Bund yields.²⁹ All of the estimated coefficients have the expected sign and are significant at least at the 5% level (Estimate 1 in the table on page 32). The results suggest that the scarcity premiums and the slope of the Eonia swap rate curve both have a particularly important impact. In order to assess the strength of the effects, it is useful to stand-

ardise the estimated coefficients such that they reflect the impact on the dependent variable in standard deviations. A standardisation of this kind reveals that an increase in the scarcity premiums by one standard deviation lowers the Bund yield by 0.48 of a standard deviation. A slightly weaker (positive) effect (0.40 of a standard deviation) is derived for the slope of the Eonia swap rate curve.³⁰

The reported effect of the scarcity premiums, which have risen considerably since the beginning of 2016, implies that they dampened yields in the last two years in particular. This effect apparently stemmed from scarcity premiums not only in the ten-year maturity segment but also at the shorter end, where the scarcity was particularly pronounced. Possible reasons for this are the above-mentioned growth in demand among institutional investors in a number of maturity segments, the Eurosystem's increased holdings as well as the rising levels of excess liquidity in the banking system.

The strong influence also exerted by the slope of the Eonia swap rate curve at the short end underlines the importance of expectations re-

Possible reasons for the scarcity of Bunds

Influence of the slope of the Eonia swap rate curve

²⁶ In the repo market, repo rates below the deposit rate, for example, indicate scarcity premiums on the underlying Bunds. The scarcity of an individual bond is expressed, moreover, in its specialness premium. This represents the difference between the repo rate for the general collateral trade (where the collateral is only required to meet general quality standards) and the repo rate for the specific collateral (where a specific individual bond constitutes the collateral).

²⁷ The first principal component explains 89% of the total variance.

²⁸ In addition to the other full-year Bund yields, yields on ten-year Bunds are also factored into the measures used for the maturity-independent scarcity and liquidity premiums (the first principal components) in each case. An endogeneity problem cannot therefore be categorically ruled out. As this impact is relatively low for both measures, however, the possibility of such an endogeneity problem appears to be negligible.

²⁹ Including the lagged value for the Bund yield in the estimation equation is immaterial for the coefficient of determination. This is demonstrated by a further estimation without a lagged Bund yield, with robust standard errors (Newey-West method).

³⁰ As all of the variables are measured in first differences, the standard deviations also refer to the differences in the variables.

Determinants of ten-year Bund yields^o

Explanatory variable	Estimate 1		Estimate 2		Estimate 3	
	Coefficient	p value	Coefficient	p value	Coefficient	p value
C	0.00*	0.05	0.00*	0.04	0.00*	0.01
Bund_Interest(-1)	-0.05*	0.00	-0.05*	0.01	-0.05*	0.00
US_Interest(-1)	0.19*	0.00	0.19*	0.00	0.19*	0.00
US_Interest(-1) × Taper_Tantrum			0.01	0.86		
US_Interest(-1) × Bund_Tantrum					0.12	0.50
Slope_Eonia	0.99*	0.00	0.97*	0.00	0.95*	0.00
Slope_Eonia × Taper_Tantrum			0.17	0.34		
Slope_Eonia × Bund_Tantrum					2.51*	0.00
PC_Scarcity	-0.02*	0.00	-0.02*	0.00	-0.02*	0.00
PC_Scarcity × Taper_Tantrum			-0.01*	0.01		
PC_Scarcity × Bund_Tantrum					0.03*	0.05
PC_Liquidity	-0.01*	0.00	-0.01*	0.00	-0.01*	0.00
PC_Liquidity × Taper_Tantrum			0.01*	0.01		
PC_Liquidity × Bund_Tantrum					-0.05*	0.00
VDAX	-0.31*	0.00	-0.34*	0.00	-0.32*	0.00
VDAX × Taper_Tantrum			0.68	0.06		
VDAX × Bund_Tantrum					-0.84*	0.01
Adj R ²	0.65		0.66		0.67	

^o The regression (estimated in differences) is based on daily data from 2 January 2012 to 23 May 2018. The dependent variable is the ten-year Bund yield (Bund_Interest). US_Interest is the yield on ten-year US Treasuries. Slope_Eonia is the slope of the Eonia swap rate curve at the short end (two-year Eonia swap rate minus one-month Eonia swap rate). PC_Scarcity and PC_Liquidity are each the first principal component of a principal component analysis which factors in the differences between Eonia swap rates and Bund yields and the yield spreads of guaranteed bank bonds over Bunds. VDAX is the volatility index. Taper_Tantrum and Bund_Tantrum are dummy variables for the taper tantrum and Bund tantrum. * Significant at the 5% level.

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garding the future path of key interest rates over the next two years. This applies not only to the monetary policy environment up until the end of 2014, which was characterised by falling central bank interest rates, but also to the period thereafter, when central bank rates were already close to zero and unconventional measures shaped monetary policy.³¹

possibility that demand for Bunds as a safe haven is particularly strong in periods of heightened uncertainty (see the box on pages 33 to 37).

Effects of US yields, liquidity premiums and the VDAX

Compared with the scarcity premiums and the monetary policy stance, US yields and liquidity premiums constitute weaker, yet still important, determinants of Bund yields.³² The reported impact of US yields illustrates the importance of international capital flows and of the transatlantic interest rate linkage. As US yields lagged by one day are used for the estimation, the reported impact also implies a leading indicator property of US interest rates, which are reflected in Bund yields with a time lag.³³ Compared with the other determinants, the VDAX has a weaker impact on Bund yields.³⁴ However, that does not rule out the

³¹ A further estimation for the subperiod from the beginning of 2015 indicates that the Eonia swap rate curve had a similarly strong effect even after the decision for the PSPP was adopted in January 2015.

³² Measured in terms of standard deviations, they amount to 0.24 of a standard deviation for US yields and 0.23 of a standard deviation for the liquidity advantage.

³³ This leading indicator property does not exclude the possibility that yields on Bunds and US yields influence one another, however. See also SE Curcuru, M De Pooter and G Eckerd (2018), Measuring monetary policy spillovers between U.S. and German bond yields, International Finance Discussion Papers 1226; and Deutsche Bundesbank, International linkage of interest rates and the national term structure, Monthly Report, October 2007, p 28.

³⁴ An increase by one standard deviation in the VDAX (measured in differences) lowers Bund yields (measured in differences) by 0.11 of a standard deviation.

How safe haven effects impact on Bund yields – a SVAR analysis

Times of crisis tend to depress the yields of German Federal bonds (Bunds) as investors often take flight to “safe havens” where they can evade the heightened uncertainty. But Bund yields are not the only variables that adjust in response to critical situations – other macroeconomic and financial variables are also affected, and in some cases interdependencies exist as well. Structural vector autoregression (SVAR) models can be used to shed light on these adjustment processes from an econometric vantage point.

Risk-averse households respond to a sudden onset of heightened uncertainty¹ surrounding future economic developments by reducing expenditure and building up financial buffers (precautionary saving effect). Enterprises, meanwhile, are more reluctant to make investments (eg real options effect) or hire new employees, with the result that they largely retain the revenue they earn.² The ultimate outcome of these two effects is a weakening of real economic activity with something of a time lag. Funding conditions might also tighten (financial constraints). Unlike real economic variables, prices and quantities in financial markets respond immediately to episodes of heightened uncertainty because investors instantly step up their demand for safe yet liquid alternatives. They also tend to switch between asset classes as securities generating more volatile cash flows in a less certain economic backdrop fall out of favour compared with assets with steady and reliable disbursement profiles. This response to heightened uncertainty is known as the flight to safety or quality, and also as safe haven flows.

Government bonds normally account for the bulk of safe (and liquid) securities.³ As a result, a flight to safety event will typically depress the prices of equities, say, and push up government bond prices, thus reducing their yields.⁴ To study the impact of an unexpected flight to safety event on Bund yields, it is important to account for any interdependencies that might exist between a given uncertainty measure, financial market variables and real economic variables. For example, (unexpected) monetary policy

¹ Strictly speaking, uncertainty denotes the inability of economic agents to determine a probability distribution for uncertain future events – ie they are unable to assign specific probabilities to a potential set of events. This is where uncertainty differs from risk, where economic agents are aware of, or can at least estimate, a probability distribution over a set of events. See N Bloom (2014), Fluctuations in uncertainty, *Journal of Economic Perspectives* 28(2), pp 153-176. As discussed in Bloom (2014), the term “uncertainty” will be used in this box text more as a combination of these two concepts, given the empirical difficulties involved in distinguishing them from one another.

² See N Bloom (2009), The impact of uncertainty shocks, *Econometrica* 77(3), pp 626-685; and S Basu and B Bundick (2017), Uncertainty shocks in a model of effective demand, *Econometrica* 85(3), pp 937-958. For more on how elevated aggregate uncertainty impacts on enterprises’ cash holdings, see J Gao, Y Grinstein and W Wang (2017), Cash holdings, precautionary motives, and systematic uncertainty, Indiana University.

³ An increase in money market instruments (such as transferable deposits) is another factor in this regard. See L Baele, G Bekaert, K Inghelbrecht and M Wei (2013), Flights to safety, NBER Working Paper No 19095.

⁴ See RB Barsky (1989), Why don’t the prices of stocks and bonds move together?, *American Economic Review* 79(5), pp 1132-1145; or G Bekaert, E Engstrom and Y Xing (2009), Risk, uncertainty and asset prices, *Journal of Financial Economics* 91(1), pp 59-82. Another term used frequently in spells of heightened financial market stress is “flight to liquidity”. Flights to liquidity can also be observed during bouts of elevated market uncertainty, in the form of portfolio reallocations into highly liquid securities, which particularly include government bonds. See D Vayanos (2004), Flight to quality, flight to liquidity, and the pricing of risk, NBER Working Paper No 10327. It is not always possible to clearly distinguish flights to liquidity from flights to safety, which is why flights to liquidity are often included in the flight to safety category.

decisions might also have a bearing on uncertainty.⁵ Furthermore, there is a strong correlation between the financial risk which financial intermediaries are willing to bear, on the one hand, and uncertainty, on the other.⁶ Thus, if the uncertainty measure is used in isolation to explain yields without considering potential interdependencies, one might conclude – incorrectly – that a flight to safety event has occurred. The aim, then, is to identify an unexpected increase in uncertainty (an exogenous uncertainty shock) as a factor driving the flight to safety. Hence the use of a structural vector autoregression (SVAR) model, as it is known, as an econometric methodology, which explicitly considers interdependencies between variables and is capable of depicting the dynamic processes of adjustment to economically interpretable innovations (shocks).⁷

The uncertainty measure used in this analysis is the VIX implied volatility index derived from options on the S&P500, a broad US equity index.⁸ Other variables included in the SVAR after the VIX are industrial production for the euro area (in logs), the rate of inflation for the euro area, the Euro Stoxx equity index (in logs), the yield of corporate bonds,⁹ the short-term shadow rate,¹⁰ the yield of ten-year Austrian government bonds, and the yield on ten-year Bunds. The observation period begins in January 2007, ie before the onset of the financial crisis, and ends in March 2018.¹¹ All variables are included at a monthly frequency.¹² The chosen ordering – putting macroeconomic variables ahead of interest rates and financial market variables – is standard in

⁵ See G Bekaert, M Hoerova and M Lo Duca (2013), Risk, uncertainty and monetary policy, *Journal of Monetary Policy* 60(7), pp 771-788. The authors show that an unexpected accommodative monetary policy measure (expansionary monetary policy shock) reduces uncertainty.

⁶ Hence the need to distinguish between financial shocks and uncertainty shocks. See D Caldara, C Fuentes-Albero, S Gilchrist and E Zakrajšek (2016), The macroeconomic impact of financial and uncertainty shocks, *European Economic Review* 88, pp 185-207.

⁷ The identification scheme is the Cholesky decomposition, which assumes that shocks to a variable affect all the other variables ordered afterwards in the same period, but only have a lagged impact on variables ordered beforehand.

⁸ Implied equity market volatility generally includes both uncertainty and risk aversion. However, since uncertainty dominates the variance in implied equity market volatility, it would appear that implied equity market volatility is a good proxy for uncertainty. See G Bekaert, M Hoerova and M Lo Duca (2013), op cit; and G Bekaert and M Hoerova (2014), The VIX, the variance premium and stock market volatility, *Journal of Econometrics* 13(2), pp 181-192. It is nonetheless worth noting that the measure used here for uncertainty also includes risk aversion. The reason for using the US equity market here is that the US has the most significant capital market worldwide. The VIX is, however, highly correlated with the implied volatility for the DAX (VDAX-NEW) or the Euro Stoxx (VStoxx).

⁹ The iBoxx non-financials BBB index for bonds with a residual maturity of between seven and ten years is used.

¹⁰ More information on shadow rates can be found in L Krippner (2015), *Zero lower bound term structure modelling: a practitioner's guide*, New York, Palgrave Macmillan US. They are also discussed in Deutsche Bundesbank, *Monetary policy indicators at the lower bound based on term structure models*, Monthly Report, September 2017, pp 13-34. The time series used (last accessed on 25 May 2018) can be found at <https://www.rbnz.govt.nz/research-and-publications/research-programme/additional-research/measure-of-the-stance-of-united-states-monetary-policy/comparison-of-international-monetary-policy-measures>

¹¹ The end of the observation period is determined by data availability constraints. The shadow rate and the yields on corporate bonds, Austrian government bonds and Bunds all follow a clear downward trend during the observation period. This is derived using a Hodrick-Prescott filter. The SVAR therefore provides an explanation for deviations from this downward trend. The trend itself cannot be explained by the approach chosen. Further information on explanatory approaches for the trend can be found in Deutsche Bundesbank, *The natural rate of interest*, Monthly Report, October 2017, pp 27-42.

¹² This means that flight to safety events which are more protracted and therefore feed through to real economic variables can be identified better. Using data at shorter intervals will tend to capture short-term flight to liquidity events. Monthly averages derived from daily data are used for the VIX, the equity index and yields.

the literature.¹³ Uncertainty is ordered first in the SVAR.¹⁴ This allows us to interpret that uncertainty shocks generally impact simultaneously on all the variables that follow them, but that all the other shocks only affect the uncertainty indicator with a time lag.¹⁵ The equity market indicator is ordered before the yields of corporate bonds. The rationale behind this is that equity prices include more of a forward-looking component and can thus capture expectation effects surrounding economic developments that lie in the more distant future. Bund yields are ordered last so that all the other structural innovations which impact on Bund yields can be captured in the same period. Finally, the yield of Austrian government bonds is included to measure the yield spread between two government bonds which have an identical AAA rating and thus have the same credit quality. Any difference that might arise can thus be expected to reflect the benchmark status of Bunds in addition to possible market liquidity effects. The identification of the uncertainty shock is highly robust to changes in the order.¹⁶

The uncertainty shocks estimated and identified using the procedure outlined above show the responses typical to a fight to safety event discussed at the beginning of

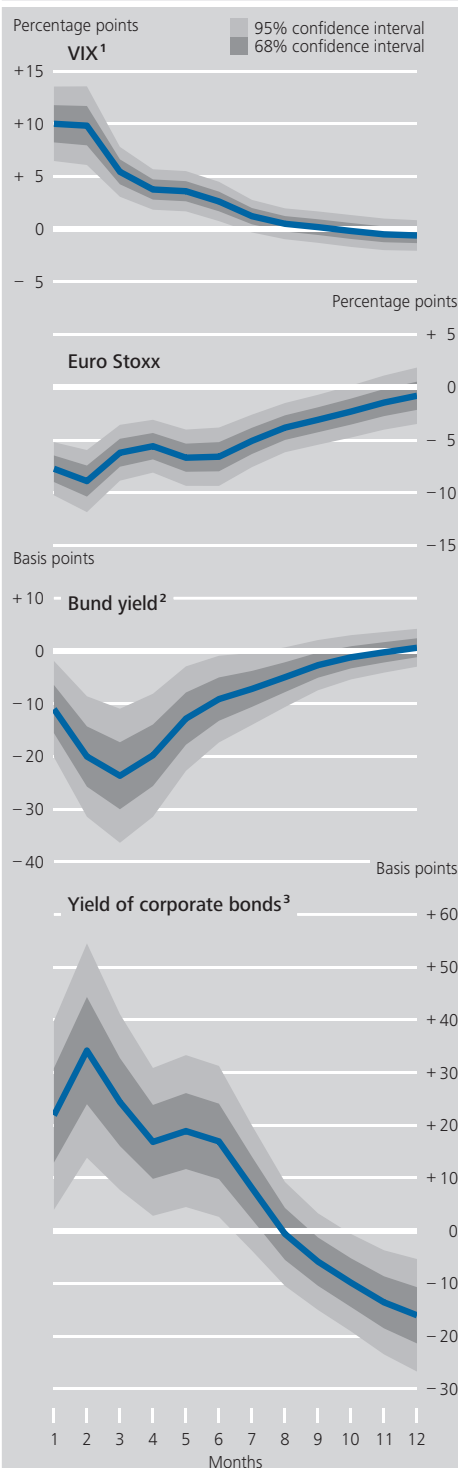
¹³ In a Cholesky decomposition, the ordering of variables has a bearing on the identification of the driving structural innovations. However, the ordering used here is of secondary importance for the uncertainty shock, which is ordered first, and only relates to the interpretation of the other shocks, which are not discussed in any further detail here.

¹⁴ The SVAR is estimated using the ordinary least squares (OLS) approach. As an alternative, it is also possible to use Bayesian techniques to estimate the SVAR. However, since the estimation results do not differ substantially, the results are based on the OLS estimation.

¹⁵ See S Basu and B Bundick (2017), op cit; or D Caldara, C Fuentes-Albero, S Gilchrist and E Zakrajšek (2016), op cit.

¹⁶ Only if equity prices are ordered before the uncertainty measure does the structural shock to equity prices ultimately capture the uncertainty shock.

Impact of an increase in uncertainty on financial market variables*

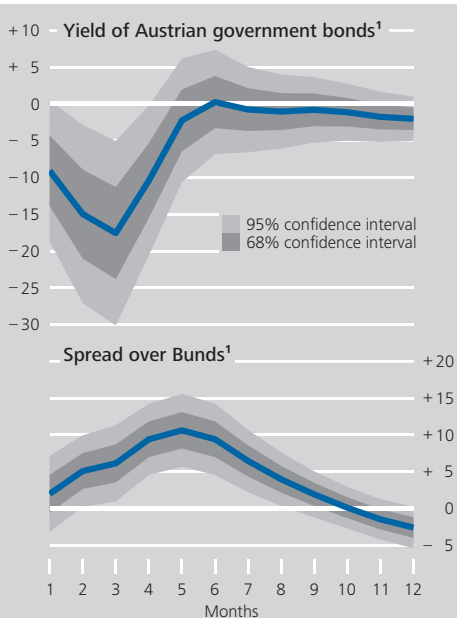


* Impulse response functions based on a vector autoregression model. Confidence intervals bootstrapped. ¹ Implied option volatility of the S&P500 index for contracts with a maturity of 30 days. ² Residual maturity of ten years. ³ Based on the iBoxx non-financials BBB index for bonds with a residual maturity of between seven and ten years.

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Impact of an increase in uncertainty on the yield of Austrian government bonds*

Basis points



* Impulse response functions based on a vector autoregression model. Confidence intervals bootstrapped. ¹ Residual maturity of ten years.

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Importance of the increase in uncertainty for financial market variables (forecast error variance decomposition)*

%

Item	Yield after ...			
	1 month	6 months	1 year	2 years
Bund yield ¹	9.6	22.9	22.9	22.5
Austrian government bond yield ¹	5.9	10.6	10.2	9.9
Equity prices	59.5	56.2	35.2	19.8
Corporate bond yield	22.8	25.4	20.3	19.0

* Table shows the importance of the uncertainty shock for the forecast error variance as a percentage at different points in time. ¹ Residual maturity of ten years.

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this box text (see the chart on page 35). Taken in isolation, an unexpected increase in uncertainty, measured in terms of a 10-percentage-point¹⁷ increase in the VIX, depresses equity prices by just over 8%. Prices of risk-bearing non-financial corporate bonds likewise come under pressure, their yields climbing by as much as 30 basis

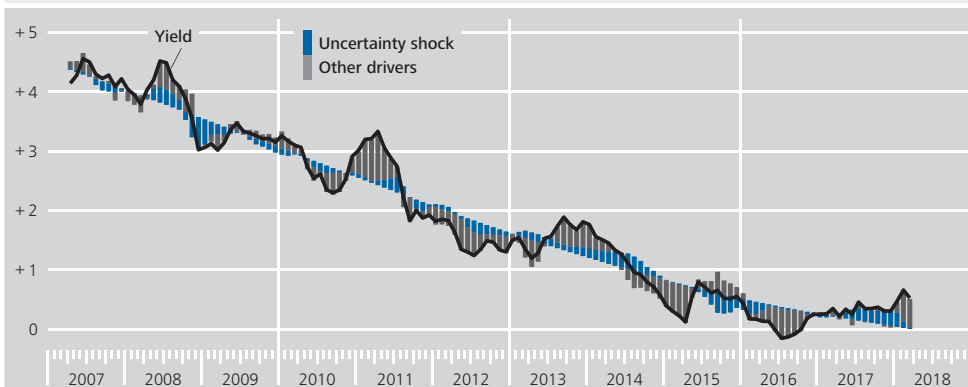
points at their peak. That is, investors lower their valuations of assets whose (expected) cash flows have become more uncertain and “take flight” from these assets. As uncertainty recedes in the months that follow, equity prices recover and the yields of corporate bonds decline again. During this flight to safety, ten-year Bund yields fall initially by a little more than ten basis points. Yields decline even further over the course of the next half-year, depressing Bund yields by almost 25 basis points compared to the base level. This lagged response probably shows that flights to safety identified at monthly intervals do not end abruptly. It is also worth noting that Bund yields decline more sharply than the yields of Austrian government bonds with identical maturities (see the adjacent chart). While the shape of the responses is quite similar, the yields of ten-year Austrian government bonds fall less sharply – with a peak decline of just under 20 basis points. Note also that Bund yields take more time to recover than their Austrian counterparts. The spread between both yields therefore widens to a little more than ten basis points after roughly half a year.¹⁸ The uncertainty shock – the driver behind flight to safety episodes – explains almost 10% of the forecast error variance of Bund yields in the first month, compared to just over 6% at most in the case of Austrian government bond yields (see the adjacent table). At the six-month horizon, the shock explains more than twice as much of the forecast error variance of Bund yields (just over 23%) compared to Austrian government bond yields (almost 11%). Over the long run, almost one-quarter of the forecast error variance of Bund yields can be ac-

¹⁷ This corresponds to roughly one standard deviation of the VIX in the observation period.

¹⁸ There is evidence that the different responses shown by the respective yields are statistically significant.

Decomposition of the yield of ten-year Bunds into its determinants*

Yield as a percentage and trend deviations in percentage points



* Yield deviation from its trend decomposed into the contribution of uncertainty shocks (driving the flight to safety) and the contribution of other drivers.

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counted for by the flight to safety.¹⁹ The fact that Bunds show a stronger response to flight to safety events than their Austrian counterparts ultimately reflects the Bund's status as a benchmark security.

Flight to safety events occur whenever uncertainty rises (exogenously). This is why Bund yields usually edge lower during such episodes. The financial crisis, in particular, played a major role during the observation period because it can ultimately be interpreted as a combination of uncertainty and financial shocks.²⁰ After peaking at just over 4.5% in July 2008, Bund yields declined by a little more than 1.5 percentage points between October 2008, when the financial crisis came to a head, and December of that year (see the above chart). Flight to safety events during this period contributed roughly -1 percentage point to the decline in yields. During the sovereign debt crisis, a number of euro area countries went through spells in which flight to safety effects depressed Bund yields by roughly 50 basis points. While it would be wrong to dismiss a decline of this magnitude out of hand, uncertainty shocks were not the main driver behind the spreads of countries with

poorer credit ratings observed during the sovereign debt crisis.

¹⁹ In a VAR, the path followed by variables is determined by exogenous drivers (shocks), allowing for interdependencies between the variables. This means that, following a shock in one period, it is possible to forecast the future development of variables. The difference between realised outcomes in a given period and their values forecast earlier (forecast errors) can be attributed to new shocks. As a result, the forecast error variance is linked to the variance of the variables that arises from the impact of the various shocks in each period and the feedback effects embedded in the model.

²⁰ For evidence for the United States, see D Caldara, C Fuentes-Albero, S Gilchrist and E Zakrajšek (2016), op cit.

Analysis of the taper and Bund tantrums

Dummy variables measure taper and Bund tantrums

In the following, two further estimations examine the extent to which the chosen determinants had a stabilising effect on Bund yields during what are referred to as the taper tantrum and the Bund tantrum. To this end, the duration of both tantrums is defined in such a way as to fully cover the two (local) periods of rising interest rates. The time span from 3 May 2013 until 11 September 2013 is set for the taper tantrum; the Bund tantrum is defined as lasting from 17 April 2015 until 10 June 2015. For the further estimations, a dummy variable is then defined for each of the two tantrums, which are combined with the determinants (Taper_Tantrum, Bund_Tantrum).

Liquidity premiums during the taper tantrum insignificant

For the phase of the taper tantrum, the results indicate a significantly lower sensitivity of Bund yields to their market liquidity and to equity market uncertainty, as well as a heightened sensitivity to the scarcity premiums (Estimate 2 in the table on page 32). Thus, neither the liquidity premiums, which actually widened during the tantrum, nor equity market uncertainty had a significant impact on yields overall during this phase. Apparently, market liquidity and events in the equity markets were insignificant for the increase in yields at that time, while scarcity premiums, which were somewhat lower on balance, played an above-average part in this respect. No changed effects are found for the other determinants. Interestingly, this also applies to the (at that time, sharply rising) US yields, which continued to be reflected strongly in Bund yields.

The significant rise in Bund yields during the Bund tantrum by almost one percentage point probably largely reflects the fact that market participants at the time felt the previous decline in yields to be excessive and corrected it very

quickly. The estimation results provide information on the respective contributions of the selected determinants. They point to a temporary, considerably weaker (and ultimately, therefore, to an insignificant) impact of the scarcity premiums and, at the same time, to significantly stronger effects stemming from the slope of the Eonia swap rate curve, the liquidity premiums and the VDAX (Estimate 3). Thus, the slope of the Eonia swap rate curve at the short end gained just under 10 basis points during the Bund tantrum, to which long-term Bund yields reacted particularly sensitively. At the same time, the liquidity advantage and equity market uncertainty decreased somewhat. This, coupled with the heightened sensitivity of Bund yields to these two variables, likewise made a significant contribution to the sharp rise in Bund yields.

Scarcity premiums and slope of the Eonia swap rate curve have particularly strong impact during Bund tantrum

Conclusion

The analysis of possible drivers of yields of ten-year Bunds reveals, in particular, that scarcity premiums were among the main determinants in explaining yield movements of late. These results therefore reflect the shifts in the holder structure of Federal securities, which show that the Eurosystem's purchases under the PSPP considerably reduced the volume of Federal securities in free float. Moreover, analysis of the holder structure suggests that the asset purchase programme is also having an impact via portfolio adjustments and the exchange rate. In addition, the moderate decline in market liquidity also plays a role as a driver of yield movements. This is consistent with a reduced free float, the decrease in trade volumes and the growing order book illiquidity recorded for ten-year Bunds since the beginning of 2016. However, this has not affected the proper functioning of the bond market as a whole.

The realignment of the Chinese economy and its global implications

Over the past few decades, China has risen to become a global economic power, but this catching-up process has slowed significantly in recent years. An important reason for this is that the export-oriented growth model has reached its limits. Chinese companies used to be specialised in the production of labour-intensive consumer goods; the sales potential on the international markets is now largely exhausted. In addition, wages have risen sharply as a result of a growing shortage of labour, with the result that the cost advantages of Chinese exporters have diminished.

During the global financial and economic crisis and its aftermath, China pursued very expansionary fiscal and monetary policies in order to counter the slowdown in economic growth. This led to over-investment in various sectors and to a sharp rise in debt, particularly in the public sector and among state-owned enterprises. This is likely to have increased the vulnerability of the Chinese economy to crises.

In recent years, the Chinese government has therefore pursued moderate reforms. On the supply side, it is aiming to boost technological convergence in order to upgrade the country's export range, and progress appears to have been made on this front. On the demand side, the authorities are working to put an end to unprofitable investments, particularly from state-owned companies. At the same time, greater importance is being attached to private consumption. Household demand has already grown fairly dynamically over the past few years and, against this backdrop, services have become considerably more important in macroeconomic terms.

Due to China's extensive trade relations and the size of the country, the ongoing transformation of its economy is having a discernible global impact. The shift in demand from investment to consumption is dampening growth in Chinese imports. In the export sector, the structural change in China in the field of labour-intensive production is opening up opportunities for other Asian emerging market economies. By contrast, the shift to higher-end products could put exporters from advanced economies, including Germany in particular, under mounting competitive pressure.

■ Introduction

Increased significance of China for the global economy ...

The Chinese economy has experienced a remarkable rise since the reform and opening-up policy was launched 40 years ago. Once a developing country, it is now the second largest economy in the world.¹ One of the key factors in China's success has been its integration in the international division of labour. China has been the world's leading exporter of goods for several years and has gained an outright dominant position on the international markets for a whole swathe of consumer goods, in particular. The creation of an efficient capital stock necessary for China's catching-up process led to a massive expansion of investment in the country, from which the German economy, as a major provider of capital goods, has benefited greatly.

... with still considerable development potential

The absolute size of the Chinese economy, however, masks still significant untapped development potential. For example, the average per capita income on the basis of purchasing power parities last year stood at just over one-quarter of the equivalent US figure. China thus belongs to the group of middle-income economies playing catch up with the advanced economies.

Nevertheless, this catching-up process has slowed down markedly in recent years. Between 2007 and 2016, economic growth slowed almost continuously from year to year.² Negative external factors, such as the global financial and economic crisis and the recessions in some euro area countries, are likely to have temporarily curbed expansion. By contrast, the global economic environment has been rather favourable in recent years. Despite this, economic growth in China has languished far below its previous rates, stabilising at just under 7% per year. It is hence very likely that the underlying pace of growth has slowed even further.

The slowdown in growth in recent years ...

In other Asian countries that experienced a rapid catching-up process in the past, economic growth slowed over time (see the box on pages 48 and 49). That said, the slowing of growth in China has been comparatively sharp. It is evident that the "natural" moderation of growth that accompanies rising per capita income is not the only factor at play here.

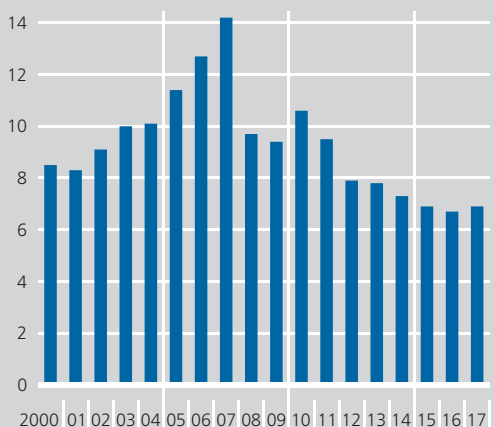
... has been significantly sharper than expected

■ Need for economic adjustment

One of the key reasons for the marked moderation of growth in the Chinese economy is likely to lie in the limits of the export-oriented economic model that prevailed in China in the past. Very expansionary monetary and fiscal policies, which were pursued until recently, caused additional problems.

Economic growth in China

Year-on-year percentage growth in real GDP



Source: National Bureau of Statistics (NBS) of China.
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¹ China's gross domestic product (GDP) on the basis of market exchange rates stood at US\$12 trillion in 2017, compared with just over US\$19 trillion for the United States. Measured in purchasing power parities, China's economic output has been higher than that of the United States since 2014.

² The slowdown in growth in China was an important factor – though not the only one – in the slowing of growth among the group of emerging market economies as a whole. See Deutsche Bundesbank, Slowdown in growth in the emerging market economies, Monthly Report, July 2015, pp 15-31.

Limits of export orientation

*Sputtering
export engine*

For a long time, economic growth in China was driven largely by external demand. China's accession to the World Trade Organization (WTO) in 2001 gave Chinese exports of goods an additional boost. Between 2001 and 2013, China's share of global trade rose from 4% to 12%. However, in recent years the export engine has started to sputter, and the country has not seen any additional meaningful gains in market share.

Chinese exporters specialised in labour-intensive products

One of the factors behind the flattening of export growth is that China, given its wage cost advantage, used to specialise in labour-intensive production. Chinese exporters were quick to move away from simple products, such as clothing, and increasingly towards higher-end goods, especially electronics. However, companies usually only carried out the final stage of production, ie assembling the final product using imported parts and components. Although China was able to raise the share of its own value added in its exports somewhat, it has nevertheless essentially remained stuck in its role as a "workshop of the world".³

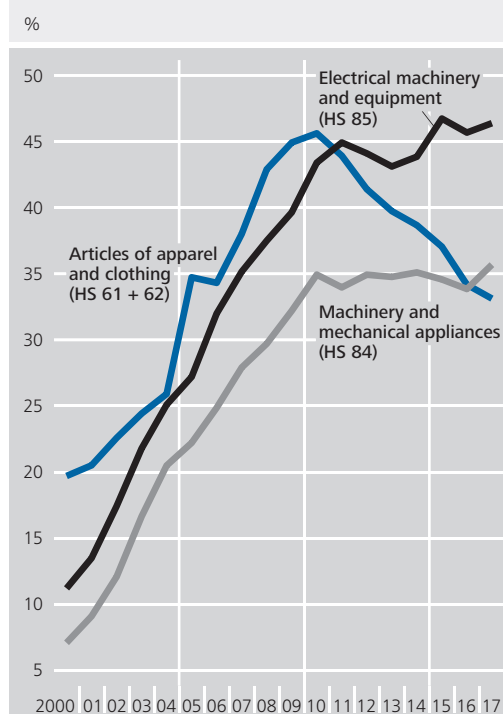
Export orientation has encountered demand-side limits

This export strategy appears to have reached demand-side limits in recent years. As China is a major economy, its export growth ultimately depends on the absorption capacity of the global market. For many of the products it exports, China has probably already largely exhausted its sales potential. For example, China has supplied just under half of all electronics imports to the European Union in recent years, and for certain products its share of imports has been very much higher still. The demand-side limits of an export-oriented growth strategy make themselves felt more quickly for a major economy than for small countries (see also the box on pages 48 and 49).

*Tightening
of the labour
market ...*

A second barrier to further Chinese export growth is linked to the supply side, namely an increasing shortage of labour in China. For example, the rural labour reserve, which was

China's share of imports to the European Union for selected product groups*



Source: Eurostat Comext. * Excluding intra-trade; product classification in accordance with the Harmonized Commodity Description and Coding System (HS).

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drawn on in the past to cover the rising demand for labour, has since been largely absorbed.⁴ As a result, wage growth accelerated markedly, and well above the rate of productivity gains.⁵

³ See HL Kee and H Tang (2016), Domestic value added in exports: Theory and firm evidence from China, *American Economic Review*, Vol 106(6), pp 1402-1436; and R Koopman, Z Wang and S-J Wei (2008), How much of Chinese exports is really made in China? Assessing domestic value-added when processing trade is pervasive, NBER Working Papers 14109.

⁴ According to official statistics, there are millions of people still employed in agriculture in China, and it is often assumed that they are in "hidden" unemployment. However, a large proportion of these people are already of an advanced age and may be reluctant or unable to work, for example, as an industrial worker far away from home. Moreover, the official household registration system (hukou) also restricts rural dwellers' mobility by preventing migrants from obtaining access to social welfare benefits and education services in the cities. See inter alia H Li, L Li, B Wu and Y Xiong (2012), The end of cheap Chinese labor, *Journal of Economic Perspectives*, Vol 26(4), pp 57-74.

⁵ The argument that a labour surplus is a drag on wage growth until the surplus has been completely absorbed is based on the "Lewis model". See WA Lewis (1954), Economic development with unlimited supplies of labour, *The Manchester School* 22(2), pp 139-191.

... and currency appreciation lead to strong rise in wages

Compared to other countries, there has been an additional rise in labour costs in China as a result of the renminbi's pronounced tendency to appreciate.⁶ Average monthly wages in manufacturing rose from the equivalent of US\$160 in 2005 to US\$800 in 2017. This increase in wage costs has placed a number of Chinese producers of export goods under considerable pressure. Particularly in the textiles sector, many enterprises moved abroad.

The consequences of a very expansionary economic policy

Government strategy long based on economic stimulus measures

Until recently, the Chinese government had pursued expansionary fiscal and monetary policies in order to counter the slowdown in economic growth. High GDP growth rates were considered necessary, particularly in order to satisfy the population's aspirations to secure and further improve their standard of living.

Over-investment in infrastructure

Fiscal policy was used heavily during the global financial and economic crisis. In order to cushion the sharp drop in exports, the Chinese government initiated a massive investment programme.⁷ Given the size of the programme and the haste with which it was implemented, long-term utility considerations are likely to have fallen by the wayside in many projects. In subsequent years, too, government investment remained exceptionally high, and it seems that this led to over-investment and misinvestment in public infrastructure.⁸ Government debt went up steeply as well.⁹

Expansionary monetary policy fuelled lending ...

The onset of the global financial and economic crisis marked the beginning of a phase of exceptionally expansionary monetary policy in China. This triggered a veritable credit boom: between 2008 and 2015, the commercial banking sector's outstanding loans measured as a share of nominal GDP rose from 94% to 136%.¹⁰ A particular problem was that loans flowed on a preferential basis to state-owned enterprises (SOEs) whose liabilities were implicitly guaranteed by the state. The productivity

of investments made by SOEs has, however, always been low.¹¹ As a result, significant over-capacity arose in many industrial sectors dominated by SOEs, such as steel production.

The expansionary monetary policy has resulted in low interest rates on bank deposits, prompting many households to invest some of their savings in property. This has contributed to a strong upturn in the real estate market, where – at least in some regions – there are likely to have also been price exaggerations and an excess of newly constructed housing.¹²

... and contributed to the boom in the residential property market

Overall, the already very strong investment activity in China increased again significantly in the wake of the country's extremely expansionary monetary and fiscal policy. From 2009 to 2014, the investment-to-GDP ratio stood at no less than 45%. At the same time, the product-

Lower productivity of capital overall

⁶ This tendency was ushered in by the abolition of the hard peg to the US dollar in 2005.

⁷ According to official data, the 27-month investment programme had a volume of 4 trillion yuan, corresponding to just under US\$600 billion. This equated to 12½% of Chinese GDP in 2008. In comparative terms, this stimulus was therefore the largest of any country in the world at the time. See C Wong (2011), The fiscal stimulus programme and public governance issues in China, OECD Journal on Budgeting, Vol 11/3, pp 53-73; and B Naughton (2009), Understanding the Chinese stimulus package, China Leadership Monitor 28.

⁸ See H Shi and S Huang (2014), How much infrastructure is too much? A new approach and evidence from China, World Development, Vol 56, pp 272-286; and A Ansar, B Flyvbjerg, A Budzier and D Lunn (2016), Does infrastructure investment lead to economic growth or economic fragility? Evidence from China, Oxford Review of Economic Policy, Vol 32(3), pp 360-390.

⁹ According to calculations by the International Monetary Fund (IMF), general government debt in China rose from just under 40% of GDP in 2007 to 62% in 2016. These figures take into account that Chinese provinces and local governments often financed their infrastructure investment outside of regular budgets. See IMF (2017), People's Republic of China – Staff Report 2017 for the Article IV Consultation, p 22.

¹⁰ On the impact of accommodative monetary policy on lending, see S Chen and JS Kang (2018), Credit booms – is China different?, IMF Working Paper, WP/18/2.

¹¹ See also C-T Hsieh and Z Song (2015), Grasp the large, let go of the small: The transformation of the state sector in China, Brookings Papers on Economic Activity, Vol 46(1), pp 295-366; and D Dollar and S-J Wei (2007), Das (Wasted) Kapital: Firm ownership and investment efficiency in China, IMF Working Paper, WP/07/9.

¹² See inter alia E Glaeser, W Huang, Y Ma and A Shleifer (2017), A real estate boom with Chinese characteristics, Journal of Economic Perspectives, Vol 31(1), pp 93-116.

ivity of capital fell significantly. According to our calculations, the aggregate return on capital fell from 18% in 2008 to 10% in 2015.¹³ Investment income has actually fallen short of investment expenditure of late. Furthermore, the falling productivity of capital is weighing on the sustainability of general government debt and corporate debt, leading to risks for the stability of the Chinese financial system (see the box on pages 44 to 46).

Chinese economy in a difficult transformation

Turnaround in economic policy underway

The challenges of realigning an export model based on labour-intensive consumer goods and the harmful side effects of the extremely expansionary macroeconomic policy led to a gradual adjustment of the economic policy stance after the political leadership change in 2012. The Chinese government is aiming to accelerate technological progress on the supply side, accompanied by a shift from investment to consumption on the demand side.

Acceleration of technological progress

Sharp increase in research and development ...

The intensification of technological progress played a key role in the successful convergence processes of other Asian economies in the past (see the box on pages 48 and 49). The Chinese government has also adopted such a strategy in recent years. To this end, it has improved the environment for innovation, for example by establishing patent courts,¹⁴ while also fostering research activities among enterprises. Against this backdrop, aggregate expenditure on research and development has increased significantly. With a share of just over 2% of GDP, it is now close to the average level for OECD countries.

... and massive investment in human capital

Furthermore, China has been investing heavily in human capital for quite some time now, sharply increasing the supply of highly skilled

Investment ratio and return on capital in China



Source: National Bureau of Statistics (NBS) of China and Bundesbank calculations. ¹ For more information on the calculation, see the explanations in the main text.
Deutsche Bundesbank

workers. One of the key measures has been the expansion of universities, leading to a nearly threefold increase in the number of university students between 2003 and 2013.¹⁵ The pro-

¹³ For these calculations, the capital stock depreciation rate is deducted from the ratio of investment income to the capital stock. For the approximation of investment income that is not directly reported, we follow the approach taken by He et al (2007). According to this, employee compensation and net taxes on products (weighted by the share of employee compensation to gross value added) are deducted from nominal GDP. In order to estimate the capital stock, fixed investment (net of capital consumption) is cumulated. Following Ma et al (2017), the annual depreciation rate is set at 7%. See D He, W Zhang and J Shek (2007), How efficient has been China's investment? Empirical evidence from national and provincial data, Pacific Economic Review, Vol 12(5), pp 597-617; and G Ma, I Roberts and G Kelly (2017), Rebalancing China's Economy: Domestic and International Implications, China & World Economy, Vol 25(1), pp 1-31.

¹⁴ See World Economic Forum (2016), China's innovation ecosystem, White Paper; and OECD (2017), Economic Surveys: China, Chapter 1 – Boosting firm dynamism and performance, pp 61-96.

¹⁵ Relating to bachelor, master and doctoral degrees; data sourced from the UNESCO Institute for Statistics (UIS). More recent figures are available, but these are not comparable due to a methodological break.

Risks to the stability of the Chinese financial system

China's national financial system was of central importance in its strategy for economic ascendance. Key sectors of the economy were to be afforded a cheap supply of capital,¹ while market principles for the allocation of capital and liability for the assumed risks played only a secondary role.

Since the outbreak of the global financial and economic crisis, this strategy has been increasingly at odds with preserving financial stability. As a result of China's very expansionary monetary policy, the level of debt, especially in the corporate sector, has risen massively compared to gross domestic product (GDP). For example, total credit to the non-financial private sector over a ten-year period up to 2017 increased by over 90 percentage points to 209% of GDP.² In many other countries, such pronounced and protracted growth in credit has, in the past, led to a financial crisis or a major economic slowdown.³ An early

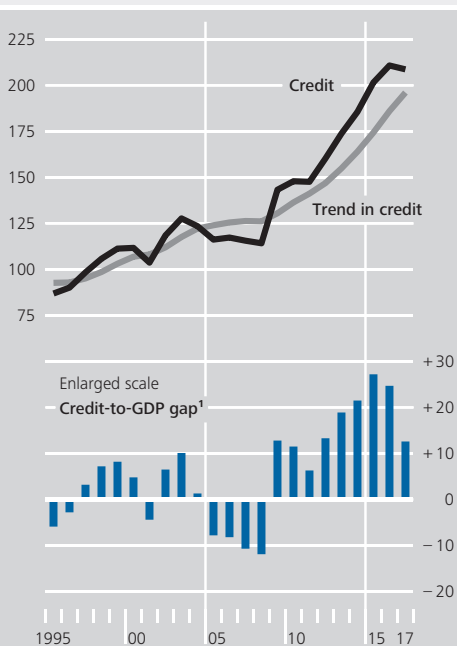
warning indicator commonly used to identify systemic risks in the banking sector, namely the extent to which the credit-to-GDP ratio exceeds its long-term trend, has already been signalling heightened risks since 2012.⁴

Another sign that there has been a build-up of financial risks as a result of deteriorating debt sustainability in parts of the corporate sector is the interest coverage ratio.⁵ In 2016, around 13% of corporate debt was originated by companies whose earnings were insufficient to cover their interest expenditure. So far, official figures do not show a significant rise in non-performing bank loans, which stood at a relatively low level of 1.7% of all outstanding bank loans in 2017.⁶ Nevertheless, these official figures may understate the true extent of problems concerning borrowers' creditworthiness.⁷

The credit boom was made possible by the rapid growth in the Chinese financial system,

Credit to the non-financial private sector in China and the credit-to-GDP ratio gap*

As a percentage of GDP



Source: BIS credit-to-GDP gap statistics. * Credit from all sectors. ¹ Difference between credit and the trend in credit.
Deutsche Bundesbank

¹ See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 7.

² These data are based on calculations by the Bank for International Settlements (BIS) and include loans and debt securities from all sectors.

³ See S Chen and JS Kang (2018), Credit booms – is China different?, IMF Working Paper, WP/18/2.

⁴ The credit-to-GDP ratio expresses the relationship between credit to the non-financial private sector and nominal GDP. The credit-to-GDP gap measures the difference between the credit-to-GDP ratio and its long-term trend. Based on historical data, setting a threshold of 10 percentage points of divergence from the trend minimises the possibility of false alarms, provided that at least two-thirds of actual crises are predicted correctly over a time horizon of three years. See BIS (2017), 87th Annual Report, p 45 f.

⁵ The interest coverage ratio is calculated by dividing a company's earnings before interest, taxes, depreciation and amortisation (EBITDA) by its interest expenditure.

⁶ If "special-mention loans", ie loans that are overdue but not yet classed as non-performing, are included, the share of at-risk loans in 2017 was around 5%.

⁷ See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 45. In 2016, the rating agency Fitch estimated the share of non-performing loans in the Chinese financial system to be between 15% and 21%. See Fitch, China's rebalancing yet to address credit risks, press release of 22 September 2016.

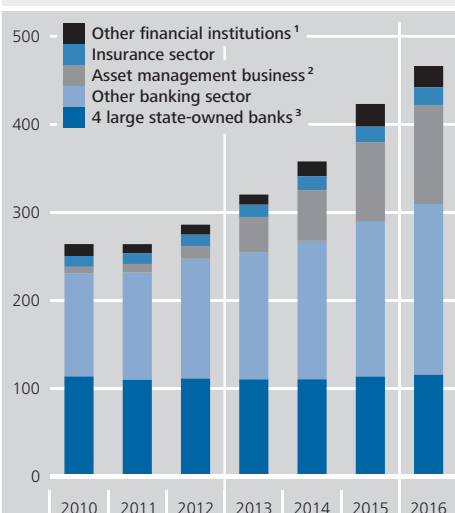
at the core of which lies the banking sector, whose total assets amount to just over three times the size of nominal GDP.⁸ This sector is dominated by four large state-owned banks, though the significance of small and medium-sized banks has increased considerably of late. Most of these smaller institutions are also subject to state control, usually from local government agencies. IMF stress tests indicate that there is a risk of insufficient capitalisation for many small and medium-sized banks, which could exacerbate the effects of a crisis in the event of an unfavourable macroeconomic development.⁹

The Chinese banking sector also played a major role in the dynamic growth of the shadow banking sector,¹⁰ with small and medium-sized credit institutions, in particular, issuing “shadow bank financing instruments” such as wealth management products (WMPs) or channelling funding to trust companies.¹¹ Between 2014 and 2016, around half of banking-sector lending to the non-financial private sector was made via these types of financing instruments. These largely off-balance-sheet transactions generally required less capital under the existing guidelines and lower risk provisioning on the part of banks compared to conventional lending.¹² This also made it possible to circumvent regulatory provisions restricting banks from lending to certain sectors.¹³ Although this practice did ultimately boost economic growth in the short term, it also increased overall economic credit risk and made the financial system more complex.

In recent years, the Chinese government has boosted its efforts to reduce risks to financial stability. In doing so, it is facing a difficult balancing act. There is a certain tension between significantly reducing risks arising from credit developments and short-term macroeconomic growth targets.¹⁴ Measures taken by authorities to lower risk in the financial system have recently focused on restricting shadow lending and limiting opportunities for regulatory arbitrage. Supervisory authorities now increasingly monitor banks’ off-balance-sheet activities and have tightened regulations for

Financial assets of Chinese financial institutions

As a percentage of GDP



Sources: IMF, People's Republic of China Financial Stability Assessment, October 2017, and Bundesbank calculations. ¹ Includes pension funds, public funds and securities companies. ² Includes the assets under management of bank off-balance-sheet wealth management products, trust companies, specialised funds, securities companies, private equity companies and futures companies. ³ Industrial and Commercial Bank of China, China Construction Bank, Agricultural Bank of China and Bank of China.

Deutsche Bundesbank

⁸ The Chinese banking system is currently the largest in the world in terms of its assets. See E Cerutti and H Zhou (2018), The Chinese banking system: much more than a domestic giant, VoxEU (<https://voxeu.org/article/chinese-banking-system>).

⁹ See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 23 ff.

¹⁰ When compared internationally, China's shadow banking sector was one of the fastest growing in the world between 2013 and 2016. See Financial Stability Board (2018), Global Shadow Banking Monitoring Report 2017, p 50 f.

¹¹ WMPs are savings instruments which in many cases guarantee higher returns than traditional bank deposits and have an investment focus on bonds, money market instruments and bank deposits. See T Ehlers, S Kong and F Zhu (2018), Mapping shadow banking in China: structure and dynamics, BIS Working Papers No 701.

¹² See IMF (2017), Global Financial Stability Report October 2017: is growth at risk?, p 38 f.

¹³ See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 17.

¹⁴ If the measures to reform the financial system are to succeed, it will therefore also be necessary to have accompanying reforms to reduce the economy's vulnerability to a slowdown in credit growth. See IMF (2017), Global Financial Stability Report October 2017: is growth at risk?, p 40 f.

complex financial products.¹⁵ The newly established Financial Stability and Development Committee has been set up to ensure better collaboration between the various authorities responsible for regulating and supervising the financial system. To strengthen financial supervision, the National People's Congress also passed a resolution in March this year to bring its banking and insurance watchdogs under one roof.

Implicit guarantees are still a major challenge when it comes to ensuring financial stability in China. For example, investors can expect to be compensated by banks or the government in the event of losses arising from a wide range of financial products such as debt instruments issued by state-owned enterprises and investment products issued by banks.¹⁶ This hampers efforts to evaluate the true risk of financial assets and ultimately causes a misallocation of capital. Enacting policies that explicitly rule out these types of guarantees could put an end to the distorted incentives that arise from them.¹⁷

A crisis in the Chinese financial system could have a noticeable negative impact on other countries as China's importance as an international lender and borrower has risen significantly since the global financial crisis. The cross-border claims of Chinese banks stood at just under US\$1 trillion at the end of 2017.¹⁸ Emerging and developing countries in South-East Asia, Africa and Latin America in particular have borrowed heavily from Chinese banks in recent years and are therefore highly dependent on these capital providers.¹⁹ In 2017, China's foreign claims and liabilities totalled around US\$12 trillion or 100% of its national GDP. Closer financial integration increases the risk that a shock in China will spill over to the international financial system.²⁰

The German financial system would probably be affected mainly by indirect spillover effects in the event of a financial crisis in China.²¹ While the direct exposures of Germany's banking system and insurance companies to Chinese debtors has risen in recent years and stood at €42 billion overall at the end of 2017,

these exposures account for only 1.9% and 0.7%, respectively, of each financial sector's foreign assets.²² Direct investment accounts for the lion's share of Germany's direct financial exposure to China, and most recently amounted to around €80 billion. Resulting losses would initially be felt primarily in Germany's non-financial corporate sector, which holds over 90% of these assets.²³ There would only be reason to fear credit risk to the German financial system if losses arising from direct investment were to have a negative impact on companies' solvency.

¹⁵ See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 34.

¹⁶ The prevailing practice whereby banks usually fully compensate the losses that small investors suffer in capital investments such as WMPs reinforces this perception.

¹⁷ Such an approach, however, harbours the risk of investors changing their behaviour abruptly, potentially triggering destabilising effects on the financial system. Against this backdrop, the IMF recommends a series of reforms to accompany the dismantling of implicit guarantees. See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 32 and p 36.

¹⁸ Source: BIS Locational banking statistics for mainland China excluding Hong Kong.

¹⁹ See E Cerutti and H Zhou (2018), op cit.

²⁰ See Y Korniyenko, M Patnam, R M del Rio-Chanón and M Porter (2018), Evolution of the global financial network and contagion: a new approach, IMF Working Paper, WP/18/113. The international financial centre of Hong Kong would probably be most directly affected by a shock to the Chinese financial system, given its close financial ties.

²¹ For example, major price corrections on the Chinese equity market and fears of a potential economic slump in China in mid-2015 had a direct effect on global financial markets. See Deutsche Bundesbank, Financial Stability Review, November 2015, p 18. Risks could also spill over to the German financial system via second round effects from financial hubs such as the United Kingdom, whose banking system has close direct and indirect financial ties with China and Germany. For more details on the United Kingdom's financial linkages with China, see Bank of England (2018), From the Middle Kingdom to the United Kingdom: spillovers from China, Quarterly Bulletin 2018 Q2.

²² Data from the Bundesbank's credit register of loans of €1.0 million or more as at 31 December 2017.

²³ According to international investment position as at 31 December 2017.

portion of science and engineering students is particularly high in China.

China's technological catch-up process has made significant progress of late

As a result of these policy efforts in innovation and education, China has since progressed noticeably in the technological catching-up process. For example, there has been a significant increase in the number and the quality of Chinese patent applications in the past few years.¹⁶ Furthermore, in the case of a number of technically sophisticated products, such as smartphones, Chinese manufacturers have become increasingly important internationally. These successes clearly should not belie the fact that China still lags noticeably behind the world leaders in many key technologies, such as semiconductors.

Guiding industrial policy aims to make China global leader in technology

The Chinese government is aiming to transform China into a global leader in technology over the medium term. With this in mind, it announced its "Made in China 2025" ten-year plan in 2015, which set out ambitious targets for the development of ten domestic industrial sectors, including information technologies, electric vehicles, and industrial robots. Alongside subsidies, the instruments of the plan also include holdings in foreign enterprises. In a number of partner countries – including Germany – this has stoked concerns of state-orchestrated transfers of technology to China.¹⁷ Furthermore, foreign enterprises operating in China fear that there will be increased pressure to surrender industrial expertise, in addition to other discriminatory measures.¹⁸

Shift of demand from investment to consumption

Chinese authorities tackling problem of over-investment

The second major adjustment taking place in the Chinese economy concerns the demand side. For around five years – and with increased effort in recent times – the Chinese government has been trying to put an end to over-investment. State-owned enterprises are a starting point. They are being pushed to pay more attention to putting their funds to more

productive use and limiting their debt. For individual industrial sectors with chronic overcapacity, such as coal and steel, the government even went as far as to announce investment bans. However, in order to ensure a sustainable solution to the problem of over-investment among state-owned enterprises, implicit state guarantees and other privileges will probably also need to be abolished.¹⁹ Moreover, the authorities are cracking down on speculative purchases in the property market. A certain degree of moderation in government investment in infrastructure can also be observed.²⁰ Against the backdrop of these efforts, growth in overall economic investment has weakened considerably in recent years.

Private consumption, meanwhile, has seen constantly buoyant growth, increasing its im-

¹⁶ The increased quality can be seen in the number of patent applications abroad or the number of foreign citations of patents. See S-J Wei, Z Xie and X Zhang (2017), From "Made in China" to "Innovated in China": necessity, prospect, and challenges, *Journal of Economic Perspectives*, Vol 31(1), pp 49-70.

¹⁷ The holdings of Chinese enterprises in German companies have risen significantly in recent years. A large portion of these can indeed be categorised under one of the ten key sectors covered by the "Made in China 2025" policy. See Bertelsmann Stiftung (2018), *Kauft China systematisch Schlüsseltechnologien auf? Chinesische Firmenbeteiligungen in Deutschland im Kontext von „Made in China 2025“*, GED study. For a discussion of the benefits and drawbacks of Chinese foreign direct investment in Germany, see Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (2016), *Transformation in China birgt Risiken*, Jahresgutachten 2016/17, chapter 12, pp 464-501.

¹⁸ See European Union Chamber of Commerce in China (2017), *China Manufacturing 2025: Putting industrial policy ahead of market forces*, Report; as well as U.S. Chamber of Commerce (2017), *Made in China 2025: Global ambitions built on local protections*, Report.

¹⁹ Reorganising the SOE sector was indeed one of the Chinese government's main economic policy objectives in recent years. So far, however, increased participation of private capital donors in SOEs (known as "mixed-ownership reform"), rather than harmonising competitive conditions between SOEs and private companies, has been at the top of the reform agenda.

²⁰ Changing incentives seem to be playing a vital role in the rethink. In the past, the performance of local politicians was chiefly measured by the rate of economic growth in their respective jurisdictions, which greatly incentivised government investment. Since 2013, however, the respective debt situation has also been taken into account in the performance evaluation.

What conclusions for China can be drawn from other Asian countries' convergence processes?

China's per capita income, measured in purchasing power parities, has now reached one-quarter of that of the United States. In the coming decades, China is aiming to join the ranks of the advanced economies. This is a leap which, in past decades, only few countries have accomplished. Some Asian countries that have made the leap are Japan, Taiwan and South Korea.¹ Japan in the late 1950s had a similar status to that of China today, as did Taiwan in the mid-1970s and South Korea in the mid-1980s. In the course of their further ascent, all three countries saw their very rapid initial rates of economic growth diminish gradually,² and the patterns of their growth changed.

In many respects, China's economic convergence process thus far is similar to that of Japan, Taiwan and South Korea. Those economies, too, followed an export-driven growth model in the past.³ Taiwan and South Korea managed to increase their exports-to-gross domestic product (GDP) ratio considerably even after having already achieved middle-income status. However, their shares of global exports were small, which meant that they did not hit absorption constraints. As a large economy, however, Japan attained an 8% share of global exports in the 1970s. For some product groups, this figure was much higher still. Later on, its global market share only rose slowly. Since the mid-1980s, it has actually been trending downward.⁴ For China, an even larger economy whose global market share has recently already hit 13%, this indicates that exports will not be able to drive the convergence process indefinitely.⁵

What this means going forward is that Chinese growth will be based to an increasing extent on domestic demand. In the relatively recent past, it already grew very sharply. Up until recently, its key determinant was the boom in investment, especially in infrastructure and other construction. The investment-to-GDP ratio ran up to nearly 50% in the past

few years. In Japan, Taiwan and South Korea, investment likewise rose sharply during the development process. However, in none of those countries did the aggregate investment ratio rise quite as sharply as in China.⁶ This observation strengthens the case for believing that China may have witnessed certain exaggerations (see the explanation in the main text beginning on page 42).

In later stages of their convergence processes, Japan, Taiwan and South Korea saw their investment ratio diminish, with consumption acquiring greater macroeconomic importance. During that period, economic growth was increasingly being driven on the supply side by technological progress. Emerging economies can achieve this to a certain extent by adopting foreign technology. However, as they approach the technological frontier, home-grown innovation becomes more im-

1 The other two successful examples are Singapore and Hong Kong, though as city states their stories are not fully comparable with the Chinese case. In fact, there is no generally accepted definition of the income threshold above which a country is considered an "advanced" (or "developed") economy. Since 1989, the World Bank has published an annual classification of countries into four income categories. On this basis, South Korea was first classified as belonging to the highest category – "high-income countries" – in 1995.

2 This observation is consistent with neoclassical growth theory, according to which a country's per capita income converges to a long-run equilibrium path. The further a country's starting position is from the long-run equilibrium, the faster the convergence process will be.

3 See inter alia P W Kuznets (1988), *An east Asian model of economic development: Japan, Taiwan, and South Korea*, Economic Development and Cultural Change, Vol 36, No 3, Supplement, pp 11-43.

4 See K Guo and P N'Diaye (2012), *Is China's export-oriented growth sustainable?*, IMF Working Paper, WPI/09/172.

5 See Deutsche Bundesbank, *The catching-up process of major emerging market economies and its implications for global trade – an analysis using the gravity model*, Monthly Report, March 2016, pp 27-30.

6 Housing construction investment, in particular, seems to be extremely high in China relative to other Asian countries. See Deutsche Bundesbank, *The potential effects of a downturn in the Chinese housing market on the real economy*, Monthly Report, August 2014, pp 17-19.

portant.⁷ Japan, Taiwan and South Korea made efforts early on towards this objective, creating a suitable environment for innovation by, for instance, enhancing the protection of intellectual property rights and investing in human capital. Moreover, they gave financial incentives to private sector companies to engage in research and development. Over time, these countries accomplished key inventions and technological breakthroughs.⁸

China, too, took a technology-driven path in the past few years. However – like the other countries in the region – it cannot simply build up innovative capacity overnight. It is therefore not surprising that, despite a distinct increase recently, China is still lagging far behind in international patent applications relative to its size.⁹ In 2015, the US Patent and Trademark Office registered only six Chinese patents per million inhabitants, whereas Japan, Taiwan and South Korea each posted more than 300 applications per million inhabitants. However, if China's development status is taken into account, the recently achieved figure is quite considerable. Should China successfully navigate the transition from an investment-based to an innovation-driven growth model, it will likely have good prospects for emulating the other Asian countries' growth track.

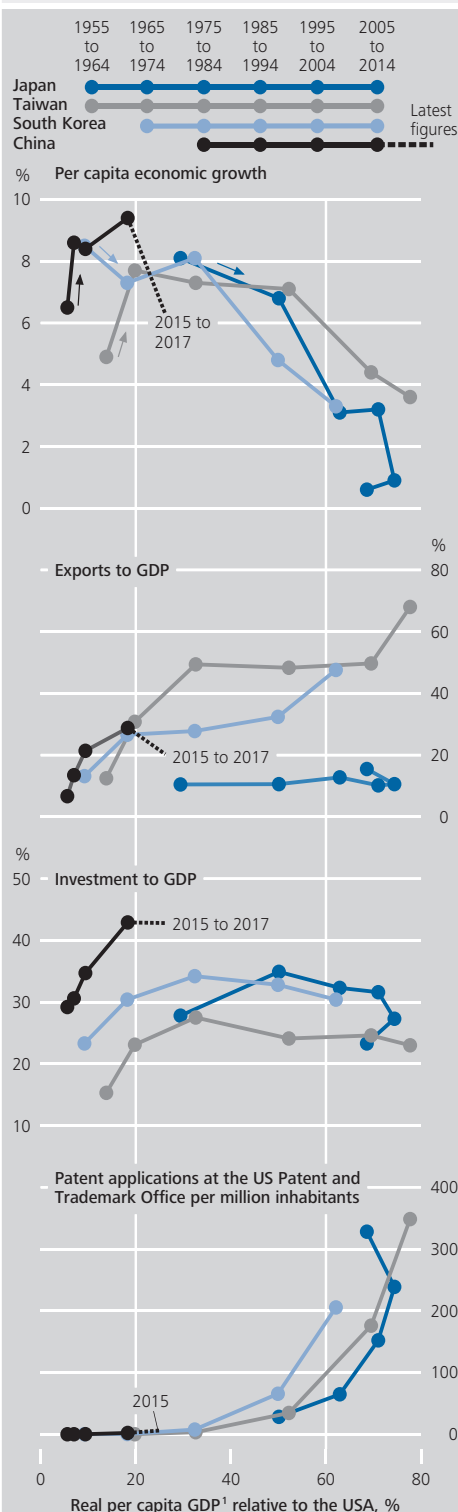
⁷ See inter alia D Acemoglu, P Aghion and F Zilibotti (2006), Distance to frontier, selection, and economic growth, *Journal of the European Association*, Vol 4(1), pp 37-74; and Asian Development Bank, *Transcending the middle-income challenge*, Asian Development Outlook 2017.

⁸ See inter alia World Bank (2012), *China 2030: Building a modern, harmonious, and creative high-income society*, Conference Edition, p 167; and PR Agénor, O Canuto and M Jelenic (2012), *Avoiding middle-income growth traps*, Economic Premise No 98.

⁹ Domestic patent applications, however, are a problematic benchmark since each national authority applies its own standards to patent applications. The benchmark used from here on will be applications registered by the US Patent and Trademark Office as its time series go significantly further back than, for instance, those of the European Patent Office.

Economic metrics of Asian countries during their convergence processes

Ten-year averages

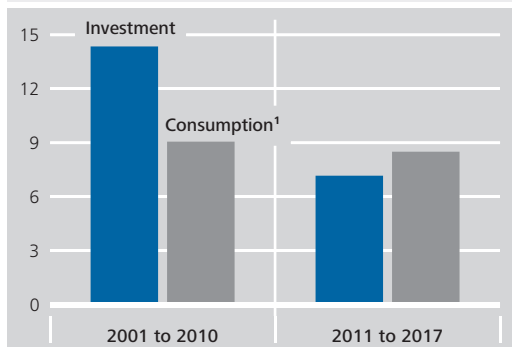


Sources: Penn World Tables 9.0, World Bank (World Development Indicators), US Patent and Trademark Office, national statistics and Bundesbank calculations. ¹ Based on purchasing power parities.

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Growth in investment and consumption in China*

Average growth per year, %, price adjusted



Source: National Bureau of Statistics (NBS) of China and Bundesbank calculations. * Calculations based on officially reported growth contributions and each component's share of nominal GDP. ¹ Including public consumption.

Deutsche Bundesbank

Private consumption gaining in importance

portance to the economy as a whole.²¹ Strong wage growth was a key contributing factor to the rise in significance of consumption. In addition, households markedly reduced their rates of saving. At just under 40%, the saving rate measured as a percentage of disposable income was nevertheless exceptionally high even recently.²² The sharp increase in consumer demand in recent years was accompanied by a considerable shift in the pattern of expenditure. Higher-end goods, such as cars, have gained substantially in importance. In this regard, the rising number of middle-class households plays a vital role. The share of spending on services also grew, which resulted in the Chinese services sector experiencing a boom. Value added in the services sector is now almost 30% higher than in the production industry; up until a few years ago, both economic sectors were still more or less equally significant.²³

Obstacles remain on path to "rebalanced" demand structure

Similar to the transition to innovation-based growth, China is only just taking its first steps on the path to a "rebalanced" overall economic demand structure. In order to further strengthen the role of private consumption, Chinese households would have to reduce their rates of saving, which – to a large extent, seemingly for precautionary reasons – continue to be extraordinarily high. An additional expansion of the social safety net could also contribute to this.²⁴

International impact of the realignment of China's growth model

China is deeply integrated into the global economy. It is not only the world's leading exporter, but also the second largest importer of goods. The transformation of the Chinese economy that is now underway, with its supply-side and demand-side aspects, is likely to bring about major changes to China's role in international markets. There could also be a marked impact on the Germany economy, which is closely intertwined with China via foreign trade. China is now the third largest sales market for German goods, and even ranks first in terms of imports.

Transformation likely to change China's role in international markets

China as a sales market

The distinct slowdown in Chinese economic growth in recent years was accompanied by an even more significant levelling-off in the country's import activities.²⁵ One major factor behind the sharp slowdown in Chinese imports was that, as a result of the decreased momentum in Chinese exports described above, the

Clear levelling-off in import growth

²¹ On the expenditure side, consumption (including public consumption, which is not reported separately), has already been the largest contributor to Chinese economic growth in arithmetical terms every year since 2014.

²² These data are based on the financial accounts, which are available up to 2015.

²³ In addition, the services sector proved to be a driving force for job creation. Between 2010 and 2016, the number of persons employed in that sector rose by more than 70 million.

²⁴ See IMF (2017), China's high savings: drivers, prospects, and policies, IMF Country Report No 17/248, pp 4-16.

²⁵ The slower rate of growth in Chinese goods imports also plays a key role in explaining the sluggish growth in global trade in recent years. See Deutsche Bundesbank, On the weakness of global trade, Monthly Report, March 2016, pp 13-35. It should also be noted that, in contrast to developments in goods trade, Chinese imports of services have risen very sharply in recent years. This is due, in particular, to booming foreign travel. See Deutsche Bundesbank, Driving forces behind the Chinese current account, Monthly Report, January 2015, pp 20-22.

need for foreign intermediate goods fell.²⁶ However, the realignment of China's growth model was an additional significant factor. In light of various technological breakthroughs, it is likely that this has enabled China to successfully replace some of its imports with domestic production. The aforementioned shift of emphasis within Chinese domestic demand probably had an even greater impact. As investment has a higher import content than private consumption, such a shift in demand will, in and of itself, lead to a reduction in imports.²⁷

German exports to China also see weaker growth ...

German exporters are already feeling the effects of weaker import growth in China. Average growth in export earnings (in euro terms) from bilateral trade declined from 19% in the 2000s to 7% between 2011 and 2017. If the general price index for goods exports to non-euro area countries is used as a basis, there was an average increase of 6% in real terms over the past seven years, which was broadly in line with the growth of price-adjusted Chinese imports overall. This allowed Germany to keep its market share in China more or less stable.²⁸

... coupled with shift in sectoral structure

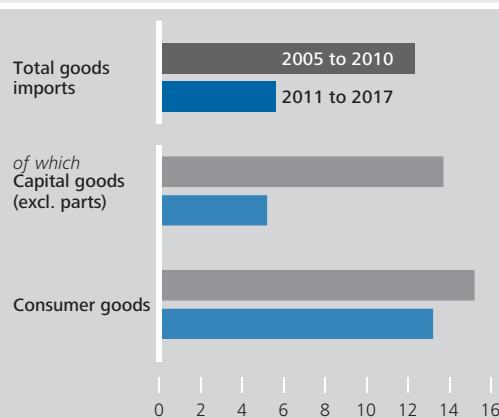
This development is noteworthy since capital goods rank high among Germany's exports. In 2010, almost 30% of Germany's total earnings from goods exports to China were accounted for by machinery alone. In recent years, those exports have risen only slightly, which reflects the slowdown in investment growth in China. By contrast, however, there was robust growth in exports of automobiles and automotive parts.²⁹ In this regard, the shift in demand in China was beneficial for German exporters.³⁰ Another category of goods that has also made gains in recent years is data processing units and electronic and optical products. This includes a number of high-end intermediate goods, such as semiconductors, which China has so far been unable to produce itself.

Moderate growth in German exports to China likely in the future

The ongoing transformation of the Chinese economy is likely dampen the growth of Chinese imports even further. In particular, it is expected that the slowdown in capital goods im-

Growth in Chinese goods imports

Average growth rate per year, %, price adjusted¹



Source: China Customs Administration and Bundesbank calculations. ¹ Based on unit values (quantum index).

Deutsche Bundesbank

ports will continue. In this regard, the lower capital intensity of the emergent services sector could have an impact alongside efforts to reduce inefficient investment. Due to their range of high-end goods, German exporters should greatly benefit from the prospective moderate growth in Chinese imports in the future, too.³¹

The outlook for an ongoing, successful realignment of the Chinese economy is, however, not

²⁶ According to one estimate, nearly half of the slowdown in Chinese imports in recent years was due to the loss of momentum in export growth. See JS Kang and W Liao (2016), Chinese imports: what's behind the slowdown?, IMF Working Paper, WP/16/106.

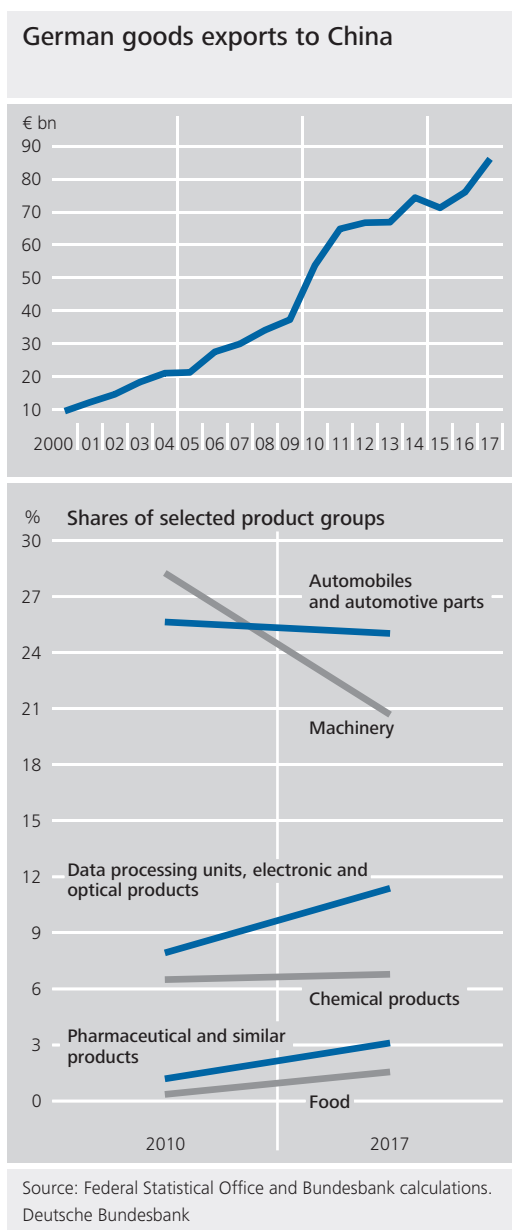
²⁷ According to an evaluation of the World Input-Output Database (WIOD), investment in China comprised just under 18% of foreign value added in 2014. At around 12%, the import content of private consumption was markedly lower.

²⁸ Measured in terms of total Chinese expenditure on non-commodity imports, Germany's market share in recent years amounted to an average of 7½%.

²⁹ The 6½% per year average growth in exports of automobiles and automotive parts recorded over the past seven years is largely due to growth spikes in 2011 and 2012. It is likely that the subsequent subdued growth was linked to German manufacturers significantly expanding car production in China. See Deutsche Bundesbank, Reasons for the recent slump in German goods exports to China, Monthly Report, November 2013, pp 47-49.

³⁰ Other examples are food and medicines. The corresponding earnings from exports to China rose sharply from 2011 to 2017, by an average of 32% and 23% per year respectively.

³¹ Another reason is the significant reductions in import tariffs on automobiles and automotive parts introduced by China on 1 July 2018, which are likely to be especially favourable to German companies.



Successful transition scenario, but with downside risks

without risk. For instance, debt has risen sharply, which poses a risk to the financial system and economic growth. With regard to China's global significance, an abrupt downturn would have international spillover effects – not least for the German economy, which shares close trade interlinkages with China (see box on pages 53 and 54).

China as a supplier and competitor

The transformation of the Chinese economy will likely change the country's role in the inter-

national division of labour, too. Consumers in industrial countries have greatly benefited from China's specialisation in labour-intensive products thus far. According to various studies, consumer price inflation was dampened by the availability of cheap imports from China and other emerging market economies.³²

Consumers in industrial countries benefited from cheap Chinese imports in the past

The strong wage growth in China raises the question of whether these disinflationary effects have now petered out or even reversed themselves.³³ There is no evidence for the latter, at least. That is partly because there are other countries in the region that still have very low wage costs – labour-intensive production in China was able to migrate to these countries. Accordingly, China's share of labour-intensive products imported into the European Union (excluding intra-EU trade) has fallen considerably in recent years, while Asia's share as a whole has remained practically unchanged. It is unclear to what extent countries such as Vietnam and Bangladesh will continue to have sufficient capacity to absorb labour-intensive industrial sectors pulling out of China in the future.

Have the disinflationary effects now reversed themselves?

For advanced economies, the realignment of Chinese industry could raise the degree of competition. Even in the last few years, Chinese companies have increasingly been coming into competition with suppliers from industrial

Competitive pressure from China in third markets ...

³² An earlier study found that, due to cheap imports from Asian emerging market economies, consumer price inflation in the euro area was suppressed by an average of 0.3 percentage point per year between 2001 and 2005. A more recent paper concerning the effects of cheap imports from low-wage countries on France estimates this figure to be 0.2 percentage point for the 1994 to 2014 period. See N Pain, I Koske and M Sollie (2006), Globalisation and inflation in the OECD economies, OECD Working Paper 524; and J Carluccio, E Gautier and S Guilloux-Nefussi (2018), Dissecting the impact of imports from low-wage countries on French consumer prices, Banque de France Working Paper Series No 672. In the overall picture for consumers, however, it must be acknowledged that China's upswing has contributed to higher commodity prices. See, for example, S Eickmeier and M Kühnlenz (2016), China's role in global inflation dynamics, Macroeconomic Dynamics, Vol 22(2), pp 225-254.

³³ See also Deutsche Bundesbank, The development of labour costs in China and their impact on consumer prices in the industrial countries, Monthly Report, May 2013, pp 13-15.

The international spillover effects of a sharp economic downturn in China

The outlook for the Chinese economy remains generally upbeat, with the International Monetary Fund's baseline scenario in the April 2018 World Economic Outlook projecting that GDP growth will slow just gradually to 5½% in 2023. But the sharp rise in debt, particularly in the corporate sector, and opaque interlinkages in the financial system entail not inconsiderable risks which cannot be ignored (see the box on pages 44 to 46).

The international spillover effects of a potential sharp downturn in China triggered by a crisis in the country's financial system have already been analysed in numerous studies. There are also macroeconomic model-based studies looking at the repercussions specifically for Germany and for the euro area.¹ These tend to investigate the consequences of a general demand shock in China. In the past, in other countries where periods of excessive credit growth have culminated in financial crises, it has been investment activity which has taken a particular hit, however. Investment growth in the affected countries dropped by an average of 12 percentage points, whereas private consumption growth slowed by an average of 3 percentage points.²

The fact that investment and consumption react differently is important in terms of external knock-on effects since, in general, investment is characterised by a higher import intensity than private consumption – and this holds true in the case of China, too.³ As a result, a decline in investment would be channelled to foreign markets to a greater degree than the same size drop in private consumption. Studies positing simply a generalised reduction in domestic demand in China are therefore likely to underestimate spillover to other countries.

In the NiGEM global economic model,⁴ which will be used for the following simula-

tions, imports are influenced by a country's aggregate demand. It therefore makes no difference whether a shock affects certain demand components to different degrees. It is only by adapting the model that differences in the import content of the individual expenditure components can be factored in.⁵ The respective (country-specific) import intensities were estimated on the basis of data from the World Input-Output Database (WIOD).⁶

¹ These include Deutsche Bundesbank, The international ripple effects of a severe economic slowdown in China, Monthly Report, July 2015, pp 29-30 and A Dieppe, R Gilhooly, J Han, I Korhonen and D Lodge (2018), The transition of China to sustainable growth – implications for the global economy and the euro area, ECB Occasional Paper No 206.

² Based on a sample of 35 periods of excessive debt build-up in emerging markets and advanced economies between 1960 and 2010, identified using a country-specific threshold factoring in the variance of the normal credit cycle. See A Abiad, M Lee, M Pundit and A Ramayandi (2016), Moderating growth and structural change in the People's Republic of China: implications for developing Asia and beyond, ADB Briefs No 53, and E Mendoza and M Terrones (2012), An anatomy of credit booms and their demise, NBER Working Paper 18379.

³ See M Bussière, G Callegari, F Ghironi, G Sestieri and N Yamano (2013), Estimating trade elasticities: demand composition and the trade collapse of 2008-2009, American Economic Journal: Macroeconomics, 2013, 5(3), pp 118-151.

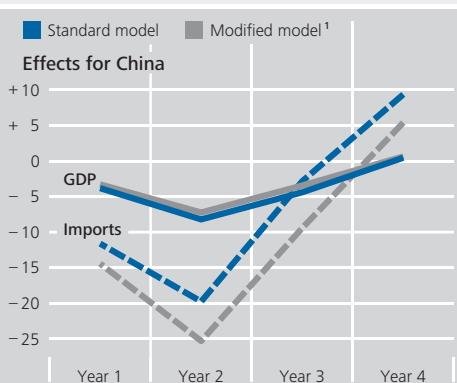
⁴ NiGEM is a macroeconometric model developed by the UK-based National Institute of Economic and Social Research (NIESR). It includes most of the OECD countries as well as important emerging economies. International linkages are modelled through foreign trade and the interest rate-exchange rate nexus. For further information on the model structure, see <https://nimodel.niesr.ac.uk>

⁵ See M Jorra, A Esser and U Slopek (2018), The import content of expenditure components and the size of international spillovers, National Institute Economic Review, 244, pp R21-R29.

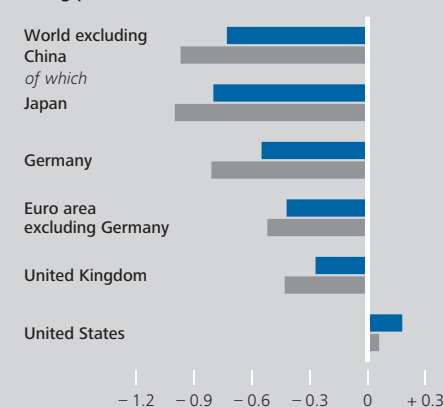
⁶ The WIOD datasets allow intermediate inputs to be captured across national borders and individual sectors' supply to be broken down by end-use categories. In this way, an import share can be determined for each expenditure component. Calculations are based on the 2016 release available at www.wiod.org. See M Timmer, E Dietzenbacher, B Los, R Stehrer and G de Vries (2015), An illustrated user guide to the World Input-Output Database: the case of global automotive production, Review of International Economics, 23(3), pp 575-605.

Impact of an abrupt economic downturn in China according to NiGEM simulations*

Deviation from the baseline, %



Spillover effects on GDP for a selection of China's trading partners



Source: Bundesbank calculations using NiGEM (Version 4.17).
* Shocks to growth rates of Chinese investment (-12 percentage points) and private consumption (-3 percentage points) persisting for two years. Rules-based monetary policy assumed.
† Modified model takes into account differences in the import content of the individual expenditure components.
Deutsche Bundesbank

For a simulation with the adjusted model, the analysis uses shocks to investment and private consumption in China corresponding to the above-mentioned historical values for other countries with financial crises.⁷ It is assumed that, in the medium run, both variables return to the path originally laid out. In the simulation, the Chinese economy therefore experiences a substantial slowdown in growth. In the first two years of the shock, real gross domestic product (GDP) growth contracts to an average of just 2%. This means that China's economic output undershoots the baseline by 7% in the second year. In the same period, China's import volume falls short of

the baseline by as much as one-quarter. The relatively high sensitivity of imports to the downturn in investment is a key factor here: in a simulation using the standard version of NiGEM, imports decline by just one-fifth.

Using the adapted model, this simulation thus yields spillover effects which – averaged across all trading partners – are around one-third higher. Germany's real GDP drops markedly against the baseline, by 0.8% after two years, compared with just under 0.6% in the standard model. Both variants of the model show Germany experiencing greater output losses than other euro area countries. This is due, in particular, to the German economy's very high degree of export exposure to China.⁸

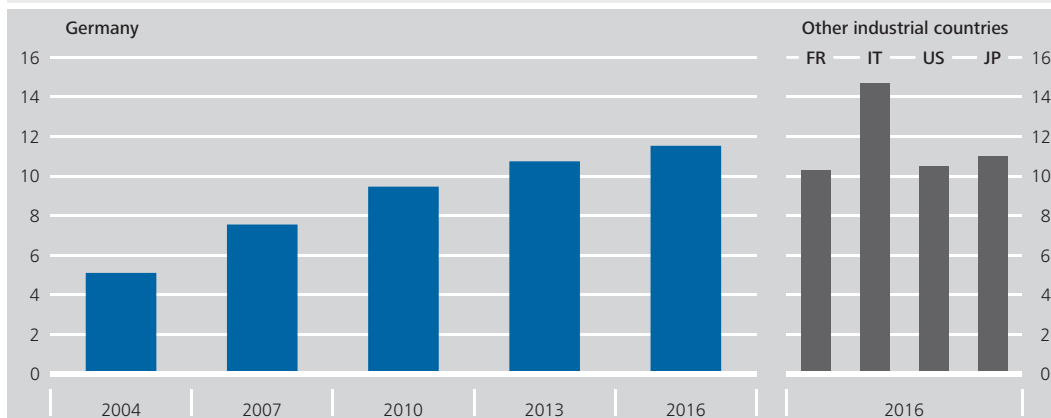
It should be noted that even the adapted model could still underestimate international spillover. The simulations assume a practically stable Chinese currency throughout the downturn, yet if such a situation were to see a significant depreciation of the renminbi, the repercussions for China's trading partners would probably be even greater. Likewise, the simulation does not account for a global loss of confidence among economic agents, in particular in the financial markets, triggered by a crisis in China.

⁷ However, there are certain circumstances applying to the Chinese economy that make it conceivable that a crisis might have milder effects than those observed in other countries. For instance, the Chinese authorities could well have at their disposal more effective means for stimulating demand than other emerging markets.

⁸ As a percentage of nominal GDP, Germany's goods exports to China last year amounted to 2.6%, compared to an average of 1% for other euro area countries.

Indicator for competitive pressure from China

Weighted global market share of Chinese exports, %¹



Source: UN Comtrade and Bundesbank calculations. ¹ China's market share of global goods exports in 230 goods categories weighted by the respective category's share of exports of each observed industrial country.

Deutsche Bundesbank

countries in third markets. A simple metric can be used to systematically capture the competitive pressure exerted by China on the exporters of individual countries. China's global market share of exports in 230 goods categories is calculated³⁴ and weighted by the respective category's share of exports of the observed industrial country. In all of the industrial countries surveyed, the degree of competition measured using this method has risen continuously since 2004. According to the indicator, competitive pressure on Germany from China in 2016 was at a similar level to other industrial countries.

Competitive pressure from China could rise over the coming years for the German economy in particular.³⁵ This is due in part to the fact that current Chinese industrial policy is largely focusing on sectors in which German companies have a strong global market presence. In the automotive sector in particular, there could be considerably more friction between German and Chinese companies. So far, China has only reached a global market share of 4½% for such exports (mainly automotive parts). As part of the "Made in China 2025" action plan, however, the development of the electric vehicle sector is being massively promoted. The domestic market is seeing strong growth and is already dominated by Chinese models.³⁶ In the medium term, large-scale ex-

ports of electric vehicles from China may also be expected.

Conclusion

With China's previous growth model increasingly hitting its limits, the Chinese government is aiming to create a new foundation for the country's economic catching-up process. On the supply side, the transformation is being accompanied by improving technology in industry and a growing significance of the services sector. On the demand side, forces are shifting from exports and investment to consumption.

Realignment of growth model has begun ...

... could rise over coming years for Germany in particular

³⁴ The goods categories used correspond to the chapters (two-digit) of the United Nations Harmonized Commodity Description and Coding System (HS). The two most significant chapters for Chinese exports – 84 (machinery and mechanical appliances) and 85 (electrical machinery and equipment) – were broken down even further.

³⁵ German enterprises operating in China are already reporting significantly increased competitive pressure from Chinese companies in recent times. See German Chamber of Commerce in China (2017), German Business in China – Business Confidence Survey 2017/18.

³⁶ Around half of the 1.2 million electric vehicles sold worldwide in 2017 were sold in China. Of those, the share of foreign models is, at 4%, extremely low. See Germany Trade and Invest, Elektromobilität VR China: Die Weichen sind gestellt, <https://www.gtai.de/GTAI/Navigation/DE/Trade/Maerkte/suche,t=elektromobilitaet-vr-china-die-weichen-sind-gestellt,did=1883192.html>

*... but some
aspects could
lead to conflict*

In order to support the structural change, the Chinese authorities are already implementing important reforms in a number of areas. Partner countries have been critical of certain political measures, particularly in industrial policy, with some, such as the United States, also using them as justification for their own trade policy measures. Against this backdrop, further improving the general environment for innovation as well as continuing to push the Chinese economy to open up to foreign investment – something that has been neglected in recent years – would be less contentious and also

probably more beneficial from a macroeconomic standpoint.

For the German economy, the transformation in China is likely to have wide-ranging implications. If a realignment of the growth model is successful and China continues to catch up at a rapid pace, German exporters may be presented with excellent market opportunities in the future, too. At the same time, however, it is expected that competitive pressure from China will also rise. In the coming years, it is precisely German enterprises that could feel the effects.

*Transformation
in China
presents oppor-
tunities and risks
for German
economy*

Trends in the financing structures of German non-financial corporations as reflected in the corporate financial statements statistics

The funding structures of German non-financial corporations have changed discernibly since the turn of the millennium. From a longer-term perspective, the strong increase in intra-group liabilities and the declining importance of trade credits are striking, as are the trends towards convergence in terms of both higher equity ratios and lower bank debt ratios. The effects are partly the result of macroeconomic trends such as the internationalisation of the German economy and the creation of complex value chains. On balance, the German non-financial corporations sector has seen a considerable across-the-board improvement in its financial viability and hence its resilience to exogenous shocks.

Based on a microdataset from the Bundesbank's corporate financial statements statistics, the results show that the trend among non-financial corporations towards strengthening their own funds base continued between 2010 and 2015. The marked observable differences in the past in the equity ratios according to sector and size category have decreased significantly. In addition, there was a marked reduction in bank loans and trade payables during the observation period. At the same time, particularly small and medium-sized enterprises as well as non-affiliated enterprises saw an expansion of liquidity reserves on the asset side of their balance sheets. This could be interpreted as losses of flexibility in short-term funding in some segments of the corporate sector being offset by increased holdings of cash. Intra-group financing, which has now emerged as the second most important source of funding for non-financial corporations, continues to make advances. In this context, the funds are often raised by group financing companies on the international financial markets in the form of syndicated loans and securities issues.

Changes in the underlying economic and financial conditions as a challenge for corporate financing

Increase in equity ratio since late 1990s

Since the turn of the millennium, there have been marked changes in the underlying economic and financial conditions for German non-financial corporations. This has also left a lasting mark on how enterprises make decisions on the nature and structure of funding. Besides shifts in debt financing, it has been chiefly the strengthening of the own funds base that has been striking. After the German corporate sector was deemed to be undercapitalised by international standards in the late 1990s, within a period of ten years, non-financial enterprises had increased their equity ratio by 5 percentage points on average to 25% in 2008.¹ The associated strengthening of financial resilience in conjunction with other measures was a key prerequisite for German enterprises emerging unharmed from the “endurance test” provided by the severe recession in the fourth quarter of 2008 and the first quarter of 2009, without reduced output in the medium to long-term and protracted job losses.

Return to decent earnings level after recession

As global demand bounced back in 2010 and 2011, German enterprises returned relatively swiftly to the decent level of profitability of the pre-crisis period. Initially, the crisis-induced adjustments in the balance sheets, which focused mainly on safeguarding liquidity, were gradually reduced. Moreover, the underlying trends in corporate funding from the pre-crisis years have persisted into the current decade. For example, equity capital now makes up an average of 30% of non-financial corporations’ total assets.

Evaluations based on balanced sample of enterprises ...

Possible explanations for the ongoing strengthening of the equity base and the interaction with other funding-related developments are discussed below. This is based on empirical analyses using granular data from the Bundesbank’s financial statement statistics between

2000 and 2015. Balanced samples of enterprises for which annual accounts are available at the beginning and the end of each observation period are formed. This is done to ensure that the observed changes in the balance sheet items are due to economic effects and not to changes in the composition of the sample. However, in return, it has to be accepted that representativeness is limited to a certain extent.

In a first step, there is an examination of the hypothesis of whether the development in the current decade towards higher equity ratios and lower bank debt ratios can be regarded as part of an ongoing convergence process since at least the end of the 1990s. This implies the notion that the extent of the adjustments depends on the company-specific starting points in terms of the two balance sheet variables. Heterogeneity in the corporate sector may be explicitly taken into consideration through distribution analyses and microeconomic studies.

In a second step, changes in the funding structure during the period from 2010 to 2015 are examined in the context of the balance sheet. In this regard, it is worth taking a look at individual sectors or enterprises of different size categories and legal forms. The disaggregated analysis is also linked to the fact that the economic upturn since 2010 has been based more strongly on domestic forces of growth than the expansionary phase between 2003 and 2008. Most recently, for example, construction, trade and some services sectors experienced a comparatively strong economic tailwind, which helped make balance sheet adjustments that had been carried out mainly by industrial enterprises in the more strongly export-led upswing of the previous decade.

The funding patterns in the current decade also reflect changes in the underlying financial con-

... to analyse longer-term convergence trends in equity and bank debt ...

... and changes in financing structures between 2010 and 2015 ...

¹ See Deutsche Bundesbank, Extrapolated results from financial statements of German enterprises 1997 to 2016, Special Statistical Publication 5, December 2017.

... against the backdrop of new financial conditions

ditions. Given exceptionally low lending rates, the sustained trend towards reducing the share of liabilities to credit institutions in total assets can only be explained in the context of additional key determinants such as the financial implications of the internationalisation of the German economy and the creation of value chains, especially as credit supply-driven constraints beyond the point when the financial crisis reached its peak are unlikely to have hurt the greater part of the German corporate sector to a major extent.² Specifically, the evaluations indicate that the increase in intra-group liabilities³ in the corporate balance sheets may be attributable not only to operational processes but also, to a large extent, to funding operations in the international financial markets.

German enterprises' financing behaviour from a longer-term perspective

Longer-term trends in enterprises' financing behaviour

The financing behaviour of German non-financial corporations in terms of their balance sheets since the turn of the millennium is essentially characterised by four trends.⁴

- Sustained strengthening of the equity capital base
- Substantial reduction in bank debt
- Declining funding opportunities from suppliers
- Strong expansion of intra-group liabilities

The considerable growth rate of intra-group liabilities (and, in parallel with them, the corresponding claims) is related to trend factors in the real economy, such as the creation of value added processes based on the division of labour⁵ and the increasing internationalisation of the German economy,⁶ as well as the deployment of group financing companies to raise funds in the international financial markets.

The existence of trends towards convergence in terms of a higher equity ratio and a lower bank debt ratio suggests that the corporate sector's financial resilience and, hence, internal capital adequacy has increased across the board. Studies on the longer-term adjustment processes, the scale of which depends on the company-specific starting positions, are based on a balanced sample of around 15,600 enterprises for which balance sheet data are available for 2000 and 2015. For this purpose, the enterprises are grouped into deciles according to their equity ratio or bank debt ratio in 2000.

As the chart at the top of the next page shows using the decile-specific medians, the increase in the equity ratio between 2000 and 2015 tended to be all the stronger, the lower the starting level was. Furthermore, there were striking developments at the borders of the distribution. Thus, the median of the enterprises in the lowest decile increased from negative territory to 16% in 2015. By contrast, the enterprises in the highest decile slimmed down their comparatively generous equity base somewhat in 2000.

Convergence trends were even more pronounced regarding the bank debt ratio. In the chart at the bottom of the next page this can be seen, for instance, by the fact that the gap

Analysis of trends towards convergence based on balanced samples of enterprises ...

... in terms of the equity ratio ...

... and regarding the bank debt ratio

² See Deutsche Bundesbank, Developments in corporate financing in the euro area since the financial and economic crisis, Monthly Report, January 2018, pp 53-71.

³ Recorded on the liabilities side, these are liabilities to affiliated enterprises as well as liabilities to other long-term investees and investors.

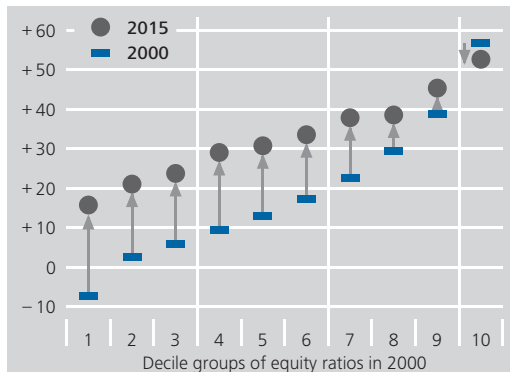
⁴ The development of financing structures in the first decade of the 21st century has already been the subject of earlier Bundesbank analyses. See, for example, Deutsche Bundesbank, Long-term developments in corporate financing in Germany – evidence based on the financial accounts, Monthly Report, January 2012, pp 13-27; and Deutsche Bundesbank, Capital base of non-financial enterprises in Germany sustainably strengthened, Monthly Report, December 2013, pp 44-26.

⁵ See Deutsche Bundesbank, The German economy in the international division of labour: a look at value added flows, Monthly Report, October 2014, pp 27-42; and Deutsche Bundesbank, Structure and dynamics of manufacturing production depth as reflected in the financial statements of German enterprises, Monthly Report, June 2016, pp 56-58.

⁶ See Deutsche Bundesbank, The impact of the internationalisation of German firms on domestic investment, Monthly Report, January 2018, pp 13-26.

Comparison of non-financial corporations' equity ratios in 2000 and 2015*

as a percentage of total assets, decile group medians



* Balanced sample of 15,582 enterprises.
Deutsche Bundesbank

between the medians of the first and tenth deciles more than halved from 72 percentage points in 2000 to 32 percentage points in 2015.⁷ The degree of downward adjustment also tended to be all the greater, the higher the debt ratio was in 2000. Moreover, the hypoth-

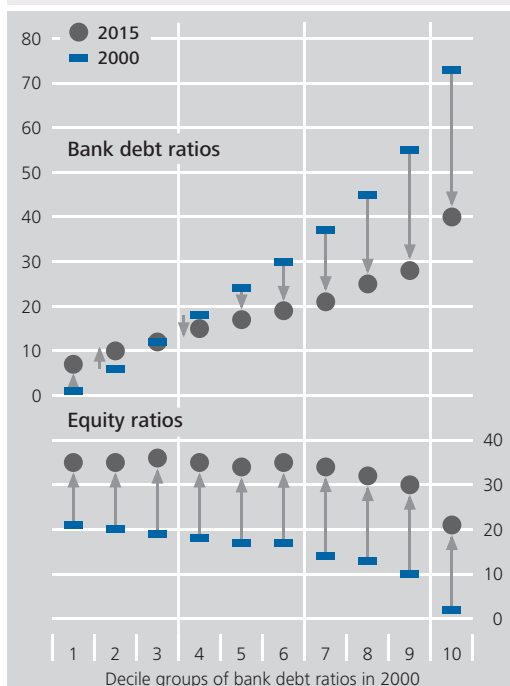
esis of a convergence process is additionally supported by the fact that the fifth of enterprises with the lowest initial values slightly increased bank liabilities as a percentage of total assets in the period under review.

Looking at the equity ratios in the period from 2000 to 2015 in the deciles grouped by the bank debt ratio, it is possible to discern substantial increases in all group-specific medians. In addition, the medians for all groups except the decile of enterprises with the highest debt ratio were in the quite narrow range of an equity ratio between 30% and 35%, whereas the starting positions in 2000 had been spread a great deal more widely. Furthermore, the findings of the distribution analysis underline the fact that the size of the equity ratio was clearly negatively correlated with the share of bank liabilities in total assets at the time. First, the enterprises which counted among the 10% with the highest bank debt ratios in 2000 had considerably increased their equity ratios from a very depressed level by 2015, but failed to match the level of the other enterprises with a median of just over 20%. Second, the enterprises in this decile reduced their bank debt more than others.

Equity ratios now hardly correlated with bank debt

Convergence in the equity and bank debt ratios of non-financial corporations between 2000 and 2015*

as a percentage of total assets, decile group medians



* Balanced sample of 12,615 enterprises.
Deutsche Bundesbank

Further indications of equity and bank debt converging – each in relation to total assets – are provided by microeconomic studies of convergence hypotheses, which are taken from empirical research into growth and development economics (see the box on page 62).

Convergence trends also confirmed by convergence tests

Capital structures in the non-financial corporations sector from 2010 to 2015

In order to shed some light on the question of what changes occurred in the structural fund-

⁷ Around 20% of the enterprises in the balanced sample show no bank liabilities in their balance sheets in 2000. The analyses based on the decile groups sorted by bank debt ratio are therefore supported by a sample of around 12,600 enterprises.

Study of the structural financing patterns based on financial statement data from 2010 and 2015, ...

ing patterns of German non-financial corporations once they had recovered from the severe recession of the final quarter of 2008 and the first quarter of 2009, we analyse balance sheet data of a balanced sample of around 39,000 enterprises for which financial statement statistics are available for 2010 and 2015.

... which account for more than 50% of the total turnover of all enterprises

The enterprises included in the study account for more than 40% of the financial statements used in the extrapolated data in the corporate financial statement statistics. With regard to overall turnover, which is recorded for all enterprises by the Federal Statistical Office, the compiled dataset for 2015 represents a share of more than 50%. Clearly underrepresented, above all, are small enterprises at just under 7%, compared with large enterprises at 68%.⁸ Owing to the high degree of correlation between the two corporate characteristics, this also applies, albeit to a lesser extent, to the coverage of non-affiliated enterprises (34%). Of the aggregated economic sectors, only construction has a particularly unfavourable coverage at just under 24%. On the whole, however, for an empirical study based on microdata, the analysis has a relatively comprehensive database.

Equity

Distinct increase in median values of equity ratio between 2010 and 2015 ...

The results of the study clearly show that the non-financial enterprises from the balanced sample further increased their stocks of equity capital in the period from 2010 to 2015. According to the median values, the equity ratio rose during the observation period by more than 5 percentage points from 24.2% to 29.4% of total assets (see the table on page 64). By contrast, based on the arithmetic mean,⁹ there was only a minor increase from 31.9% to 32.4%. This shows that large enterprises have, in the past few years, been significantly more restrained in increasing their liabilities by raising new funds, while some enterprises have even reduced their liabilities.¹⁰

A size-category-specific analysis of movements in equity ratios confirms this finding. In the five years up to 2015, small enterprises increased their equity capital based on the median from 21.7% to 28.3% of total assets, ie by more than 6.5 percentage points. Somewhat less marked was the increase in liable funds in the case of medium-sized enterprises, where the ratio went up from 26.1% to 30.6% during the period under review. In the case of large enterprises, the equity ratio in the median was boosted by no more than 2.6 percentage points to 29.8%.

... especially in the case of small enterprises, ...

The results thus show that the earlier clear gap between the equity ratios of small and large enterprises in the non-financial corporations sector in Germany has now largely disappeared. The group of medium-sized enterprises, in fact, currently stands at the top of the non-financial corporations sector's equity pyramid.

... as a result of which the gap in equity financing to larger enterprises has virtually disappeared

Such a convergence of equity ratios cannot be seen in the breakdown of enterprises by legal form, however. The median equity capital of corporations saw dynamic growth, rising from 28.0% to 34.2% of total assets. While the liable capital of non-corporations also grew over the five-year observation period, the ratio went up by no more than 2.1 percentage points, meaning that – measured by the median – non-corporations' equity ratio in 2015, at 17.1%, was exactly half of the figure for corporations, and that remaining disparities in the en-

Still major disparities between the equity bases of corporations and non-corporations ...

⁸ Enterprises are grouped into size categories based on their turnover. In line with the classification recommended by the EU, small enterprises have a turnover of below €10 million, medium-sized enterprises have a turnover of between €10 million and below €50 million, and large enterprises have a turnover of €50 million and more.

⁹ In this report, the term "arithmetic mean" always refers to the arithmetic mean weighted by total assets, which takes account of the differing sizes of enterprise; at the same time, the ratios are in relation to total assets.

¹⁰ While the extrapolated results of the Bundesbank's financial statement statistics are generally presented as weighted arithmetic means, this particular study chiefly uses (unweighted) median values. These are much less prone to outliers and are not determined by the recognisable size effects in the cross-sections, which represents a greater robustness in statistical terms.

Microeconomic findings on the convergence of non-financial corporations' equity and bank debt ratios in the period from 2000 to 2015

The concepts of beta and sigma convergence are well known from the empirical literature on convergence processes in growth and development economics.¹ Generally, these are statistical parameters indicating that, for a large number of observation units, the path of a variable over time may be interpreted as an adjustment process towards a standardising target value. The econometric verification manages without the specification of the target value. In the case under consideration, the observation units are those 15,600 enterprises for which balance sheet data are available for 2000 and 2015. The presence of convergence is investigated here for the equity ratio and bank debt ratio.

Beta convergence characterises an adjustment that takes place all the more quickly, the smaller the initial value is. Given a very high level at the beginning, a reduction should occur. In the case of equity ratios, the upward movement is likely to dominate, whereas the bank debt ratios are predominantly adjusted downwards. Irrespective of the main direction of movement, the test for beta convergence is based on the following regression:

$$\Delta x_i^{2000/2015} = \alpha + \beta x_i^{2000} + \epsilon_i,$$

where $\Delta x_i^{2000/2015}$ is the change in the balance sheet ratio of enterprise i under consideration between 2000 and 2015, x_i^{2000} is the balance sheet ratio of 2000, α is a constant and ϵ_i the error term.

Using the simple ordinary least squares method (OLS), β is estimated at -0.60 in the case of the equity ratio and at -0.63 for the bank debt ratio. As the standard errors of the coefficient estimates each stand at 0.01, the condition for the presence of beta convergence ($\beta < 0$) is fulfilled. Estimating the model, for the purpose of a robustness check, also using the LAD method,² produces results of

-0.48 and -0.52 respectively, which are of a similar magnitude.

Sigma convergence, in this context, refers to the narrowing of the dispersion of the equity ratios and bank debt ratios respectively between 2000 and 2015. Beta convergence is a necessary, but not sufficient, condition for sigma convergence. It is for that reason that this criterion is additionally investigated. Moreover, a distinction is to be made between an absolute narrowing of the dispersion as measured, for instance, by the standard deviation, and a reduction in the dispersion relative to the mean value, expressed, for example, by the coefficient of variation.

In the case of the equity ratio, the standard deviation increased slightly from 26 percentage points to 28 percentage points between 2000 and 2015. Given the fact that there was a sharp rise in the mean value during this period, the coefficient of variation decreased substantially from 1.5 to 0.9. As a result, the dispersion of the own funds ratio declined in relative terms rather than in absolute terms. The opposite is true of the bank debt ratio. In this case, the standard deviation declined from 26 percentage points to 22 percentage points between 2000 and 2015. However, the sharply reduced mean value during this period led to an increase in the coefficient of variation from 0.8 to 1.1.

¹ For further information, see, for example, X Sala-i-Martin (1996), The classical approach to convergence analysis, *Economic Journal*, 106, pp 1019-1036, and A Young, M Higgins and D Levy (2008), Sigma convergence versus beta convergence: Evidence from US country-level data, *Journal of Money, Credit and Banking* 40, 5, pp 1083-1093.

² The LAD estimate is based on the absolute deviations being minimised (least absolute deviation: LAD). As these are amount-related deviations, the estimation results are typically more robust to outliers than in the case of minimum square deviations. With regard to the distribution of residuals in the regressions, this property proves to be an advantage.

terprises' equity bases in fact became even larger.

... due to different liability rules

Differing statutory liability rules are a key factor affecting persistent legal form-specific differences in the provision of enterprises with own funds. Whereas only the equity capital and any additional collateral provided can be drawn on in the event of a corporation's bankruptcy, in the case of non-corporations, the company owner's liability is unlimited and includes all personal assets. The equity holdings in the balance sheet therefore lose their importance as the sole measure of the amount of liable capital as well as for the acquisition of funds.¹¹

Lower equity bases in the case of group enterprises given ability to obtain funds centrally within group

The results also suggest that enterprises which are structured as group enterprises in an economic and organisational sense normally have a lower equity base than those that are not affiliated with a group, although it was possible to derive this enterprise characteristic in the present study only indirectly from the existing balance sheet data.¹² In groups, funds are often obtained centrally through the parent company, a holding company or a special financing company. In this way, the management of intra-group financing needs is optimised and the financial autonomy of groups vis-à-vis banks is strengthened.¹³ According to the results obtained from the present study, non-affiliated enterprises saw relatively large increases in their equity ratios in the observation period; in the median, they rose relatively sharply from a comparatively low level of 22.7% to 30.3%. The level and dynamics of capitalisation at affiliated enterprises, on the other hand, were significantly lower, with the ratio only rising from 24.8% to 28.9%.

Structural analysis confirms the increase in equity capital in large segments of the non-financial corporate sector, ...

The trend towards a further increase in equity and a levelling of the differences in equity ratios can also be seen if the results are broken down by economic sector. In the manufacturing sector, the median values increased from 29.3% to 33.9%; in energy and water, the figure went up from 28.2% to 35.8%; and there was a similar development in wholesale and retail trade,

with a rise from 24.6% to 29.6% (with corresponding increases in their mean values). Thus, equity ratios of just over 30% on average are now the norm in large segments of the non-financial sector.

One exception is construction, which traditionally has low equity ratios. The results show that the liable capital situation in this sector, which has been strained for many years, saw a further marked improvement during the observation period, which is evidently due to the rebound in construction activity since 2010 and resulting growth in profitability. Over the five years observed, the increase in equity ratios was relatively clear, with the median climbing from 14.0% to 18.4%. However, this means that they are still just over one-third below the comparable figures of the other sectors.¹⁴ The weak capitalisation of the construction industry is partly related to its operational structure, as most construction firms are owner-operated small and medium-sized enterprises with the legal form of non-corporations,¹⁵ and hence they generally hold less equity capital for liability purposes.¹⁶ Furthermore, statistically, advance payments are usually fairly high in the

... with equity ratios in the construction sector still just over one-third below those of other sectors

¹¹ See Deutsche Bundesbank, Verhältniszahlen aus Jahresabschlüssen deutscher Unternehmen von 2014 bis 2015, Special Statistical Publication 6, May 2018, p. 6.

¹² Enterprises are classified as affiliated with a group if data are reported for at least one of the asset or liability items relating to participating interests or affiliated companies.

¹³ See H. Friderichs, Unternehmensanalyse im Zeichen zunehmender Internationalisierung der deutschen Wirtschaft, Wirtschaftsdienst, Vol. 94, No. 11, November 2014, pp. 11 ff.

¹⁴ The results for the services sector buck the trend somewhat, as the median values here indicate a strong increase from just 21.5% to 26.1%, while the arithmetic means even suggest a decline from 38.2% to 36.2%, with the latter very clearly reflecting particular developments in the case of large enterprises.

¹⁵ In 2011, just over two-thirds of all operations in the construction sector were registered as sole proprietorships. See Federal Institute for Research on Building, Urban Affairs and Spatial Development, Konsequenzen veränderter Finanzierungsbedingungen für die Bauwirtschaft, Bonn, 2016, p. 15.

¹⁶ According to the extrapolated data from the corporate financial statement statistics, non-corporations in the construction sector recorded an equity ratio of just under 11% in 2015, while the equity capital of corporations as a percentage of total assets was almost twice as high.

Developments in non-financial corporations' equity capital*

As a percentage of total assets

Classification	2010		2015	
	Median	Weighted average	Median	Weighted average
All enterprises	24.2	31.9	29.4	32.4
By turnover size category				
Less than €10 mn	21.7	28.7	28.3	33.8
€10 mn to less than €50 mn	26.1	33.4	30.6	36.5
€50 mn or more	27.2	31.9	29.8	32.0
By economic sector				
Manufacturing	29.3	31.7	33.9	31.7
Electricity and water supply and waste management	28.2	29.9	35.8	33.9
Construction	14.0	16.2	18.4	18.5
Wholesale and retail trade and repair of motor vehicles and motorcycles	24.6	27.5	29.6	31.3
Service activities ¹	21.5	38.2	26.1	36.2
By group affiliation				
Affiliated	24.8	31.9	28.9	32.3
Not affiliated	22.7	32.0	30.3	38.5
By legal form				
Corporations	28.0	32.8	34.2	33.4
Non-corporations	15.0	25.8	17.1	25.9

* Mining and quarrying; manufacturing; electricity and water supply and waste management; construction; wholesale and retail trade; and service activities. Results of the two-year balanced sample for 2010 and 2015. ¹ Transportation and storage; accommodation and food service activities; information and communication; and business service activities.

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construction sector, which has the effect of squeezing the equity ratio.¹⁷

Bank debt

Bank debt as a percentage of total assets ran counter to the trend in equity ratios in the period under review. According to the results obtained here and based on median values, the debt ratio vis-à-vis credit institutions fell from 9.1% in 2010 to 7.6% in 2015. In the case of average values, the decline given similar sizes was significantly lower, however, at only 0.4 percentage point (see the table on page 65). The scale on which debt to credit institutions was reduced, though, is especially visible when the results are broken down by the maturity of the loans. Over the five-year observation period, short-term bank debt (with a residual maturity of up to one year), showed a further fall from a very low level of 1.9% to 1.6% of total assets.¹⁸ Based on mean values,

by contrast, it increased slightly to just under 3%, however, mainly because of the financial operations of enterprises not affiliated with a group. With regard to long-term bank debt, the median was close to zero in both years, while the average values, which are strongly influenced by large enterprises, showed a further decline in the ratio from 5.5% to 5.1%. The vast majority of enterprises were thus increasingly allowing their long-term bank loans to expire in the period under review.

Despite these declining trends in bank debt, the present study findings also make it clear that bank loans still play an important role for a considerable number of enterprises in the non-financial corporate sector. Small and medium-sized enterprises, in particular, still rely quite heavily on bank loans for their funding; the bank debt ratios for small firms, based on the median, came to 13.5% in 2010 and 12.2% in 2015. The corresponding figures for medium-sized enterprises were 7.5% in 2010 and 6.1% in 2015. Another thing that stands out is the fact that firms operating in wholesale and retail trade and firms which are not affiliated with a group make substantial use of bank loans, which is especially true of short-term loans, but also of long-term funding operations through credit institutions in some cases. Here, the conditions have remained relatively stable over the past five years, with only minor declines of around 1 percentage point in each year.

Importance of bank loans dependent on enterprises' size and group affiliation

Trade credit

The observable broad-based decline in trade payables as a percentage of total assets is also similarly apparent in the corresponding claims

Decline in trade payables and receivables

¹⁷ Since gross figures are used in the statistics to ensure consistency of measurement, any outstanding advance payments against assets are reported on the liabilities side in the individual financial statements. This leads to an increase in total assets and thus reduces the equity ratio.

¹⁸ The low median ratio values relative to the ratio for total liabilities to banks broken down by maturity stem from the fact that, for many enterprises, only either the short-term or the long-term value is recorded, meaning that the aggregate value produces a different distribution.

on the assets side of the balance sheet. The scope for borrowing from suppliers, as measured by the median, was reduced quite noticeably in the observation period, with a fall in the ratio from 8.8% to 7.0%. The associated restriction of inter-company funding between enterprises mainly affects smaller enterprises, wholesale and retail traders (where this form of short-term funding traditionally plays a major role) and enterprises not affiliated with a group. Based on the median, these areas consistently recorded declines of between 2 and 3 percentage points in this respect. Survey findings suggest that the decline in trade credit might partly be connected with enterprises' heightened risk sensitivity in the wake of the financial and economic crisis, which may have led to a sustained reduction in collection periods and have significantly curtailed enterprises' short-term funding through suppliers.¹⁹

Intra-group liabilities

Increase in liabilities to affiliated companies, especially at large enterprises ...

Finally, the present study shows that there was a steep rise in intra-group liabilities during the reporting period. Viewed as a whole, these are now the second most important source of funding for non-financial corporations in Germany after equity capital. The ratio for intra-group liabilities went up from an average of 16.8% in 2010 to 19.8% in 2015,²⁰ with the increase in liabilities to affiliated companies being particularly concentrated on large enterprises.²¹

... partly because of the development of global value chains

Under German balance sheet legislation, intra-group liabilities include not only financial obligations from intra-group relations, but also trade payables in the context of group affiliates. The sharp growth in intra-group items cannot therefore be attributed solely to the increasing importance of intra-group funding sources. Rather, the construction of global value chains and networks provides a further explanation.

Developments in non-financial corporations' liabilities*

As a percentage of total assets

Classification	2010		2015	
	Median	Weighted average	Median	Weighted average
Liabilities to banks	9.1	8.4	7.6	8.0
of which				
Short-term	1.9	2.8	1.6	2.9
Long-term	0.0	5.5	0.0	5.1
By turnover size category				
Less than €10 mn	13.5	26.0	12.2	22.6
€10 mn to less than €50 mn	7.5	17.2	6.1	15.8
€50 mn or more	1.3	7.1	0.3	6.8
By group affiliation				
Affiliated	7.0	8.1	5.4	7.7
Not affiliated	14.5	21.3	13.2	18.9
Trade payables	8.8	6.8	7.0	6.3
By turnover size category				
Less than €10 mn	9.1	10.1	6.9	8.5
€10 mn to less than €50 mn	8.7	9.4	7.2	8.2
€50 mn or more	8.1	6.4	6.9	6.1
By group affiliation				
Affiliated	8.0	6.6	6.6	6.2
Not affiliated	11.5	12.1	8.4	10.6
Liabilities to affiliated companies	0.0	16.8	0.0	19.8

* Mining and quarrying; manufacturing; electricity and water supply and waste management; construction; wholesale and retail trade; and service activities. Results of the two-year balanced sample for 2010 and 2015.

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¹⁹ See in this connection the surveys of Creditreform for European countries, most recently: Creditreform, Corporate insolvencies in Europe, 2014/15. According to these results, collection periods in Europe have declined sharply in recent years, although the implementation of the EU Late Payment Directive of 2011 is likely to also have played a part in some countries. Even in Germany – a country which, owing to the accompanying legal provisions for trade credits with comprehensive reservation of ownership rights, already has by far the lowest collection periods in Europe – collection periods have fallen since 2007.

²⁰ In this context, it should be borne in mind that the funding shares of these items stem mainly from syndicated loans as well as short and long-term securities issuance, which are often obtained through special group-specific financing companies on international credit, money and capital markets. These cross-border bank and capital market-based funding processes can only be seen in group balance sheets, however. In this respect, the disintermediation of German non-financial corporations is actually considerably less advanced than the individual financial statement data might suggest.

²¹ Many smaller enterprises have no intra-group liabilities, which means that the median values are zero in these cases. For this reason, the more meaningful average values are used here instead.

Developments in non-financial corporations' cash holdings*

Cash balances and bank deposits as a percentage of total assets

Grouping criterion	Enterprises in the ...					
	... bottom half of the distribution according to criterion			... top half of the distribution according to criterion		
	2010	2015	Change between 2010 and 2015 ¹	2010	2015	Change between 2010 and 2015 ¹
Short-term liabilities to banks in 2015						
Total	8.2	10.5	2.4	2.9	2.9	– 0.1
By turnover size category						
Less than €10 mn	11.3	15.9	4.6	3.0	3.0	0.0
€10 mn to less than €50 mn	7.1	8.9	1.8	3.1	3.0	– 0.1
€50 mn or more	3.8	3.6	– 0.2	2.5	2.2	– 0.3
By group affiliation						
Affiliated	5.9	7.5	1.5	2.6	2.5	– 0.1
Not affiliated	15.2	19.4	4.2	3.5	3.7	0.2
Trade payables in 2015						
Total	5.7	6.9	1.2	3.9	4.3	0.4
By turnover size category						
Less than €10 mn	6.8	9.2	2.4	4.4	5.1	0.7
€10 mn to less than €50 mn	5.4	6.3	0.9	3.7	4.0	0.3
€50 mn or more	3.5	2.9	– 0.6	2.8	2.7	– 0.2
By group affiliation						
Affiliated	4.7	5.2	0.6	3.2	3.3	0.2
Not affiliated	8.9	12.2	3.3	5.5	6.4	0.9

* Mining and quarrying; manufacturing; electricity and water supply and waste management; construction; wholesale and retail trade; and service activities. Results of the two-year balanced sample for 2010 and 2015. ¹ In percentage points.

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Interaction between enterprises' short-term debt and their cash holdings

Increase in cash holdings in order to safeguard liquidity ...

All other things being equal, a reduced level of short-term bank and trade credits might imply a loss of flexibility with regard to short-term funding options. Enterprises are in a position, however, to protect themselves against the associated refinancing risks by increasing their cash holdings and bank deposits.²² The extrapolated data from the corporate financial statement statistics indicate a slight tendency towards increased cash holdings, with cash holdings and bank deposits as a percentage of total assets amounting to just over 7% in 2016. Following a temporary decline in the first few years of the current decade, the ratio thus returned to the heightened level it had reached in 2009 and 2010 in order to safeguard liquidity as a result of the recessionary phase of the financial and economic crisis.

In order to establish more accurately that enterprises which were supporting fewer of their funding needs through short-term debt positions had been tending to increase their cash holdings in the preceding years, the balanced sample based on the median short-term liabilities to banks in 2015 or short-term trade payables is split into a lower and an upper category (see the table above). While enterprises that showed larger percentages of short-term debt items in their balance sheets in 2015 altered their liquidity holdings hardly at all or only moderately between 2010 and 2015, the enterprises with corresponding ratios below

... as short-term debt positions are reduced ...

²² For more information on the transmission mechanism in the context of categorising alternative funding strategies (bank-oriented versus autonomous), see, for example, J Hicks, *The Crisis in Keynesian Economics*, Oxford, 1974, pp 50 ff. According to this theory, as long as they have sufficient working capital loans and other short-term loans at their disposal, companies need not maintain their own liquidity buffers internally in the form of cash holdings and bank deposits.

the median recorded an above-average increase in their cash holdings during this period.

... especially in the case of small and medium-sized enterprises and non-affiliated enterprises

The link between short-term debt positions and cash holdings is more pronounced in the case of small and medium-sized enterprises as well as enterprises not affiliated with a group, as they have limited options for securing liquidity through other channels, such as through group affiliates, when needed. For example, small enterprises with lower short-term bank debt boosted their share of cash holdings and bank deposits from 11% in 2010 to 16% in 2015, while medium-sized enterprises increased the size of their balance sheet holdings of these assets from 7% to 9%. By contrast, large enterprises were tending in this period to further scale back their liquidity buffers as a share of total assets from what was already a lower starting percentage of the balance sheet. Non-group-affiliated enterprises with lower short-term bank debt ratios in 2015 stepped up their cash holdings and bank deposits between 2010 and 2015 by just over 4 percentage points to almost 20% of total assets. Even non-group-affiliated enterprises which had smaller balance sheet holdings of supplier liabilities showed a marked rise in their cash ratio during this period.

■ Summary and conclusions

Convergence of equity bases at a high level

The funding patterns of non-financial enterprises in Germany have changed markedly in recent years. The sustained improvement in equity ratios, for example, continued in the period observed here from 2010 to 2015, with profit retention likely to have made a substantial contribution in this regard. In addition, there was a considerable reduction in the differences in the extent to which enterprises are equipped with liable capital depending on firm size and economic sector. This means that the idea of a significant equity capital gap between small and large enterprises, to which many of the economic problems of small and medium-sized enterprises were regularly attributed in the past, is now largely outdated.

On the other hand, there was a marked reduction in debt, primarily as a result of a decrease in liabilities to banks, although funding in the form of bank loans still plays an important role for a large number of small and medium-sized enterprises in Germany. The increase in cash holdings in the balance sheets of enterprises over the past few years can be explained in the context of a declining share of trade credit. Small and medium-sized enterprises as well as enterprises not affiliated with a group, in particular, are tending to offset the decline in funding buffers at banks and suppliers with higher liquidity provisions of their own. Despite the opportunity costs, this then affords them more security and greater flexibility in decision-making. The renewed growth in cash holdings over the past few years therefore need not necessarily be associated with a more or less involuntary reaction to a lack of sufficiently lucrative investment opportunities, but could also be interpreted as a deliberate decision to mitigate risk, at least in the case of enterprises which are keeping their short-term debt positions at a comparatively low level.

Deleveraging occasionally leads to increased cash holdings

What particularly stands out is the strong growth in intra-group liabilities that has come about as a result of the German economy's greater international focus and the establishment of value added processes based on the division of labour. This balance sheet item largely reflects funding through syndicated loans and securities issuance, which is mainly obtained through special intra-group financing companies on the international credit, money and capital markets. In this respect, the actual deleveraging taking place in Germany's non-financial corporate sector would appear, if anything, to be overstated when looking at enterprises' individual financial statements.

Growing importance of intra-group financing companies

All things considered, the adjustments in both the financing structures and in liquidity-holding bring considerable advantages for non-financial corporations' viability in the face of exogenous shocks and are likely to help make the German corporate sector more resilient to crisis.

Altered funding patterns contribute to enterprises' increased resilience to crisis

Statistical Section

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I Key economic data for the euro area

1 Monetary developments and interest rates

Period	Money stock in various definitions ^{1,2}				Determinants of the money stock ¹			Interest rates		
	M1	M2	M 3 ³		MFI lending, total	MFI lending to enterprises and households	Monetary capital formation ⁴	Eonia ^{5,7}	3-month Euribor ^{6,7}	Yield on European government bonds outstanding ⁸
				3-month moving average (centred)						
Annual percentage change								% Annual percentage as a monthly average		
2016 Sep	8.3	5.0	5.0	4.8	4.0	1.9	– 2.2	– 0.34	– 0.30	0.6
Oct	8.0	4.6	4.5	4.7	4.3	2.2	– 1.6	– 0.35	– 0.31	0.7
Nov	8.5	4.8	4.7	4.7	4.4	2.2	– 1.5	– 0.35	– 0.31	1.0
Dec	8.8	4.8	5.0	4.8	4.7	2.4	– 1.6	– 0.35	– 0.32	1.0
2017 Jan	8.4	4.6	4.7	4.8	4.5	2.4	– 1.4	– 0.35	– 0.33	1.1
Feb	8.3	4.7	4.6	4.8	4.3	2.2	– 1.0	– 0.35	– 0.33	1.2
Mar	9.0	5.0	5.1	4.8	4.8	2.8	– 1.1	– 0.35	– 0.33	1.2
Apr	9.1	5.0	4.8	4.9	4.5	2.6	– 1.4	– 0.36	– 0.33	1.1
May	9.2	5.1	4.9	4.8	4.3	2.6	– 1.2	– 0.36	– 0.33	1.1
June	9.6	5.2	4.9	4.8	4.1	2.8	– 1.2	– 0.36	– 0.33	1.0
July	9.2	5.0	4.6	4.8	3.8	2.6	– 0.9	– 0.36	– 0.33	1.2
Aug	9.6	5.4	5.0	4.9	3.8	2.3	– 0.8	– 0.36	– 0.33	1.0
Sep	9.9	5.4	5.2	5.1	3.9	2.4	– 0.9	– 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	– 1.3	– 0.34	– 0.33	0.9
2018 Jan	8.8	5.3	4.6	4.5	3.5	2.9	– 0.9	– 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	7.5	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	...	3.2	3.2	– 1.5	– 0.36	– 0.33	1.1
June	...	...	...	...	...	...	...	– 0.36	– 0.32	1.1

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

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

2 External transactions and positions *

Period	Selected items of the euro-area balance of payments ^r								Euro exchange rates ¹		
	Current account				Financial account				Dollar rate	Effective exchange rate ³	
	Balance	of which Goods	Balance	Direct investment	Portfolio investment	Financial derivatives ²	Other investment	Reserve assets		Nominal	Real ⁴
€ million									1 EUR = ... USD	Q1 1999 = 100	
2016 Sep	+ 38,079	+ 33,606	+ 50,627	+ 60,951	+ 28,222	+ 4,190	- 49,481	+ 6,745	1.1212	95.1	90.1
Oct	+ 34,507	+ 28,476	+ 9,615	+ 23,846	+ 38,372	+ 5,447	- 54,100	- 3,950	1.1026	95.1	90.3
Nov	+ 39,284	+ 34,333	+ 14,421	+ 11,880	- 30,097	+ 2,207	+ 27,886	+ 2,545	1.0799	94.6	89.6
Dec	+ 47,674	+ 33,186	+ 98,106	+ 30,366	+ 53,214	+ 7,094	+ 1,385	+ 6,046	1.0543	93.7	88.9
2017 Jan	- 1,563	+ 6,676	- 7,321	- 27,665	+ 16,459	+ 8,411	+ 517	- 5,043	1.0614	93.9	89.1
Feb	+ 20,488	+ 18,717	+ 22,638	+ 13,241	+ 73,511	+ 8,337	- 74,495	+ 2,044	1.0643	93.4	88.9
Mar	+ 45,247	+ 37,569	+ 39,826	+ 10,374	- 1,842	+ 7,743	+ 22,832	+ 719	1.0685	94.0	89.2
Apr	+ 20,310	+ 24,480	+ 14,179	+ 24,694	+ 20,757	+ 2,344	- 29,474	- 4,142	1.0723	93.7	89.0
May	+ 15,614	+ 29,449	+ 8,985	+ 20,086	- 20,950	+ 4,135	+ 4,582	+ 1,132	1.1058	95.6	90.5
June	+ 28,851	+ 34,138	+ 55,981	- 28,179	+ 25,173	- 5,980	+ 63,402	+ 1,565	1.1229	96.3	91.2
July	+ 42,939	+ 32,562	+ 41,562	- 1,857	+ 25,222	- 2,814	+ 26,204	- 5,194	1.1511	97.6	92.4
Aug	+ 38,883	+ 25,690	+ 6,067	- 14,388	+ 70,769	- 5,622	- 44,009	- 682	1.1807	99.0	93.6
Sep	+ 46,488	+ 34,903	+ 79,242	+ 9,537	+ 38,359	- 1,884	+ 26,810	+ 6,420	1.1915	99.0	93.6
Oct	+ 39,417	+ 30,338	+ 38,084	+ 27,780	+ 51,039	+ 1,929	- 39,966	- 2,698	1.1756	98.6	93.1
Nov	+ 41,641	+ 36,352	+ 35,978	+ 784	+ 5,694	+ 4,143	+ 19,181	+ 6,177	1.1738	98.5	93.0
Dec	+ 48,252	+ 32,175	+ 78,945	+ 9,618	+ 10,822	+ 4,674	+ 55,458	- 1,628	1.1836	98.8	93.3
2018 Jan	+ 10,229	+ 11,444	+ 16,722	+ 41,247	+ 18,403	+ 247	- 45,456	+ 2,282	1.2200	99.4	93.9
Feb	+ 25,909	+ 25,416	+ 35,820	+ 32,673	+ 48,258	- 577	- 44,416	- 119	1.2348	99.6	93.9
Mar	+ 44,557	+ 37,378	+ 99,916	+ 59,952	- 14,819	- 3,842	+ 49,229	+ 9,396	1.2336	99.7	94.2
Apr	+ 26,203	+ 22,616	- 6,010	+ 34,723	+ 26,383	+ 1,669	- 65,059	- 3,726	1.2276	99.5	p 93.9
May	...	...	...	...	...	...	...	...	1.1812	98.1	p 92.8
June	...	...	...	...	...	...	...	...	1.1678	97.9	p 92.7

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

XII.10 and 12, pp 82-83*. ² Including employee stock options. ³ Vis-à-vis the currencies of the EER-19 group. ⁴ Based on consumer price indices.

I Key economic data for the euro area

3 General economic indicators

Period	Euro area	Belgium	Germany	Estonia	Finland	France	Greece	Ireland	Italy	Latvia
Real gross domestic product ^{1,2}										
2015	2.1	1.4	1.7	1.7	0.1	1.1	– 0.3	25.6	1.0	3.0
2016	1.8	1.4	1.9	2.1	2.5	1.2	– 0.2	5.1	0.9	2.2
2017	2.4	1.7	2.2	4.9	2.8	2.2	1.3	7.8	1.5	4.6
2016 Q4	2.0	1.4	1.3	3.1	2.5	1.0	– 1.3	9.9	0.6	3.0
2017 Q1	2.1	1.8	3.4	4.4	4.2	1.7	0.7	5.3	2.0	4.1
Q2	2.5	1.5	1.0	5.7	2.6	1.6	1.4	6.3	1.3	4.0
Q3	2.8	1.6	2.2	4.2	2.1	2.5	1.4	10.9	1.4	5.8
Q4	2.8	2.0	2.3	5.0	2.4	2.8	1.8	8.4	1.3	4.2
2018 Q1	2.5	1.5	1.6	3.6	2.8	2.0	2.3	...	1.2	3.9
Industrial production ^{1,3}										
2015	2.6	– 1.2	0.9	– 0.2	– 1.1	1.6	1.0	35.9	1.1	3.4
2016	1.6	4.6	1.1	3.0	3.9	0.3	2.6	1.8	1.9	4.9
2017	3.0	3.0	3.4	8.0	4.2	2.4	4.8	– 2.2	3.6	8.5
2016 Q4	3.2	5.3	1.5	8.7	5.2	0.9	3.9	13.4	3.9	9.8
2017 Q1	1.2	1.4	1.0	10.8	5.7	1.0	9.9	– 6.6	2.2	8.6
Q2	2.5	4.2	3.1	12.4	3.2	1.7	3.4	– 6.6	3.8	9.2
Q3	4.1	4.7	4.3	4.3	2.9	3.1	4.5	3.4	4.6	11.4
Q4	4.1	1.8	5.0	4.9	5.1	3.9	1.9	0.5	4.0	4.9
2018 Q1	3.1	2.8	4.0	5.6	5.5	2.2	– 0.5	– 2.2	3.4	4.5
Capacity utilisation in industry ⁴										
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 Q1	82.4	80.7	85.5	74.4	81.0	84.6	68.6	–	76.5	74.5
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	85.8	71.2	–	78.1	76.3
Standardised unemployment rate ⁵										
2015	10.9	8.5	4.6	6.2	9.4	10.4	24.9	10.0	11.9	9.9
2016	10.0	7.8	4.1	6.8	8.8	10.1	23.6	8.4	11.7	9.6
2017	9.1	7.1	3.8	5.8	8.6	9.4	21.5	6.7	11.2	8.7
2017 Dec	8.7	6.2	3.6	5.5	8.3	9.1	20.8	6.2	10.9	8.2
2018 Jan	8.6	6.1	3.5	6.3	8.2	9.2	20.7	6.0	11.1	8.1
Feb	8.6	6.1	3.5	6.2	8.1	9.2	20.7	5.8	11.0	7.8
Mar	8.5	6.0	3.4	5.6	8.0	9.2	20.1	5.6	11.0	7.6
Apr	8.4	6.0	3.5	5.0	7.9	9.2	20.2	5.4	11.0	7.4
May	8.4	6.0	3.5	...	7.9	9.2	...	5.3	10.7	7.4
Harmonised Index of Consumer Prices ¹										
2015	⁶ 0.0	0.6	0.1	0.1	– 0.2	0.1	– 1.1	0.0	0.1	0.2
2016	0.2	1.8	0.4	0.8	0.4	0.3	0.0	– 0.2	– 0.1	0.1
2017	1.5	2.2	1.7	3.7	0.8	1.2	1.1	0.3	1.3	2.9
2018 Jan	1.3	1.8	1.4	3.6	0.8	1.5	0.2	0.3	1.2	2.0
Feb	1.1	1.5	1.2	3.2	0.6	1.3	0.4	0.7	0.5	1.8
Mar	1.3	1.5	1.5	2.9	0.9	1.7	0.2	0.5	0.9	2.3
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
General government financial balance ⁷										
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	1.0	– 0.3	– 1.8	– 3.4	0.6	– 0.5	– 2.5	0.1
2017	– 0.9	– 1.0	1.2	– 0.3	– 0.6	– 2.6	0.8	– 0.3	– 2.3	– 0.5
General government debt ⁷										
2015	89.9	106.1	71.0	10.0	63.5	95.6	176.8	76.9	131.5	36.8
2016	89.0	105.9	68.2	9.4	63.0	96.6	180.8	72.8	132.0	40.5
2017	86.7	103.1	64.1	9.0	61.4	97.0	178.6	68.0	131.8	40.1

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

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

I Key economic data for the euro area

Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovakia	Slovenia	Spain	Cyprus	Period
Real gross domestic product ^{1,2}										
2.0	2.9	9.6	2.0	1.1	1.8	3.9	2.3	3.4	2.0	2015
2.3	3.1	5.2	2.2	1.4	1.6	3.3	3.1	3.3	3.4	2016
3.8	2.3	6.4	2.9	3.0	2.7	3.4	5.0	3.0	3.9	2017
3.6	4.5	5.3	2.0	1.1	2.0	3.2	3.5	2.5	3.9	2016 Q4
4.2	2.6	6.6	3.0	3.1	3.2	3.0	5.0	2.8	3.8	2017 Q1
4.1	1.7	7.3	2.9	2.7	2.8	3.7	4.5	3.4	4.0	Q2
3.2	3.2	7.3	2.8	3.2	2.5	3.4	4.5	2.9	3.8	Q3
4.0	1.8	4.6	2.7	3.2	2.3	3.5	6.0	3.0	3.9	Q4
3.7	5.1	4.4	2.8	3.4	1.5	3.6	4.6	2.9	4.0	2018 Q1
Industrial production ^{1,3}										
4.2	1.2	6.3	– 3.3	2.2	2.1	6.0	5.1	3.4	5.1	2015
2.8	0.5	4.7	2.2	2.8	2.4	3.7	7.8	1.7	9.3	2016
6.8	2.5	4.1	2.0	4.6	3.5	3.1	8.5	3.2	8.1	2017
2.9	0.6	– 2.5	5.5	4.5	1.6	2.8	9.2	1.8	9.7	2016 Q4
5.1	– 1.3	6.8	2.3	2.1	3.5	5.3	6.5	1.9	10.5	2017 Q1
6.2	1.0	3.5	1.4	4.0	2.7	0.4	7.7	2.7	7.4	Q2
8.7	5.1	5.3	2.2	6.3	5.6	2.9	8.8	3.1	7.6	Q3
7.0	5.1	0.9	2.1	5.8	2.4	3.7	11.2	5.3	7.3	Q4
6.5	5.7	– 7.4	3.0	6.3	2.0	0.3	8.1	2.9	3.2	2018 Q1
Capacity utilisation in industry ⁴										
74.2	68.3	78.6	81.8	84.0	80.4	82.4	83.6	77.8	58.2	2015
75.9	76.9	79.1	81.7	84.3	80.2	84.5	83.5	78.6	59.8	2016
77.2	81.5	80.3	82.5	86.7	80.4	85.3	85.1	78.7	59.1	2017
76.5	82.6	79.3	81.4	85.1	79.8	87.1	84.5	78.8	58.1	2017 Q1
77.4	82.1	79.1	82.5	86.6	79.1	86.5	85.4	78.1	57.6	Q2
77.6	80.1	80.0	83.1	86.9	80.9	84.4	85.1	78.7	61.5	Q3
77.4	81.1	82.8	83.1	88.0	81.7	83.0	85.2	79.1	59.1	Q4
77.8	83.1	81.1	83.9	88.8	81.6	83.7	85.0	79.7	60.4	2018 Q1
77.5	82.0	77.6	83.6	88.7	81.4	86.3	86.0	80.3	60.9	Q2
Standardised unemployment rate ⁵										
9.1	6.5	5.4	6.9	5.7	12.6	11.5	9.0	22.1	15.0	2015
7.9	6.3	4.7	6.0	6.0	11.2	9.7	8.0	19.6	13.0	2016
7.1	5.6	4.6	4.9	5.5	9.0	8.1	6.6	17.2	11.1	2017
6.8	5.4	4.6	4.4	5.4	7.9	7.4	5.7	16.5	10.4	2017 Dec
6.4	5.3	4.4	4.2	5.2	7.9	7.3	5.7	16.4	9.9	2018 Jan
6.3	5.3	4.4	4.1	5.0	7.6	7.1	5.6	16.2	9.4	Feb
6.5	5.3	4.3	3.9	4.9	7.5	7.0	5.5	16.1	9.0	Mar
6.9	5.2	4.1	3.9	4.8	7.2	6.9	5.6	16.0	8.6	Apr
6.8	5.2	3.9	3.9	4.6	7.3	6.8	5.6	15.8	8.4	May
Harmonised Index of Consumer Prices ¹										
– 0.7	0.1	1.2	0.2	0.8	0.5	– 0.3	– 0.8	– 0.6	– 1.5	2015
0.7	0.0	0.9	0.1	1.0	0.6	– 0.5	– 0.2	– 0.3	– 1.2	2016
3.7	2.1	1.3	1.3	2.2	1.6	1.4	1.6	2.0	0.7	2017
3.6	1.3	1.2	1.5	1.9	1.1	2.6	1.7	0.7	– 1.5	2018 Jan
3.2	1.1	1.3	1.3	1.9	0.7	2.2	1.4	1.2	– 0.4	Feb
2.5	1.1	1.3	1.0	2.0	0.8	2.5	1.5	1.3	– 0.4	Mar
2.2	1.3	1.4	1.0	2.0	0.3	3.0	1.9	1.1	– 0.3	Apr
2.9	2.1	1.7	1.9	2.1	1.4	2.7	2.2	2.1	1.0	May
2.6	e 2.4	2.0	1.7	2.3	2.0	2.9	2.3	2.3	1.7	June
General government financial balance ⁷										
– 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 ⁷										
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

⁶ Including Lithuania from 2015 onwards. ⁷ As a percentage of GDP (Maastricht Treaty definition). Euro area: European Central Bank, regularly updated. Member states excluding Germany: latest data publication under the excessive deficit

procedure (Eurostat). Germany: current data according to the Federal Statistical Office and Bundesbank calculations.

II Overall monetary survey in the euro area

1 The money stock and its counterparts *

(a) Euro area

€ billion

Period	I Lending to non-banks (non-MFIs) in the euro area					II Net claims on non-euro-area residents			III Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
	Enterprises and households		General government		Total	Total	Claims on non-euro-area residents	Liabilities to non-euro-area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) ²	Capital and reserves ³
	Total	of which Securities	Total	of which Securities									
2016 Oct	84.9	37.3	5.6	47.6	45.1	– 45.5	153.8	199.3	4.7	– 5.6	– 0.6	– 2.6	13.5
Nov	105.8	55.8	16.1	50.0	61.9	7.4	– 21.3	– 28.7	0.3	– 7.9	– 0.8	– 1.1	10.1
Dec	– 57.7	– 50.3	– 8.3	– 7.3	– 0.6	36.3	– 154.3	– 190.6	– 12.3	0.7	– 1.0	– 13.7	1.7
2017 Jan	130.6	43.4	31.0	87.2	69.1	– 13.3	233.2	246.6	– 15.3	– 9.8	– 0.2	– 3.9	– 1.4
Feb	46.4	30.9	4.2	15.5	35.6	– 46.6	52.9	99.5	14.3	– 6.2	– 0.5	– 3.0	24.0
Mar	151.3	92.7	25.4	58.6	62.4	– 8.8	– 51.5	– 42.6	– 14.8	1.6	– 0.5	– 22.7	6.8
Apr	54.5	24.4	20.0	30.1	27.5	– 38.5	77.9	116.4	– 22.9	– 12.2	– 0.3	– 0.8	– 9.6
May	48.5	24.0	16.3	24.5	35.1	0.7	– 4.0	– 4.8	15.5	– 7.7	– 2.4	16.6	9.0
June	23.8	29.4	0.4	– 5.6	– 5.6	58.2	– 108.5	– 166.7	– 4.9	– 13.6	– 0.1	– 6.5	15.3
July	6.9	– 0.0	15.3	6.9	9.4	7.0	105.9	98.9	– 7.2	– 7.8	– 0.9	– 3.0	4.4
Aug	12.9	– 19.7	– 15.0	32.6	38.6	– 26.9	– 2.8	24.1	7.2	– 5.8	– 0.8	– 3.1	17.0
Sep	54.9	43.4	– 13.8	11.5	16.9	6.3	– 34.8	– 41.1	– 24.2	– 12.1	– 0.9	– 29.9	18.7
Oct	65.1	53.3	– 9.2	11.7	11.5	– 69.5	87.3	156.8	– 30.3	– 27.0	– 0.6	– 7.4	4.7
Nov	127.7	99.1	22.1	28.6	34.7	18.6	– 1.0	– 19.6	3.7	4.5	– 0.8	– 2.6	2.6
Dec	– 106.6	– 88.3	– 8.7	– 18.3	– 8.8	15.4	– 153.1	– 168.5	– 6.5	11.4	– 0.6	– 5.9	– 11.4
2018 Jan	126.0	84.9	26.5	41.1	27.9	– 42.3	152.9	195.1	11.2	– 8.5	– 0.1	20.2	– 0.4
Feb	4.1	– 0.3	– 0.4	4.4	20.4	– 11.6	47.1	58.7	– 17.6	0.1	– 0.5	– 12.5	– 4.8
Mar	66.3	61.1	1.5	5.2	7.8	81.9	– 64.7	– 146.6	14.3	– 5.4	– 0.4	1.6	18.4
Apr	64.1	64.3	52.4	– 0.2	– 1.9	– 74.1	41.5	115.6	– 7.9	– 2.3	– 0.5	– 3.3	– 1.9
May	112.1	84.2	8.7	27.9	33.0	– 36.0	120.4	156.4	– 39.0	– 7.8	– 0.4	– 7.0	– 23.8

(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	Claims on non-euro-area residents	Liabilities to non-euro-area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) ²	Capital and reserves ³
	Total	of which Securities	Total	of which Securities									
2016 Oct	21.5	11.8	2.6	9.6	6.5	– 3.2	42.4	45.7	7.1	2.2	– 0.8	5.8	– 0.2
Nov	28.1	18.4	4.4	9.7	14.4	– 22.4	– 25.7	– 3.3	9.2	– 0.6	– 0.5	9.6	0.8
Dec	– 10.1	– 8.1	0.4	– 2.1	8.4	19.6	– 9.5	– 29.1	– 2.6	– 2.0	– 0.4	– 2.9	2.7
2017 Jan	23.6	15.0	2.3	8.6	8.5	– 24.4	31.8	56.2	9.8	– 3.1	– 0.7	15.9	– 2.3
Feb	17.3	12.5	3.9	4.9	5.5	– 30.2	7.5	37.8	– 1.4	– 1.4	– 0.6	– 0.1	0.8
Mar	18.2	12.7	1.8	5.5	9.5	– 3.6	6.3	9.9	2.7	– 1.0	– 0.5	– 1.3	5.5
Apr	14.9	7.8	– 1.5	7.1	5.4	– 19.0	– 7.3	11.6	9.3	– 3.5	– 0.5	1.3	11.9
May	13.8	13.3	3.5	0.6	7.9	7.1	– 13.0	– 20.1	2.7	– 0.1	– 0.4	1.8	1.4
June	11.8	11.5	6.2	0.4	2.6	22.7	16.2	– 6.4	6.0	– 2.0	– 0.4	2.8	5.6
July	18.1	12.8	1.8	5.3	3.5	– 10.3	– 23.0	– 12.7	– 4.0	– 1.3	– 0.8	– 1.4	– 0.5
Aug	13.6	10.2	– 0.6	3.4	8.3	14.7	– 13.8	– 28.5	4.5	0.1	– 0.8	3.5	1.7
Sep	17.8	14.1	– 1.8	3.7	8.0	– 22.3	9.2	31.5	– 5.9	– 0.2	– 0.6	– 7.3	2.3
Oct	15.9	8.6	0.4	7.3	6.5	– 11.4	– 17.5	– 11.4	– 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	21.3	5.0	– 2.1	2.4	– 11.2	29.8	41.0	– 0.1	0.6	– 0.2	4.1	– 4.6

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

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

II Overall monetary survey in the euro area

(a) Euro area

IV De- posits of central gov- ernments	V Other factors			VI Money stock M3 (balance I plus II less III less IV less V)												Period
	Total 4	of which Intra- Eurosystem liability/ claim related to banknote issue	Total	Money stock M2						Repo transac- tions	Money market fund shares (net) 2,7,8	Debt secur- ities with maturities of up to 2 years (incl money market paper) (net) 2,7				
				Total	Money stock M1			Deposits with an agreed maturity of up to 2 years 5	Deposits at agreed notice of up to 3 months 5,6							
					Total	Currency in cir- culation	Overnight deposits 5									
- 3.0	7.0	-	30.7	14.4	50.2	3.2	47.0	- 29.6	- 6.2	- 16.9	18.0	2.1	2016 Oct			
5.1	20.4	-	87.4	82.7	95.0	1.2	93.7	- 10.3	- 1.9	- 2.2	7.0	1.2	Nov			
- 48.3	- 12.4	-	51.6	72.1	89.8	16.1	73.7	- 24.1	6.4	4.4	- 6.0	- 7.3	Dec			
62.7	42.1	-	27.8	6.4	- 6.6	- 11.9	5.4	3.3	9.7	- 17.4	11.5	- 1.0	2017 Jan			
- 17.4	- 26.6	-	29.5	31.0	31.3	2.9	28.4	- 1.9	1.6	- 8.6	- 4.1	- 6.0	Feb			
24.2	26.5	-	106.5	92.5	92.9	4.4	88.5	- 5.6	5.2	14.8	11.9	- 1.0	Mar			
- 5.4	- 9.2	-	53.5	72.4	101.9	6.8	95.1	- 31.2	1.7	- 5.9	- 4.3	- 16.4	Apr			
13.4	- 12.6	-	33.0	30.2	42.0	0.4	41.6	- 20.9	9.1	- 11.7	- 4.7	- 6.1	May			
20.4	21.1	-	45.4	74.6	82.7	9.5	73.2	- 10.5	2.3	- 16.6	- 20.6	- 0.2	June			
- 7.7	- 14.9	-	43.7	31.5	35.9	6.0	29.9	- 6.2	1.8	- 24.1	13.6	- 3.3	July			
- 18.3	- 58.6	-	55.7	45.5	30.9	- 2.3	33.2	8.1	6.4	2.6	9.1	- 5.2	Aug			
41.2	23.2	-	21.1	23.7	48.0	1.0	47.0	- 21.3	- 3.0	7.0	- 4.1	- 10.6	Sep			
- 43.4	54.1	-	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			
- 21.4	- 83.9	-	20.6	62.6	65.2	16.1	49.2	- 6.8	4.1	- 31.7	- 26.5	- 7.4	Dec			
41.3	22.7	-	8.5	- 2.5	- 19.8	- 15.2	- 4.7	5.6	11.7	- 7.5	19.6	- 11.8	2018 Jan			
13.5	9.6	-	- 13.0	- 9.5	5.0	0.3	4.7	- 17.2	2.8	- 4.8	- 11.3	4.4	Feb			
13.9	51.1	-	68.9	65.9	63.2	8.7	54.5	- 3.7	6.4	7.7	- 1.4	8.0	Mar			
- 19.6	- 35.8	-	53.4	32.3	50.7	4.2	46.5	- 20.6	2.2	- 3.7	12.3	- 1.9	Apr			
7.1	40.0	-	68.0	92.3	96.0	4.9	91.1	- 10.8	7.1	24.7	- 11.2	- 7.8	May			

(b) German contribution

IV De- posits of central gov- ernments	V Other factors				VI Money stock M3 (balance I plus II less III less IV less V) 10											Period
	Total	<i>of which</i>			Total	Components of the money stock										
		Intra- Eurosystem liability/ claim related to banknote issue 9,11	Currency in cir- culation	Overnight deposits		Deposits with an agreed maturity of up to 2 years	Deposits at agreed notice of up to 3 months 6	Repo transac- tions	Money market fund shares (net) 7,8	Debt securities with maturities of up to 2 years (incl money market paper)(net) 7						
- 8.8	18.6	3.2	- 0.5	1.4	12.0	- 10.2	0.2	0.3	- 0.1	- 0.8	2016 Oct					
- 6.9	48.2	1.9	0.3	37.8	36.2	3.3	0.1	0.2	0.0	1.7	Nov					
- 13.6	30.4	3.3	2.4	- 4.8	- 4.9	1.5	2.7	0.9	0.0	0.1	Dec					
- 12.6	27.2	1.1	- 2.7	29.2	16.9	8.9	0.7	2.6	0.1	0.2	2017 Jan					
- 4.2	18.9	1.7	1.2	11.6	13.6	2.4	0.7	0.3	- 0.0	0.0	Feb					
14.2	2.7	1.8	1.1	0.5	2.4	3.5	- 1.4	1.9	0.1	2.0	Mar					
- 6.7	8.9	3.3	1.6	2.3	10.3	7.1	- 0.0	0.9	0.0	1.8	Apr					
7.7	8.7	2.9	0.7	19.2	18.3	1.3	- 0.1	1.1	0.0	0.8	May					
7.1	0.7	4.7	0.9	20.7	20.6	0.7	- 0.7	0.6	0.1	0.6	June					
2.5	14.8	2.1	2.1	- 5.6	- 3.0	3.0	- 0.4	1.4	0.1	0.6	July					
7.4	5.1	3.7	- 1.3	11.2	14.7	2.9	- 0.3	0.1	0.2	0.5	Aug					
9.6	14.2	3.5	- 0.3	5.9	5.6	0.8	0.0	0.8	0.0	0.3	Sep					
- 14.2	43.1	2.1	0.8	4.5	14.3	9.3	0.5	0.3	0.3	0.5	Oct					
6.2	8.7	1.2	- 0.0	32.7	33.8	1.7	0.2	0.3	0.0	0.2	Nov					
10.0	58.0	3.8	2.0	- 8.8	- 10.1	0.4	2.4	0.7	0.3	1.8	Dec					
- 24.3	35.5	- 0.0	- 2.8	13.1	11.5	2.4	0.2	1.0	0.0	2.0	2018 Jan					
9.2	21.2	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	38.9	38.8	0.5	- 0.1	0.8	0.2	1.7	May					

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

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

II Overall monetary survey in the euro area

Liabilities										
Currency in circulation ⁴	Deposits of non-banks (non-MFIs) in the euro area									
			Enterprises and households							
	Total	of which in euro ⁵	Total	Overnight	With agreed maturities of			At agreed notice of ⁶		End of year/month
					up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	
Euro area (€ billion) ¹										
1,047.1	11,715.7	10,978.1	11,072.9	5,504.4	963.0	337.5	2,071.0	2,126.5	70.5	2016 Apr
1,049.3	11,766.9	11,005.9	11,092.6	5,545.2	945.2	331.9	2,066.3	2,134.0	70.0	May
1,057.7	11,829.3	11,001.4	11,089.4	5,565.3	944.9	330.2	2,046.5	2,133.1	69.3	June
1,067.8	11,849.6	11,053.7	11,133.7	5,615.1	952.1	325.6	2,039.3	2,132.9	68.8	July
1,064.3	11,783.5	11,037.8	11,120.8	5,611.4	952.6	320.7	2,034.0	2,134.1	68.1	Aug
1,066.5	11,788.9	11,032.4	11,130.6	5,637.1	960.1	315.0	2,021.8	2,129.2	67.4	Sep
1,069.7	11,797.5	11,047.9	11,134.7	5,680.7	936.8	307.6	2,018.8	2,123.8	67.2	Oct
1,071.0	11,882.2	11,107.7	11,212.3	5,780.1	926.7	303.3	2,013.9	2,121.8	66.4	Nov
1,087.1	11,929.4	11,211.4	11,321.3	5,826.7	911.5	294.0	2,050.9	2,172.7	65.6	Dec
1,075.6	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	12,285.8	11,543.2	11,617.9	6,349.6	834.7	242.1	1,925.4	2,211.3	54.9	Dec
1,108.0	12,317.5	11,527.5	11,609.5	6,341.2	840.5	236.7	1,914.3	2,221.0	55.8	2018 Jan
1,108.3	12,329.4	11,524.5	11,603.1	6,345.0	831.1	232.3	1,916.0	2,223.5	55.1	Feb
1,117.0	12,391.9	11,578.9	11,659.2	6,407.6	831.5	226.4	1,909.4	2,229.7	54.8	Mar
1,121.2	12,401.4	11,611.0	11,680.7	6,448.7	817.5	222.4	1,906.9	2,230.9	54.4	Apr
1,126.1	12,500.9	11,689.4	11,761.8	6,547.0	810.0	217.7	1,900.3	2,232.8	54.0	May
German contribution (€ billion)										
244.2	3,429.1	3,334.3	3,208.5	1,759.1	178.5	38.3	640.3	535.1	57.2	2016 Apr
243.7	3,469.8	3,356.2	3,222.9	1,779.2	175.2	37.3	640.6	534.4	56.2	May
245.2	3,481.5	3,352.9	3,218.7	1,779.1	173.1	38.3	638.8	533.9	55.4	June
247.4	3,464.1	3,368.1	3,233.1	1,793.5	174.7	38.2	638.3	533.8	54.6	July
246.5	3,480.0	3,376.0	3,238.3	1,803.0	173.4	38.2	636.2	533.8	53.8	Aug
245.9	3,494.5	3,380.7	3,247.0	1,807.9	179.4	38.3	635.0	533.3	53.1	Sep
245.4	3,489.6	3,386.4	3,254.0	1,821.1	172.1	37.8	637.3	533.5	52.3	Oct
245.7	3,536.5	3,424.0	3,288.1	1,857.7	171.0	37.4	636.6	533.7	51.7	Nov
248.1	3,517.1	3,419.8	3,284.1	1,851.0	171.5	38.4	635.6	536.3	51.3	Dec
245.4	3,526.3	3,439.3	3,306.3	1,873.8	174.0	38.7	632.1	537.1	50.6	2017 Jan
246.6	3,532.6	3,448.3	3,313.4	1,881.5	175.3	38.8	630.0	537.9	50.0	Feb
247.7	3,549.3	3,449.2	3,318.1	1,886.4	177.4	39.9	628.4	536.5	49.5	Mar
249.3	3,540.9	3,447.5	3,317.0	1,895.9	170.7	40.0	624.7	536.6	49.0	Apr
248.6	3,566.1	3,465.8	3,327.4	1,910.5	167.5	40.2	624.1	536.4	48.7	May
249.5	3,590.5	3,482.0	3,339.9	1,928.7	165.5	40.3	621.4	535.7	48.3	June
251.6	3,583.1	3,472.8	3,333.0	1,927.8	162.6	40.3	619.5	537.9	44.9	July
250.4	3,600.7	3,483.1	3,338.6	1,938.3	159.0	40.3	619.3	537.5	44.1	Aug
250.1	3,616.3	3,486.8	3,345.9	1,945.0	162.3	39.6	617.9	537.5	43.5	Sep
250.9	3,606.4	3,490.8	3,352.9	1,958.5	158.8	38.6	616.2	538.0	42.7	Oct
250.9	3,646.8	3,521.5	3,383.7	1,990.6	157.1	37.4	618.2	538.3	42.1	Nov
252.9	3,647.9	3,515.8	3,378.5	1,976.2	162.0	37.7	620.4	540.7	41.5	Dec
250.1	3,632.5	3,522.3	3,390.7	1,994.6	161.5	36.4	616.5	539.5	42.2	2018 Jan
249.8	3,642.4	3,523.0	3,388.4	1,995.9	160.2	35.3	615.5	540.0	41.5	Feb
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

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

3 Banking system's liquidity position * Stocks

€ billion; period averages of daily positions

Reserve maintenance period ending in 1	Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current account balances (including minimum reserves) 7	Base money 8		
	Monetary policy operations of the Eurosystem													
	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														
2016 Jan	611.6	71.6	466.9	0.2	811.8	196.6	0.0	1 072.8	82.5	53.2	557.1	1 826.5		
Feb	.	.	.	.	.	.	.	.	.	.	.	.		
Mar	607.8	62.9	461.7	0.1	907.6	230.5	0.0	1 063.4	115.6	73.9	556.5	1 850.4		
Apr	627.3	58.1	460.8	0.2	1 000.1	262.0	0.0	1 069.3	147.4	97.7	570.0	1 901.3		
May	.	.	.	.	.	.	.	.	.	.	.	.		
June	640.3	53.9	456.3	0.2	1 105.3	309.0	0.0	1 076.6	123.9	122.8	623.8	2 009.4		
July	666.1	47.6	471.6	0.1	1 227.1	323.1	0.0	1 087.1	175.5	169.4	657.5	2 067.7		
Aug	.	.	.	.	.	.	.	.	.	.	.	.		
Sep	685.0	43.5	483.7	0.0	1 339.7	355.1	0.0	1 096.2	137.8	214.0	748.8	2 200.2		
Oct	687.8	37.4	503.5	0.1	1 447.0	387.3	0.0	1 094.7	168.3	248.0	777.4	2 259.4		
Nov	.	.	.	.	.	.	.	.	.	.	.	.		
Dec	687.4	34.0	511.8	0.2	1 570.2	439.4	0.0	1 103.1	159.7	277.6	823.9	2 366.3		
2017 Jan	674.7	34.6	548.9	0.2	1 670.8	434.4	0.0	1 119.1	143.1	313.6	919.0	2 472.6		
Feb	.	.	.	.	.	.	.	.	.	.	.	.		
Mar	662.4	29.0	554.3	0.3	1 787.5	479.2	0.0	1 110.8	160.3	322.2	960.9	2 550.9		
Apr	.	.	.	.	.	.	.	.	.	.	.	.		
May	678.6	18.5	707.4	0.3	1 905.3	550.0	0.0	1 118.4	182.0	378.8	1 081.1	2 749.4		
June	683.1	13.7	767.4	0.2	1 995.0	593.7	0.0	1 126.0	163.6	397.4	1 178.7	2 898.5		
July	656.9	9.4	767.4	0.2	2 076.1	595.3	0.0	1 136.3	229.8	379.4	1 169.2	2 900.8		
Aug	.	.	.	.	.	.	.	.	.	.	.	.		
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		
Deutsche Bundesbank														
2016 Jan	144.8	3.6	48.4	0.1	174.0	50.0	0.0	252.4	18.0	- 124.0	174.4	476.8		
Feb	.	.	.	.	.	.	.	.	.	.	.	.		
Mar	143.7	1.9	46.3	0.0	193.9	59.8	0.0	250.4	26.1	- 113.3	162.9	473.1		
Apr	152.2	3.1	45.0	0.0	214.1	67.6	0.0	252.1	37.3	- 105.1	162.4	482.1		
May	.	.	.	.	.	.	.	.	.	.	.	.		
June	156.4	3.3	45.3	0.0	237.2	87.3	0.0	254.7	41.1	- 127.2	186.5	528.4		
July	163.3	2.7	44.7	0.0	263.4	89.8	0.0	257.4	47.2	- 117.0	196.6	543.9		
Aug	.	.	.	.	.	.	.	.	.	.	.	.		
Sep	168.3	1.9	44.0	0.0	288.2	90.8	0.0	258.7	36.2	- 112.6	229.3	578.9		
Oct	168.7	1.5	50.6	0.0	311.9	105.2	0.0	258.6	50.5	- 125.2	243.6	607.4		
Nov	.	.	.	.	.	.	.	.	.	.	.	.		
Dec	167.7	0.9	54.0	0.0	339.2	129.7	0.0	260.3	43.7	- 141.9	270.0	660.0		
2017 Jan	163.8	0.9	62.0	0.0	361.5	132.7	0.0	264.2	35.4	- 146.1	302.0	698.9		
Feb	.	.	.	.	.	.	.	.	.	.	.	.		
Mar	159.4	0.8	63.5	0.0	386.6	153.7	0.0	262.3	23.1	- 169.8	341.0	757.0		
Apr	.	.	.	.	.	.	.	.	.	.	.	.		
May	164.4	1.0	86.0	0.1	412.4	181.4	0.0	264.1	29.7	- 185.3	374.0	819.5		
June	165.8	0.3	95.0	0.0	431.8	181.2	0.0	266.2	32.4	- 204.9	418.0	865.4		
July	159.6	0.5	95.0	0.0	447.9	170.1	0.0	269.0	52.7	- 201.6	412.7	851.9		
Aug	.	.	.	.	.	.	.	.	.	.	.	.		
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		

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

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

II Overall monetary survey in the euro area

Flows

Liquidity-providing factors						Liquidity-absorbing factors					Credit institutions' current account balances (including minimum reserves) 7	Base money 8	Reserve maintenance period ending in 1			
Net assets in gold and foreign currency	Monetary policy operations of the Eurosystem					Deposit facility	Other liquidity-absorbing operations 4	Banknotes in circulation 5	Central government deposits	Other factors (net) 6						
	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations 3												
Eurosystem ²																
- 0.6	+ 5.5	+ 7.6	+ 0.1	+ 81.1	+ 23.5	± 0.0	+ 16.3	- 11.0	+ 1.7	+ 63.3	+ 103.1	2016 Jan				
- 3.8	- 8.7	- 5.2	- 0.1	+ 95.8	+ 33.9	± 0.0	- 9.4	+ 33.1	+ 20.7	- 0.6	+ 23.9	Feb				
+ 19.5	- 4.8	- 0.9	+ 0.1	+ 92.5	+ 31.5	± 0.0	+ 5.9	+ 31.8	+ 23.8	+ 13.5	+ 50.9	Mar				
+ 13.0	- 4.2	- 4.5	± 0.0	+ 105.2	+ 47.0	± 0.0	+ 7.3	- 23.5	+ 25.1	+ 53.8	+ 108.1	Apr				
+ 25.8	- 6.3	+ 15.3	- 0.1	+ 121.8	+ 14.1	± 0.0	+ 10.5	+ 51.6	+ 46.6	+ 33.7	+ 58.3	May				
+ 18.9	- 4.1	+ 12.1	- 0.1	+ 112.6	+ 32.0	± 0.0	+ 9.1	- 37.7	+ 44.6	+ 91.3	+ 132.5	June				
+ 2.8	- 6.1	+ 19.8	+ 0.1	+ 107.3	+ 32.2	± 0.0	- 1.5	+ 30.5	+ 34.0	+ 28.6	+ 59.2	July				
- 0.4	- 3.4	+ 8.3	+ 0.1	+ 123.2	+ 52.1	± 0.0	+ 8.4	- 8.6	+ 29.6	+ 46.5	+ 106.9	Aug				
- 12.7	+ 0.6	+ 37.1	± 0.0	+ 100.6	- 5.0	± 0.0	+ 16.0	- 16.6	+ 36.0	+ 95.1	+ 106.3	Sep				
- 12.3	- 5.6	+ 5.4	+ 0.1	+ 116.7	+ 44.8	± 0.0	- 8.3	+ 17.2	+ 8.6	+ 41.9	+ 78.3	Oct				
+ 16.2	- 10.5	+ 153.1	± 0.0	+ 117.8	+ 70.8	± 0.0	+ 7.6	+ 21.7	+ 56.6	+ 120.2	+ 198.5	Nov				
+ 4.5	- 4.8	+ 60.0	- 0.1	+ 89.7	+ 43.7	± 0.0	+ 7.6	- 18.4	+ 18.6	+ 97.6	+ 149.1	Dec				
- 26.2	- 4.3	± 0.0	± 0.0	+ 81.1	+ 1.6	± 0.0	+ 10.3	+ 66.2	- 18.0	- 9.5	+ 2.3	2017 Jan				
- 17.9	- 3.9	+ 1.2	+ 0.1	+ 74.1	+ 16.1	± 0.0	+ 6.2	- 48.0	+ 5.7	+ 73.5	+ 95.9	Feb				
- 4.0	+ 1.2	- 3.3	- 0.1	+ 89.0	+ 36.7	± 0.0	+ 0.3	+ 36.5	- 1.2	+ 10.6	+ 47.5	Mar				
- 0.5	- 3.7	- 1.6	± 0.0	+ 94.3	+ 34.4	± 0.0	+ 3.8	- 29.8	+ 23.7	+ 56.4	+ 94.6	Apr				
+ 1.2	- 0.1	- 3.1	± 0.0	+ 64.7	+ 6.7	± 0.0	+ 11.6	- 0.4	+ 79.4	- 34.5	- 16.3	May				
- 4.8	- 1.4	- 0.1	- 0.2	+ 37.3	- 2.9	± 0.0	- 10.0	+ 15.5	- 12.1	+ 40.4	+ 27.6	June				
- 3.8	+ 0.4	- 1.0	+ 0.1	+ 41.3	- 18.3	± 0.0	+ 10.8	+ 43.9	+ 20.7	- 20.3	- 27.8	July				
- 1.9	- 0.1	- 2.2	± 0.0	+ 43.1	- 8.5	± 0.0	+ 11.4	- 29.5	+ 6.9	+ 58.6	+ 61.5	Aug				
Deutsche Bundesbank																
- 1.3	+ 0.5	+ 5.1	+ 0.1	+ 17.7	- 6.0	± 0.0	+ 3.3	+ 8.7	- 7.6	+ 23.7	+ 21.0	2016 Jan				
- 1.0	- 1.7	- 2.1	- 0.0	+ 19.9	+ 9.8	± 0.0	- 2.1	+ 8.1	+ 10.7	- 11.5	- 3.8	Feb				
+ 8.4	+ 1.1	- 1.3	+ 0.0	+ 20.3	+ 7.8	± 0.0	+ 1.7	+ 11.3	+ 8.2	- 0.4	+ 9.0	Mar				
+ 4.3	+ 0.3	+ 0.4	- 0.0	+ 23.1	+ 19.7	± 0.0	+ 2.6	+ 3.8	- 22.1	+ 24.1	+ 46.3	Apr				
+ 6.9	- 0.6	- 0.6	- 0.0	+ 26.2	+ 2.6	± 0.0	+ 2.8	+ 6.1	+ 10.2	+ 10.1	+ 15.4	May				
+ 5.1	- 0.8	- 0.7	- 0.0	+ 24.8	+ 1.0	± 0.0	+ 1.3	- 11.0	+ 4.4	+ 32.7	+ 35.0	June				
+ 0.4	- 0.5	+ 6.6	+ 0.0	+ 23.7	+ 14.4	± 0.0	- 0.1	+ 14.3	- 12.6	+ 14.2	+ 28.5	July				
- 0.9	- 0.5	+ 3.3	+ 0.0	+ 27.3	+ 24.4	± 0.0	+ 1.7	- 6.8	- 16.7	+ 26.5	+ 52.6	Aug				
- 4.0	- 0.1	+ 8.1	- 0.0	+ 22.3	+ 3.0	± 0.0	+ 3.9	- 8.3	- 4.3	+ 31.9	+ 38.8	Sep				
- 4.4	- 0.0	+ 1.4	+ 0.0	+ 25.1	+ 21.0	± 0.0	- 1.9	- 12.2	- 23.6	+ 39.0	+ 58.1	Oct				
+ 4.9	+ 0.1	+ 22.6	+ 0.0	+ 25.9	+ 27.7	± 0.0	+ 1.8	+ 6.6	- 15.6	+ 33.0	+ 62.5	Nov				
+ 1.5	- 0.7	+ 9.0	- 0.1	+ 19.4	- 0.2	± 0.0	+ 2.1	+ 2.6	- 19.6	+ 44.0	+ 45.9	Dec				
- 6.2	+ 0.2	+ 0.0	+ 0.0	+ 16.1	- 11.1	± 0.0	+ 2.8	+ 20.3	+ 3.3	- 5.3	- 13.6	2017 Jan				
- 4.4	- 0.2	- 0.1	+ 0.0	+ 15.4	- 4.6	± 0.0	+ 0.9	- 0.2	+ 9.0	+ 5.8	+ 2.1	Feb				
- 0.4	- 0.1	- 0.1	- 0.0	+ 18.3	+ 5.5	± 0.0	- 0.5	+ 13.5	- 5.0	+ 4.2	+ 9.2	Mar				
- 0.6	+ 0.2	- 0.0	- 0.0	+ 19.9	+ 16.5	± 0.0	+ 0.9	- 9.9	- 21.0	+ 33.1	+ 50.4	Apr				
+ 1.3	+ 0.4	- 1.6	- 0.0	+ 13.3	+ 16.9	± 0.0	+ 2.5	- 1.1	+ 26.4	- 31.3	- 11.9	May				
- 4.0	- 0.3	+ 0.1	+ 0.0	+ 8.2	+ 3.5	± 0.0	- 1.7	+ 1.9	- 29.1	+ 29.4	+ 31.1	June				
- 0.8	+ 0.5	- 0.0	+ 0.0	+ 7.7	- 17.0	± 0.0	+ 2.8	+ 4.2	+ 30.0	- 13.0	- 27.3	July				
- 0.6	+ 0.0	- 0.2	- 0.0	+ 10.0	+ 9.5	± 0.0	+ 3.6	- 1.8	- 26.6	+ 25.1	+ 38.1	Aug				

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

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

III Consolidated financial statement of the Eurosystem

1 Assets *

€ billion

On reporting date		Total assets	Gold and gold receivables	Claims on non-euro area residents denominated in foreign currency			Claims on euro area residents denominated in foreign currency	Claims on non-euro area residents denominated in euro			
				Total	Receivables from the IMF	Balances with banks, security investments, external loans and other external assets		Total	Balances with banks, security investments and loans	Claims arising from the credit facility under ERM II	
Eurosystem ¹											
2017 Dec	22	4,487.3	379.0	300.6	70.7	230.0	39.4	16.5	16.5	—	—
	29	4,471.7	376.5	296.2	70.2	226.0	38.1	19.4	19.4	—	—
2018 Jan	5	4,466.0	376.3	294.6	70.2	224.4	38.6	16.1	16.1	—	—
	12	4,472.7	376.3	295.5	70.2	225.3	28.9	14.5	14.5	—	—
	19	4,484.0	376.3	297.6	70.2	227.4	29.9	15.8	15.8	—	—
	26	4,493.1	376.3	296.4	70.1	226.3	29.1	15.7	15.7	—	—
Feb	2	4,491.2	376.3	295.9	70.0	225.9	32.7	16.1	16.1	—	—
	9	4,493.7	376.3	297.1	69.9	227.3	32.5	16.8	16.8	—	—
	16	4,504.8	376.3	296.8	69.9	226.9	34.7	17.4	17.4	—	—
	23	4,511.5	376.3	296.2	69.9	226.3	35.4	17.4	17.4	—	—
Mar	2	4,519.4	376.3	297.1	69.9	227.2	34.5	16.6	16.6	—	—
	9	4,530.1	376.3	299.6	69.9	229.7	32.5	18.7	18.7	—	—
	16	4,532.6	376.3	300.2	69.8	230.4	29.6	17.8	17.8	—	—
	23	4,539.1	376.3	304.6	69.8	234.7	26.5	18.5	18.5	—	—
2018 Apr	30	4,529.6	374.1	299.6	69.3	230.3	26.6	17.7	17.7	—	—
	6	4,531.5	374.1	297.2	69.3	227.9	25.7	17.1	17.1	—	—
	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	—	—
May	27	4,554.3	374.1	296.2	69.4	226.8	28.6	18.8	18.8	—	—
	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	—	—
June	25	4,562.7	374.1	299.8	69.2	230.6	25.7	13.9	13.9	—	—
	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	—	—
July	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	—	—
	6	4,593.3	373.2	314.3	73.7	240.6	22.0	16.7	16.7	—	—
Deutsche Bundesbank											
2017 Dec	22	1 721.8	118.2	50.3	18.4	31.9	7.2	1.4	1.4	—	—
	29	1 727.7	117.3	49.5	18.3	31.2	7.2	4.4	4.4	—	—
2018 Jan	5	1 690.6	117.3	49.6	18.3	31.3	7.2	1.5	1.5	—	—
	12	1 673.4	117.3	49.6	18.3	31.3	0.1	1.4	1.4	—	—
	19	1 682.7	117.3	50.0	18.3	31.7	0.1	1.8	1.8	—	—
	26	1 653.8	117.3	49.5	18.2	31.3	0.1	2.0	2.0	—	—
Feb	2	1 710.7	117.3	49.5	18.2	31.3	0.0	2.3	2.3	—	—
	9	1 712.9	117.3	49.5	18.1	31.4	0.0	2.2	2.2	—	—
	16	1 731.0	117.3	49.8	18.1	31.6	0.0	2.0	2.0	—	—
	23	1 712.4	117.3	50.2	18.1	32.0	0.0	1.9	1.9	—	—
Mar	2	1 738.6	117.3	49.9	18.1	31.8	0.0	1.1	1.1	—	—
	9	1 720.8	117.3	49.3	18.1	31.2	0.0	3.4	3.4	—	—
	16	1 713.8	117.3	49.1	18.1	31.0	0.0	1.8	1.8	—	—
	23	1 725.0	117.3	49.8	18.1	31.6	—	2.1	2.1	—	—
2018 Apr	30	1 756.2	116.6	49.2	18.0	31.2	0.0	1.5	1.5	—	—
	6	1 717.4	116.6	48.9	18.0	30.8	0.0	1.5	1.5	—	—
	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	—	—
May	27	1 706.5	116.6	48.6	18.0	30.6	0.0	2.7	2.7	—	—
	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	—	—
June	25	1 777.6	116.6	48.8	18.0	30.9	0.0	0.8	0.8	—	—
	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	—	—
July	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	—	—
	6	1 744.4	116.3	50.9	19.2	31.7	0.1	1.3	1.3	—	—

* 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 the

III Consolidated financial statement of the Eurosystem

Lending to euro area credit institutions related to monetary policy operations denominated in euro							Other claims on euro area credit institutions denomi- nated in euro	Securities of euro area residents in euro			General government debt deno- minated in euro	Other assets	On reporting date
Total	Main re- financing opera- tions	Longer- term re- financing opera- tions	Fine- tuning reverse opera- tions	Structural reverse opera- tions	Marginal lending facility	Credits related to margin calls		Total	Securities held for monetary policy purposes	Other securities			
Eurosystem ¹													
764.3	3.4	760.6	–	–	0.3	–	43.1	2 668.3	2 393.3	275.0	25.1	250.9	2017 Dec 22
764.3	3.4	760.6	–	–	0.3	–	37.6	2 660.7	2 386.0	274.7	25.0	254.0	
763.6	2.9	760.6	–	–	0.1	–	35.2	2 662.4	2 388.9	273.5	25.0	254.2	2018 Jan 5
763.7	3.0	760.6	–	–	0.1	–	46.2	2 672.9	2 399.0	273.9	25.0	249.7	
763.3	2.4	760.6	–	–	0.2	–	47.7	2 679.3	2 406.6	272.7	25.0	249.1	19
762.8	2.2	760.6	–	–	0.1	–	49.5	2 688.7	2 415.3	273.4	25.0	249.5	26
762.6	1.9	760.7	–	–	0.0	–	51.5	2 685.3	2 416.1	269.1	25.0	245.7	Feb 2
762.2	1.6	760.7	–	–	0.0	–	45.5	2 694.9	2 425.2	269.7	25.0	243.3	9
762.1	1.3	760.7	–	–	0.1	–	47.0	2 703.0	2 433.3	269.7	25.0	242.6	16
762.2	1.5	760.7	–	–	0.0	–	48.5	2 708.4	2 438.4	270.0	25.0	242.2	23
762.0	1.7	760.3	–	–	0.0	–	49.1	2 715.6	2 445.2	270.4	25.0	243.1	Mar 2
761.4	1.1	760.3	–	–	–	–	49.0	2 725.1	2 454.6	270.5	25.0	242.7	
761.3	1.0	760.3	–	–	–	–	48.7	2 731.2	2 461.0	270.2	25.0	242.6	16
761.9	1.5	760.3	–	–	0.1	–	50.2	2 738.0	2 468.6	269.4	25.0	238.1	23
761.9	2.4	759.3	–	–	0.2	–	48.5	2 732.7	2 464.6	268.1	24.9	243.5	30
761.6	2.3	759.3	–	–	–	–	44.9	2 742.4	2 474.5	268.0	24.9	243.5	2018 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	
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	
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	
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	July 6
Deutsche Bundesbank													
94.3	1.0	93.3	–	–	0.0	–	3.8	513.7	513.7	–	4.4	928.3	2017 Dec 22
94.3	1.0	93.3	–	–	–	–	0.5	512.1	512.1	–	4.4	937.9	
94.2	0.9	93.3	–	–	–	–	1.8	512.7	512.7	–	4.4	901.9	2018 Jan 5
94.3	1.0	93.3	–	–	0.0	–	3.5	515.1	515.1	–	4.4	887.8	
94.0	0.7	93.3	–	–	0.0	–	3.5	516.8	516.8	–	4.4	894.9	19
94.1	0.8	93.3	–	–	–	–	3.7	517.7	517.7	–	4.4	865.0	26
94.0	0.6	93.4	–	–	0.0	–	3.3	518.5	518.5	–	4.4	921.4	Feb 2
93.8	0.5	93.4	–	–	–	–	3.8	521.6	521.6	–	4.4	920.0	
93.8	0.5	93.4	–	–	–	–	3.4	522.7	522.7	–	4.4	937.4	16
94.0	0.6	93.4	–	–	–	–	3.7	522.7	522.7	–	4.4	918.2	23
94.2	0.8	93.4	–	–	–	–	3.9	524.9	524.9	–	4.4	942.8	Mar 2
93.8	0.5	93.4	–	–	–	–	4.3	526.8	526.8	–	4.4	921.3	
93.8	0.4	93.4	–	–	0.0	–	4.4	527.3	527.3	–	4.4	915.6	16
93.9	0.5	93.4	–	–	0.0	–	3.9	529.7	529.7	–	4.4	923.8	23
94.7	1.2	93.3	–	–	0.1	–	5.1	529.0	529.0	–	4.4	955.7	30
94.6	1.3	93.3	–	–	–	–	4.4	531.2	531.2	–	4.4	915.7	2018 Apr 6
94.2	0.9	93.3	–	–	0.0	–	4.5	532.5	532.5	–	4.4	908.3	
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	
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	
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	July 6

end of the quarter. ¹ Source: ECB.

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Liabilities to non-euro area residents denominated in euro	Liabilities to euro area residents in foreign currency	Liabilities to non-euro area residents denominated in foreign currency			Counterpart of special drawing rights allocated by the IMF	Other liabilities ²	Intra-Eurosystem liability related to euro banknote issue ¹	Revaluation accounts	Capital and reserves	On reporting date
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
Eurosystem ³										
286.1	6.5	11.9	11.9	–	55.6	233.6	–	364.9	102.3	2017 Dec 22
354.6	3.8	11.3	11.3	–	55.2	225.5	–	358.0	102.3	
291.1	3.9	11.4	11.4	–	55.2	227.7	–	357.9	102.3	2018 Jan 5
253.3	5.3	11.2	11.2	–	55.2	230.2	–	357.9	102.1	
252.1	7.0	12.1	12.1	–	55.2	231.6	–	357.9	102.2	19
220.8	5.4	11.5	11.5	–	55.2	234.6	–	357.9	102.2	
239.1	8.4	11.9	11.9	–	55.2	237.9	–	357.9	102.7	Feb 2
237.9	7.5	12.7	12.7	–	55.2	230.8	–	357.9	102.7	
245.8	8.6	12.9	12.9	–	55.2	232.7	–	357.9	102.6	16
251.9	9.0	12.4	12.4	–	55.2	232.5	–	357.9	102.6	
260.4	8.5	12.7	12.7	–	55.2	234.1	–	357.9	102.7	Mar 2
258.1	9.8	11.6	11.6	–	55.2	233.6	–	357.9	102.7	
270.4	7.7	11.4	11.4	–	55.2	235.7	–	357.9	102.7	16
266.5	7.3	12.9	12.9	–	55.2	236.1	–	357.9	103.5	
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	
257.3	6.8	12.4	12.4	–	54.9	228.0	–	351.2	104.3	2018 Apr 6
257.1	7.6	11.1	11.1	–	54.9	230.5	–	351.2	104.4	
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	
257.1	7.1	10.5	10.5	–	54.9	226.9	–	351.2	104.4	May 4
256.6	6.2	9.8	9.8	–	54.9	226.3	–	351.2	104.4	
258.4	7.8	11.6	11.6	–	54.9	228.1	–	351.2	104.4	18
272.3	8.6	10.8	10.8	–	54.9	225.4	–	351.2	104.4	
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	
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	
276.5	6.2	10.5	10.5	–	56.1	229.9	–	360.4	104.4	July 6
Deutsche Bundesbank										
165.4	0.0	1.0	1.0	–	14.4	28.1	355.5	114.6	5.6	2017 Dec 22
199.8	0.0	1.0	1.0	–	14.3	27.9	359.3	113.1	5.6	
161.5	0.0	1.1	1.1	–	14.3	28.0	359.3	113.1	5.6	2018 Jan 5
152.9	0.0	1.3	1.3	–	14.3	28.0	359.3	113.1	5.6	
153.0	0.0	1.6	1.6	–	14.3	28.4	359.3	113.1	5.6	19
126.1	0.0	1.2	1.2	–	14.3	28.1	359.7	113.1	5.6	
144.5	0.0	1.1	1.1	–	14.3	28.3	359.3	113.1	5.6	Feb 2
139.0	0.0	1.2	1.2	–	14.3	28.3	359.3	113.1	5.6	
144.2	0.0	1.3	1.3	–	14.3	28.4	359.3	113.1	5.6	16
149.6	0.0	1.8	1.8	–	14.3	28.6	359.3	113.1	5.6	
154.3	0.0	1.5	1.5	–	14.3	26.8	361.3	113.1	5.7	Mar 2
151.9	0.0	0.9	0.9	–	14.3	26.8	361.3	113.1	5.7	
155.3	0.0	0.8	0.8	–	14.3	27.0	361.3	113.1	5.7	16
157.1	0.0	1.3	1.3	–	14.3	27.0	361.3	113.1	5.7	
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	
151.1	0.0	2.2	2.2	–	14.2	27.2	368.2	111.5	5.7	2018 Apr 6
149.5	0.0	1.5	1.5	–	14.2	27.3	368.2	111.5	5.7	
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	
148.5	0.0	0.6	0.6	–	14.2	27.7	369.5	111.5	5.7	May 4
157.8	0.0	0.3	0.3	–	14.2	27.8	369.5	111.5	5.7	
161.0	0.0	1.1	1.1	–	14.2	27.9	369.5	111.5	5.7	11
173.2	0.0	0.6	0.6	–	14.2	28.1	374.9	111.5	5.7	
174.1	0.0	0.6	0.6	–	14.2	28.2	374.9	111.5	5.7	June 1
174.0	0.0	0.6	0.6	–	14.2	28.6	374.9	111.5	5.7	
174.5	0.0	0.6	0.6	–	14.2	28.9	374.9	111.5	5.7	8
213.3	–	0.3	0.3	–	14.6	28.3	378.5	112.9	5.7	
165.4	0.0	0.4	0.4	–	14.6	28.9	378.5	112.9	5.7	July 6

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

notes allocated to the NCB according to the aforementioned accounting regime and the value of euro banknotes put into circulation is also disclosed as an "Intra-Eurosystem claim/liability related to banknote issue". ² For the Deutsche Bundesbank: including DM banknotes still in circulation. ³ Source: ECB.

IV Banks

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

€ billion

End of month	Number of reporting institutions	Balance sheet total ¹	Cash in hand and credit balances with central banks	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)					Participating interests	Other assets ¹
				Total	of which		Total	of which					
					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				
2017 Dec	1,631	7,755.3	447.7	2,371.3	1,901.6	468.4	4,056.5	333.6	3,002.4	0.6	715.0	112.6	767.1
2018 Jan	1,627	7,861.7	500.8	2,407.1	1,934.0	470.6	4,074.4	353.7	3,001.5	0.6	712.2	112.5	766.8
Feb	1,627	7,836.4	513.0	2,408.7	1,936.1	469.6	4,080.8	357.4	3,012.0	0.5	703.6	112.5	721.5
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
All categories of banks													
2018 Apr	264	3,120.5	319.7	997.2	918.2	78.4	1,247.5	200.7	829.9	0.4	212.3	51.1	505.0
May	263	3,184.9	311.9	1,023.5	945.6	77.2	1,260.5	208.5	830.9	0.4	217.9	55.7	533.3
Big banks ⁷													
2018 Apr	4	1,657.1	142.6	506.8	475.1	31.7	495.2	110.4	293.8	0.1	88.0	45.0	467.5
May	4	1,858.8	147.4	571.9	541.3	30.6	602.1	117.8	363.0	0.1	119.5	49.9	487.5
Regional banks and other commercial banks													
2018 Apr	151	1,033.4	94.7	247.5	203.4	43.9	656.7	61.3	479.1	0.2	115.1	5.3	29.2
May	150	883.0	85.7	193.5	149.5	43.8	561.2	60.0	410.5	0.2	89.6	5.1	37.5
Branches of foreign banks													
2018 Apr	109	429.9	82.4	243.0	239.7	2.8	95.6	29.0	57.1	0.1	9.2	0.7	8.3
May	109	443.1	78.8	258.1	254.8	2.8	97.2	30.7	57.4	0.1	8.7	0.7	8.3
Landesbanken													
2018 Apr	8	893.9	57.7	279.3	209.6	69.0	460.1	53.7	339.5	0.1	64.8	9.9	86.9
May	8	897.3	60.9	271.5	202.3	68.5	460.6	54.0	341.0	0.0	63.1	10.0	94.3
Savings banks													
2018 Apr	386	1,208.0	38.8	177.2	63.7	113.5	960.7	49.0	753.3	0.0	158.1	14.1	17.3
May	385	1,213.6	42.7	176.3	62.7	113.5	962.9	48.4	756.0	0.0	158.4	14.0	17.7
Credit cooperatives													
2018 Apr	915	899.4	18.2	168.2	62.1	105.4	677.6	32.6	534.3	0.0	110.5	16.9	18.6
May	915	905.8	19.9	169.4	63.5	105.3	680.9	32.5	537.3	0.0	110.8	16.9	18.7
Mortgage banks													
2018 Apr	13	224.6	3.2	31.3	20.7	10.6	183.9	2.8	158.2	–	22.9	0.1	6.0
May	13	224.8	3.9	29.7	19.2	10.5	184.4	2.9	158.9	–	22.5	0.1	6.8
Building and loan associations													
2018 Apr	20	232.2	1.6	56.9	40.7	16.2	169.0	1.2	142.3	.	25.5	0.3	4.4
May	20	232.6	1.5	57.0	40.8	16.2	169.3	1.2	142.7	.	25.5	0.3	4.5
Banks with special, development and other central support tasks													
2018 Apr	19	1,248.0	68.8	699.4	614.5	83.8	379.8	16.9	265.7	–	95.3	20.6	79.4
May	19	1,270.0	84.8	701.7	615.9	84.6	381.3	17.1	267.1	–	95.0	20.6	81.6
Memo item: Foreign banks ⁸													
2018 Apr	143	1,128.8	139.2	411.5	372.2	38.7	487.7	77.1	312.0	0.3	96.2	4.0	86.4
May	142	1,155.3	132.1	431.2	393.2	37.4	497.0	78.4	318.4	0.3	98.2	4.0	90.9
of which: Banks majority-owned by foreign banks ⁹													
2018 Apr	34	698.8	56.8	168.5	132.4	35.9	392.1	48.1	255.0	0.2	87.0	3.3	78.2
May	33	712.2	53.3	173.1	138.4	34.7	399.9	47.7	261.0	0.2	89.5	3.3	82.6

* 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 (Handels-

gesetzbuch) read in conjunction with section 35 (1) No 1a of the Credit Institution Accounting Regulation (Verordnung über die Rechnungslegung der Kreditinstitute) are classified under "Other assets and liabilities" as of the December 2010 reporting date. Trading portfolio derivatives are listed separately in the Statistical Supplement to the Monthly Report 1, Banking statistics, in Tables I.1 to I.3. ² For building and loan associations: Including deposits under savings and loan contracts (see Table IV.12). ³ Included in time deposits. ⁴ Excluding deposits under savings and loan

IV Banks

Deposits of banks (MFIs)			Deposits of non-banks (non-MFIs)								Bearer debt securities outstanding 5	Capital including published reserves, participation rights capital, funds for general banking risks	Other liabilities 1	End of month				
Total	of which		Total	of which			Memo item Liabilities arising from repos 3	Savings deposits 4		Bank savings bonds								
	Sight deposits	Time deposits		Sight deposits	Time deposits 2	Total		of which At three months' notice										
					for up to and including 1 year	for more than 1 year 2												
All categories of banks																		
1,707.1	500.3	1,206.8	3,662.1	2,050.4	269.1	700.3	46.0	590.3	547.6	52.0	1,097.0	511.1	777.9	2017 Dec				
1,772.0	566.8	1,205.1	3,703.9	2,079.8	287.2	697.6	75.0	589.9	546.3	49.4	1,090.7	510.5	784.6	2018 Jan				
1,772.3	551.4	1,220.9	3,705.4	2,084.4	288.9	695.3	84.4	589.6	546.9	47.2	1,107.4	511.5	739.9	Feb				
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	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				
Commercial banks 6																		
841.9	377.1	464.8	1,490.7	931.3	168.5	271.2	66.7	100.4	93.1	19.3	157.0	179.7	451.2	2018 Apr				
863.8	405.1	458.7	1,509.4	950.6	167.8	272.5	67.7	100.3	93.0	18.2	159.4	179.1	473.1	May				
Big banks 7																		
382.7	132.5	250.2	642.9	387.3	101.8	88.4	64.3	61.2	60.0	4.3	120.1	104.3	407.1	2018 Apr				
429.2	147.8	281.3	770.8	463.9	103.8	116.4	65.3	83.2	77.0	3.5	123.8	106.5	428.7	May				
Regional banks and other commercial banks																		
205.6	69.7	135.9	690.4	434.5	44.3	157.6	2.4	39.1	32.9	14.9	36.6	67.0	33.8	2018 Apr				
169.7	70.1	99.7	580.1	374.9	42.7	130.9	2.4	16.9	15.8	14.7	35.4	64.3	33.5	May				
Branches of foreign banks																		
253.6	174.9	78.6	157.4	109.4	22.5	25.2	–	0.2	0.2	0.0	0.3	8.5	10.2	2018 Apr				
264.9	187.2	77.7	158.6	111.8	21.3	25.2	–	0.2	0.2	0.0	0.3	8.4	10.9	May				
Landesbanken																		
259.0	63.5	195.6	296.6	135.7	58.3	89.4	11.0	12.4	12.2	0.7	195.4	50.8	92.1	2018 Apr				
260.5	64.0	196.5	296.3	134.6	58.8	89.7	11.0	12.5	12.3	0.7	194.8	50.9	94.7	May				
Savings banks																		
130.8	4.3	126.4	909.9	571.5	14.8	15.2	–	289.3	264.5	19.1	14.2	108.7	44.4	2018 Apr				
129.8	3.6	126.2	915.7	577.5	15.0	15.2	–	289.0	264.3	18.9	14.2	109.9	43.9	May				
Credit cooperatives																		
115.5	1.2	114.3	667.6	428.8	34.3	14.0	–	185.1	175.8	5.4	8.9	75.0	32.3	2018 Apr				
115.9	1.0	114.9	673.1	434.5	34.1	14.0	–	185.1	175.9	5.4	9.3	76.3	31.2	May				
Mortgage banks																		
43.0	2.4	40.6	78.1	3.0	3.4	71.7	–	–	–	–	87.4	8.9	7.2	2018 Apr				
42.8	2.8	40.0	77.7	3.0	3.3	71.4	–	–	–	–	88.3	8.9	7.2	May				
Building and loan associations																		
27.1	4.2	23.0	179.3	3.4	1.4	174.0	–	0.4	0.4	0.1	3.1	11.6	11.1	2018 Apr				
26.9	4.3	22.6	179.9	3.4	1.3	174.5	–	0.4	0.4	0.1	3.1	11.6	11.2	May				
Banks with special, development and other central support tasks																		
320.9	76.2	244.7	99.8	36.1	8.8	53.4	3.7	–	–	–	649.7	78.9	98.7	2018 Apr				
326.3	78.9	247.4	105.1	39.5	11.0	53.2	3.7	–	–	–	664.4	79.1	95.1	May				
Memo item: Foreign banks 8																		
421.3	252.9	168.4	546.9	383.8	53.7	81.7	11.5	20.8	20.4	7.0	23.1	49.7	87.8	2018 Apr				
439.7	266.7	173.1	549.0	388.5	51.3	81.6	11.3	20.8	20.3	6.9	23.6	49.6	93.4	May				
of which: Banks majority-owned by foreign banks 9																		
167.7	78.0	89.7	389.6	274.3	31.2	56.4	11.5	20.6	20.1	6.9	22.8	41.3	77.5	2018 Apr				
174.8	79.5	95.3	390.4	276.6	30.0	56.4	11.3	20.5	20.1	6.8	23.3	41.2	82.5	May				

contracts (see also footnote 2). **5** Including subordinated negotiable bearer debt securities; excluding non-negotiable bearer debt securities. **6** Commercial banks comprise the sub-groups "Big banks", "Regional banks and other commercial banks" and "Branches of foreign banks". **7** Deutsche Bank AG, Dresdner Bank AG (up to Nov. 2009), Commerzbank AG, UniCredit Bank AG (formerly Bayerische Hypo- und Vereinsbank AG), 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

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

€ billion

Period	Lending to domestic non-banks, total		Short-term lending							Medium and long-term	
	including negotiable money market paper, securities, equalisation claims	excluding negotiable money market paper, securities, equalisation claims	Total	to enterprises and households			to general government			Total	to enter-
				Total	Loans and bills	Negotiable money market paper	Total	Loans	Treasury bills		
End of year or month *											
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
2016 Dec	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0
2017 Jan	3,277.7	2,831.5	252.1	208.6	208.0	0.6	43.5	43.3	0.2	3,025.6	2,535.3
Feb	3,279.0	2,837.1	252.8	209.7	209.1	0.7	43.1	42.9	0.1	3,026.2	2,541.5
Mar	3,283.0	2,840.9	252.7	212.6	211.8	0.8	40.0	39.8	0.2	3,030.4	2,547.5
Apr	3,288.9	2,849.0	253.7	210.6	209.8	0.8	43.1	42.8	0.3	3,035.2	2,558.1
May	3,292.9	2,851.5	249.3	211.0	210.0	0.9	38.4	37.5	0.8	3,043.5	2,568.8
June	3,296.8	2,856.1	251.1	214.1	213.5	0.6	37.0	36.5	0.5	3,045.7	2,577.7
July	3,302.5	2,865.5	249.4	210.2	209.5	0.7	39.2	38.8	0.3	3,053.1	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
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
2016 Dec	- 19.0	- 16.2	- 19.0	- 10.1	- 9.9	- 0.2	- 8.9	- 8.2	- 0.7	+ 0.0	+ 3.8
2017 Jan	+ 3.3	+ 7.3	+ 3.5	+ 2.9	+ 2.5	+ 0.3	+ 0.6	+ 0.5	+ 0.1	- 0.2	+ 5.3
Feb	+ 1.4	+ 5.6	+ 0.7	+ 1.2	+ 1.1	+ 0.1	- 0.4	- 0.3	- 0.1	+ 0.6	+ 6.2
Mar	+ 3.9	+ 3.7	- 0.2	+ 2.8	+ 2.7	+ 0.1	- 3.0	- 3.1	+ 0.1	+ 4.1	+ 5.9
Apr	+ 5.9	+ 8.1	+ 1.0	- 2.0	- 2.0	- 0.0	+ 3.0	+ 2.9	+ 0.1	+ 4.9	+ 10.6
May	+ 3.9	+ 2.5	- 4.0	+ 0.7	+ 0.5	+ 0.1	- 4.7	- 5.2	+ 0.5	+ 8.0	+ 7.8
June	+ 4.0	+ 4.6	+ 1.9	+ 3.3	+ 3.6	- 0.3	- 1.4	- 1.1	- 0.3	+ 2.1	+ 8.8
July	+ 5.6	+ 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

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

marked. **1** Excluding debt securities arising from the exchange of equalisation claims (see also footnote 2). **2** Including debt securities arising from the exchange of equalisation claims.

IV Banks

lending												Period	
prises and households					to general government								
Loans				Memo item Fiduciary loans	Total	Loans			Secur- ities 1	Equal- isation claims 2	Memo item Fiduciary loans		
Total	Medium- term	Long- term				Total	Medium- term	Long- term					
End of year or month *													
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	
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	2016 Dec	
2,311.3	264.5	2,046.8	224.0	18.6	490.3	268.9	24.2	244.7	221.4	–	1.7	2017 Jan	
2,316.5	263.2	2,053.3	225.1	18.5	484.7	268.6	25.0	243.7	216.1	–	1.7	Feb	
2,322.0	264.4	2,057.6	225.5	18.4	482.9	267.3	24.6	242.7	215.6	–	1.7	Mar	
2,331.2	265.4	2,065.9	226.8	18.4	477.2	265.1	23.6	241.5	212.0	–	1.7	Apr	
2,342.6	266.2	2,076.4	226.2	18.3	474.8	261.3	23.4	238.0	213.4	–	1.7	May	
2,346.1	267.4	2,078.7	231.6	18.0	468.0	260.0	23.0	237.0	208.1	–	1.6	June	
2,357.7	268.3	2,089.4	231.5	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	
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	
+ 3.4	– 0.5	+ 3.9	+ 0.5	+ 0.0	– 3.8	– 1.5	– 0.4	– 1.1	– 2.3	–	– 0.0	2016 Dec	
+ 4.8	+ 0.3	+ 4.5	+ 0.5	+ 1.3	– 5.5	– 0.5	+ 0.3	– 0.8	– 5.0	–	– 0.0	2017 Jan	
+ 5.1	– 1.3	+ 6.4	+ 1.1	– 0.1	– 5.6	– 0.2	+ 0.8	– 1.0	– 5.3	–	– 0.0	Feb	
+ 5.5	+ 1.2	+ 4.3	+ 0.4	– 0.1	– 1.8	– 1.4	– 0.3	– 1.0	– 0.4	–	– 0.0	Mar	
+ 9.3	+ 1.0	+ 8.3	+ 1.3	– 0.1	– 5.7	– 2.2	– 1.0	– 1.1	– 3.6	–	– 0.0	Apr	
+ 8.5	+ 0.8	+ 7.7	– 0.7	– 0.0	+ 0.1	– 1.3	– 0.2	– 1.1	+ 1.4	–	– 0.0	May	
+ 3.4	+ 1.2	+ 2.2	+ 5.4	– 0.3	– 6.7	– 1.3	– 0.3	– 1.0	– 5.4	–	– 0.1	June	
+ 11.4	+ 1.0	+ 10.4	– 0.1	– 0.0	– 4.0	– 0.4	+ 0.1	– 0.5	– 3.6	–	+ 0.0	July	
+ 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	

IV Banks

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

€ billion

Lending to domestic enterprises and households (excluding holdings of negotiable money market paper and excluding securities portfolios) ¹														
Total	of which				Lending to enterprises and self-employed persons									
	Mortgage loans, total	Housing loans		Other housing loans										
		Total	Mortgage loans secured by residential real estate			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 motor-cycles	Agriculture, forestry, fishing and aquaculture	Transportation and storage; post and telecommunications	Financial intermediation (excluding MFIs) and insurance companies
Lending, total														
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	
2,533.8	1,267.0	1,283.2	1,022.4	260.8	1,364.4	356.6	129.4	105.2	66.9	131.5	50.5	55.9	141.0	
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	
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	
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	
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	
Short-term lending														
205.5	–	6.9	–	6.9	174.3	3.7	29.7	4.4	11.8	43.2	3.6	4.4	29.3	
211.8	–	6.9	–	6.9	181.3	3.7	33.6	4.5	13.6	44.8	3.8	4.2	28.6	
213.6	–	6.7	–	6.7	183.3	3.5	34.7	4.7	13.7	43.3	4.0	4.6	28.1	
213.5	–	6.5	–	6.5	183.5	3.6	33.8	4.0	14.0	45.2	3.9	4.3	28.1	
210.6	–	6.5	–	6.5	180.8	3.6	32.3	4.0	13.6	45.2	3.4	4.0	27.4	
224.9	–	6.8	–	6.8	195.3	3.8	36.6	5.0	14.9	48.4	3.5	4.2	29.1	
Medium-term lending														
264.1	–	34.5	–	34.5	186.4	13.5	23.6	5.5	10.5	17.2	4.5	11.2	41.8	
264.4	–	34.0	–	34.0	186.8	13.4	23.3	4.9	11.4	17.9	4.4	10.8	43.0	
267.4	–	33.8	–	33.8	188.7	13.3	23.3	5.0	10.9	18.2	4.4	10.7	44.3	
269.6	–	33.9	–	33.9	190.2	13.6	23.1	5.1	11.2	18.2	4.4	10.4	45.6	
273.5	–	34.0	–	34.0	193.1	14.0	23.6	5.1	11.3	18.2	4.3	10.3	46.7	
275.2	–	34.0	–	34.0	194.0	14.4	23.3	5.0	11.7	18.6	4.2	10.4	47.0	
Long-term lending														
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	
2,057.6	1,267.0	1,242.4	1,022.4	220.0	996.2	339.6	72.5	95.8	41.9	68.7	42.3	40.9	69.4	
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	
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	
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	
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	
Lending, total														
Change during quarter *														
+ 21.7	+ 7.3	+ 6.6	+ 5.8	+ 0.7	+ 16.8	+ 2.6	+ 4.3	+ 0.5	+ 2.0	+ 3.3	– 0.1	– 1.1	+ 1.2	
+ 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	
+ 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	
+ 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	
+ 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	
Short-term lending														
+ 6.3	–	– 0.0	–	– 0.0	+ 7.0	+ 0.0	+ 4.0	+ 0.1	+ 1.0	+ 1.6	+ 0.2	– 0.2	– 0.7	
+ 2.1	–	– 0.1	–	– 0.1	+ 2.3	– 0.1	+ 1.1	+ 0.2	+ 0.1	– 1.4	+ 0.3	+ 0.3	– 0.4	
– 0.1	–	– 0.2	–	– 0.2	+ 0.2	+ 0.0	– 0.9	– 0.7	+ 0.3	+ 1.8	– 0.2	– 0.3	+ 0.0	
– 2.8	–	– 0.0	–	– 0.0	– 2.6	+ 0.0	– 1.4	– 0.0	– 0.4	– 0.0	– 0.4	– 0.3	– 0.8	
+ 14.3	–	+ 0.3	–	+ 0.3	+ 14.4	+ 0.3	+ 4.1	+ 0.9	+ 1.3	+ 3.3	+ 0.4	+ 0.1	+ 1.7	
Medium-term lending														
+ 0.2	–	– 0.6	–	– 0.6	+ 0.4	– 0.1	– 0.4	– 0.5	+ 0.5	+ 0.7	– 0.1	– 0.4	+ 1.1	
+ 3.0	–	– 0.1	–	– 0.1	+ 1.9	– 0.0	–	+ 0.0	– 0.4	+ 0.2	– 0.1	– 0.1	+ 1.3	
+ 2.4	–	+ 0.2	–	+ 0.2	+ 1.5	+ 0.3	– 0.2	+ 0.2	+ 0.3	+ 0.0	+ 0.1	– 0.3	+ 1.3	
+ 3.9	–	+ 0.1	–	+ 0.1	+ 2.8	+ 0.3	+ 0.5	– 0.1	+ 0.1	– 0.0	– 0.1	– 0.1	+ 1.1	
+ 2.0	–	+ 0.0	–	+ 0.0	+ 1.2	+ 0.4	– 0.2	– 0.1	+ 0.4	+ 0.4	– 0.0	– 0.1	+ 0.1	
Long-term lending														
+ 15.1	+ 7.3	+ 7.2	+ 5.8	+ 1.4	+ 9.4	+ 2.6	+ 0.7	+ 0.9	+ 0.5	+ 0.9	– 0.2	– 0.5	+ 0.8	
+ 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	
+ 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	
+ 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	
+ 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	

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

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

IV Banks

													Period						
						Lending to employees and other individuals					Lending to non-profit institutions								
Services sector (including the professions)				Memo items		Total	Housing loans	Other lending			Total	of which Housing loans							
Total	of which			Lending to self-employed persons ²	Lending to craft enterprises			Total	of which	Debit balances on wage, salary and pension accounts									
	Housing enterprises	Holding companies	Other real estate activities																
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							
684.0	206.2	38.8	179.7	403.8	46.3	1,154.8	922.9	231.9	165.5	9.2	14.6	3.7	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 Mar						
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	June						
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	Sep						
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	Dec						
Short-term lending													2018 Mar						
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							
48.2	8.4	6.6	9.1	24.5	5.7	29.8	3.2	26.7	1.8	9.2	0.6	0.0	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 Mar						
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	June						
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	Sep						
53.5	10.2	7.9	10.7	23.7	5.8	29.0	3.0	26.1	1.5	8.4	0.6	–	Dec						
Medium-term lending													2018 Mar						
72.1	11.1	8.2	19.3	32.9	3.6	77.3	21.1	56.2	51.0	–	0.5	0.0							
71.1	11.3	8.6	17.8	32.7	3.6	77.1	20.6	56.5	51.7	–	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 Mar						
72.2	11.9	9.1	18.3	32.9	3.6	78.9	20.2	58.6	54.0	–	0.5	0.0	June						
73.5	12.1	9.3	18.3	32.7	3.6	79.9	20.0	59.9	55.2	–	0.6	0.0	Sep						
73.9	12.6	9.3	18.3	32.8	3.4	80.7	19.7	61.0	56.5	–	0.5	0.0	Dec						
Long-term lending													2018 Mar						
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							
564.7	186.5	23.6	152.7	346.5	37.1	1,047.9	899.2	148.8	112.1	–	13.4	3.7	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 Mar						
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	June						
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	Sep						
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	Dec						
Change during quarter *													Lending, total						
+ 6.8	+ 1.4	+ 2.3	+ 0.8	+ 2.3	+ 0.3	+ 4.9	+ 4.1	+ 0.8	+ 2.3	– 0.0	+ 0.1	– 0.0							
+ 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 Q1						
+ 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	Q2						
+ 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	Q3						
+ 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	Q4						
Short-term lending													2018 Q1						
+ 1.0	+ 0.0	+ 0.9	– 0.2	+ 0.7	+ 0.6	– 0.7	– 0.0	– 0.7	+ 0.0	– 0.0	+ 0.1	– 0.0							
+ 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 Q1						
+ 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	Q2						
+ 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	Q3						
+ 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	Q4						
Medium-term lending													2018 Q1						
– 0.5	+ 0.2	+ 0.2	– 0.9	– 0.1	– 0.0	– 0.2	– 0.5	+ 0.3	+ 0.7	–	+ 0.0	– 0.0							
+ 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 Q1						
+ 0.1	+ 0.3	+ 0.3	– 0.3	+ 0.1	– 0.0	+ 0.9	– 0.1	+ 1.0	+ 1.0	–	+ 0.0	+ 0.0	Q2						
+ 1.4	+ 0.3	+ 0.2	– 0.0	– 0.3	+ 0.0	+ 1.0	– 0.2	+ 1.2	+ 1.2	–	+ 0.0	– 0.0	Q3						
+ 0.8	+ 0.4	+ 0.1	+ 0.2	+ 0.1	– 0.2	+ 0.8	– 0.4	+ 1.2	+ 1.3	–	– 0.0	+ 0.0	Q4						
Long-term lending													2018 Q1						
+ 6.2	+ 1.2	+ 1.1	+ 2.0	+ 1.8	– 0.2	+ 5.8	+ 4.6	+ 1.2	+ 1.6	–	– 0.0	– 0.0							
+ 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 Q1						
+ 8.6	+ 2.0	+ 1.2	+ 2.7	+ 3.0	+ 0.1	+ 14.3	+ 12.4	+ 1.9	+ 1.6	–	+ 0.2	– 0.0	Q2						
+ 6.5	+ 2.9	+ 0.9	+ 0.7	+ 1.5	– 0.1	+ 8.9	+ 8.9	– 0.0	– 0.1	–	+ 0.0	– 0.0	Q3						
+ 7.7	+ 2.0	+ 0.8	+ 2.3	+ 3.0	– 0.1	+ 7.0	+ 6.6	+ 0.4	+ 0.6	–	+ 0.1	+ 0.0	Q4						

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

IV Banks

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 June	3,370.3	1,869.2	869.8	226.4	643.4	53.5	589.9	584.7	46.6	29.8	16.9	0.9	
July	3,361.5	1,866.0	866.0	223.2	642.8	54.1	588.6	583.5	46.0	29.9	16.7	0.7	
Aug	3,376.5	1,884.2	864.4	220.0	644.4	55.2	589.2	582.4	45.4	30.0	16.7	0.7	
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	
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 June	+ 10.9	+ 17.0	- 4.6	- 2.9	- 1.7	+ 1.2	- 2.9	- 1.0	- 0.4	- 0.6	- 0.1	+ 0.4	
July	- 8.8	- 3.1	- 3.8	- 3.2	- 0.6	+ 0.7	- 1.3	- 1.2	- 0.7	+ 0.2	- 0.2	- 0.1	
Aug	+ 15.0	+ 18.2	- 1.6	- 3.2	+ 1.6	+ 1.1	+ 0.6	- 1.1	- 0.6	+ 0.1	- 0.1	- 0.0	
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	
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 June	209.9	58.1	143.5	81.8	61.8	21.8	40.0	3.7	4.7	25.8	2.4	-	
July	207.2	55.6	143.2	80.4	62.8	22.4	40.4	3.7	4.7	25.8	2.4	-	
Aug	213.6	61.2	144.2	79.9	64.3	23.4	40.8	3.7	4.5	25.9	2.5	-	
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	-	
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 June	- 0.1	- 3.0	+ 2.9	+ 1.3	+ 1.5	+ 1.4	+ 0.2	- 0.0	+ 0.0	- 0.4	- 0.0	-	
July	- 2.8	- 2.5	- 0.4	- 1.3	+ 0.9	+ 0.5	+ 0.4	-	+ 0.0	- 0.0	+ 0.0	-	
Aug	+ 6.4	+ 5.6	+ 0.9	- 0.5	+ 1.4	+ 1.1	+ 0.3	+ 0.1	- 0.2	+ 0.1	+ 0.0	-	
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	-	

* 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

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	
2017 Dec	2,179.7	1,323.1	1,286.6	223.4	907.6	155.7	36.5	257.5	243.5	23.4	182.9	37.1	
2018 Jan	2,175.4	1,320.4	1,284.1	226.0	903.3	154.8	36.3	257.1	243.3	22.9	183.3	37.1	
Feb	2,184.7	1,330.0	1,293.1	226.1	911.8	155.2	36.9	257.7	243.8	22.7	183.9	37.3	
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	
Changes*													
2016	+ 97.1	+ 108.4	+ 105.3	+ 17.5	+ 78.7	+ 9.0	+ 3.0	+ 2.4	+ 1.8	+ 0.1	+ 1.9	- 0.3	
2017	+ 84.7	+ 101.1	+ 99.8	+ 17.5	+ 77.8	+ 4.5	+ 1.3	- 5.0	- 5.1	- 1.8	- 2.1	- 1.3	
2017 Dec	+ 10.9	+ 7.4	+ 6.3	+ 0.5	+ 5.2	+ 0.6	+ 1.0	+ 2.1	+ 2.1	+ 0.0	+ 1.5	+ 0.5	
2018 Jan	- 4.3	- 2.7	- 2.6	+ 2.6	- 4.2	- 0.9	- 0.2	- 0.4	- 0.2	- 0.5	+ 0.4	- 0.1	
Feb	+ 9.3	+ 9.6	+ 9.0	+ 0.1	+ 8.5	+ 0.4	+ 0.6	+ 0.5	+ 0.5	- 0.3	+ 0.5	+ 0.2	
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	

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

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

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

€ billion

Deposits														
Period	Domestic government, total	Federal Government and its special funds ¹						State governments						
		Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds ²	Memo item Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds ²	Memo item Fiduciary loans	
				for up to and including 1 year	for more than 1 year					for up to and including 1 year	for more than 1 year			
End of year or month*														
2015	197.4	9.6	3.1	3.9	2.6	0.1	14.1	44.3	13.2	13.7	16.5	0.9	13.5	
2016	199.8	7.9	3.6	2.0	2.2	0.1	13.5	42.3	13.4	11.2	16.6	1.1	13.2	
2017	201.7	8.7	4.3	1.5	2.8	0.1	12.9	37.5	11.9	9.9	14.5	1.3	12.7	
2017 Dec	201.7	8.7	4.3	1.5	2.8	0.1	12.9	37.5	11.9	9.9	14.5	1.3	12.7	
2018 Jan	202.1	8.9	4.6	1.2	2.9	0.1	12.9	40.1	10.3	13.9	14.6	1.3	13.1	
Feb	204.3	8.8	4.4	1.4	2.9	0.1	12.9	40.3	10.3	14.2	14.6	1.3	13.1	
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	
Changes*														
2016	+ 3.1	- 1.2	+ 0.5	- 1.4	- 0.3	+ 0.0	- 0.5	- 1.8	+ 0.1	- 1.8	- 0.3	+ 0.1	- 0.3	
2017	- 1.0	- 0.0	+ 0.7	- 1.0	+ 0.2	- 0.0	- 0.6	- 5.1	- 1.4	- 1.4	- 2.5	+ 0.2	- 0.5	
2017 Dec	- 11.1	+ 0.3	+ 0.1	+ 0.1	+ 0.1	+ 0.0	- 0.3	- 7.5	- 0.1	- 4.0	- 3.4	+ 0.1	+ 0.1	
2018 Jan	+ 0.4	+ 0.2	+ 0.3	- 0.2	+ 0.0	+ 0.0	- 0.0	+ 2.6	- 1.6	+ 4.0	+ 0.1	+ 0.0	+ 0.4	
Feb	+ 2.2	- 0.1	- 0.2	+ 0.2	+ 0.0	- 0.0	+ 0.0	+ 0.2	+ 0.0	+ 0.3	+ 0.0	- 0.1	- 0.0	
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	

* 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

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						Savings deposits ³			Memo item				
by maturity						Total	Domestic households	Domestic non-profit institutions	Bank savings bonds ⁴	Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities) ⁵	Liabilities arising from repos	Period
Domestic non-profit institutions	up to and including 1 year	more than 1 year ²											
		Total	of which										
			up to and including 2 years	more than 2 years									
End of year or month*						Total	Domestic households	Domestic non-profit institutions	Bank savings bonds ⁴	Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities) ⁵	Liabilities arising from repos	Period
	13.1	55.5	203.9	12.7	191.1	585.6	576.6	9.0	39.2	0.0	3.8	–	2015
	13.5	54.5	207.5	13.3	194.3	577.7	569.3	8.4	32.7	0.1	2.9	–	2016
	14.0	49.0	208.5	12.7	195.8	572.4	564.6	7.9	26.6	1.7	2.4	–	2017
	14.0	49.0	208.5	12.7	195.8	572.4	564.6	7.9	26.6	1.7	2.4	–	2017 Dec
	13.8	48.3	208.8	12.7	196.1	571.9	564.0	7.8	26.0	1.8	2.4	–	2018 Jan
	13.8	48.7	209.0	12.7	196.3	571.5	563.8	7.7	25.5	2.2	2.4	–	Feb
	13.9	48.6	209.0	12.5	196.5	570.5	562.8	7.7	25.1	2.6	2.4	–	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
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	– 0.5	+ 2.6	+ 0.5	+ 2.1	+ 1.9	+ 1.8	+ 0.1	– 0.4	+ 0.3	– 0.0	–	2017 Dec
	– 0.2	– 0.7	+ 0.3	+ 0.0	+ 0.3	– 0.5	– 0.5	– 0.0	– 0.6	+ 0.1	– 0.0	–	2018 Jan
	+ 0.0	+ 0.3	+ 0.2	– 0.0	+ 0.2	– 0.4	– 0.2	– 0.1	– 0.5	+ 0.4	– 0.0	–	Feb
	+ 0.0	– 0.1	– 0.0	– 0.2	+ 0.2	– 1.0	– 1.0	+ 0.0	– 0.4	+ 0.4	+ 0.0	–	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

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

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

Local government and local government associations (including municipal special-purpose associations)						Social security funds							
Total	Sight deposits	Time deposits 3		Savings deposits and bank savings bonds 2,4	Memo item Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds 2	Memo item Fiduciary loans	Period	
		for up to and including 1 year	for more than 1 year					for up to and including 1 year	for more than 1 year				
End of year or month*													
52.4	29.2	9.6	8.3	5.2	0.4	91.2	12.1	60.5	17.5	1.1	–	2015	
56.0	31.5	8.7	10.1	5.7	0.4	93.6	9.4	57.6	25.1	1.5	–	2016	
61.6	33.2	8.8	14.1	5.5	0.0	93.8	9.5	45.6	37.6	1.1	–	2017	
61.6	33.2	8.8	14.1	5.5	0.0	93.8	9.5	45.6	37.6	1.1	–	2017 Dec	
54.0	26.2	8.3	14.0	5.5	0.0	99.2	14.0	46.1	38.0	1.1	–	2018 Jan	
57.4	29.6	8.3	14.1	5.5	0.0	97.8	14.6	44.8	37.2	1.2	–	Feb	
55.4	27.6	7.9	14.2	5.6	0.0	96.6	14.2	44.1	37.2	1.1	–	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	
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	
+ 3.2	+ 3.3	– 0.3	+ 0.1	+ 0.1	+ 0.0	– 7.1	– 5.4	– 2.3	+ 0.6	+ 0.0	–	2017 Dec	
– 7.6	– 7.0	– 0.5	– 0.1	– 0.0	– 0.0	+ 5.3	+ 4.5	+ 0.5	+ 0.4	– 0.0	–	2018 Jan	
+ 3.5	+ 3.4	– 0.0	+ 0.1	– 0.0	– 0.0	– 1.4	+ 0.6	– 1.3	– 0.8	+ 0.1	–	Feb	
– 2.0	– 1.9	– 0.3	+ 0.2	+ 0.1	–	– 1.1	– 0.4	– 0.7	– 0.0	– 0.0	–	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	

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

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

IV Banks

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

€ billion

Period	Savings deposits ¹								Memo item Interest credited on savings deposits	Bank savings bonds ³ , sold to			
	of residents						of non-residents			non-banks, total	domestic non-banks		foreign non-banks
	Total	Total	at three months' notice		at more than three months' notice		Total	of which At three months' notice			Total	of which With maturities of more than 2 years	
			Total	of which Special savings facilities ²	Total	of which Special savings facilities ²							
Total	Total	Total					Total						
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 Jan	589.9	582.4	539.8	346.2	42.7	31.2	7.4	6.5	0.2	49.4	42.9	30.9	6.5
Feb	589.6	582.2	540.5	343.9	41.7	30.7	7.4	6.5	0.1	47.2	42.3	30.5	4.9
Mar	588.6	581.3	540.0	342.7	41.3	30.3	7.3	6.4	0.1	46.7	41.8	30.3	4.9
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
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 Jan	- 0.5	- 0.4	+ 0.2	- 2.1	- 0.7	+ 0.9	- 0.0	- 0.0	.	- 0.9	- 0.8	- 0.5	- 0.1
Feb	- 0.3	- 0.3	+ 0.4	- 2.3	- 0.6	- 0.5	- 0.0	- 0.0	.	- 2.2	- 0.6	- 0.4	- 1.6
Mar	- 1.0	- 0.9	- 0.5	- 1.3	- 0.4	- 0.4	- 0.0	- 0.0	.	- 0.5	- 0.5	- 0.2	- 0.0
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

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

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

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

€ billion

Period	Negotiable bearer debt securities and money market paper										Non-negotiable bearer debt securities and money market paper ⁶		Subordinated	
	Total	of which				with maturities of								
		Floating rate bonds ¹	Zero coupon bonds ^{1,2}	Foreign currency bonds ^{3,4}	Certificates of deposit	up to and including 1 year		more than 1 year up to and including 2 years		more than 2 years				
						Total	of which without a nominal guarantee ⁵	Total	of which without a nominal guarantee ⁵					
											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 Jan	1,060.2	143.6	24.4	355.1	76.5	92.3	4.2	31.2	6.8	936.7	0.4	0.2	30.5	0.5
Feb	1,076.8	143.7	26.1	371.5	86.2	104.0	4.4	33.2	7.3	939.6	0.3	0.2	30.6	0.5
Mar	1,081.8	146.2	25.8	367.5	83.6	100.6	4.3	32.6	7.1	948.6	0.3	0.2	30.2	0.5
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
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 Jan	- 6.3	- 3.6	- 1.7	- 15.2	- 13.3	- 15.1	+ 0.2	- 1.7	+ 0.4	+ 10.4	+ 0.0	+ 0.0	+ 0.0	- 0.0
Feb	+ 16.6	+ 0.0	+ 1.7	+ 16.3	+ 9.7	+ 11.6	+ 0.2	+ 2.0	+ 0.4	+ 2.9	- 0.0	- 0.0	+ 0.1	-
Mar	+ 5.0	+ 2.5	- 0.3	- 4.0	- 2.6	- 3.3	- 0.1	- 0.6	- 0.2	+ 9.0	- 0.0	- 0.0	- 0.4	-
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

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

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

IV Banks

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

€ billion

End of year/month	Number of associ- ations	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 secur- ities out- stand- ing	Capital (includ- ing pub- lished re- serves) 7	Memo item New con- tracts entered into in year or month 8
			Credit bal- ances and loans (ex- cluding building loans) 1	Building loans 2	Bank debt secur- ities 3	Building loans			Secur- ities (in- cluding Treasury bills and Treasury discount paper) 4	Deposits under savings and loan con- tracts	Sight and time deposits	Deposits under savings and loan con- tracts	Sight and time de- posits 6			
						Loans under savings and loan con- tracts	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 Mar	20	232.0	42.5	0.0	16.2	12.1	105.7	25.3	25.4	2.6	24.3	170.0	9.4	3.1	11.6	7.2
Apr	20	232.2	42.3	0.0	16.2	12.1	106.0	25.4	25.5	2.6	24.5	170.1	9.2	3.1	11.6	6.9
May	20	232.6	42.3	0.0	16.2	12.1	106.3	25.5	25.5	2.6	24.3	170.6	9.2	3.1	11.6	7.3
Private building and loan associations																
2018 Mar	12	162.3	26.6	–	7.1	9.1	82.0	22.0	11.6	1.7	22.0	110.7	9.1	3.1	8.0	4.4
Apr	12	162.1	26.3	–	7.0	9.1	82.2	22.0	11.6	1.7	21.9	110.7	9.0	3.1	8.0	4.3
May	12	162.2	26.3	–	7.0	9.1	82.4	22.1	11.6	1.7	21.7	111.1	8.9	3.1	8.0	4.5
Public building and loan associations																
2018 Mar	8	69.7	15.9	0.0	9.1	3.0	23.7	3.3	13.8	0.9	2.3	59.3	0.2	–	3.6	2.8
Apr	8	70.1	15.9	0.0	9.2	3.0	23.8	3.4	13.9	0.9	2.6	59.4	0.3	–	3.6	2.6
May	8	70.4	16.1	0.0	9.2	3.0	23.9	3.4	13.9	0.9	2.5	59.6	0.3	–	3.6	2.9

Trends in building and loan association business

€ billion

Period	Changes in deposits under savings and loan contracts			Capital promised		Capital disbursed						Disbursement commitments outstanding at end of period		Interest and repayments received on building loans ¹⁰		Memo item Housing bonuses re-ceived ¹²
	Amounts paid into savings and loan accounts ⁹	Interest credited on deposits under savings and loan con-tracts	Repay-ments of deposits under cancelled savings and loan con-tracts	Total	of which Net alloca-tions ¹¹	Total	Allocations				Newly granted interim and bridging loans and other building loans	Total	of which Under allo-cated con-tracts	Total	of which Repay-ments during quarter	
							Deposits under savings and loan contracts		Loans under savings and loan contracts ⁹							
							Total	of which Applied to settle-ment of interim and bridging loans	Total	of which Applied to settle-ment of interim and bridging loans						
All building and loan associations																
2016	27.5	2.2	7.6	46.8	27.4	40.9	17.2	4.4	4.9	3.7	18.8	16.3	8.0	8.0	7.2	0.2
2017	26.7	2.3	7.6	45.3	26.0	39.6	16.4	4.1	4.5	3.4	18.7	16.4	7.4	7.1	6.2	0.2
2018 Mar	2.3	0.0	0.7	3.9	2.0	3.3	1.3	0.3	0.3	0.2	1.7	17.5	7.6	0.5	1.4	0.0
Apr	2.2	0.0	0.7	4.1	2.3	3.5	1.4	0.4	0.5	0.4	1.6	17.6	7.6	0.5		0.0
May	2.5	0.0	0.7	3.8	2.1	3.2	1.3	0.4	0.4	0.3	1.5	17.8	7.5	0.5		0.0
Private building and loan associations																
2018 Mar	1.5	0.0	0.4	2.7	1.2	2.5	0.9	0.2	0.3	0.2	1.3	12.5	4.3	0.4	1.0	0.0
Apr	1.4	0.0	0.3	3.0	1.6	2.7	1.1	0.3	0.3	0.3	1.3	12.5	4.2	0.4		0.0
May	1.6	0.0	0.3	2.7	1.4	2.5	0.9	0.3	0.3	0.3	1.2	12.6	4.2	0.4		0.0
Public building and loan associations																
2018 Mar	0.8	0.0	0.3	1.2	0.8	0.8	0.3	0.1	0.1	0.1	0.4	5.0	3.3	0.1	0.4	0.0
Apr	0.8	0.0	0.3	1.1	0.7	0.9	0.4	0.1	0.1	0.1	0.4	5.1	3.3	0.1		0.0
May	0.9	0.0	0.4	1.1	0.7	0.8	0.3	0.1	0.1	0.1	0.3	5.2	3.4	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.

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 May	12,415.6	124.2	123.8	1,354.0	1,230.2	0.0
June ^p	12,509.3	125.1	124.7	...	...	...
July	.	.	.	.	.	.

2 Reserve maintenance in Germany

€ million

Maintenance period beginning in ¹	Reserve base ²	German share of euro-area reserve base in per cent	Required reserves before deduction of lump-sum allowance ³	Required reserves after deduction of lump-sum allowance ⁴	Current accounts ⁵	Excess reserves ⁶	Deficiencies ⁷
2011	2,666,422	25.7	53,328	53,145	54,460	1,315	1
2012	2,874,716	27.0	28,747	28,567	158,174	129,607	1
2013	2,743,933	26.4	27,439	27,262	75,062	47,800	2
2014	2,876,931	26.9	28,769	28,595	75,339	46,744	4
2015	3,137,353	27.6	31,374	31,202	174,361	143,159	0
2016	3,371,095	28.3	33,711	33,546	301,989	268,443	0
2017	3,456,192	27.8	34,562	34,404	424,547	390,143	2
2018 May	3,467,454	27.9	34,675	34,517	465,994	431,477	0
June ^p	3,502,652	28.0	35,027	34,870	...	...	...
July	.	.	.	.	.	.	.

(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 May	6,188	5,773	3,118	11,301	6,364	104	1,669
June	6,164	5,765	3,323	11,397	6,406	99	1,716
July	.	.	.	.	.	.	.

(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 May	2,365,915	1,509	406,083	580,598	113,347
June	2,384,432	1,138	423,273	579,885	113,927
July	.	.	.	.	.

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

2% between 1 January 1999 and 17 January 2012. Since 18 January 2012, it was stood at 1%. ⁴ Article 5 (2) of the Regulation of the European Central Bank on the application of minimum reserves. ⁵ Average credit balances of credit institutions at national central banks. ⁶ Average credit balances less required reserves after deduction of the lump-sum allowance. ⁷ Required reserves after deduction of the lump-sum allowance.

VI Interest rates

1 ECB interest rates

% per annum

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

1 Pursuant to section 247 of the Civil Code.

2 Base rates

% per annum

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

3 Eurosystem monetary policy operations allotted through tenders *

Date of settlement	Bid amount	Allotment amount	Fixed rate tenders	Variable rate tenders			Running for ... days
			Fixed rate	Minimum bid rate	Marginal rate ¹	Weighted average rate	
	€ million		% per annum				
	Main refinancing operations						
2018 June 20	1,544	1,544	0.00	—	—	—	7
June 27	2,738	2,738	0.00	—	—	—	7
July 4	2,283	2,283	0.00	—	—	—	7
July 11	1,910	1,910	0.00	—	—	—	7
July 18	1,958	1,958	0.00	—	—	—	7
Long-term refinancing operations							
2018 Mar 29	2,359	2,359	2 0.00	—	—	—	91
Apr 26	2,281	2,281	2 ...	—	—	—	91
May 31	2,887	2,887	2 ...	—	—	—	91
June 28	2 266	2 266	2 ...	—	—	—	91

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

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

4 Money market rates, by month *

% per annum

Monthly average	EONIA 1	EURIBOR 2					
		One-week funds	One-month funds	Three-month funds	Six-month funds	Nine-month funds	Twelve-month funds
2017 Dec	– 0.34	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19
2018 Jan	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19
Feb	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19
Mar	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19
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

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

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

VI Interest rates

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

(a) Outstanding amounts °

End of month	Households' deposits				Non-financial corporations' deposits			
	with an agreed maturity of							
	up to 2 years		over 2 years		up to 2 years		over 2 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2017 May	0.33	71,503	1.41	217,847	0.08	82,646	1.41	20,471
June	0.33	69,952	1.40	217,154	0.08	80,018	1.35	20,770
July	0.32	69,365	1.39	216,115	0.08	78,396	1.31	21,529
Aug	0.31	69,014	1.37	215,909	0.09	78,517	1.30	22,146
Sep	0.31	67,904	1.36	215,817	0.08	77,405	1.25	22,356
Oct	0.30	67,393	1.35	215,503	0.08	76,092	1.18	23,093
Nov	0.30	66,679	1.34	215,034	0.08	77,669	1.12	24,421
Dec	0.29	66,585	1.34	216,841	0.06	78,428	1.07	25,136
2018 Jan	0.29	66,589	1.32	216,681	0.05	78,112	1.05	26,055
Feb	0.28	65,984	1.31	216,585	0.04	75,362	1.03	26,887
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	26,849

End of month	Housing loans to households ³						Loans for consumption and other purposes to households ^{4, 5}					
	with a maturity of											
	up to 1 year ⁶		over 1 year and up to 5 years		over 5 years		up to 1 year ⁶		over 1 year and up to 5 years		over 5 years	
	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million
2017 May	2.44	4,304	2.04	26,188	2.85	1,108,805	7.13	49,165	3.96	84,813	4.06	311,334
June	2.44	4,200	2.03	26,206	2.83	1,115,307	7.17	50,307	3.95	85,111	4.04	310,769
July	2.46	4,076	2.01	26,017	2.80	1,120,699	7.15	49,247	3.93	85,513	4.03	311,617
Aug	2.45	4,035	2.00	25,937	2.77	1,125,823	7.17	48,525	3.92	85,972	4.01	313,025
Sep	2.42	3,934	2.00	25,996	2.75	1,131,500	7.12	49,521	3.91	86,239	4.00	312,467
Oct	2.38	4,208	1.99	25,925	2.73	1,135,284	7.14	48,762	3.89	86,683	3.98	312,869
Nov	2.44	3,898	1.98	25,924	2.71	1,139,714	7.00	48,352	3.87	87,393	3.96	312,973
Dec	2.44	3,851	1.97	25,850	2.68	1,143,333	6.98	48,885	3.87	87,210	3.95	311,861
2018 Jan	2.33	3,906	1.96	25,566	2.66	1,144,088	7.07	48,461	3.85	87,632	3.93	312,287
Feb	2.31	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	4,021	1.93	25,588	2.58	1,162,273	7.04	48,212	3.76	84,796	3.89	312,644

End of month	Loans to non-financial corporations with a maturity of					
	up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2017 May	2.45	131,174	1.97	134,474	2.35	649,087
June	2.51	132,255	1.95	134,974	2.33	645,396
July	2.45	131,691	1.95	135,710	2.31	650,498
Aug	2.44	130,333	1.94	136,527	2.30	654,312
Sep	2.45	135,493	1.93	135,872	2.28	654,806
Oct	2.39	136,523	1.92	136,647	2.26	657,911
Nov	2.42	137,523	1.91	138,041	2.25	664,018
Dec	2.47	133,105	1.90	137,708	2.22	664,374
2018 Jan	2.34	141,326	1.88	138,344	2.20	668,281
Feb	2.39	142,819	1.88	138,735	2.19	672,403
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	149,356	1.78	138,969	2.15	678,537

* 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 companies, banks and other financial institutions. The most recent figures are in all cases to be regarded as provisional. Subsequent revisions appearing in the following Monthly Report are not specially marked. Further information on the MFI interest rate statistics can be found on the Bundesbank's website (Statistics / Money and capital markets / Interest rates and yields / Interest rates on deposits and loans). ° The statistics on outstanding amounts are collected at the end of the month. 1 The effective interest rates are

calculated either as annualised agreed interest rates or as narrowly defined effective rates. Both calculation methods cover all interest payments on deposits and loans but not any other related charges which may occur for enquiries, administration, preparation of the documents, guarantees and credit insurance. 2 Data based on monthly balance sheet statistics. 3 Secured and unsecured loans for home purchase, including building and home improvements; including loans granted by building and loan associations and interim credits as well as transmitted loans granted by the reporting agents in their own name and for their own account. 4 Loans for consumption are defined as loans granted for the purpose of personal use in the consumption of goods and services. 5 For the purpose of these statistics, other loans are loans granted for other purposes such as business, debt consolidation, education etc. 6 Including overdrafts (see also footnotes 12 to 14 p 47*).

VI Interest rates

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

Households' deposits												
		with an agreed maturity of							redeemable at notice of ⁸			
Overnight		up to 1 year		over 1 year and up to 2 years		over 2 years		up to 3 months		over 3 months		
Reporting period	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million
2017 May	0.05	1,258,521	0.20	4,724	0.43	719	0.87	726	0.21	536,046	0.30	48,646
June	0.04	1,264,791	0.22	4,078	0.27	947	0.73	633	0.21	535,416	0.30	48,253
July	0.04	1,271,823	0.17	5,276	0.31	653	0.70	617	0.20	537,553	0.31	44,902
Aug	0.03	1,278,289	0.14	5,198	0.41	492	0.65	716	0.19	537,173	0.30	44,119
Sep	0.03	1,285,601	0.15	3,992	0.31	598	0.65	636	0.19	537,108	0.30	43,509
Oct	0.03	1,294,797	0.18	3,750	0.28	800	0.65	696	0.19	537,700	0.28	42,721
Nov	0.03	1,314,663	0.17	4,022	0.39	696	0.72	747	0.18	537,935	0.27	42,074
Dec	0.03	1,322,096	0.13	4,043	0.35	880	0.59	627	0.18	540,332	0.28	41,475
2018 Jan	0.03	1,319,368	0.19	4,348	0.31	866	0.71	780	0.18	539,145	0.28	42,193
Feb	0.03	1,328,779	0.26	4,181	0.31	652	0.80	737	0.17	539,604	0.27	41,465
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

		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			
Reporting period	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	Effective interest rate ¹ % pa	Volume ⁷ € million	
2017 May	– 0.01	401,652	– 0.05	10,212	0.13	912	0.30	837	
June	– 0.02	415,078	– 0.14	14,661	0.07	525	0.24	586	
July	– 0.01	402,113	– 0.09	11,516	0.19	859	0.26	1,382	
Aug	– 0.02	409,698	– 0.04	9,710	0.21	185	0.52	666	
Sep	– 0.02	414,461	– 0.08	10,040	0.09	351	0.37	704	
Oct	– 0.02	425,806	– 0.10	9,134	0.04	412	0.26	1,456	
Nov	– 0.02	428,784	– 0.08	9,337	0.09	897	0.22	1,237	
Dec	– 0.02	425,477	– 0.07	13,102	0.09	351	0.28	1,477	
2018 Jan	– 0.02	429,587	– 0.07	11,368	0.01	520	0.30	1,271	
Feb	– 0.02	419,428	– 0.09	8,751	0.11	186	0.32	932	
Mar	– 0.02	418,683	– 0.08	10,133	0.13	347	0.31	427	
Apr	– 0.03	430,412	– 0.11	8,954	0.06	314	0.35	815	
May	– 0.03	440,268	– 0.04	9,576	0.11	490	0.34	587	

Loans to households											
Loans for consumption with an initial rate fixation of 4											
Reporting period	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 % pa	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million
2017 May	5.89	5.87	9,372	7.22	1,814	6.41	337	4.49	3,846	6.87	5,189
	5.90	5.88	8,683	7.24	1,685	6.28	308	4.49	3,574	6.89	4,801
July	5.99	5.97	8,940	7.32	1,872	6.22	299	4.57	3,561	6.95	5,080
Aug	5.88	5.86	8,827	7.20	1,724	6.51	312	4.54	3,703	6.84	4,812
Sep	5.67	5.65	8,212	7.11	1,465	6.09	305	4.31	3,579	6.72	4,328
Oct	5.67	5.65	8,338	7.07	1,495	6.06	302	4.30	3,758	6.81	4,278
Nov	5.63	5.61	8,216	7.10	1,410	6.09	306	4.31	3,827	6.80	4,083
Dec	5.39	5.37	6,701	6.83	1,004	5.81	297	4.15	3,315	6.63	3,089
2018 Jan	5.85	5.83	9,288	7.26	1,729	6.04	328	4.32	3,860	6.96	5,100
	5.70	5.68	8,315	7.09	1,451	6.15	258	4.28	3,497	6.72	4,560
Feb	5.44	5.43	9,545	7.04	1,732	5.97	287	4.10	4,259	6.53	4,999
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

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

business at the end of the month has to be incorporated in the calculation of average rates of interest. ⁷ Estimated. The volume of new business is extrapolated to form the underlying total using a grossing-up procedure. ⁸ Including non-financial corporations' deposits; including fidelity and growth premia. ⁹ Excluding overdrafts. ¹⁰ Annual percentage rate of charge, which contains other related charges which may occur for enquiries, administration, preparation of the documents, guarantees and credit insurance.

VI Interest rates

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

Loans to households (cont'd)										
Loans for other purposes to households with an initial rate fixation of 5										
Reporting period	Total		of which renegotiated loans 9		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million
Loans to households										
2017 May	2.02	5,890	1.81	1,930	1.83	2,535	2.61	941	1.99	2,414
June	2.06	5,933	1.89	1,852	1.95	2,722	2.73	859	1.93	2,352
July	1.96	6,388	1.75	2,282	1.76	2,873	2.48	964	1.99	2,551
Aug	1.99	5,667	1.74	1,625	1.81	2,171	2.66	814	1.92	2,682
Sep	1.99	5,275	1.80	1,455	1.79	2,341	2.60	804	1.99	2,130
Oct	2.08	5,682	1.91	1,915	1.91	2,646	2.64	854	2.07	2,182
Nov	1.98	5,587	1.84	1,569	1.76	2,471	2.63	873	1.96	2,243
Dec	2.00	6,193	1.80	1,624	1.80	2,705	2.76	958	1.92	2,530
2018 Jan	2.01	6,017	1.94	2,035	1.85	2,693	2.62	888	1.97	2,436
Feb	1.97	5,062	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
<i>of which: loans to sole proprietors</i>										
2017 May	2.12	4,033	-	-	2.04	1,667	2.84	689	1.92	1,677
June	2.15	4,197	-	-	2.13	1,964	2.84	681	1.88	1,552
July	2.06	4,142	-	-	1.89	1,917	2.82	688	1.94	1,537
Aug	2.08	3,640	-	-	1.95	1,445	2.79	629	1.92	1,566
Sep	2.04	3,411	-	-	1.84	1,436	2.81	598	1.90	1,377
Oct	2.13	3,707	-	-	1.98	1,694	2.82	628	2.00	1,385
Nov	2.07	3,725	-	-	1.94	1,592	2.80	662	1.88	1,471
Dec	2.09	4,266	-	-	2.00	1,822	2.83	753	1.85	1,691
2018 Jan	2.07	4,146	-	-	1.99	1,817	2.72	679	1.89	1,650
Feb	2.07	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

Loans to households (cont'd)													
Housing loans with an initial rate fixation of 3													
Reporting period	Total (including charges)	Total		of which renegotiated loans 9		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years and up to 10 years		over 10 years	
	Annual percentage rate of charge 10 % pa	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million
Total loans													
2017 May	1.88	1.83	20,484	1.92	4,136	2.17	2,288	1.77	1,731	1.66	7,308	1.88	9,157
June	1.87	1.82	19,294	1.92	3,767	2.02	2,265	1.70	1,541	1.68	6,573	1.89	8,915
July	1.88	1.82	20,405	1.88	4,612	2.04	2,389	1.68	1,726	1.66	7,420	1.92	8,870
Aug	1.94	1.87	20,228	2.00	3,743	2.05	2,340	1.89	1,888	1.67	7,199	1.98	8,801
Sep	1.92	1.86	17,363	1.91	3,289	2.04	2,025	1.71	1,571	1.71	5,950	1.96	7,817
Oct	1.90	1.85	18,128	1.90	3,955	2.08	2,134	1.70	1,634	1.68	6,611	1.96	7,749
Nov	1.90	1.84	18,793	1.89	3,525	2.04	2,170	1.72	1,640	1.68	6,550	1.94	8,433
Dec	1.86	1.79	17,473	1.87	3,242	2.04	2,150	1.69	1,553	1.65	6,084	1.86	7,686
2018 Jan	1.88	1.82	19,643	1.90	4,529	2.03	2,354	1.69	1,798	1.65	6,864	1.92	8,627
Feb	1.90	1.84	18,839	1.95	3,687	2.07	2,090	1.73	1,624	1.68	6,400	1.92	8,725
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
<i>of which: collateralised loans 11</i>													
2017 May	-	1.73	9,110	-	-	2.09	843	1.59	900	1.58	3,370	1.81	3,997
June	-	1.72	8,374	-	-	1.87	865	1.53	726	1.61	3,030	1.82	3,753
July	-	1.72	9,062	-	-	1.84	896	1.53	891	1.60	3,529	1.84	3,746
Aug	-	1.79	8,461	-	-	1.96	821	1.87	996	1.59	3,204	1.92	3,440
Sep	-	1.78	7,701	-	-	1.97	711	1.53	797	1.63	2,707	1.92	3,486
Oct	-	1.77	8,217	-	-	1.97	780	1.53	782	1.62	3,095	1.92	3,560
Nov	-	1.76	8,464	-	-	1.93	771	1.53	796	1.60	3,031	1.90	3,866
Dec	-	1.69	7,644	-	-	1.97	685	1.51	740	1.57	2,733	1.77	3,486
2018 Jan	-	1.75	9,069	-	-	2.00	837	1.57	946	1.59	3,283	1.88	4,003
Feb	-	1.76	8,579	-	-	2.02	702	1.53	803	1.61	2,946	1.86	4,128
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

For footnotes * and 1 to 6, see p 44•. For footnotes +, 7 to 10, see p 45•. For footnote 11, see p 47•.

VI Interest rates

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

Loans to households (cont'd)						Loans to non-financial corporations			
Revolving loans ¹² and overdrafts ¹³ credit card debt ¹⁴		of which				Revolving loans ¹² and overdrafts ¹³ credit card debt ¹⁴		of which	
		Revolving loans ¹² and overdrafts ¹³		Extended credit card debt				Revolving loans ¹² and overdrafts ¹³	
Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million	Effective interest rate ¹ % pa	Volume ² € million
8.46	39,394	8.50	31,647	15.13	4,259	3.53	65,353	3.54	65,067
8.44	40,606	8.47	32,739	15.13	4,328	3.59	67,282	3.61	66,992
8.45	39,300	8.46	31,374	15.11	4,423	3.52	65,979	3.54	65,695
8.48	38,663	8.47	30,914	15.12	4,364	3.48	66,012	3.49	65,718
8.44	39,630	8.48	31,635	15.09	4,393	3.52	67,886	3.54	67,559
8.47	39,133	8.48	31,101	15.10	4,493	3.41	67,481	3.42	67,162
8.30	38,672	8.35	30,489	15.11	4,386	3.45	67,793	3.46	67,457
8.21	39,538	8.35	31,187	14.94	4,303	3.47	65,936	3.49	65,625
8.33	39,136	8.38	31,128	14.92	4,369	3.36	68,733	3.37	68,418
8.36	39,233	8.39	31,380	14.92	4,334	3.40	70,798	3.42	70,488
8.31	39,818	8.36	31,844	14.87	4,340	3.41	71,713	3.43	71,381
8.29	39,308	8.35	31,176	14.85	4,408	3.29	72,449	3.30	72,100
8.29	39,116	8.38	30,992	14.79	4,376	3.35	71,010	3.37	70,690

Loans to non-financial corporations (cont'd)																	
Total		of which		Loans up to €1 million with an initial rate fixation of 15						Loans over €1 million with an initial rate fixation of 15							
		renegotiated loans 9		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years			
Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million
Total loans																	
1.35	65,177	1.53	18,706	2.54	8,000	2.58	1,661	1.82	1,423	0.99	41,638	1.55	3,072	1.58	9,383		
1.41	71,950	1.50	21,083	2.51	8,904	2.57	1,681	1.84	1,442	1.13	46,903	1.08	3,655	1.61	9,365		
1.39	67,430	1.48	20,770	2.42	8,497	2.57	1,583	1.87	1,403	1.08	43,495	1.28	3,021	1.61	9,431		
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		
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		
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		
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		
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		
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		
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		
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		
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		
1.20	72,972	1.36	17,165	2.31	9,731	2.40	1,395	1.95	1,290	0.85	51,022	1.59	3,004	1.73	6,530		
<i>of which:</i> collateralised loans 11																	
1.61	8,671	.	.	2.06	545	2.54	191	1.70	401	1.45	4,558	2.04	646	1.63	2,330		
1.55	11,011	.	.	1.85	632	2.60	150	1.75	444	1.44	6,484	1.64	625	1.66	2,676		
1.52	9,023	.	.	1.78	661	2.46	155	1.77	415	1.34	5,050	1.74	464	1.68	2,278		
1.47	9,188	.	.	1.99	480	2.39	153	1.69	431	1.30	4,961	1.94	560	1.50	2,603		
1.52	9,811	.	.	1.83	535	2.50	132	1.77	351	1.41	5,743	1.64	370	1.62	2,680		
1.46	9,398	.	.	1.90	557	2.61	131	1.77	349	1.25	5,480	2.19	304	1.64	2,577		
1.60	8,531	.	.	1.95	545	2.41	147	1.74	414	1.40	5,212	2.68	423	1.74	1,790		
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		
1.53	7,387	.	.	1.92	627	2.36	148	1.90	426	1.32	4,529	1.93	357	1.73	1,300		
1.55	6,461	.	.	1.96	428	2.77	134	1.79	324	1.30	3,638	1.54	457	1.88	1,480		
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		
1.57	8,174	.	.	1.91	620	2.50	152	1.83	434	1.26	4,155	2.07	764	1.77	2,049		
1.61	7,424	.	.	1.93	540	2.47	158	1.77	354	1.38	4,223	1.82	638	1.92	1,511		

For footnotes * and 1 to 6, see p 44*. For footnotes + and 7 to 10, see p 45*. **11** For the purposes of the interest rate statistics, a loan is considered to be secured if collateral (among others financial collateral, real estate collateral, debt securities) in at least the same value as the loan amount has been posted, pledged or assigned. **12** Including revolving loans which have all the following features: (a) the borrower may use or withdraw the funds to a pre-approved credit limit without giving prior notice to the lender; (b) the amount of available credit can increase and decrease as funds are borrowed and repaid; (c) the loan may be used repeatedly;

(d) there is no obligation of regular repayment of funds. **13** Overdrafts are defined as debit balances on current accounts. They include all bank overdrafts regardless of whether they are within or beyond the limits agreed between customers and the bank. **14** Including convenience and extended credit card debt. Convenience credit is defined as the credit granted at an interest rate of 0% in the period between payment transactions effected with the card during one billing cycle and the date at which the debt balances from this specific billing cycle become due. **15** The amount category refers to the single loan transaction considered as new business.

VII Insurance corporations and pension funds

1 Assets

€ billion

End of year/quarter	Total	Currency and deposits ²	Debt securities	Loans ³	Shares and other equity	Investment fund shares/units	Financial derivatives	Insurance technical reserves	Non-financial assets	Remaining assets
Insurance corporations										
2015	1,954.1	344.4	344.7	278.9	228.7	578.3	4.5	71.9	51.8	50.8
2016 Q1	2,007.8	343.6	374.1	280.2	230.0	596.3	5.2	73.7	53.1	51.7
Q2	2,034.6	336.1	395.8	281.9	229.6	607.7	4.8	73.5	53.2	52.0
2016 Q3 ¹	2,219.9	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	2,214.7	343.8	395.0	325.6	343.1	662.0	2.3	50.6	33.9	58.4
Life insurance										
2015	1,063.7	219.7	169.8	158.0	34.9	414.6	2.2	16.3	30.7	17.4
2016 Q1	1,095.7	219.1	187.0	159.2	35.3	428.0	2.5	15.6	31.9	17.2
Q2	1,116.7	214.5	201.7	160.7	35.6	438.0	2.4	14.9	32.0	16.9
2016 Q3 ¹	1,247.0	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	1,185.2	212.6	199.6	205.5	43.0	479.9	1.2	8.5	19.3	15.5
Non-life insurance										
2015	511.0	113.9	97.6	55.6	48.5	134.8	1.3	32.9	14.5	11.9
2016 Q1	527.6	113.2	108.2	55.5	49.6	140.6	1.5	32.8	14.5	11.8
Q2	532.8	109.4	113.6	55.8	49.3	144.5	1.4	32.8	14.4	11.7
2016 Q3 ¹	592.3	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	622.3	120.0	112.3	75.0	72.3	166.8	0.3	34.5	9.8	31.4
Reinsurance ⁴										
2015	379.4	10.8	77.3	65.3	145.4	28.9	1.1	22.7	6.5	21.4
2016 Q1	376.0	11.2	78.5	64.0	145.1	27.3	1.1	20.4	6.4	21.9
Q2	373.7	11.9	79.8	62.8	144.8	25.8	1.0	18.8	6.4	22.4
2016 Q3 ¹	380.7	12.0	91.0	52.5	182.3	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
Pension funds ⁵										
2015	579.5	145.5	60.2	28.8	19.1	268.5	–	5.4	31.5	20.4
2016 Q1	588.8	143.1	66.0	29.0	19.4	273.4	–	5.5	31.9	20.5
Q2	601.7	142.7	69.1	29.2	20.0	281.9	–	5.5	32.5	20.7
Q3	611.6	144.4	69.2	29.3	20.1	289.0	–	5.6	33.2	20.9
Q4	613.5	144.7	67.8	29.8	20.6	288.9	–	5.7	34.5	21.4
2017 Q1	619.9	146.2	66.1	30.3	21.2	293.9	–	5.8	34.9	21.6
Q2	623.7	143.7	69.0	30.7	21.4	295.3	–	6.8	35.3	21.5
Q3	632.5	141.8	70.7	30.8	21.7	303.3	–	6.9	35.5	21.8
Q4	653.4	136.4	74.0	31.1	24.6	318.1	–	7.0	39.5	22.7
2018 Q1	654.0	136.0	74.3	31.5	25.3	317.1	–	7.1	40.0	22.8

¹ Data as of 2016 Q3 are based on Solvency II supervisory data, valuation of listed securities at the corresponding consistent price from the ESCB's securities database. Figures from 2016 Q3 on have been revised. Up to and including 2016 Q2 data are based on Solvency I supervisory data from the Federal Financial Supervisory Authority (BaFin), supplemented by estimates and own calculations. ² Accounts receivable to monetary financial institutions, including registered bonds, borrowers' note loans and registered Pfandbriefe. ³ Including deposits 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										
2015	1,954.1	18.3	91.7	214.8	1,474.7	1,160.6	314.1	0.0	70.2	84.4
2016 Q1	2,007.8	17.7	92.9	220.4	1,501.0	1,179.8	321.2	0.0	71.5	104.3
2016 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	–
2016 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	–
2017 Q2	2,177.9	28.6	57.0	450.7	1,505.2	1,308.4	196.8	2.1	134.3	–
2017 Q3	2,187.4	28.5	58.4	455.4	1,512.8	1,317.1	195.7	2.3	130.1	–
2017 Q4	2,211.6	28.3	62.6	465.9	1,521.1	1,333.7	187.4	2.2	131.6	–
2018 Q1	2,214.7	28.0	61.8	460.1	1,536.5	1,331.3	205.2	1.5	126.7	–
Life insurance										
2015	1,063.7	0.0	24.5	24.6	926.0	911.0	15.0	0.0	30.9	57.7
2016 Q1	1,095.7	0.0	26.0	23.6	938.7	923.4	15.2	0.0	30.7	76.8
2016 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	–
2016 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	–
2017 Q2	1,172.7	4.0	12.1	119.8	989.5	989.5	–	1.0	46.2	–
2017 Q3	1,177.4	4.1	12.3	121.5	993.9	993.9	–	1.1	44.5	–
2017 Q4	1,192.7	4.1	12.8	122.2	1,006.6	1,006.6	–	1.1	45.9	–
2018 Q1	1,185.2	4.0	13.3	119.6	1,005.0	1,005.0	–	0.7	42.6	–
Non-life insurance										
2015	511.0	0.0	14.2	63.7	390.5	249.6	140.9	0.0	17.1	25.5
2016 Q1	527.6	0.0	14.6	62.0	399.6	253.8	145.9	0.0	17.5	33.9
2016 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	–
2016 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	–
2017 Q2	603.3	1.1	6.8	135.6	406.7	302.4	104.2	0.1	53.0	–
2017 Q3	602.5	1.1	6.9	137.3	406.6	305.7	100.9	0.1	50.6	–
2017 Q4	606.6	1.1	6.7	141.2	405.6	309.7	95.9	0.1	51.9	–
2018 Q1	622.3	1.1	7.7	141.2	422.5	310.9	111.5	0.0	49.8	–
Reinsurance ⁵										
2015	379.4	18.3	53.0	124.8	158.2	–	158.2	0.0	22.2	2.8
2016 Q1	376.0	17.7	52.5	118.3	157.3	–	157.3	0.0	22.5	7.7
2016 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	–
2016 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	–
2017 Q2	401.9	23.5	38.1	195.2	109.1	16.4	92.6	1.1	35.0	–
2017 Q3	407.5	23.3	39.3	196.6	112.3	17.5	94.8	1.1	35.0	–
2017 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	–
Pension funds ⁶										
2015	579.5	–	4.9	11.3	518.3	517.9	0.4	–	6.1	38.9
2016 Q1	588.8	–	5.0	11.4	522.7	522.2	0.5	–	5.8	44.1
2016 Q2	601.7	–	5.0	10.0	529.6	529.1	0.5	–	5.8	51.3
2016 Q3	611.6	–	5.1	10.3	535.2	535.2	–	–	5.8	55.3
2016 Q4	613.5	–	5.2	11.3	544.7	544.7	–	–	6.0	46.4
2017 Q1	619.9	–	5.2	11.9	552.4	552.4	–	–	6.0	44.3
2017 Q2	623.7	–	6.1	11.6	554.3	554.3	–	–	6.2	45.5
2017 Q3	632.5	–	6.3	11.6	561.5	561.5	–	–	3.5	49.7
2017 Q4	653.4	–	6.4	11.9	578.6	578.6	–	–	3.5	52.9
2018 Q1	654.0	–	6.5	11.7	581.8	581.8	–	–	3.6	50.5

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

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

VIII Capital market

1 Sales and purchases of debt securities and shares in Germany

€ million

Period	Debt securities										
	Sales						Purchases				
	Sales = total purchases	Domestic debt securities ¹					Residents				
		Total	Bank debt securities	Corporate bonds (non-MFIs) ²	Public debt securities	Foreign debt securities ³	Total ⁴	Credit in- stitutions 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 July	– 7,748	– 17,251	– 7,196	8,174	– 18,228	9,503	9,578	– 6,471	11,565	4,484	– 17,325
Aug	13,342	12,771	– 1,814	– 1,581	16,166	571	6,897	– 8,730	9,902	5,725	6,445
Sep	– 13,756	– 18,254	– 8,577	– 3,456	– 6,221	4,497	1,838	– 8,357	12,865	– 2,670	– 15,594
Oct	– 12,129	– 10,152	– 9,775	– 2,760	2,383	– 1,977	9,642	– 4,841	12,199	2,284	– 21,771
Nov	28,537	22,066	893	6,338	14,835	6,471	25,664	3,359	13,355	8,950	2,873
Dec	– 20,490	– 18,944	– 5,802	– 952	– 12,190	– 1,546	3,495	– 12,058	10,057	5,496	– 23,985
2018 Jan	14,802	– 2,330	1,183	530	– 4,043	17,132	19,710	1,164	6,138	12,408	– 4,908
Feb	5,636	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	20,788	20,327	6,728	2,570	11,028	462	1,330	– 1,553	7,676	– 4,793	19,459

€ million

Period	Shares						
	Sales			Purchases			
	Sales = total purchases	Domestic shares ⁸		Residents			
		Domestic shares ⁸	Foreign shares ⁹	Total ¹⁰	Credit in- stitutions 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 July	2,889	509	2,380	4,140	– 690	4,830	– 1,251
Aug	2,276	155	2,121	4,782	– 603	5,385	– 2,506
Sep	5,766	1,482	4,284	4,296	– 1,738	6,034	1,470
Oct	2,242	572	1,670	– 535	735	– 1,270	2,777
Nov	3,310	110	3,200	4,121	1,198	2,923	– 811
Dec	13,617	484	13,133	15,596	2,898	12,698	– 1,979
2018 Jan	7,746	153	7,593	9,297	867	8,430	– 1,551
Feb	15,184	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	– 1,942	1,175	– 3,117	– 2,496	– 1,156	– 3,652	554

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

values. ⁸ Excluding shares of public limited investment companies; at issue prices. ⁹ Net purchases or net sales (–) of foreign shares (including direct investment) by residents; transaction values. ¹⁰ Domestic and foreign shares. ¹¹ Residual; also including purchases of domestic and foreign securities by domestic mutual funds. ¹² Net purchases or net sales (–) of domestic shares (including direct investment) by non-residents; transaction values. — The figures for the most recent date are provisional; revisions are not specially marked.

VIII Capital market

2 Sales of debt securities issued by residents *

€ million nominal value

Period	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
2017 Oct	91,104	50,410	2,420	1,150	34,514	12,326	5,299	35,396
Nov	84,080	37,055	1,823	340	22,871	12,021	11,681	35,345
Dec ⁴	59,026	33,899	1,727	1,727	17,999	12,446	6,113	19,014
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
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
2017 Oct	31,980	14,680	2,129	1,145	7,480	3,926	2,837	14,463
Nov	35,497	12,555	1,528	320	6,294	4,413	8,990	13,952
Dec ⁴	18,711	8,098	420	1,607	2,704	3,368	4,821	5,791
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
Net sales ⁶								
2006	129,423	58,336	—	12,811	—	44,890	—	55,482
2007	86,579	58,168	—	10,896	—	42,567	—	32,093
2008	119,472	8,517	—	15,052	—	65,773	—	28,302
2009	76,441	75,554	—	858	—	25,579	—	103,482
2010	21,566	87,646	—	3,754	—	28,296	—	85,464
2011	22,518	54,582	—	1,657	—	32,904	—	80,289
2012	—	85,298	—	4,177	—	3,259	—	21,298
2013	—	140,017	—	17,364	—	4,027	—	15,479
2014	—	34,020	—	6,313	—	862	—	12,383
2015	—	65,147	—	9,271	—	2,758	—	13,174
2016 ⁴	—	21,951	—	2,176	—	16,266	—	7,020
2017 ⁴	—	2,669	—	6,389	—	18,788	—	10,114
2017 Oct	—	1,501	—	1,342	—	1,165	—	272
Nov	—	22,681	—	444	—	1,471	—	15,863
Dec ⁴	—	28,202	—	1,367	—	7,519	—	10,909
2018 Jan	—	8,981	—	1,643	—	3,302	—	12,067
Feb	—	1,784	—	544	—	10,663	—	9,596
Mar	—	14,572	—	2,792	—	8,127	—	5,655
Apr	—	15,565	—	50	—	3,478	—	21,952
May	—	21,542	—	3,037	—	5,950	—	11,765

* For definitions, see the explanatory notes in the Statistical Supplement 2 Capital market statistics on p 21 ff. ¹ Excluding registered bank debt securities. ² Including cross-border financing within groups from January 2011. ³ 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	Bank debt securities						Corporate bonds (non-MFIs)	Public debt securities
	Total	Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions	Other bank debt securities		
2006	3,044,145	1,809,899	144,397	499,525	368,476	797,502	99,545	1,134,701
2007	3,130,723	1,868,066	133,501	452,896	411,041	870,629	95,863	1,166,794
2008	3,250,195	1,876,583	150,302	377,091	490,641	858,550	178,515	1,195,097
2009	3,326,635	1,801,029	151,160	296,445	516,221	837,203	227,024	1,298,581
2010	3,348,201	1,570,490	147,529	232,954	544,517	645,491	250,774	1,526,937
2011	3,370,721	1,515,911	149,185	188,663	577,423	600,640	247,585	1,607,226
2012	3,285,422	1,414,349	145,007	147,070	574,163	548,109	220,456	1,650,617
2013	3,145,329	1,288,340	127,641	109,290	570,136	481,273	221,851	1,635,138
2014	3,111,308	1,231,445	121,328	85,434	569,409	455,274	232,342	1,647,520
2015	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377
2016 ¹	3,068,111	1,164,965	132,775	62,701	633,578	335,910	275,789	1,627,358
2017 ¹	3,090,708	1,170,920	141,273	58,004	651,211	320,432	302,543	1,617,244
2017 Nov	3,118,910	1,187,744	142,640	58,333	660,338	326,433	303,012	1,628,153
2017 Dec	3,090,708	1,170,920	141,273	58,004	651,211	320,432	302,543	1,617,244
2018 Jan	3,081,726	1,173,984	142,916	57,006	654,514	319,549	302,565	1,605,177
2018 Feb	3,083,510	1,184,139	143,460	57,149	665,177	318,354	303,790	1,595,582
2018 Mar	3,098,082	1,193,483	146,252	57,900	673,304	316,027	303,362	1,601,237
2018 Apr	3,082,517	1,194,234	146,302	57,260	676,782	313,889	308,998	1,579,285
2018 May	3,104,059	1,202,753	149,339	55,434	682,732	315,248	310,256	1,591,050

Breakdown by remaining period to maturity ³

Position at end-May 2018

less than 2	1,031,211	465,728	42,997	22,390	294,951	105,392	63,192	502,293
2 to less than 4	612,580	270,538	36,776	11,447	151,397	70,919	50,652	291,391
4 to less than 6	456,823	172,661	29,190	7,557	91,950	43,965	40,367	243,796
6 to less than 8	336,370	127,819	21,621	6,513	70,302	29,384	33,422	175,129
8 to less than 10	237,660	78,407	14,811	4,821	36,399	22,376	14,639	144,614
10 to less than 15	117,275	34,616	2,735	1,105	17,236	13,540	24,336	58,323
15 to less than 20	81,554	19,452	424	1,153	13,910	3,966	6,250	55,852
20 and more	230,585	33,533	788	448	6,588	25,708	77,401	119,651

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

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

4 Shares in circulation issued by residents *

€ million nominal value

Period	Share capital = circulation at end of period under review	Net increase or net decrease (–) during period under review	Change in domestic public limited companies' capital due to							Memo item Share circulation at market values (market capita- lisation) level at end of period under review 2				
			cash payments and ex- change of convertible bonds 1	issue of bonus shares	contribution of claims and other real assets	contribution of shares, GmbH shares, etc	merger and transfer of assets	change of legal form	reduction of capital and liquidation					
2006	163,764	695	2,670	3,347	604	954	–	1,868	–	1,256	–	3,761	1,279,638	
2007	164,560	799	3,164	1,322	200	269	–	682	–	1,847	–	1,636	1,481,930	
2008	168,701	4,142	5,006	1,319	152	0	–	428	–	608	–	1,306	830,622	
2009	175,691	6,989	12,476	398	97	–	–	3,741	–	1,269	–	974	927,256	
2010	174,596	–	1,096	3,265	497	178	10	–	486	–	993	–	3,569	1,091,220
2011	177,167	2,570	6,390	552	462	200	9	–	552	–	762	–	3,532	924,214
2012	178,617	1,449	3,046	129	570	152	–	–	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	533	–	–	465	–	1,044	–	1,446	1,478,063
2015	177,416	319	4,634	397	599	533	–	–	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	533	–	–	457	–	661	–	1,615	1,933,733
2017 Nov	179,426	132	109	–	–	–	–	–	0	–	58	–	35	1,947,204
2017 Dec	178,828	–	598	128	–	1	–	–	140	–	363	–	224	1,933,733
2018 Jan	178,752	–	75	102	–	1	–	–	0	–	118	–	61	1,981,815
2018 Feb	179,778	1,026	1,094	7	19	19	–	–	0	–	28	–	66	1,887,325
2018 Mar	180,086	308	553	24	2	2	–	–	0	–	239	–	31	1,874,136
2018 Apr	180,359	273	239	64	11	11	–	–	5	–	1	–	36	1,939,502
2018 May	179,930	–	429	142	18	5	–	–	548	–	10	–	36	1,929,120

* 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 the Deutsche Börse AG.

IX Financial accounts

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

€ billion

Item	2015	2016	2017	2016	2017				2018
				Q4	Q1	Q2	Q3	Q4	Q1
Acquisition of financial assets									
Currency and deposits	96.67	114.98	103.59	52.40	12.35	30.16	18.03	43.05	14.75
Currency	25.51	21.30	17.15	6.32	3.63	5.57	2.46	5.49	4.41
Deposits	71.16	93.68	86.45	46.09	8.72	24.59	15.58	37.57	10.33
Transferable deposits	100.96	105.26	99.72	46.52	13.26	29.95	20.65	35.86	12.14
Time deposits	– 9.22	1.28	– 4.03	0.02	– 1.59	– 2.32	– 2.47	2.34	1.15
Savings deposits (including savings certificates)	– 20.58	– 12.87	– 9.24	– 0.45	– 2.96	– 3.04	– 2.61	– 0.64	– 2.95
Debt securities	– 18.40	– 12.80	– 8.14	– 3.32	– 1.36	– 1.49	– 2.28	– 3.01	– 1.00
short-term debt securities	0.75	– 0.16	– 0.20	0.31	0.37	0.18	– 0.34	– 0.41	– 0.37
long-term debt securities	– 19.15	– 12.63	– 7.93	– 3.62	– 1.72	– 1.67	– 1.94	– 2.60	– 0.63
Memo item									
Debt securities of domestic sectors	– 10.06	– 4.14	– 5.09	– 1.65	0.01	– 0.67	– 1.88	– 2.56	– 0.01
Non-financial corporations	0.36	– 0.01	– 1.43	– 0.10	– 0.66	– 0.22	– 0.14	– 0.40	0.08
Financial corporations	– 7.42	– 2.48	– 2.68	– 1.37	1.01	– 0.17	– 1.55	– 1.97	0.07
General government	– 2.99	– 1.65	– 0.99	– 0.18	– 0.33	– 0.28	– 0.18	– 0.19	– 0.17
Debt securities of the rest of the world	– 8.34	– 8.66	– 3.05	– 1.67	– 1.37	– 0.82	– 0.41	– 0.45	– 0.98
Equity and investment fund shares	47.95	45.78	55.13	4.54	12.11	12.32	14.08	16.62	17.73
Equity	16.62	21.65	14.69	– 0.90	3.40	2.21	5.11	3.97	7.35
Listed Shares of domestic sectors	4.17	9.37	0.90	– 3.03	0.15	– 0.18	0.89	0.04	4.27
Non-financial corporations	3.88	6.09	0.54	– 1.70	0.48	– 1.42	1.01	0.47	3.12
Financial corporations	0.28	3.28	0.36	– 1.33	– 0.33	1.24	– 0.12	– 0.43	1.15
Quoted shares of the rest of the world	8.00	6.94	9.66	1.69	2.25	1.69	2.94	2.77	1.47
Other equity ¹	4.45	5.35	4.13	0.44	1.00	0.70	1.28	1.15	1.61
Investment fund shares	31.34	24.13	40.44	5.44	8.70	10.11	8.97	12.65	10.38
Money market fund shares	– 0.57	– 0.53	– 0.28	– 0.17	– 0.22	0.04	– 0.16	0.05	– 0.40
Non-MMF investment fund shares	31.90	24.66	40.72	5.61	8.92	10.08	9.12	12.60	10.79
Non-life insurance technical reserves and provision for calls under standardised guarantees	20.09	19.58	11.43	8.01	2.85	2.87	2.82	2.89	2.88
Life insurance and annuity entitlements	31.69	24.82	31.59	5.65	13.31	10.71	4.91	2.67	15.50
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	30.85	20.63	29.47	1.63	7.67	4.34	7.09	10.37	3.67
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	– 11.76	– 12.68	– 21.60	15.21	– 6.13	2.70	– 24.47	14.98
Total	191.54	201.23	210.39	47.32	62.14	52.77	47.35	48.13	68.51
External financing									
Loans	38.20	47.38	55.63	9.48	7.90	16.64	18.56	12.53	10.79
short-term loans	– 3.17	– 4.31	– 2.19	– 2.05	– 0.35	– 0.34	– 1.09	– 0.40	– 0.02
long-term loans	41.36	51.69	57.82	11.53	8.25	16.98	19.66	12.93	10.81
Memo item									
Mortgage loans	35.63	41.84	47.49	11.04	6.12	13.31	15.84	12.23	8.98
Consumer loans	5.44	9.78	11.25	0.88	2.41	3.25	3.41	2.19	1.78
Entrepreneurial loans	– 2.88	– 4.24	– 3.11	– 2.44	– 0.62	0.07	– 0.68	– 1.89	0.04
Memo item									
Loans from monetary financial institutions	39.35	42.87	49.99	8.08	7.10	15.54	16.93	10.42	11.00
Loans from other financial institutions	– 1.16	4.51	5.65	1.40	0.80	1.10	1.63	2.11	– 0.21
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	0.22	0.06	0.12	0.07	0.02	0.02	– 0.04
Total	37.06	47.15	55.85	9.54	8.02	16.70	18.58	12.55	10.75

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

IX Financial accounts

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

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

Item	2015	2016	2017	2016	2017				2018
				Q4	Q1	Q2	Q3	Q4	Q1
Financial assets									
Currency and deposits	2,094.8	2,208.9	2,311.3	2,208.9	2,221.9	2,252.1	2,270.1	2,311.3	2,326.0
Currency	153.2	174.5	191.6	174.5	178.1	183.7	186.2	191.6	196.1
Deposits	1,941.6	2,034.4	2,119.6	2,034.4	2,043.8	2,068.4	2,084.0	2,119.6	2,130.0
Transferable deposits	1,082.4	1,188.0	1,287.7	1,188.0	1,201.2	1,231.2	1,251.8	1,287.7	1,299.8
Time deposits	246.8	248.7	245.4	248.7	247.9	245.6	243.1	245.4	246.6
Savings deposits (including savings certificates)	612.4	597.7	586.5	597.7	594.7	591.7	589.1	586.5	583.6
Debt securities	139.8	127.4	120.5	127.4	126.7	125.4	123.6	120.5	117.7
short-term debt securities	2.9	2.7	2.5	2.7	3.1	3.2	2.9	2.5	2.1
long-term debt securities	136.9	124.7	118.0	124.7	123.6	122.2	120.7	118.0	115.6
Memo item									
Debt securities of domestic sectors	89.4	85.6	82.5	85.6	86.1	86.2	85.1	82.5	81.2
Non-financial corporations	13.4	13.9	12.5	13.9	13.3	13.0	12.9	12.5	12.4
Financial corporations	69.5	66.7	66.1	66.7	68.2	68.9	68.1	66.1	65.1
General government	6.5	5.0	3.9	5.0	4.6	4.3	4.1	3.9	3.7
Debt securities of the rest of the world	50.3	41.8	37.9	41.8	40.6	39.3	38.5	37.9	36.4
Equity and investment fund shares	1,040.7	1,107.9	1,218.2	1,107.9	1,155.7	1,158.4	1,193.2	1,218.2	1,198.2
Equity	555.9	590.0	642.1	590.0	614.8	611.2	632.5	642.1	626.1
Listed Shares of domestic sectors	188.9	200.8	226.4	200.8	213.0	211.1	223.7	226.4	217.3
Non-financial corporations	158.7	169.8	190.3	169.8	180.4	177.5	188.4	190.3	182.5
Financial corporations	30.3	31.0	36.1	31.0	32.6	33.6	35.4	36.1	34.8
Quoted shares of the rest of the world	74.8	86.8	101.0	86.8	93.1	92.7	96.5	101.0	97.7
Other equity ¹	292.2	302.5	314.7	302.5	308.7	307.4	312.2	314.7	311.0
Investment fund shares	484.8	517.8	576.2	517.8	540.9	547.2	560.7	576.2	572.1
Money market fund shares	3.4	2.8	2.7	2.8	2.7	2.8	2.6	2.7	2.3
Non-MMF investment fund shares	481.4	515.0	573.5	515.0	538.2	544.4	558.1	573.5	569.8
Non-life insurance technical reserves and provision for calls under standardised guarantees	324.3	339.9	351.3	339.9	342.7	345.6	348.4	351.3	354.2
Life insurance and annuity entitlements	919.5	947.8	979.8	947.8	961.2	972.0	977.1	979.8	995.3
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	786.6	816.7	846.2	816.7	824.4	828.7	835.8	846.2	849.9
Financial derivatives and employee stock options	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts receivable ²	37.1	32.6	33.5	32.6	32.8	33.2	33.3	33.5	33.9
Total	5,342.8	5,581.1	5,860.8	5,581.1	5,665.5	5,715.4	5,781.5	5,860.8	5,875.1
Liabilities									
Loans	1,606.6	1,654.6	1,711.9	1,654.6	1,662.5	1,680.5	1,699.0	1,711.9	1,722.6
short-term loans	60.9	56.6	54.4	56.6	56.3	55.9	54.8	54.4	54.4
long-term loans	1,545.8	1,598.0	1,657.5	1,598.0	1,606.2	1,624.5	1,644.2	1,657.5	1,668.2
Memo item									
Mortgage loans	1,153.8	1,195.8	1,247.4	1,195.8	1,201.9	1,218.3	1,234.6	1,247.4	1,257.4
Consumer loans	191.9	201.8	211.8	201.8	204.2	207.4	210.6	211.8	212.8
Entrepreneurial loans	260.9	257.0	252.7	257.0	256.4	254.8	253.8	252.7	252.5
Memo item									
Loans from monetary financial institutions	1,514.9	1,558.3	1,610.0	1,558.3	1,565.4	1,582.3	1,599.2	1,610.0	1,620.9
Loans from other financial institutions	91.8	96.3	101.9	96.3	97.1	98.2	99.8	101.9	101.7
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	15.6	15.4	16.5	16.2	16.4	15.6	16.6
Total	1,621.7	1,670.1	1,727.5	1,670.1	1,679.0	1,696.6	1,715.4	1,727.5	1,739.2

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

X Public finances in Germany

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

€ billion

Period	Central, state and local government ¹									Deficit / surplus	Social security funds ²			General government, total		
	Revenue			Expenditure							Rev- enue ⁶	Expend- iture	Deficit / surplus	Rev- enue	Expend- iture	Deficit / surplus
	Total ⁴	of which		Total ⁴	Person- nel expend- iture	Current grants	Interest	Fixed asset forma- tion	Finan- cial transac- tions ⁵							
		Taxes	Finan- cial transac- tions ⁵													
2011	689.6	573.4	22.8	711.6	194.3	301.3	56.8	38.5	13.7	– 22.0	526.3	511.2	+ 15.1	1,104.2	1,111.1	– 6.9
2012 P	745.0	600.0	14.7	770.2	218.8	285.2	69.9	42.6	25.5	– 25.2	536.2	518.8	+ 17.4	1,171.1	1,178.8	– 7.8
2013 P	761.8	619.7	14.7	773.6	225.3	286.9	65.7	42.8	23.5	– 11.8	536.7	531.9	+ 4.9	1,198.1	1,205.0	– 6.9
2014 P	791.8	643.6	11.3	786.7	236.0	292.9	57.1	45.9	17.6	+ 5.1	554.5	551.1	+ 3.5	1,245.3	1,236.7	+ 8.6
2015 P	829.5	673.3	10.4	804.1	244.1	302.6	49.8	46.4	12.5	+ 25.5	575.0	573.1	+ 1.9	1,300.8	1,273.4	+ 27.4
2016 P	862.1	705.8	9.0	843.4	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
2015 Q1 P	196.0	160.9	2.4	198.8	58.5	80.5	18.4	7.7	2.5	– 2.8	137.3	142.8	– 5.4	307.6	315.8	– 8.2
Q2 P	208.4	167.7	1.5	185.2	59.5	72.8	7.2	9.1	3.0	+ 23.1	142.4	142.3	+ 0.1	325.0	301.8	+ 23.2
Q3 P	202.8	166.5	3.8	198.0	62.3	71.3	16.6	11.6	3.4	+ 4.7	141.2	143.4	– 2.1	318.1	315.5	+ 2.6
Q4 P	221.5	178.2	2.6	219.3	63.4	77.4	7.3	17.3	3.5	+ 2.2	152.7	145.3	+ 7.4	348.4	338.8	+ 9.6
2016 Q1 P	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 government's financial statistics)

€ billion

Period	Central government			State government ^{2,3}			Local government ³		
	Revenue ¹	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus
2011	307.1	324.9	– 17.7	286.5	295.9	– 9.4	183.9	184.9	– 1.0
2012 P	312.5	335.3	– 22.8	311.0	316.1	– 5.1	200.0	198.5	+ 1.5
2013 P	313.2	335.6	– 22.4	324.3	323.9	+ 0.4	207.6	206.3	+ 1.3
2014 P	322.9	323.3	– 0.3	338.3	336.1	+ 2.1	218.7	218.7	– 0.1
2015 P	338.3	326.5	+ 11.8	355.1	350.6	+ 4.5	232.7	229.1	+ 3.6
2016 P	344.7	338.4	+ 6.2	381.1	372.4	+ 8.8	248.9	243.1	+ 5.8
2017 P	357.8	352.8	+ 5.0	397.7	385.8	+ 11.8	260.3	249.1	+ 11.2
2015 Q1 P	74.4	81.6	– 7.1	84.2	84.5	– 0.3	46.3	52.1	– 5.8
Q2 P	86.5	72.6	+ 13.9	87.0	83.6	+ 3.4	58.1	53.4	+ 4.7
Q3 P	85.9	89.0	– 3.2	87.8	84.2	+ 3.6	57.5	56.3	+ 1.2
Q4 P	91.5	83.4	+ 8.1	94.1	96.8	– 2.8	69.0	65.9	+ 3.0
2016 Q1 P	81.1	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	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	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
2017 Apr	.	45,841	23,674	19,826	2,341	.	.	.	2,275
May	.	45,515	24,364	18,876	2,276	.	.	.	2,275
2018 Apr	.	47,500	24,298	20,936	2,267	.	.	.	2,197
May	.	48,495	26,351	20,364	1,780	.	.	.	2,197

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. **1** Before deducting or adding supplementary central government grants, regionalisation funds (local public transport), compensation for the transfer of motor vehicle tax to central government and consolidation assistance, which central government remits to state government. See the last column for the volume of these amounts which are deducted from tax revenue in the federal budget. **2** Custom duties and shares in VAT and gross national income accruing to the EU from central

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

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

€ million

Period	Total 1	Joint taxes								Local business tax transfers 6	Central government taxes 7	State government taxes 7	EU customs duties	Memo item Local government share in joint taxes
		Income taxes 2					Turnover taxes 5							
		Total	Wage tax 3	Assessed income tax	Corporation tax	Investment income tax 4	Total	Turnover tax	Turnover tax on imports					
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
2017 Apr	49,018	20,035	16,149	1,389	551	1,946	17,302	12,328	4,975	1,772	7,789	1,669	450	3,177
May	48,352	18,182	14,788	292	280	2,822	19,062	14,434	4,628	294	8,579	1,850	385	2,837
2018 Apr	50,927	21,339	17,136	1,548	413	2,241	16,997	12,345	4,652	1,794	8,036	2,355	405	3,426
May	51,621	20,479	16,047	198	853	3,382	19,903	14,889	5,014	418	8,680	1,808	332	3,125

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

9 Federal Employment Agency: budgetary development*

€ million

Period	Revenue				Expenditure							Deficit/ surplus	Deficit offsetting grant or loan from central govern- ment
	Total ¹	of which			Total	of which							
		Contri- butions	Insolvency compen- sation levy	Central government subscriptions		Unemploy- ment benefit ²	Short-time working benefits ³	Job promotion ⁴	Re- integration payment ⁵	Insolvency benefit payment	Adminis- trative expend- iture ⁶		
2011	37,563	25,433	37	8,046	37,524	13,776	1,324	8,369	4,510	683	5,090	+ 40	–
2012	37,429	26,570	314	7,238	34,842	13,823	828	6,699	3,822	982	5,117	+ 2,587	–
2013	32,636	27,594	1,224	245	32,574	15,411	1,082	6,040	.	912	5,349	+ 61	–
2014	33,725	28,714	1,296	–	32,147	15,368	710	6,264	.	694	5,493	+ 1,578	–
2015	35,159	29,941	1,333	–	31,439	14,846	771	6,295	.	654	5,597	+ 3,720	–
2016	36,352	31,186	1,114	–	30,889	14,435	749	7,035	.	595	5,314	+ 5,463	–
2017	37,819	32,501	882	–	31,867	14,055	769	7,043	.	687	6,444	+ 5,952	–
2015 Q1	8,209	6,969	310	–	8,599	4,267	387	1,586	.	165	1,287	– 390	–
Q2	8,758	7,467	326	–	7,856	3,758	214	1,591	.	172	1,318	+ 902	–
Q3	8,573	7,285	329	–	7,319	3,501	82	1,455	.	164	1,368	+ 1,254	–
Q4	9,619	8,220	367	–	7,665	3,320	87	1,662	.	152	1,624	+ 1,954	–
2016 Q1	8,376	7,271	261	–	7,984	4,083	395	1,739	.	150	984	+ 393	–
Q2	8,991	7,737	278	–	7,807	3,648	203	1,847	.	147	1,288	+ 1,184	–
Q3	8,877	7,609	276	–	7,349	3,428	74	1,608	.	165	1,399	+ 1,529	–
Q4	10,108	8,569	299	–	7,750	3,276	77	1,841	.	134	1,642	+ 2,358	–
2017 Q1	8,859	7,564	204	–	8,834	3,973	478	1,772	.	146	1,749	+ 26	–
Q2	9,355	8,112	227	–	7,964	3,529	173	1,802	.	155	1,577	+ 1,391	–
Q3	9,159	7,897	210	–	7,281	3,360	63	1,646	.	171	1,402	+ 1,878	–
Q4	10,446	8,929	241	–	7,789	3,193	55	1,823	.	215	1,717	+ 2,657	–
2018 Q1	9,167	7,926	151	–	9,546	3,826	415	1,742	.	174	2,625	– 379	–

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

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

10 Statutory health insurance scheme: budgetary development

€ million

Period	Revenue 1			Expenditure 1								Deficit/ surplus	
	Total	of which		Total	of which								
		Contri- butions 2	Central govern- ment funds 3		Hospital treatment	Pharma- ceuticals	Medical treatment	Dental treatment 4	Thera- peutical treatment and aids	Sickness benefits	Adminis- trative expend- iture 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
2015 Q1	50,407	46,846	2,875	53,255	17,532	8,554	8,961	3,379	3,216	2,935	2,360	–	2,848
Q2	51,850	48,371	2,875	53,351	17,157	8,661	8,976	3,385	3,376	2,730	2,433	–	1,501
Q3	51,888	48,472	2,875	52,884	16,899	8,621	8,808	3,262	3,398	2,732	2,508	–	996
Q4	55,872	52,085	2,875	54,124	16,553	8,773	8,998	3,449	3,618	2,834	3,102	+	1,747
2016 Q1	53,320	49,292	3,500	55,424	18,044	8,879	9,374	3,470	3,419	2,955	2,458	–	2,104
Q2	54,988	51,009	3,500	55,603	17,686	9,005	9,362	3,478	3,528	2,963	2,599	–	615
Q3	55,632	51,377	3,500	55,114	17,421	8,929	9,166	3,399	3,585	2,842	2,628	+	517
Q4	59,552	55,146	3,500	56,832	17,342	9,194	9,351	3,526	3,698	2,912	3,291	+	2,720
2017 Q1	55,809	51,632	3,625	57,716	18,632	9,215	9,807	3,559	3,516	3,173	2,514	–	1,907
Q2	57,801	53,621	3,625	57,502	17,973	9,239	9,822	3,614	3,748	3,043	2,589	+	298
Q3	57,617	53,442	3,625	57,202	17,802	9,330	9,629	3,374	3,679	2,980	2,731	+	415
Q4	62,391	57,526	3,625	58,527	17,878	9,627	9,712	3,566	3,792	3,080	3,095	+	3,865
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

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

ment. ³ Federal grant and liquidity assistance. ⁴ Including dentures. ⁵ Net, ie after deducting reimbursements for expenses for levying contributions incurred by other social insurance funds.

X Public finances in Germany

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

€ million

Period	Revenue 1		Expenditure 1						Deficit/ surplus	
	Total	of which Contributions 2	Total	of which						
				Non-cash care benefits	In-patient care	Nursing benefit	Contributions to pension insur- ance scheme 3	Administrative expenditure		
2011	22,294	22,145	21,962	3,002	9,700	4,735	881	1,034	+	331
2012	23,082	22,953	22,988	3,135	9,961	5,073	881	1,083	+	95
2013	24,972	24,891	24,405	3,389	10,058	5,674	896	1,155	+	567
2014	25,974	25,893	25,457	3,570	10,263	5,893	946	1,216	+	517
2015	30,825	30,751	29,101	3,717	10,745	6,410	960	1,273	+	1,723
2016	32,171	32,100	30,936	3,846	10,918	6,673	983	1,422	+	1,235
2017	36,305	36,248	38,862	4,609	13,014	10,010	1,611	1,606	–	2,557
2015 Q1	7,252	7,228	6,906	906	2,655	1,571	236	333	+	346
Q2	7,611	7,592	7,139	902	2,666	1,591	239	311	+	472
Q3	7,626	7,609	7,390	930	2,701	1,613	239	326	+	236
Q4	8,198	8,180	7,571	966	2,722	1,682	240	295	+	626
2016 Q1	7,600	7,578	7,587	941	2,703	1,613	238	389	+	13
Q2	7,918	7,901	7,659	949	2,724	1,665	244	331	+	259
Q3	7,958	7,942	7,810	961	2,746	1,682	247	373	+	147
Q4	8,550	8,535	7,941	975	2,741	1,877	250	322	+	608
2017 Q1	8,558	8,538	9,092	1,046	3,194	2,261	289	405	–	534
Q2	8,978	8,962	9,379	1,080	3,230	2,440	347	397	–	400
Q3	8,945	8,932	9,944	1,210	3,289	2,562	422	411	–	999
Q4	9,620	9,610	10,110	1,158	3,285	2,731	470	387	–	490
2018 Q1	8,961	8,948	10,146	1,192	3,233	2,603	496	424	–	1,185

Source: Federal Ministry of Health. * Including transfers to the long-term care provident fund. ¹ The final annual figures generally differ from the total of the reported provisional quarterly figures as the latter are not revised subsequently. ² Since 2005

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

12 Central government: borrowing in the market

€ million

Period	Total new borrowing ¹		of which Change in money market loans	of which Change in money market deposits ³
	Gross ²	Net		
2011	+ 264,572	+ 5,890	– 4,876	– 9,036
2012	+ 263,334	+ 31,728	+ 6,183	+ 13,375
2013	+ 246,781	+ 19,473	+ 7,292	– 4,601
2014	+ 192,540	– 2,378	– 3,190	+ 891
2015	+ 167,655	– 16,386	– 5,884	– 1,916
2016	+ 182,486	– 11,331	– 2,332	– 16,791
2017	+ 171,906	+ 4,531	+ 11,823	+ 2,897
2015 Q1	+ 52,024	– 3,086	+ 4,710	– 7,612
Q2	+ 36,214	– 5,404	– 12,133	+ 6,930
Q3	+ 46,877	– 1,967	– 806	– 1,091
Q4	+ 32,541	– 5,929	+ 2,344	– 142
2016 Q1	+ 61,598	+ 10,650	+ 8,501	– 19,345
Q2	+ 60,691	+ 4,204	+ 3,694	+ 4,084
Q3	+ 33,307	– 13,887	– 18,398	– 4,864
Q4	+ 26,890	– 12,297	+ 3,872	+ 3,333
2017 Q1	+ 47,749	– 5,700	+ 6,178	– 2,428
Q2	+ 42,941	+ 5,281	+ 318	+ 4,289
Q3	+ 44,338	+ 3,495	+ 587	+ 941
Q4	+ 36,878	+ 1,455	+ 4,741	+ 95
2018 Q1	+ 42,934	– 4,946	– 5,138	+ 3,569
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
		Bundes- bank	Domestic MFIs pe	Other do- mestic fi- nancial cor- porations pe	Other domestic creditors 1	
2011	2,125,099	11,785	605,907	206,631	53,974	1,246,801
2012	2,202,307	12,126	629,513	199,132	60,140	1,301,397
2013	2,190,496	12,438	639,922	190,555	43,969	1,303,612
2014	2,192,004	12,774	610,509	190,130	44,915	1,333,675
2015	2,161,775	85,952	597,515	186,661	44,977	1,246,670
2016	2,145,473	205,391	574,727	179,755	41,352	1,144,248
2017 P	2,092,643	319,159	522,427	175,618	39,207	1,036,232
2015 Q1	2,198,049	20,802	619,047	189,048	44,414	1,324,738
Q2	2,163,452	42,807	599,029	187,280	44,792	1,289,545
Q3	2,165,441	63,558	604,195	188,165	44,785	1,264,738
Q4	2,161,775	85,952	597,515	186,661	44,977	1,246,670
2016 Q1	2,170,197	108,746	612,193	183,160	41,334	1,224,764
Q2	2,173,554	142,139	600,804	181,372	39,529	1,209,709
Q3	2,166,995	172,567	587,282	179,359	38,827	1,188,959
Q4	2,145,473	205,391	574,727	179,755	41,352	1,144,248
2017 Q1 P	2,118,194	239,495	559,898	178,219	39,505	1,101,077
Q2 P	2,112,479	265,130	546,493	176,810	38,785	1,085,262
Q3 P	2,105,556	290,214	533,924	176,646	39,130	1,065,643
Q4 P	2,092,643	319,159	522,427	175,618	39,207	1,036,232
2018 Q1 P	2,071,401	329,387	503,643	176,495	37,902	1,023,974

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

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14. Maastricht debt by instrument (cont'd)

€ million

Period (End of year or quarter)	€ million		Debt securities by original maturity		Loans by original maturity		Memo item ²	
	Total	Currency and deposits ¹	Short-term debt securities (up to one year)	Long-term debt securities (more than one year)	Short-term loans (up to one year)	Long-term loans (more than one year)	Debt vis-à-vis other government sub-sectors	Claims vis-à-vis other government sub-sectors
	Social security funds							
2011	1,331	—	—	—	237	1,094	—	2,743
2012	1,171	—	—	—	195	976	—	2,661
2013	1,287	—	—	—	360	927	—	3,872
2014	1,430	—	—	—	387	1,043	—	2,122
2015 Q1	1,365	—	—	—	329	1,036	—	2,457
Q2	1,391	—	—	—	355	1,036	—	2,428
Q3	1,460	—	—	—	450	1,010	—	2,578
Q4	1,411	—	—	—	446	965	—	2,685
2016 Q1	1,211	—	—	—	458	753	—	2,828
Q2	1,147	—	—	—	443	704	—	2,948
Q3	1,025	—	—	—	334	691	—	3,002
Q4	1,143	—	—	—	473	670	—	3,044
2017 Q1 P	1,150	—	—	—	504	646	—	3,380
Q2 P	895	—	—	—	290	605	—	3,333
Q3 P	750	—	—	—	184	566	—	3,396
Q4 P	792	—	—	—	247	545	—	4,025
2018 Q1 P	975	—	—	—	424	551	—	3,729

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

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

15. Maastricht debt of central government by instrument and category

€ million

Period (End of year or quarter)	Common												Loans ¹
	Currency and deposits ²			Debt securities									
	Total ¹	Total ¹	of which ³	Total ¹	of which ³								
			Federal Day Bond		Federal bonds (Bunds)	Federal notes (Boblts)	Inflation- linked Federal bonds (Bunds) ⁴	Inflation- linked Federal notes (Boblts) ⁴	Capital indexation of inflation- linked securities	Federal Treasury notes (Schätze) ⁵	Treasury discount paper (Bubills) ⁶	Federal savings notes	
2007	984,256	6,675	–	917,584	564,137	173,949	10,019	3,444	506	102,083	37,385	10,287	59,997
2008	1,016,364	12,466	3,174	928,754	571,913	164,514	12,017	7,522	1,336	105,684	40,795	9,649	75,144
2009	1,082,644	9,981	2,495	1,013,072	577,798	166,471	16,982	7,748	1,369	113,637	104,409	9,471	59,592
2010	1,334,021	10,890	1,975	1,084,019	602,624	185,586	25,958	9,948	2,396	126,220	85,867	8,704	239,112
2011	1,344,082	10,429	2,154	1,121,331	615,200	199,284	29,313	14,927	3,961	130,648	58,297	8,208	212,322
2012	1,387,857	9,742	1,725	1,177,168	631,425	217,586	35,350	16,769	5,374	117,719	56,222	6,818	200,947
2013	1,390,440	10,592	1,397	1,192,025	643,200	234,759	41,105	10,613	4,730	110,029	50,004	4,488	187,822
2014	1,396,496	12,150	1,187	1,206,203	653,823	244,633	48,692	14,553	5,368	103,445	27,951	2,375	178,144
2015	1,372,626	14,303	1,070	1,188,572	663,296	232,387	59,942	14,553	5,607	96,389	18,536	1,305	169,750
2016	1,366,847	15,845	1,010	1,179,659	670,245	221,551	51,879	14,585	3,602	95,727	23,609	737	171,343
2017 P	1,351,622	14,651	966	1,168,919	693,687	203,899	58,365	14,490	4,720	91,013	10,037	289	168,053
2015 Q1	1,397,998	10,652	1,155	1,196,655	653,801	235,849	52,507	14,583	4,211	102,203	26,495	2,271	190,691
Q2	1,380,556	10,546	1,133	1,201,068	664,278	228,755	56,437	14,543	5,626	101,090	27,535	2,031	168,943
Q3	1,374,737	10,727	1,106	1,195,185	655,574	242,085	58,192	14,528	5,308	98,087	24,157	1,677	168,825
Q4	1,372,626	14,303	1,070	1,188,572	663,296	232,387	59,942	14,553	5,607	96,389	18,536	1,305	169,750
2016 Q1	1,382,491	11,976	1,051	1,187,099	666,565	225,678	61,893	14,603	4,395	98,232	20,526	1,205	183,417
Q2	1,391,145	12,181	1,033	1,189,287	675,794	220,840	49,675	14,550	3,099	99,417	28,369	1,108	189,677
Q3	1,381,065	15,370	1,021	1,195,744	664,034	231,375	50,869	14,570	3,097	102,053	30,626	922	169,950
Q4	1,366,847	15,845	1,010	1,179,659	670,245	221,551	51,879	14,585	3,602	95,727	23,609	737	171,343
2017 Q1 P	1,350,991	12,891	995	1,169,945	674,049	213,371	53,838	14,535	3,362	95,148	14,910	619	168,155
Q2 P	1,353,598	15,196	986	1,172,916	687,278	205,203	55,842	14,465	4,507	93,795	14,431	487	165,486
Q3 P	1,352,969	16,161	977	1,171,094	684,134	215,029	56,905	14,490	4,092	91,893	11,851	398	165,715
Q4 P	1,351,622	14,651	966	1,168,919	693,687	203,899	58,365	14,490	4,720	91,013	10,037	289	168,053
2018 Q1 P	1,338,835	12,540	951	1,169,358	699,638	193,811	60,778	14,455	4,421	94,282	9,031	219	156,937

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

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

XI Economic conditions in Germany

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

Item							2016		2017				2018	
	2015	2016	2017	2015	2016	2017	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
	Index 2010=100			Annual percentage change										
At constant prices, chained														
I Origin of domestic product														
Production sector (excluding construction)	112.8	114.9	117.9	2.2	1.9	2.7	1.2	0.6	4.4	– 0.4	2.8	4.1	2.0	
Construction	102.9	104.9	107.3	0.0	1.9	2.3	1.7	– 0.4	5.7	0.2	1.7	2.5	1.3	
Wholesale/retail trade, transport and storage, hotel and restaurant services	108.5	111.1	114.3	0.7	2.4	2.9	1.6	2.5	4.7	1.9	3.1	2.2	2.3	
Information and communication	128.5	132.0	137.2	2.6	2.7	3.9	3.5	1.6	4.4	3.5	3.8	3.9	3.2	
Financial and insurance activities	104.3	107.4	107.4	– 0.7	3.0	– 0.1	4.1	2.3	0.6	– 0.4	– 0.5	0.1	0.8	
Real estate activities	103.3	103.9	105.1	0.2	0.6	1.1	0.4	0.5	1.3	0.5	1.3	1.5	1.0	
Business services ¹	108.1	110.0	112.6	1.9	1.8	2.4	1.7	1.5	3.8	0.7	2.6	2.3	1.7	
Public services, education and health	105.3	107.7	110.0	2.2	2.2	2.2	2.3	2.4	2.6	2.0	2.3	1.8	1.5	
Other services	99.3	100.2	101.5	0.7	0.9	1.3	1.2	1.0	2.7	0.2	1.4	0.7	0.0	
Gross value added	108.3	110.4	112.9	1.5	1.9	2.3	1.7	1.4	3.5	0.8	2.4	2.5	1.7	
Gross domestic product ²	108.6	110.7	113.1	1.7	1.9	2.2	1.7	1.3	3.4	1.0	2.2	2.3	1.6	
II Use of domestic product														
Private consumption ³	106.1	108.3	110.2	1.7	2.1	1.8	1.7	1.7	2.1	1.9	2.0	1.1	1.4	
Government consumption	108.0	111.9	113.7	2.9	3.7	1.5	3.4	3.0	1.5	1.4	1.6	1.6	1.0	
Machinery and equipment	111.1	113.4	118.0	3.9	2.2	4.0	1.4	– 2.6	3.6	1.7	4.5	6.0	4.4	
Premises	108.3	111.3	114.4	– 1.4	2.7	2.7	2.1	0.4	5.6	1.3	2.8	1.7	1.3	
Other investment ⁴	117.3	123.8	128.0	5.5	5.5	3.5	6.1	2.6	3.9	3.4	3.2	3.4	3.1	
Changes in inventories ^{5, 6}	.	.	.	– 0.3	– 0.2	0.2	0.2	0.4	0.1	0.5	0.2	– 0.1	0.1	
Domestic demand	106.1	108.7	111.1	1.6	2.4	2.2	2.4	1.9	2.6	2.4	2.4	1.6	1.6	
Net exports ⁶	.	.	.	0.2	– 0.3	0.2	– 0.5	– 0.5	1.0	– 1.1	0.0	0.8	0.1	
Exports	124.7	128.0	133.9	5.2	2.6	4.6	1.3	2.6	6.9	1.4	4.9	5.5	3.0	
Imports	120.5	125.2	131.6	5.6	3.9	5.2	2.8	4.3	5.6	4.7	5.8	4.6	3.3	
Gross domestic product ²	108.6	110.7	113.1	1.7	1.9	2.2	1.7	1.3	3.4	1.0	2.2	2.3	1.6	
At current prices (€ billion)														
III Use of domestic product														
Private consumption ³	1,630.5	1,674.4	1,732.8	2.3	2.7	3.5	2.2	2.8	4.0	3.5	3.7	2.7	2.9	
Government consumption	587.1	615.4	637.9	4.1	4.8	3.6	4.5	4.1	3.3	3.3	3.9	4.1	3.2	
Machinery and equipment	200.8	205.8	214.6	4.7	2.5	4.3	1.7	– 2.3	3.8	2.0	4.8	6.3	4.9	
Premises	291.0	304.5	323.0	0.4	4.6	6.1	4.1	2.5	8.4	4.5	6.2	5.6	5.6	
Other investment ⁴	112.5	119.7	125.4	7.0	6.4	4.8	6.9	3.7	4.9	4.8	4.7	4.7	4.9	
Changes in inventories ⁵	– 21.5	– 26.4	– 17.5	.	.	.	.	.	.	.	.	.	.	
Domestic use	2,800.3	2,893.4	3,016.2	2.6	3.3	4.2	3.2	3.2	4.4	4.4	4.5	3.6	3.5	
Net exports	243.3	250.6	247.2	.	.	.	.	.	.	.	.	.	.	
Exports	1,426.7	1,450.0	1,541.5	6.4	1.6	6.3	– 0.0	2.3	8.6	3.5	6.5	6.8	3.5	
Imports	1,183.4	1,199.4	1,294.3	4.1	1.4	7.9	0.2	3.9	9.8	8.2	7.5	6.4	3.6	
Gross domestic product ²	3,043.7	3,144.1	3,263.4	3.8	3.3	3.8	2.9	2.5	4.3	2.6	4.3	4.0	3.5	
IV Prices (2010=100)														
Private consumption	106.2	106.9	108.7	0.6	0.6	1.7	0.5	1.1	1.9	1.6	1.7	1.6	1.4	
Gross domestic product	108.7	110.1	111.8	2.0	1.3	1.5	1.2	1.2	0.9	1.6	2.0	1.7	1.8	
Terms of trade	102.1	103.7	102.7	2.7	1.5	– 1.0	1.3	0.2	– 2.3	– 1.2	– 0.1	– 0.4	0.3	
V Distribution of national income														
Compensation of employees	1,542.3	1,600.3	1,668.9	3.9	3.8	4.3	3.7	3.9	4.2	4.4	4.4	4.1	4.6	
Entrepreneurial and property income	722.6	737.7	765.8	3.8	2.1	3.8	– 0.2	– 1.2	4.1	– 0.9	6.4	5.5	2.9	
National income	2,264.9	2,338.0	2,434.7	3.8	3.2	4.1	2.3	2.5	4.2	2.7	5.1	4.5	4.0	
Memo item: Gross national income	3,099.8	3,197.2	3,323.6	3.7	3.1	4.0	2.4	2.5	4.1	2.9	4.6	4.2	3.9	

Source: Federal Statistical Office; figures computed in May 2018. ¹ Professional, scientific, technical, administration and support service activities. ² Gross value added plus taxes on products (netted with subsidies on products). ³ Including non-profit in-

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

XI Economic conditions in Germany

2 Output in the production sector*

Adjusted for working-day variations •

	of which:											
			Industry									
				of which: by main industrial grouping				of which: by economic sector				
	Production sector, total	Construction	Energy	Total	Intermediate goods	Capital goods	Durable goods	Non-durable goods	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 Q1	98.9	84.8	104.5	100.9	102.2	100.0	106.1	99.4	103.3	102.3	95.8	105.0
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
2017 May	103.0	109.5	94.8	102.5	104.3	101.7	103.1	100.4	106.5	102.0	98.7	104.5
June	107.1	114.6	91.3	107.1	106.8	108.7	108.0	102.0	109.1	108.9	109.1	106.4
July ²	106.7	119.2	91.3	105.8	108.6	104.1	101.6	104.6	108.6	109.2	101.8	103.9
Aug ²	101.2	112.3	93.0	99.9	103.5	96.4	98.2	102.6	102.2	104.3	94.9	95.6
Sep	111.5	118.4	93.0	111.8	110.2	113.7	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 ^r	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 ^r	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 ^r	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 ^x	104.6	109.2	92.7	104.8	105.5	105.0	103.4	102.6	108.0	103.8	99.8	112.0
May ^{x,p}	106.2	113.7	90.4	106.2	107.7	104.3	103.8	109.4	108.6	105.8	101.2	108.1
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 Q1	+ 1.0	+ 0.8	- 0.3	+ 1.1	+ 1.3	+ 0.9	+ 2.8	+ 0.4	+ 2.0	+ 3.6	+ 1.5	± 0.0
Q2	+ 3.4	+ 5.2	+ 2.7	+ 3.1	+ 3.4	+ 3.3	+ 4.7	+ 1.4	+ 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
2017 May	+ 4.7	+ 5.2	+ 2.9	+ 4.7	+ 3.4	+ 6.4	+ 9.7	+ 1.9	+ 5.9	+ 7.3	+ 6.5	+ 7.6
June	+ 2.7	+ 4.2	+ 3.3	+ 2.4	+ 3.3	+ 1.9	+ 0.8	+ 1.9	+ 3.2	+ 4.0	+ 3.3	- 0.7
July ²	+ 3.9	+ 2.8	- 2.7	+ 4.8	+ 5.4	+ 4.3	+ 5.3	+ 3.7	+ 6.8	+ 8.0	+ 5.5	+ 1.8
Aug ²	+ 4.4	+ 3.0	± 0.0	+ 5.0	+ 5.3	+ 5.7	+ 7.4	+ 2.2	+ 6.1	+ 6.8	+ 3.3	+ 9.3
Sep	+ 4.0	+ 3.9	- 2.6	+ 4.5	+ 5.0	+ 4.5	+ 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 ^r	+ 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 ^r	+ 2.1	- 1.3	+ 1.9	+ 2.6	+ 3.5	+ 1.6	+ 0.6	+ 4.2	+ 4.2	+ 5.2	+ 2.5	- 0.4
Mar ^r	+ 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 ^x	+ 1.4	- 0.1	- 2.8	+ 2.0	+ 0.3	+ 3.2	- 2.3	+ 4.0	+ 2.4	+ 0.8	+ 2.4	+ 4.6
May ^{x,p}	+ 3.1	+ 3.8	- 4.6	+ 3.6	+ 3.3	+ 2.6	+ 0.7	+ 9.0	+ 2.0	+ 3.7	+ 2.5	+ 3.4

Source of the unadjusted figures: Federal Statistical Office. * For explanatory notes, see Statistical Supplement Seasonally adjusted business statistics, Tables II.10 to II.12. • Using 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 ◦

Period				of which:											
				Intermediate goods		Capital goods		Consumer goods		of which:					
	Industry									Durable goods		Non-durable goods			
		Annual percent-age change			Annual percent-age change		Annual percent-age change		Annual percent-age change		Annual percent-age change		Annual percent-age change		
2015=100			2015=100		2015=100		2015=100		2015=100		2015=100		2015=100		
Total															
2013	95.2	+	2.4	100.0	–	0.9	92.6	+	4.6	92.5	+	2.0	91.7	+	2.0
2014	97.8	+	2.7	100.6	+	0.6	96.2	+	3.9	96.8	+	4.6	95.8	+	5.9
2015	99.8	+	2.0	99.8	–	0.8	99.8	+	3.7	99.8	+	3.1	99.7	+	2.8
2016	100.8	+	1.0	98.9	–	0.9	101.9	+	2.1	100.6	+	0.8	105.3	+	0.8
2017	108.6	+	7.7	109.4	+	10.6	108.5	+	6.5	105.8	+	5.2	116.5	+	3.2
2017 May	103.8	+	6.5	106.5	+	8.3	102.4	+	5.6	101.6	+	4.7	110.3	+	0.7
	110.7	+	7.4	110.9	+	11.0	111.4	+	5.4	104.0	+	4.8	117.6	+	1.6
July	105.8	+	6.3	108.8	+	9.9	103.8	+	4.4	107.8	+	5.0	108.8	+	4.8
	99.0	+	9.8	104.9	+	16.6	94.1	+	5.6	107.9	+	8.2	115.3	+	4.1
Aug	110.3	+	11.0	108.9	+	11.8	111.8	+	11.4	107.0	+	6.2	126.2	+	3.5
Sep	112.9	+	9.0	113.6	+	11.5	112.9	+	7.9	109.7	+	6.4	127.9	+	6.8
	114.8	+	10.9	118.2	+	13.8	113.1	+	9.5	111.4	+	8.1	129.8	+	4.8
Oct	115.2	+	9.1	103.4	+	14.0	125.2	+	7.2	94.5	+	4.2	108.6	+	1.2
Nov	110.9	+	9.9	115.7	+	10.5	107.9	+	9.7	111.3	+	8.8	112.6	+	10.0
	110.3	+	4.1	110.9	+	2.3	110.1	+	5.9	108.7	–	1.4	112.2	+	2.8
Dec	121.6	+	3.8	121.2	+	4.1	122.9	+	3.6	113.6	+	2.8	123.6	–	4.9
2018 Jan	108.4	+	1.6	116.0	+	7.4	104.7	–	1.7	101.5	–	0.6	114.1	+	1.8
	109.5	+	5.5	113.9	+	6.9	107.3	+	4.8	106.8	+	5.1	121.4	+	3.4
From the domestic market															
2013	97.0	+	0.5	102.8	–	1.3	92.3	+	2.1	95.2	+	1.2	100.4	+	1.3
2014	98.1	+	1.1	101.7	–	1.1	95.2	+	3.1	97.1	+	2.0	100.4	±	2.8
2015	99.8	+	1.7	99.8	–	1.9	99.7	+	4.7	99.8	+	2.8	99.7	–	4.0
2016	99.8	±	0.0	97.6	–	2.2	101.9	+	2.2	98.0	–	1.8	103.1	+	3.5
2017	107.0	+	7.2	107.1	+	9.7	107.8	+	5.8	101.7	+	3.8	108.7	+	3.1
2017 May	101.3	+	4.0	103.7	+	7.5	100.0	+	1.8	96.5	–	0.6	98.7	+	2.8
	108.7	+	7.8	105.5	+	7.7	112.8	+	8.4	99.9	+	4.8	107.2	+	3.4
July	107.2	+	9.3	108.2	+	10.0	106.7	+	9.4	104.9	+	4.8	102.3	+	6.0
	101.2	+	9.3	107.0	+	16.6	95.4	+	3.1	106.3	+	8.9	110.9	+	7.7
Aug	107.5	+	10.7	105.9	+	13.0	109.4	+	9.7	104.5	+	5.9	121.1	+	5.4
Sep	111.0	+	7.7	112.3	+	10.7	110.2	+	5.2	108.7	+	7.1	128.7	+	6.3
	112.7	+	9.3	114.1	+	10.9	111.7	+	7.9	111.6	+	10.0	123.1	+	9.7
Oct	101.3	+	1.5	98.4	+	12.7	106.1	–	5.8	86.2	±	0.0	89.0	+	0.9
Nov	107.8	+	8.8	113.4	+	11.0	104.0	+	7.5	101.8	+	4.0	103.1	+	5.2
	105.6	–	3.5	108.1	–	0.9	103.5	–	6.2	105.3	+	0.5	109.5	+	1.7
Dec	119.7	+	4.3	119.4	+	5.9	121.6	+	3.1	109.0	+	3.5	122.1	+	3.0
2018 Jan	105.0	–	4.6	108.7	+	2.7	103.0	–	11.4	97.9	+	4.9	115.5	+	1.7
	106.4	+	5.0	110.3	+	6.4	103.2	+	3.2	106.2	+	10.1	127.6	+	3.4
From abroad															
2013	93.9	+	3.9	97.1	–	0.4	92.8	+	6.2	90.5	+	2.7	91.0	+	2.5
2014	97.5	+	3.8	99.5	+	2.5	96.7	+	4.2	96.5	+	6.6	92.0	+	8.3
2015	99.8	+	2.4	99.8	+	0.3	99.8	+	3.2	99.8	+	3.4	99.8	+	1.9
2016	101.5	+	1.7	100.4	+	0.6	101.9	+	2.1	102.6	+	2.8	107.1	+	1.3
2017	109.8	+	8.2	111.9	+	11.5	109.0	+	7.0	108.9	+	6.1	122.8	+	3.3
2017 May	105.7	+	8.4	109.6	+	9.3	103.8	+	7.9	105.5	+	8.9	119.6	+	3.5
	112.2	+	7.0	116.8	+	14.6	110.6	+	3.8	107.2	+	4.8	125.9	+	0.4
July	104.8	+	4.2	109.5	+	9.9	102.0	+	1.4	110.0	+	5.0	114.1	+	3.9
	97.3	+	10.1	102.7	+	16.7	93.3	+	7.1	109.2	+	7.7	118.8	+	1.6
Aug	112.5	+	11.2	112.1	+	10.6	113.2	+	12.2	109.0	+	6.4	130.3	+	2.1
Sep	114.4	+	10.1	115.0	+	12.3	114.6	+	9.7	110.4	+	5.7	127.3	+	7.0
	116.4	+	12.1	122.7	+	16.9	113.9	+	10.5	111.3	+	6.6	135.2	+	1.2
Oct	125.7	+	14.3	108.8	+	15.3	136.7	+	14.6	100.9	+	7.2	124.3	+	2.9
Nov	113.3	+	10.9	118.2	+	10.1	110.3	+	11.0	118.6	+	12.2	120.3	+	13.4
	113.9	+	10.2	113.9	+	5.9	114.1	+	13.9	111.4	–	2.6	114.3	+	3.6
Dec	123.0	+	3.3	123.1	+	2.2	123.7	+	3.9	117.2	+	2.4	124.8	–	6.3
2018 Jan	111.0	+	6.5	123.8	+	12.1	105.8	+	5.1	104.3	–	4.2	112.9	–	4.1
	111.9	+	5.9	117.8	+	7.5	109.7	+	5.7	107.2	+	1.6	116.4	–	3.4

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

XI Economic conditions in Germany

4 Orders received by construction *

Adjusted for working-day variations •

Period	Adjusted for working day variations -															
	Total		Breakdown by type of construction										Breakdown by client 1			
			Building				Civil engineering						Industry		Public sector 2	
			Total		Housing construction											
2010 = 100	Annual percent-age change	2010 = 100	Annual percent-age change	2010 = 100	Annual percent-age change	2010 = 100	Annual percent-age change	2010 = 100	Annual percent-age change	2010 = 100	Annual percent-age change	2010 = 100	Annual percent-age change	2010 = 100	Annual percent-age change	
2014	118.5	– 0.6	127.2	+ 0.6	146.6	+ 4.3	126.8	– 0.9	90.6	– 3.5	109.9	– 1.8	121.8	– 0.1	104.1	– 3.3
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	+ 5.0
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 Apr	165.2	+ 9.4	170.5	+ 9.8	204.5	+ 4.5	166.7	+ 17.1	114.7	+ 0.6	160.0	+ 9.1	154.0	+ 9.7	160.9	+ 11.8
May	155.4	– 1.3	162.5	– 7.7	202.2	– 3.5	143.0	– 17.7	142.1	+ 20.8	148.4	+ 7.0	138.5	– 11.2	154.0	+ 11.7
June	173.3	+ 5.0	188.1	+ 3.9	238.5	+ 6.9	164.4	– 5.9	159.2	+ 36.3	158.5	+ 6.2	156.1	– 3.3	164.6	+ 13.0
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	155.2	+ 7.7	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	+ 6.6
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	129.8	– 2.8	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	112.1	+ 9.8	130.3	+ 4.7	98.7	+ 14.9
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	174.5	+ 4.1	168.4	+ 2.0	174.0	+ 4.0
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	– 2.0

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

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

5 Retail trade turnover *

Adjusted for calendar variations •

Period					of which												Retail sale via mail order houses or via internet as well as other retail sale ²	
					in stores by enterprises main product range													
					Food, beverages, tobacco ¹		Textiles, clothing, footwear and leather goods		Information and communications equipment		Construction and flooring materials, household appliances, furniture		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles					
	At current prices		At prices in year 2010 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	100.1	+ 3.7	100.1	+ 3.8	100.1	+ 2.9	100.2	+ 0.3	100.2	+ 1.0	100.2	+ 2.7	100.0	+ 5.3	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	107.5	+ 4.9	105.1	+ 2.9	105.6	+ 3.8	108.2	+ 7.1	106.5	+ 6.6	103.6	+ 2.1	107.9	+ 3.8	120.6	+ 9.8		
2017 May	106.8	+ 4.9	104.2	+ 3.0	106.2	+ 3.5	105.6	+ 2.6	89.0	+ 7.1	106.6	+ 1.3	106.6	+ 5.2	114.0	+ 10.5		
June	105.2	+ 5.8	103.2	+ 4.0	104.8	+ 3.9	105.4	+ 8.5	95.1	+ 6.5	102.4	+ 3.4	106.2	+ 6.0	111.7	+ 11.3		
July	107.2	+ 4.5	105.7	+ 2.8	107.2	+ 3.7	105.2	+ 2.8	102.2	+ 10.2	104.2	+ 2.7	109.3	+ 2.9	112.3	+ 13.3		
Aug	102.9	+ 3.8	101.2	+ 1.9	103.4	+ 2.7	99.2	+ 6.7	97.7	+ 9.8	98.1	+ 0.9	104.6	+ 3.8	110.8	+ 9.5		
Sep	106.2	+ 7.5	103.3	+ 5.4	102.5	+ 5.1	124.9	+ 27.4	102.2	+ 10.5	99.8	+ 3.5	105.6	+ 3.1	116.7	+ 12.1		
Oct	110.4	+ 2.4	107.1	+ 0.7	105.7	+ 2.4	121.7	– 3.9	111.0	+ 4.1	109.8	+ 1.8	108.8	+ 2.3	122.2	+ 2.9		
Nov	114.9	+ 5.8	111.3	+ 3.9	108.0	+ 4.7	117.6	+ 9.7	121.5	+ 5.7	111.1	+ 3.3	113.1	+ 4.1	150.2	+ 13.1		
Dec	129.6	+ 4.3	125.7	+ 2.7	125.8	+ 4.8	132.0	+ 6.5	157.6	– 0.6	112.6	+ 2.3	123.8	+ 5.2	154.1	+ 7.6		
2018 Jan	100.1	+ 3.7	97.6	+ 2.3	98.7	+ 3.8	91.2	+ 3.5	109.2	– 2.7	91.2	+ 4.1	107.1	+ 5.3	119.4	+ 4.3		
Feb	96.4	+ 2.4	93.7	+ 1.1	97.9	+ 3.4	81.6	+ 1.5	92.7	+ 0.2	89.1	– 0.4	104.0	+ 4.5	108.7	+ 1.4		
Mar	110.7	+ 1.3	106.8	± 0.0	110.0	+ 3.7	103.6	– 5.5	103.9	+ 0.6	107.1	– 4.8	112.3	+ 2.9	125.9	+ 5.7		
Apr	112.1	+ 4.8	107.7	+ 3.1	111.5	+ 3.6	117.7	+ 8.3	91.0	– 2.5	113.3	+ 4.0	111.4	+ 5.2	121.3	+ 6.0		
May	109.4	+ 2.4	104.9	+ 0.7	111.1	+ 4.6	105.7	+ 0.1	88.5	– 0.6	105.9	– 0.7	107.7	+ 1.0	118.0	+ 3.3		

Source of the unadjusted figures: Federal Statistical Office. * Excluding value-added tax; For explanatory notes, see Statistical Supplement Seasonally adjusted business statistics, Table II.24. • Using the Census X-12-ARIMA method, version 0.2.8. ¹ Including stalls and markets. ² Not in stores, stalls or markets. ³ Values at current prices deflated with retail price indices in 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

7 Prices

Period	Harmonised Index of Consumer Prices						Memo item: Consumer price index (national concept)	Con- struction price index	Index of producer prices of industrial products sold on the domestic market 5	Index of producer prices of agricultural products 5)	Indices of foreign trade prices		HWWI Index of World Market Prices of Raw Materials 6	
	<i>of which</i> 1										Exports	Imports	Energy 7	Other raw materials 8
	Total	Food 2	Non- energy industrial goods	Energy 3	Services	<i>of which</i>								
						Housing rents 4								
	2015 = 100						2010 = 100						2015 = 100	
	Index level													
2013	99.1	97.4	98.7	109.8	97.4	97.3	105.7	107.9	106.9	120.7	104.3	105.9	160.2	117.6
2014	99.9	98.8	99.2	107.5	98.8	98.8	106.6	109.7	105.8	111.1	104.0	103.6	142.8	108.3
2015	100.0	100.0	100.0	100.0	100.0	100.0	106.9	111.3	103.9	106.9	104.9	100.9	100.0	100.0
2016	100.4	101.3	101.0	94.6	101.2	101.2	107.4	113.4	102.1	106.6	104.0	97.8	83.2	98.4
2017	102.1	104.0	102.3	97.5	102.5	102.9	109.3	117.0	104.8	9) 115.1	105.9	101.5	99.6	107.1
2016 Aug	100.6	100.9	100.3	94.3	102.3	101.4	107.6	113.7	102.2	106.7	104.0	97.7	83.9	98.6
Sep	100.6	101.2	101.5	94.9	101.4	101.5	107.7		102.0	104.7	104.0	97.8	83.9	97.0
Oct	100.8	101.2	102.0	96.2	101.2	101.7	107.9		102.7	108.8	104.3	98.7	96.2	99.8
Nov	100.8	102.0	102.0	95.2	101.1	101.8	108.0	114.1	103.0	111.3	104.8	99.4	95.4	108.5
Dec	101.8	102.6	101.6	97.3	102.8	102.0	108.8		103.4	113.1	105.2	101.3	106.6	114.0
2017 Jan	101.0	103.2	100.7	98.2	101.0	102.2	108.1		104.1	114.8	105.8	102.2	108.9	115.9
Feb	101.7	104.6	101.0	98.4	101.9	102.3	108.8	115.5	104.3	116.2	106.0	102.9	110.2	118.9
Mar	101.8	103.4	102.6	97.5	102.0	102.4	109.0		104.3	117.6	106.0	102.4	99.7	116.4
Apr	101.8	103.4	102.7	98.3	101.5	102.6	109.0		104.7	119.9	106.2	102.3	100.4	110.1
May	101.6	103.5	102.7	96.9	101.5	102.8	108.8	116.6	104.5	120.9	106.0	101.3	93.1	104.2
June	101.8	103.6	102.0	96.1	102.5	102.9	109.0		104.5	121.3	105.8	100.2	85.7	100.4
July	102.2	103.8	101.4	95.9	103.8	103.0	109.4		104.7	120.2	105.7	99.8	86.5	102.9
Aug	102.4	103.8	101.8	96.3	103.8	103.1	109.5	117.5	104.9	121.2	105.6	99.8	90.1	103.3
Sep	102.4	104.1	102.9	97.5	102.8	103.2	109.6		105.2	9) 115.9	105.8	100.7	96.3	102.8
Oct	102.3	104.8	103.2	97.4	102.2	103.3	109.6		105.5	114.3	105.9	101.3	101.6	102.7
Nov	102.6	104.8	103.2	98.7	102.6	103.5	109.9	118.4	105.6	114.7	106.1	102.1	110.3	103.8
Dec	103.4	105.5	102.8	98.5	104.2	103.6	110.6		105.8	114.3	106.2	102.4	113.7	103.6
2018 Jan	102.4	106.2	101.8	98.9	102.4	103.9	109.8		106.3	110.5	106.5	102.9	115.9	105.4
Feb	102.9	106.2	102.2	98.5	103.3	104.0	110.3	120.4	106.2	110.0	106.5	102.3	108.7	106.0
Mar	103.3	106.4	103.2	97.9	103.7	104.1	110.7		106.3	111.3	106.7	102.3	109.5	104.9
Apr	103.2	106.8	103.4	99.5	102.7	104.3	110.7		106.8	110.7	106.9	102.9	116.7	106.1
May	103.8	106.9	103.3	101.9	103.4	104.4	111.2	121.7	107.3	109.5	107.4	104.5	129.9	112.5
June	103.9	106.9	102.9	102.4	103.8	104.5	111.3		...	...	...	...	130.5	111.3
	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	- 2.6	- 4.0	- 8.6
2014	+ 0.8	+ 1.5	+ 0.5	- 2.1	+ 1.4	+ 1.6	+ 0.9	+ 1.7	- 1.0	- 8.0	- 0.3	- 2.2	- 10.9	- 7.9
2015	+ 0.1	+ 1.2	+ 0.8	- 7.0	+ 1.2	+ 1.2	+ 0.3	+ 1.5	- 1.8	- 3.8	+ 0.9	- 2.6	- 30.0	- 7.7
2016	+ 0.4	+ 1.3	+ 1.0	- 5.4	+ 1.2	+ 1.2	+ 0.5	+ 1.9	- 1.7	- 0.3	- 0.9	- 3.1	- 16.8	- 1.6
2017	+ 1.7	+ 2.7	+ 1.3	+ 3.1	+ 1.3	+ 1.7	+ 1.8	+ 3.2	+ 2.6	9) + 8.0	+ 1.8	+ 3.8	+ 19.7	+ 8.8
2016 Aug	+ 0.3	+ 1.2	+ 0.7	- 5.9	+ 1.3	+ 1.3	+ 0.4	+ 2.0	- 1.6	+ 4.5	- 0.9	- 2.6	- 8.3	+ 2.7
Sep	+ 0.5	+ 1.2	+ 0.8	- 3.6	+ 1.3	+ 1.3	+ 0.7		- 1.4	- 2.5	- 0.6	- 1.8	- 7.6	+ 3.1
Oct	+ 0.7	+ 0.8	+ 0.8	- 1.4	+ 1.2	+ 1.4	+ 0.8		- 0.4	- 0.1	- 0.1	- 0.6	+ 5.0	+ 6.9
Nov	+ 0.7	+ 1.5	+ 1.0	- 2.6	+ 1.0	+ 1.4	+ 0.8	+ 2.1	+ 0.1	+ 3.4	+ 0.3	+ 0.3	+ 6.5	+ 17.0
Dec	+ 1.7	+ 2.4	+ 1.2	+ 2.4	+ 1.6	+ 1.6	+ 1.7		+ 1.0	+ 5.4	+ 1.1	+ 3.5	+ 37.5	+ 27.5
2017 Jan	+ 1.9	+ 2.8	+ 1.0	+ 5.9	+ 1.1	+ 1.6	+ 1.9		+ 2.4	+ 7.5	+ 1.8	+ 6.0	+ 68.8	+ 31.4
Feb	+ 2.2	+ 3.8	+ 1.1	+ 7.2	+ 1.3	+ 1.6	+ 2.2	+ 2.7	+ 3.1	+ 9.6	+ 2.5	+ 7.4	+ 72.2	+ 34.2
Mar	+ 1.5	+ 2.2	+ 1.6	+ 5.2	+ 0.5	+ 1.6	+ 1.6		+ 3.1	+ 10.3	+ 2.3	+ 6.1	+ 37.9	+ 24.4
Apr	+ 2.0	+ 1.8	+ 1.2	+ 5.0	+ 1.8	+ 1.7	+ 2.0		+ 3.4	+ 13.2	+ 2.6	+ 6.1	+ 33.7	+ 15.3
May	+ 1.4	+ 2.2	+ 1.3	+ 2.0	+ 1.0	+ 1.8	+ 1.5	+ 3.1	+ 2.8	+ 14.1	+ 2.2	+ 4.1	+ 12.7	+ 7.2
June	+ 1.5	+ 2.6	+ 1.3	- 0.1	+ 1.6	+ 1.8	+ 1.6		+ 2.4	+ 14.0	+ 1.8	+ 2.5	- 2.5	+ 1.5
July	+ 1.5	+ 2.5	+ 1.4	+ 0.8	+ 1.6	+ 1.8	+ 1.7		+ 2.3	+ 9.3	+ 1.5	+ 1.9	+ 2.5	+ 2.7
Aug	+ 1.8	+ 2.9	+ 1.5	+ 2.1	+ 1.5	+ 1.7	+ 1.8	+ 3.3	+ 2.6	+ 13.6	+ 1.5	+ 2.1	+ 7.4	+ 4.8
Sep	+ 1.8	+ 2.9	+ 1.4	+ 2.7	+ 1.4	+ 1.7	+ 1.8		+ 3.1	9) + 10.7	+ 1.7	+ 3.0	+ 14.8	+ 6.0
Oct	+ 1.5	+ 3.6	+ 1.2	+ 1.2	+ 1.0	+ 1.6	+ 1.6		+ 2.7	+ 5.1	+ 1.5	+ 2.6	+ 5.6	+ 2.9
Nov	+ 1.8	+ 2.7	+ 1.2	+ 3.7	+ 1.5	+ 1.7	+ 1.8	+ 3.8	+ 2.5	+ 3.1	+ 1.2	+ 2.7	+ 15.6	- 4.3
Dec	+ 1.6	+ 2.8	+ 1.2	+ 1.2	+ 1.4	+ 1.6	+ 1.7		+ 2.3	+ 1.1	+ 1.0	+ 1.1	+ 6.7	- 9.1
2018 Jan	+ 1.4	+ 2.9	+ 1.1	+ 0.7	+ 1.4	+ 1.7	+ 1.6		+ 2.1	- 3.7	+ 0.7	+ 0.7	+ 6.4	- 9.1
Feb	+ 1.2	+ 1.5	+ 1.2	+ 0.1	+ 1.4	+ 1.7	+ 1.4	+ 4.2	+ 1.8	- 5.3	+ 0.5	- 0.6	- 1.4	- 10.8
Mar	+ 1.5	+ 2.9	+ 0.6	+ 0.4	+ 1.7	+ 1.7	+ 1.6		+ 1.9	- 5.4	+ 0.7	- 0.1	+ 9.8	- 9.9
Apr	+ 1.4	+ 3.3	+ 0.7	+ 1.2	+ 1.2	+ 1.7	+ 1.6		+ 2.0	- 7.7	+ 0.7	+ 0.6	+ 16.2	- 3.6
May	+ 2.2	+ 3.3	+ 0.6	+ 5.2	+ 1.9	+ 1.6	+ 2.2	+ 4.4	+ 2.7	- 9.4	+ 1.3	+ 3.2	+ 39.5	+ 8.0
June	+ 2.1	+ 3.2	+ 0.9	+ 6.6	+ 1.3	+ 1.6	+ 2.1		...	...	...	...	+ 52.3	+ 10.9

Sources: Eurostat; Federal Statistical Office and Bundesbank calculation based on data from the Federal Statistical Office; for the Index of World Market Prices of Raw Materials: HWWI. **1** Differences from the official figures are due to rounding. **2** Including alcoholic beverages and tobacco. **3** Electricity, gas and other fuels 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	1,212.7	3.9	806.9	3.7	398.4	2.6	1,205.2	3.3	1,759.8	2.5	166.6	8.4	9.5
2015	1,260.8	4.0	836.6	3.7	417.0	4.7	1,253.7	4.0	1,804.0	2.5	173.5	4.2	9.6
2016	1,311.5	4.0	869.1	3.9	430.1	3.1	1,299.2	3.6	1,854.1	2.8	179.7	3.5	9.7
2017	1,369.5	4.4	906.0	4.2	444.6	3.4	1,350.6	4.0	1,922.8	3.7	190.0	5.8	9.9
2016 Q4	363.1	4.1	240.4	3.8	106.9	3.0	347.4	3.6	472.4	2.9	39.9	4.4	8.5
2017 Q1	319.1	4.4	211.5	4.5	112.9	4.2	324.4	4.4	477.2	4.4	62.6	7.0	13.1
Q2	333.7	4.4	215.8	3.9	109.9	3.7	325.7	3.9	479.2	3.5	45.0	3.2	9.4
Q3	338.3	4.6	228.7	4.6	111.7	2.6	340.4	4.0	479.8	3.9	40.0	6.2	8.3
Q4	378.4	4.2	250.0	4.0	110.1	3.0	360.1	3.7	486.7	3.0	42.5	6.4	8.7
2018 Q1	334.0	4.7	221.0	4.5	115.2	2.1	336.1	3.6	492.7	3.3	66.2	5.8	13.4

Source: Federal Statistical Office; figures computed in May 2018. * Households including non-profit institutions serving households. ¹ Residence concept. ² After deducting the wage tax payable on gross wages and salaries and employees' contributions to the social security funds. ³ Social security benefits in cash from the social security funds, central, state and local government and foreign countries, pension payments (net), private funded social benefits, less social contributions on social benefits, consumption-related taxes and public charges. ⁴ Net wages and

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

9 Negotiated pay rates (overall economy)

Period	Index of negotiated wages ¹								Memo item: Wages and salaries per employee ³	
	On an hourly basis		On a monthly basis							
			Total		Total excluding one-off payments		Basic pay rates ²			
	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change
2010	100.0	1.6	100.0	1.7	100.0	1.7	100.0	1.8	100.0	2.5
2011	101.7	1.7	101.8	1.8	101.8	1.8	101.8	1.8	103.4	3.4
2012	104.4	2.7	104.4	2.6	104.7	2.8	104.7	2.9	106.2	2.7
2013	107.0	2.4	107.0	2.4	107.3	2.5	107.2	2.4	108.4	2.1
2014	110.1	2.9	109.9	2.8	110.1	2.7	110.1	2.7	111.4	2.8
2015	112.6	2.3	112.4	2.2	112.6	2.3	112.7	2.3	114.5	2.8
2016	114.9	2.1	114.7	2.1	115.0	2.1	115.2	2.2	117.3	2.4
2017	117.4	2.1	117.1	2.1	117.5	2.2	117.8	2.3	120.5	2.7
2016 Q4	128.1	2.2	127.8	2.2	128.2	2.2	116.1	2.3	128.4	2.5
2017 Q1	109.1	2.6	108.8	2.5	109.1	2.5	116.8	2.5	113.6	2.7
Q2	110.1	2.1	109.9	2.1	110.2	2.4	117.6	2.4	117.7	2.7
Q3	119.9	2.1	119.6	2.0	120.0	2.0	118.3	2.1	118.7	2.8
Q4	130.5	1.9	130.1	1.8	130.6	1.9	118.6	2.1	131.6	2.5
2018 Q1	111.6	2.3	111.3	2.3	111.4	2.1	119.3	2.2	116.9	2.9
2017 Nov	167.9	1.6	167.5	1.6	168.1	1.6	118.6	2.1	.	.
Dec	112.5	2.0	112.2	2.0	112.5	2.1	118.6	2.1	.	.
2018 Jan	111.2	2.0	110.9	2.0	111.3	2.2	119.1	2.2	.	.
Feb	111.3	2.1	111.0	2.1	111.3	2.0	119.2	2.0	.	.
Mar	112.2	2.8	112.0	2.8	111.7	2.2	119.7	2.2	.	.
Apr	113.3	2.8	113.1	2.8	113.2	2.6	120.6	2.6	.	.
May	114.6	4.0	114.3	4.0	113.8	3.2	121.3	3.1	.	.

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 May 2018.

XI Economic conditions in Germany

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

End-of-year/end-of-half data

End of year/end of half data																
Period	Assets								Equity and liabilities							
	Total assets	Non-current assets	of which			Current assets	of which			Equity	Total	Liabilities				
			Intangible assets	Tangible assets	Financial assets		Inventories	Trade receivables	Cash ¹			Total	Long-term	Short-term		
														of which	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.

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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) as a percentage of revenues					
					Weighted average		Distribution 2			Operating income (EBIT)		Weighted average		Distribution 2		
							First quartile	Median	Third quartile					First quartile	Median	Third quartile
	€ billion 3	Annual change in % 4	€ billion 3	Annual change in % 4	%	Annual change in per-centage points 4	%	%	%	€ billion 3	Annual change in % 4	%	Annual change in per-centage 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	17.7

* 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 the 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	2016	2017 r	2017 r		2018			
				Q3	Q4	Q1 r	Feb r	Mar	Apr P
A Current account	+ 339,804	+ 388,042	+ 386,567	+ 128,310	+ 129,310	+ 80,695	+ 25,909	+ 44,557	+ 26,203
1 Goods									
Exports	2,138,202	2,130,057	2,285,193	564,067	594,145	569,268	180,278	205,570	188,878
Imports	1,779,019	1,754,756	1,942,144	470,912	495,279	495,030	154,862	168,192	166,262
Balance	+ 359,184	+ 375,300	+ 343,049	+ 93,155	+ 98,865	+ 74,238	+ 25,416	+ 37,378	+ 22,616
2 Services									
Receipts	771,662	784,711	855,969	225,108	224,102	196,884	61,491	69,854	67,525
Expenditure	708,219	745,202	754,213	188,869	197,822	176,017	54,855	61,454	59,625
Balance	+ 63,444	+ 39,509	+ 101,756	+ 36,238	+ 26,279	+ 20,867	+ 6,635	+ 8,401	+ 7,900
3 Primary income									
Receipts	654,888	637,064	662,499	162,777	176,210	154,066	50,955	58,394	55,370
Expenditure	598,912	524,924	576,450	130,755	139,810	125,304	40,569	45,165	49,812
Balance	+ 55,975	+ 112,142	+ 86,050	+ 32,021	+ 36,401	+ 28,761	+ 10,386	+ 13,229	+ 5,558
4 Secondary income									
Receipts	112,149	105,041	108,753	25,551	29,154	25,783	8,236	9,811	8,684
Expenditure	250,950	243,952	253,042	58,655	61,389	68,956	24,765	24,262	18,555
Balance	- 138,799	- 138,910	- 144,288	- 33,105	- 32,235	- 43,172	- 16,528	- 14,451	- 9,871
B Capital account	- 11,548	+ 1,035	- 20,913	- 1,241	+ 1,637	+ 2,685	+ 663	+ 970	+ 163
C Financial account (Increase: +)	+ 267,248	+ 347,103	+ 414,166	+ 126,871	+ 153,007	+ 152,458	+ 35,820	+ 99,916	- 6,010
1 Direct investment	+ 248,833	+ 169,006	+ 44,025	- 6,708	+ 38,182	+ 133,872	+ 32,673	+ 59,952	+ 34,723
By resident units abroad	+1,075,532	+ 425,381	+ 96,038	- 153,052	+ 36,317	+ 95,158	+ 33,610	+ 18,902	+ 20,702
By non-resident units in the euro area	+ 826,697	+ 256,376	+ 52,015	- 146,344	- 1,865	- 38,714	+ 937	- 41,050	- 14,021
2 Portfolio investment	+ 71,869	+ 499,308	+ 315,013	+ 134,350	+ 67,555	+ 51,842	+ 48,258	- 14,819	+ 26,383
By resident units abroad	+ 386,724	+ 394,649	+ 630,953	+ 187,421	+ 90,918	+ 193,500	+ 44,561	+ 46,432	+ 20,226
Equity and Investment fund shares	+ 11,280	+ 21,350	+ 168,961	+ 56,946	+ 27,262	+ 54,154	+ 7,756	- 7,265	+ 16,749
Long-term debt securities	+ 367,161	+ 365,565	+ 396,402	+ 112,099	+ 53,291	+ 110,849	+ 28,602	+ 41,925	+ 4,088
Short-term debt securities	+ 8,281	+ 7,735	+ 65,591	+ 18,375	+ 10,367	+ 28,496	+ 8,204	+ 11,771	- 611
By non-resident units in the euro area	+ 314,853	- 104,655	+ 315,942	+ 53,071	+ 23,365	+ 141,658	- 3,697	+ 61,251	- 6,157
Equity and Investment fund shares	+ 207,409	+ 98,539	+ 494,408	+ 101,253	+ 134,589	+ 119,107	+ 12,887	+ 61,186	- 6,908
Long-term debt securities	+ 141,691	- 258,262	- 175,679	- 48,190	- 61,666	- 10,240	- 29,228	+ 1,073	+ 8,701
Short-term debt securities	- 34,248	+ 55,067	- 2,789	+ 7	- 49,558	+ 32,791	+ 12,645	- 1,009	- 7,950
3 Financial derivatives and employee stock options	+ 87,029	+ 17,694	+ 25,416	- 10,320	+ 10,746	- 4,172	- 577	- 3,842	+ 1,669
4 Other investment	- 151,157	- 354,604	+ 31,042	+ 9,005	+ 34,673	- 40,643	- 44,416	+ 49,229	- 65,059
Eurosysteem	- 25,393	- 151,292	- 172,184	- 10,057	- 123,423	+ 3,345	- 27,680	- 75,009	+ 50,691
General government	+ 18,920	+ 9,063	+ 17,453	- 4,399	+ 23,906	- 2,024	- 4,665	- 2,557	- 760
MFIs (excluding the Eurosysteem)	- 123,682	- 149,026	+ 134,813	+ 20,687	+ 108,013	- 32,895	- 7,476	+ 120,194	- 112,128
Enterprises and households	- 21,004	- 63,350	+ 50,956	+ 2,773	+ 26,175	- 9,071	- 4,595	+ 6,599	- 2,862
5 Reserve assets	+ 10,671	+ 15,700	- 1,330	+ 544	+ 1,851	+ 11,559	- 119	+ 9,396	- 3,726
D Net errors and omissions	- 61,007	- 41,975	+ 48,507	- 199	+ 22,058	+ 69,078	+ 9,248	+ 54,389	- 32,376

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

XII External sector

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

€ million

Period	Current account						Balance of capital account 4	Financial account (Net lending: + / net borrowing: -)		Errors and omissions 5										
	Total	Goods (fob/fob) 1			Services 3	Primary income		Secondary income	Total		of which Reserve assets									
		Total	of which Supplementary trade items 2																	
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 r	+	218,965	+	228,185	-	5,741	-	24,485	+	56,549	-	41,283	+	2,936	+	240,116	-	2,564	+	18,215
2015 r	+	271,403	+	261,135	-	2,565	-	16,910	+	67,222	-	40,044	+	534	+	239,418	-	2,213	-	32,520
2016 r	+	268,812	+	267,999	-	1,845	-	19,948	+	60,639	-	39,879	+	3,468	+	257,693	+	1,686	-	14,587
2017 r	+	257,724	+	265,361	+	1,256	-	20,874	+	67,357	-	54,120	-	254	+	279,967	-	1,269	+	22,496
2015 Q2 r	+	60,964	+	68,693	-	1,742	-	2,543	+	825	-	6,011	+	1,407	+	70,734	-	465	+	8,362
Q3 r	+	71,124	+	67,467	+	1,030	-	10,245	+	20,490	-	6,587	+	778	+	68,865	-	1,455	-	3,037
Q4 r	+	78,172	+	64,632	-	435	-	2,391	+	26,238	-	10,307	-	2,004	+	68,701	-	272	-	7,467
2016 Q1 r	+	66,589	+	63,353	+	566	-	3,042	+	19,599	-	13,320	-	205	+	40,617	+	1,228	-	25,767
Q2 r	+	69,819	+	76,770	-	54	-	3,707	+	125	-	3,370	+	1,009	+	62,621	+	761	-	8,207
Q3 r	+	61,051	+	66,795	-	346	-	11,309	+	16,175	-	10,610	+	307	+	59,558	-	261	-	1,801
Q4 r	+	71,353	+	61,082	-	2,012	-	1,889	+	24,740	-	12,579	+	2,356	+	94,897	-	43	+	21,188
2017 Q1 r	+	67,578	+	65,985	+	2,402	-	2,921	+	21,296	-	16,781	+	616	+	67,316	-	360	-	879
Q2 r	+	53,573	+	67,141	-	187	-	4,785	+	3,058	-	11,841	-	727	+	72,061	+	385	+	19,216
Q3 r	+	63,145	+	68,051	-	113	-	11,794	+	17,922	-	11,035	+	904	+	54,979	+	152	-	9,069
Q4 r	+	73,429	+	64,184	-	846	-	1,374	+	25,082	-	14,463	-	1,047	+	85,610	-	1,446	+	13,229
2018 Q1	+	71,289	+	64,782	-	1,397	-	630	+	21,620	-	14,483	+	214	+	74,584	+	699	+	3,081
2015 Dec r	+	28,191	+	18,264	-	578	+	2,737	+	11,613	-	4,423	-	2,161	+	22,839	+	123	-	3,191
2016 Jan r	+	15,865	+	14,208	+	71	-	1,412	+	5,307	-	2,238	-	19	-	1,987	-	186	-	17,833
Feb r	+	20,854	+	21,911	+	619	-	84	+	6,519	-	7,491	+	545	+	21,103	+	1,478	-	296
Mar r	+	29,869	+	27,234	-	124	-	1,546	+	7,772	-	3,591	-	731	+	21,501	-	64	-	7,638
Apr r	+	28,952	+	27,797	-	179	-	661	+	3,533	-	1,718	+	1,303	+	26,217	+	696	-	4,039
May r	+	17,745	+	23,050	+	409	-	838	-	3,921	-	546	+	277	+	14,290	+	776	-	3,733
June r	+	23,122	+	25,923	-	284	-	2,209	+	513	-	1,106	-	571	+	22,115	-	711	-	435
July r	+	18,927	+	20,453	+	413	-	3,460	+	5,372	-	3,437	-	103	+	17,363	+	342	-	1,461
Aug r	+	17,632	+	20,933	-	435	-	4,807	+	6,016	-	4,510	-	101	+	17,217	+	93	-	314
Sep r	+	24,492	+	25,409	-	324	-	3,042	+	4,788	-	2,662	+	511	+	24,977	-	695	-	26
Oct r	+	19,777	+	20,598	+	294	-	3,425	+	6,117	-	3,513	-	117	+	28,457	-	145	+	8,797
Nov r	+	25,394	+	23,647	-	347	-	255	+	6,949	-	4,948	-	69	+	22,295	+	140	-	3,031
Dec r	+	26,182	+	16,837	-	1,959	+	1,790	+	11,675	-	4,119	+	2,541	+	44,145	-	38	+	15,422
2017 Jan r	+	11,883	+	15,705	+	171	-	979	+	6,851	-	9,693	-	145	+	7,119	-	124	-	4,620
Feb r	+	22,966	+	22,275	+	1,022	-	955	+	6,280	-	4,634	+	291	+	14,387	-	216	-	8,871
Mar r	+	32,729	+	28,004	+	1,209	-	987	+	8,165	-	2,453	+	470	+	45,810	-	21	+	12,611
Apr r	+	16,017	+	19,682	+	21	-	1,181	+	5,852	-	8,336	-	321	+	21,216	-	2	+	5,520
May r	+	15,153	+	22,995	-	968	-	1,674	-	5,295	-	872	+	85	+	11,773	-	47	-	3,465
June r	+	22,402	+	24,464	+	760	-	1,930	+	2,501	-	2,632	-	491	+	39,072	+	434	+	17,160
July r	+	18,741	+	21,046	+	679	-	4,043	+	6,159	-	4,420	+	525	+	14,479	+	463	-	4,787
Aug r	+	17,820	+	21,530	-	765	-	5,392	+	5,158	-	3,476	+	174	+	8,062	-	912	-	9,933
Sep r	+	26,583	+	25,476	-	27	-	2,359	+	6,605	-	3,139	+	204	+	32,438	+	602	+	5,650
Oct r	+	19,221	+	20,764	+	393	-	3,846	+	6,527	-	4,224	-	206	+	15,799	+	1,176	-	3,216
Nov r	+	26,146	+	25,046	-	587	-	508	+	6,868	-	5,260	-	536	+	29,624	-	270	+	4,015
Dec r	+	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	+	29,307	-	121	+	8,607
Feb	+	21,438	+	20,699	+	351	+	710	+	5,419	-	5,390	+	19	+	21,329	+	583	-	128
Mar	+	29,640	+	25,872	-	576	-	791	+	8,600	-	4,041	-	294	+	23,948	+	236	-	5,398
Apr	+	23,487	+	22,685	+	97	-	576	+	4,014	-	2,636	+	357	+	30,208	-	670	+	6,364
May p	+	12,589	+	21,487	+	146	-	1,578	-	7,404	+	84	-	478	-	2,970	+	83	-	15,081

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	2017	2018					May P
					Dec	Jan	Feb	Mar	Apr		
All countries ¹	Exports	1,193,555	1,203,833	1,278,936	100,539	107,070	104,716	116,216	110,282	109,098	
	Imports	949,245	954,917	1,034,491	82,500	89,887	86,460	91,476	90,202	89,429	
	Balance	+ 244,310	+ 248,916	+ 244,445	+ 18,039	+ 17,184	+ 18,256	+ 24,741	+ 20,080	+ 19,669	
I European countries	Exports	803,425	818,644	872,421	66,519	74,719	73,342	79,797	76,524	...	
	Imports	653,782	657,753	707,811	56,834	60,183	59,988	64,175	62,279	...	
	Balance	+ 149,643	+ 160,891	+ 164,610	+ 9,685	+ 14,536	+ 13,354	+ 15,622	+ 14,245	...	
1 EU member states (28)	Exports	692,493	705,548	749,702	57,806	64,906	63,263	68,827	66,150	...	
	Imports	543,334	551,344	590,433	47,184	49,839	49,851	53,676	52,083	...	
	Balance	+ 149,159	+ 154,204	+ 159,268	+ 10,622	+ 15,067	+ 13,412	+ 15,151	+ 14,067	...	
Euro-area (19) countries	Exports	434,075	441,092	471,603	36,870	41,081	40,231	44,333	41,926	...	
	Imports	356,643	358,848	381,404	30,777	32,313	32,541	35,073	33,906	...	
	Balance	+ 77,432	+ 82,244	+ 90,198	+ 6,093	+ 8,768	+ 7,689	+ 9,259	+ 8,020	...	
of which Austria	Exports	58,217	59,778	62,826	4,783	5,250	5,142	5,644	5,531	...	
	Imports	37,250	38,543	41,104	3,188	3,382	3,494	3,709	3,737	...	
	Balance	+ 20,967	+ 21,235	+ 21,722	+ 1,595	+ 1,868	+ 1,649	+ 1,935	+ 1,794	...	
Belgium and Luxembourg	Exports	46,196	46,931	50,038	3,873	4,222	4,254	4,560	4,358	...	
	Imports	40,116	40,960	44,055	3,317	4,231	3,697	4,335	4,402	...	
	Balance	+ 6,079	+ 5,971	+ 5,983	+ 557	- 9	+ 557	+ 225	- 44	...	
France	Exports	102,762	101,106	105,240	7,901	9,219	8,426	9,650	9,163	...	
	Imports	66,819	65,651	64,181	4,928	5,070	5,342	5,556	5,632	...	
	Balance	+ 35,943	+ 35,454	+ 41,059	+ 2,973	+ 4,149	+ 3,085	+ 4,094	+ 3,531	...	
Italy	Exports	57,987	61,265	65,510	5,058	5,808	5,796	6,258	5,821	...	
	Imports	49,038	51,737	55,917	4,627	4,674	4,980	4,930	4,934	...	
	Balance	+ 8,949	+ 9,528	+ 9,593	+ 431	+ 1,135	+ 815	+ 1,328	+ 888	...	
Netherlands	Exports	79,191	78,433	85,711	7,341	7,543	7,580	8,586	7,717	...	
	Imports	87,889	83,142	91,215	7,943	8,154	8,062	9,077	7,779	...	
	Balance	- 8,697	- 4,709	- 5,504	- 602	- 611	- 482	- 491	- 61	...	
Spain	Exports	38,715	40,497	43,037	3,164	3,816	3,717	3,824	3,843	...	
	Imports	26,442	27,870	31,611	2,503	2,695	2,699	2,924	3,072	...	
	Balance	+ 12,273	+ 12,627	+ 11,426	+ 661	+ 1,121	+ 1,018	+ 900	+ 772	...	
Other EU member states	Exports	258,417	264,456	278,099	20,936	23,825	23,032	24,494	24,224	...	
	Imports	186,691	192,496	209,029	16,408	17,526	17,310	18,602	18,177	...	
	Balance	+ 71,727	+ 71,960	+ 69,070	+ 4,529	+ 6,299	+ 5,722	+ 5,892	+ 6,047	...	
of which United Kingdom	Exports	89,018	85,939	84,462	6,002	7,167	6,917	7,247	6,993	...	
	Imports	38,414	35,654	37,170	2,892	2,963	2,815	3,090	3,043	...	
	Balance	+ 50,604	+ 50,285	+ 47,291	+ 3,111	+ 4,204	+ 4,102	+ 4,158	+ 3,950	...	
2 Other European countries	Exports	110,932	113,096	122,720	8,713	9,812	10,080	10,970	10,374	...	
	Imports	110,448	106,409	117,378	9,650	10,343	10,137	10,500	10,196	...	
	Balance	+ 484	+ 6,687	+ 5,342	- 937	- 531	- 58	+ 471	+ 177	...	
of which Switzerland	Exports	49,070	50,161	53,963	3,719	4,540	4,360	4,726	4,431	...	
	Imports	42,089	43,896	45,773	3,389	3,658	3,683	3,926	3,732	...	
	Balance	+ 6,981	+ 6,265	+ 8,190	+ 330	+ 882	+ 677	+ 800	+ 699	...	
II Non-European countries	Exports	387,398	382,486	403,385	33,795	32,107	31,162	36,158	33,466	...	
	Imports	295,461	297,164	326,679	25,666	29,567	26,138	27,116	27,743	...	
	Balance	+ 91,936	+ 85,322	+ 76,706	+ 8,129	+ 2,540	+ 5,024	+ 9,042	+ 5,724	...	
1 Africa	Exports	23,897	24,434	25,557	1,776	1,707	1,693	1,933	1,814	...	
	Imports	18,307	16,675	20,392	1,702	1,720	1,658	1,734	1,765	...	
	Balance	+ 5,590	+ 7,759	+ 5,165	+ 74	- 13	+ 35	+ 198	+ 49	...	
2 America	Exports	156,982	147,542	154,333	12,544	12,070	12,229	14,621	12,999	...	
	Imports	85,582	83,499	89,369	7,088	7,300	7,186	7,624	8,062	...	
	Balance	+ 71,400	+ 64,043	+ 64,964	+ 5,456	+ 4,770	+ 5,043	+ 6,997	+ 4,937	...	
of which United States	Exports	113,733	106,822	111,495	9,030	8,565	8,663	10,903	9,337	...	
	Imports	60,217	57,968	61,093	4,785	5,060	4,993	5,264	5,505	...	
	Balance	+ 53,516	+ 48,855	+ 50,402	+ 4,245	+ 3,504	+ 3,670	+ 5,639	+ 3,832	...	
3 Asia	Exports	196,297	200,158	212,147	18,458	17,121	16,266	18,579	17,708	...	
	Imports	188,621	193,979	213,061	16,660	20,262	17,000	17,480	17,664	...	
	Balance	+ 7,676	+ 6,179	- 915	+ 1,798	- 3,142	- 734	+ 1,099	+ 44	...	
of which Middle East	Exports	39,518	36,659	33,159	2,783	2,075	2,290	2,291	2,391	...	
	Imports	7,330	6,581	6,953	518	614	593	508	679	...	
	Balance	+ 32,188	+ 30,079	+ 26,206	+ 2,265	+ 1,461	+ 1,697	+ 1,783	+ 1,712	...	
Japan	Exports	16,968	18,307	19,531	1,605	1,606	1,530	1,863	1,424	...	
	Imports	20,180	21,922	22,877	1,695	2,097	1,864	2,010	2,075	...	
	Balance	- 3,213	- 3,615	- 3,346	- 90	- 491	- 334	- 147	- 651	...	
People's Republic of China ²	Exports	71,284	76,046	86,170	7,725	7,321	6,924	7,887	7,446	...	
	Imports	91,930	94,172	100,683	8,174	10,087	7,724	8,155	7,787	...	
	Balance	- 20,646	- 18,126	- 14,513	- 449	- 2,766	- 800	- 267	- 341	...	
New industrial countries and emerging markets of Asia ³	Exports	51,510	51,921	53,418	4,310	4,580	4,034	4,767	4,763	...	
	Imports	42,478	42,966	50,843	3,866	4,480	3,997	4,012	4,355	...	
	Balance	+ 9,032	+ 8,955	+ 2,576	+ 445	+ 100	+ 37	+ 755	+ 408	...	
4 Oceania and polar regions	Exports	10,221	10,352	11,348	1,017	1,210	974	1,025	945	...	
	Imports	2,951	3,011	3,857	217	285	294	278	252	...	
	Balance	+ 7,271	+ 7,341	+ 7,491	+ 800	+ 925	+ 680	+ 747	+ 693	...	

* Source: Federal Statistical Office. Exports (fob) by country of destination, imports (cif) by country of origin. Individual countries and groups of countries according to the current position. **1** Including fuel and other supplies for ships and aircraft and

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

XII External sector

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

€ million

Period	Services ¹								Primary income		
	Total	of which							Compensation of employees	Investment income	Other primary income ⁴
		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			
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 Q3	- 11,309	- 1,449	- 15,946	+ 2,038	+ 1,554	+ 523	- 25	+ 828	- 469	+ 17,826	- 1,182
Q4	- 1,889	- 1,888	- 7,385	+ 3,241	+ 2,366	+ 1,236	- 1,605	+ 596	+ 307	+ 21,418	+ 3,015
2017 Q1	- 2,921	- 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
2017 July	- 4,043	- 214	- 5,329	+ 892	+ 730	- 106	- 576	+ 172	- 219	+ 6,747	- 369
Aug	- 5,392	- 473	- 7,084	+ 1,193	+ 435	+ 70	- 224	+ 244	- 203	+ 5,773	- 412
Sep	- 2,359	- 447	- 4,753	+ 661	+ 268	+ 548	+ 853	+ 129	- 199	+ 7,170	- 366
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 P	- 1,578	+ 48	- 3,775	+ 676	+ 644	+ 302	- 324	+ 244	- 83	- 6,085	- 1,237

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

Total	General government					All sectors excluding general government ²				
	Total	of which			Total	of which				
		Current international cooperation ¹	Current taxes on income, wealth etc.	Personal transfers between resident and nonresident households ³		of which Workers' remittances				
- 43,639	- 28,923	- 4,733	+ 6,174	- 14,715	- 3,250	- 3,229				
- 41,283	- 28,146	- 6,419	+ 8,105	- 13,137	- 3,477	- 3,451				
- 40,044	- 23,965	- 6,805	+ 10,638	- 16,079	- 3,540	- 3,523				
- 39,879	- 24,870	- 11,523	+ 10,994	- 15,009	- 4,214	- 4,196				
- 54,120	- 23,688	- 11,496	+ 10,584	- 30,432	- 4,632	- 4,613				
- 10,610	- 6,813	- 2,583	+ 1,782	- 3,797	- 1,053	- 1,049				
- 12,579	- 8,362	- 3,186	+ 1,325	- 4,217	- 1,055	- 1,049				
- 16,781	- 7,604	- 2,995	+ 1,796	- 9,176	- 1,158	- 1,153				
- 11,841	- 1,706	- 1,500	+ 6,239	- 10,135	- 1,159	- 1,153				
- 11,035	- 5,432	- 1,557	+ 1,755	- 5,603	- 1,157	- 1,153				
- 14,463	- 8,946	- 5,444	+ 794	- 5,517	- 1,159	- 1,153				
- 14,483	- 9,356	- 2,233	+ 1,655	- 5,127	- 1,291	- 1,286				
- 4,420	- 2,562	- 933	+ 492	- 1,859	- 386	- 384				
- 3,476	- 1,441	- 395	+ 465	- 2,035	- 386	- 384				
- 3,139	- 1,430	- 229	+ 799	- 1,709	- 386	- 384				
- 4,224	- 2,939	- 1,036	+ 108	- 1,285	- 387	- 384				
- 5,260	- 2,807	- 1,685	+ 70	- 2,453	- 386	- 384				
- 4,979	- 3,201	- 2,723	+ 615	- 1,778	- 386	- 384				
- 5,052	- 3,518	- 1,332	+ 230	- 1,534	- 430	- 429				
- 5,390	- 3,679	- 558	+ 814	- 1,712	- 429	- 429				
- 4,041	- 2,160	- 343	+ 612	- 1,881	- 432	- 429				
- 2,636	- 994	- 314	+ 1,479	- 1,643	- 429	- 429				
+ 84	+ 1,640	- 280	+ 3,635	- 1,557	- 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 Q3	+ 307	+ 887	- 579
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
2017 July	+ 525	+ 703	- 178
Aug	+ 174	+ 334	- 160
Sep	+ 204	+ 494	- 290
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 P	- 478	- 628	+ 150

XII External sector

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

€ million

Item	2015	2016	2017	2017		2018			
				Q3	Q4	Q1	Mar	Apr	May P
I Net domestic investment abroad (Increase: +)	+ 270,235	+ 397,043	+ 363,024	+ 56,779	+ 36,972	+ 163,507	+ 31,308	- 24,330	+ 85,228
1 Direct investment	+ 116,141	+ 82,985	+ 111,797	+ 20,572	+ 27,372	+ 42,552	+ 18,973	+ 8,038	+ 1,618
Equity	+ 75,292	+ 70,623	+ 71,205	+ 16,953	+ 22,786	+ 35,042	+ 10,297	+ 12,295	+ 4,104
of which									
Reinvestment of earnings ¹	+ 16,804	+ 10,867	+ 23,779	+ 8,291	+ 3,009	+ 12,044	+ 4,194	+ 4,196	+ 889
Debt instruments	+ 40,849	+ 12,362	+ 40,592	+ 3,620	+ 4,585	+ 7,510	+ 8,676	- 4,257	- 2,486
2 Portfolio investment	+ 124,062	+ 98,236	+ 105,157	+ 30,407	+ 23,329	+ 42,396	+ 6,120	+ 818	+ 174
Shares ²	+ 19,692	+ 17,254	+ 14,042	+ 5,116	+ 5,695	+ 8,182	- 2,020	- 2,399	- 3,522
Investment fund shares ³	+ 35,750	+ 36,142	+ 47,747	+ 10,718	+ 14,687	+ 8,585	+ 14	+ 80	+ 3,234
Long-term									
debt securities ⁴	+ 74,342	+ 51,037	+ 47,101	+ 15,231	+ 7,636	+ 25,157	+ 9,463	+ 3,789	+ 980
Short-term									
debt securities ⁵	- 5,723	- 6,196	- 3,733	- 658	- 4,689	+ 473	- 1,338	- 651	- 519
3. Financial derivatives and employee stock options ⁶	+ 26,026	+ 32,535	+ 8,937	+ 2,064	+ 4,038	+ 1,154	- 739	+ 1,605	+ 4,080
4. Other investment ⁷	+ 6,219	+ 181,602	+ 138,402	+ 3,584	- 16,321	+ 76,706	+ 6,718	- 34,122	+ 79,273
Monetary financial institutions ⁸	- 90,288	+ 18,627	- 21,008	- 16,029	- 50,588	+ 41,060	- 13,428	- 7,014	+ 34,197
Long-term	- 2,804	+ 44,980	+ 19,619	- 1,400	+ 5,438	- 1,407	- 306	- 1,429	+ 5,344
Short-term	- 87,484	- 26,353	- 40,627	- 14,629	- 56,026	+ 42,467	- 13,122	- 5,585	+ 28,853
Enterprises and households ⁹	- 14,618	- 6,248	+ 7,927	+ 3,174	+ 3,952	+ 20,540	+ 9,024	- 2,256	- 7,917
Long-term	+ 19,127	+ 1,725	- 3,372	- 818	- 1,290	+ 1,660	+ 894	+ 2,292	+ 513
Short-term	- 33,744	- 7,974	+ 11,298	+ 3,991	+ 5,241	+ 18,880	+ 8,130	- 4,548	- 8,430
General government	- 12,239	- 1,268	- 5,154	- 2,690	+ 991	+ 1,523	+ 2,049	- 4,362	- 704
Long-term	- 7,591	- 7,595	- 3,730	- 425	- 489	- 310	- 352	+ 76	- 166
Short-term	- 4,648	+ 6,327	- 1,424	- 2,265	+ 1,480	+ 1,833	+ 2,401	- 4,438	- 538
Bundesbank	+ 123,364	+ 170,491	+ 156,637	+ 19,129	+ 29,324	+ 13,583	+ 9,072	- 20,490	+ 53,697
5. Reserve assets	- 2,213	+ 1,686	- 1,269	+ 152	- 1,446	+ 699	+ 236	- 670	+ 83
II Net foreign investment in the reporting country (Increase: +)	+ 30,817	+ 139,350	+ 83,057	+ 1,799	- 48,638	+ 88,923	+ 7,360	- 54,538	+ 88,198
1 Direct investment	+ 48,606	+ 51,816	+ 69,548	+ 21,377	+ 12,040	+ 20,537	+ 5,171	- 5,424	+ 3,707
Equity	+ 10,567	+ 11,894	+ 24,077	+ 6,047	+ 10,118	+ 2,089	+ 79	+ 1,365	+ 160
of which									
Reinvestment of earnings ¹	- 1,524	+ 3,935	+ 9,216	+ 3,331	+ 2,107	+ 2,671	+ 772	+ 1,356	- 39
Debt instruments	+ 38,039	+ 39,921	+ 45,471	+ 15,330	+ 1,922	+ 18,449	+ 5,093	- 6,790	+ 3,547
2 Portfolio investment	- 68,808	- 108,471	- 95,045	- 28,130	- 46,598	+ 7,592	+ 9,870	- 18,390	+ 19,673
Shares ²	+ 10,605	+ 342	- 1,126	- 2,311	- 821	+ 4,306	+ 6,287	+ 2,876	+ 554
Investment fund shares ³	+ 7,357	- 6,919	- 3,441	+ 656	- 2,894	- 1,792	- 2,666	- 3,039	- 339
Long-term									
debt securities ⁴	- 96,048	- 97,281	- 70,559	- 21,125	- 40,436	+ 16,555	+ 9,081	- 18,405	+ 11,500
Short-term									
debt securities ⁵	+ 9,278	- 4,613	- 19,919	- 5,349	- 2,447	- 11,476	- 2,833	+ 178	+ 7,959
3. Other investment ⁷	+ 51,019	+ 196,006	+ 108,554	+ 8,552	- 14,080	+ 60,794	- 7,681	- 30,723	+ 64,818
Monetary financial institutions ⁸	- 41,165	+ 86,742	+ 17,476	- 3,551	- 67,367	+ 45,097	- 51,789	+ 22,359	+ 40,821
Long-term	- 19,535	+ 5,774	+ 7,541	- 1,325	+ 5,550	- 7,418	- 2,743	- 419	+ 1,680
Short-term	- 21,630	+ 80,968	+ 9,935	- 2,226	- 72,917	+ 52,515	- 49,046	+ 22,778	+ 39,141
Enterprises and households ⁹	+ 18,920	+ 3,716	+ 17,557	+ 6,933	+ 16,752	+ 4,463	+ 6,362	- 7,519	+ 84
Long-term	+ 23,006	+ 8,579	+ 3,339	+ 3,252	- 328	+ 1,879	- 592	+ 1,026	- 185
Short-term	- 4,085	- 4,863	+ 14,218	+ 3,681	+ 17,079	+ 2,584	+ 6,955	- 8,545	+ 269
General government	- 11,105	- 5,309	- 6,313	+ 6,057	- 12,219	+ 1,660	- 4,180	- 1,302	+ 311
Long-term	- 3,941	- 4,682	- 3,290	+ 244	+ 170	- 1	- 2	+ 48	- 9
Short-term	- 7,164	- 626	- 3,023	+ 5,813	- 12,389	+ 1,662	- 4,178	- 1,350	+ 321
Bundesbank	+ 84,369	+ 110,857	+ 79,834	- 886	+ 48,754	+ 9,574	+ 41,925	- 44,261	+ 23,601
III Net financial account (Net lending: + / net borrowing: -)	+ 239,418	+ 257,693	+ 279,967	+ 54,979	+ 85,610	+ 74,584	+ 23,948	+ 30,208	- 2,970

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	675,253	467,592
2015 Oct	786,694	166,664	112,836	15,126	5,199	33,503	575,246	562,818	44,784	468,506	318,187
Nov	813,320	163,816	108,820	15,475	5,217	34,303	604,946	592,518	44,558	482,764	330,555
Dec	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	481,787	318,921
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	605,438	480,477
Nov	1,091,832	169,539	117,208	14,069	5,168	33,094	869,988	855,548	52,305	582,362	509,470
Dec	1,142,845	166,842	117,347	13,987	4,294	31,215	923,765	906,941	52,238	675,253	467,592
2018 Jan	1,114,634	164,944	117,008	13,776	4,166	29,994	896,525	882,043	53,165	619,483	495,151
Feb	1,147,979	166,370	117,138	13,949	4,138	31,146	928,275	913,989	53,333	638,927	509,051
Mar	1,157,102	165,830	116,630	13,906	4,114	31,181	937,348	923,466	53,924	680,791	476,311
Apr	1,137,942	166,970	117,867	14,043	4,150	30,910	916,858	902,364	54,115	636,684	501,259
May	1,196,227	171,469	120,871	14,287	4,172	32,139	970,555	956,150	54,203	660,554	535,673
June	1,212,477	167,078	116,291	14,245	4,983	31,559	990,543	976,266	54,857	706,166	506,312

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

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

XII External sector

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

€ million

End of year or month	Claims on non-residents							Liabilities vis-à-vis non-residents						
	Total	Balances with foreign banks	Claims on foreign non-banks					Total	Loans from foreign banks	Liabilities vis-à-vis foreign non-banks				
			Total	from financial operations	from trade credits					Total	from financial operations	from trade credits		
					Total	Credit terms granted	Advance payments effected					Total	Credit terms used	Advance payments received
All countries														
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
2017 Dec	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 Jan	882,690	224,986	657,704	436,357	221,347	207,523	13,824	1,070,728	130,675	940,053	745,611	194,443	124,933	69,509
Feb	887,933	224,648	663,285	439,284	224,001	210,115	13,886	1,085,830	129,196	956,634	759,351	197,283	127,076	70,207
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	896,738	220,833	675,906	450,724	225,182	211,193	13,988	1,094,434	129,313	965,121	769,032	196,088	124,190	71,898
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
2017 Dec	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 Jan	765,019	220,912	544,107	393,460	150,647	138,449	12,198	964,879	121,947	842,932	706,863	136,068	101,612	34,456
Feb	768,227	220,485	547,742	395,684	152,058	139,792	12,266	981,205	122,026	859,179	721,624	137,555	102,859	34,696
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	773,280	216,653	556,627	403,444	153,182	140,852	12,331	990,026	121,892	868,134	731,567	136,567	101,674	34,893
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
2017 Dec	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 Jan	610,859	200,779	410,080	303,634	106,446	96,482	9,964	794,165	106,244	687,921	593,084	94,837	70,119	24,718
Feb	614,860	199,991	414,868	306,053	108,815	98,868	9,947	807,915	106,471	701,444	603,847	97,597	72,647	24,949
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	614,872	194,205	420,666	310,746	109,921	99,796	10,124	815,616	106,000	709,616	611,880	97,736	72,694	25,041
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
2017 Dec	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 Jan	451,513	155,370	296,143	225,480	70,664	63,141	7,522	634,999	68,044	566,956	505,298	61,658	46,464	15,194
Feb	448,766	151,624	297,142	225,466	71,676	64,149	7,527	645,319	68,857	576,461	513,162	63,299	47,982	15,317
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	451,783	149,412	302,371	229,963	72,408	64,809	7,599	658,015	67,870	590,145	524,097	66,049	50,177	15,872
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
2017 Dec	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 Jan	115,931	2,539	113,391	42,830	70,561	68,935	1,626	97,894	1,091	96,803	38,548	58,256	23,291	34,965
Feb	117,914	2,632	115,282	43,473	71,809	70,190	1,620	98,249	1,082	97,167	37,527	59,640	24,186	35,454
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	121,552	2,562	118,990	47,152	71,838	70,180	1,658	98,062	1,378	96,684	37,265	59,419	22,479	36,940

* 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.

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 Mar	1.4018	1.4306	7.3692	7.4356	120.68	9.0919	9.5279	1.0706	0.86560	1.0685
Apr	1.4241	1.4408	7.3892	7.4376	118.29	9.1993	9.5941	1.0727	0.84824	1.0723
May	1.4878	1.5041	7.6130	7.4400	124.09	9.4001	9.7097	1.0904	0.85554	1.1058
June	1.4861	1.4941	7.6459	7.4376	124.58	9.4992	9.7538	1.0874	0.87724	1.1229
July	1.4772	1.4641	7.7965	7.4366	129.48	9.3988	9.5892	1.1059	0.88617	1.1511
Aug	1.4919	1.4889	7.8760	7.4379	129.70	9.3201	9.5485	1.1398	0.91121	1.1807
Sep	1.4946	1.4639	7.8257	7.4401	131.92	9.3275	9.5334	1.1470	0.89470	1.1915
Oct	1.5099	1.4801	7.7890	7.4429	132.76	9.3976	9.6138	1.1546	0.89071	1.1756
Nov	1.5395	1.4978	7.7723	7.4420	132.39	9.6082	9.8479	1.1640	0.88795	1.1738
Dec	1.5486	1.5108	7.8073	7.4433	133.64	9.8412	9.9370	1.1689	0.88265	1.1836
2018 Jan	1.5340	1.5167	7.8398	7.4455	135.25	9.6464	9.8200	1.1723	0.88331	1.2200
Feb	1.5684	1.5526	7.8068	7.4457	133.29	9.6712	9.9384	1.1542	0.88396	1.2348
Mar	1.5889	1.5943	7.7982	7.4490	130.86	9.5848	10.1608	1.1685	0.88287	1.2336
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

* Averages: Bundesbank calculations based on the daily euro foreign exchange reference rates published by the ECB; for additional euro foreign exchange reference rates, see Statistical Supplement 5, Exchange rate statistics.

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

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

XII External sector

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

1999 Q1=100

Period	Effective exchange rate of the Euro 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			
	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	26 selected industrial countries ⁵			37 countries ⁵	26 selected industrial countries ⁴	37 countries ⁵	56 countries ⁶
							Total	of which					
								Euro area countries	Non-euro area countries				
1999	96.3	96.1	96.1	96.0	96.5	95.8	97.9	99.5	95.8	97.6	98.2	98.0	97.7
2000	87.2	86.7	86.1	85.3	88.0	85.9	91.8	97.3	85.2	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	89.3	95.2	90.5	92.2	95.5	88.4	90.6	93.5	91.9	91.7
2003	100.7	101.2	100.3	100.4	107.1	101.4	95.6	94.5	97.5	94.7	97.0	96.5	96.7
2004	104.6	104.9	103.1	103.6	111.7	105.0	95.8	93.3	99.8	94.9	98.4	98.0	98.3
2005	102.9	103.4	100.9	101.6	109.6	102.4	94.6	92.0	98.9	92.8	98.4	96.9	96.5
2006	102.8	103.3	100.1	100.3	109.6	101.7	93.4	90.3	98.2	91.0	98.5	96.4	95.8
2007	106.1	106.0	101.8	102.5	113.0	103.6	94.3	89.5	102.0	91.3	100.7	97.8	96.9
2008	109.3	108.1	103.1	105.7	117.1	105.5	94.4	88.1	105.2	90.3	102.1	97.7	97.0
2009	110.7	108.8	104.1	110.5	120.2	106.5	94.6	88.9	104.4	90.9	101.7	97.9	97.4
2010	103.6	101.1	95.8	102.4	111.6	97.6	92.2	88.6	98.0	87.1	98.7	93.6	91.9
2011	103.3	100.1	93.6	100.9	112.3	97.0	91.8	88.4	97.4	86.2	98.1	92.7	91.3
2012	97.7	94.8	88.2	94.8	107.2	92.2	89.9	88.3	92.4	83.6	95.8	89.7	88.2
2013	101.0	97.7	90.9	97.4	111.8	95.0	92.2	88.8	97.7	85.5	98.1	91.4	90.1
2014	101.4	97.2	90.9	98.3	114.1	95.4	92.9	89.7	97.9	86.2	98.1	91.6	90.7
2015	91.7	87.6	82.8	88.2	105.7	86.9	90.1	90.6	89.3	82.5	94.1	86.4	85.8
2016	94.4	89.5	84.9	89.3	109.7	88.9	90.9	91.1	90.6	84.0	94.7	87.4	87.0
2017	96.6	91.4	85.8	90.0	112.0	90.0	92.2	91.3	93.5	84.7	96.0	88.6	87.8
2015 June	91.7	87.7			105.2	86.7					94.1	86.4	85.6
July	90.7	86.6			104.2	85.7					93.7	85.8	85.0
Aug	92.4	88.0	83.1	88.2	107.1	87.9	90.2	90.6	89.6	82.8	94.3	86.7	86.4
Sep	93.2	88.9			108.7	89.2					94.5	87.1	87.1
Oct	93.0	88.8			108.1	88.7					94.5	87.1	86.8
Nov	90.5	86.3	83.1	87.9	105.0	86.0	90.2	90.8	89.4	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	88.6					93.9	86.8	86.7
Feb	94.2	89.3	84.7	89.0	110.3	89.5	90.9	91.2	90.3	83.8	94.4	87.2	87.1
Mar	93.6	88.8			109.0	88.5					94.5	87.0	86.7
Apr	94.4	89.5			109.8	89.0					94.9	87.5	87.1
May	94.6	89.9	85.1	89.5	110.2	89.4	90.9	91.2	90.6	84.1	94.8	87.7	87.4
June	94.4	89.6			109.8	89.0					94.5	87.5	87.1
July	94.6	89.8			109.5	88.7					94.8	87.6	86.9
Aug	94.9	90.0	85.2	89.5	110.0	89.0	91.1	91.1	91.0	84.2	95.0	87.6	87.0
Sep	95.1	90.1			110.2	89.2					95.1	87.8	87.2
Oct	95.1	90.3			110.0	89.0					95.4	87.9	87.1
Nov	94.6	89.6	84.6	89.1	109.6	88.5	90.9	91.0	90.6	83.8	94.8	87.5	86.8
Dec	93.7	88.9			108.6	87.8					94.6	87.3	86.5
2017 Jan	93.9	89.1			109.0	88.0					94.5	87.2	86.4
Feb	93.4	88.9	83.4	88.1	108.1	87.4	90.6	91.0	89.9	83.2	94.5	87.1	86.2
Mar	94.0	89.2			108.5	87.5					94.6	87.2	86.2
Apr	93.7	89.0			108.2	87.2					94.5	87.1	86.0
May	95.6	90.5	84.8	88.9	110.5	88.8	91.6	91.4	91.8	84.2	95.4	88.0	87.0
June	96.3	91.2			111.4	89.5					95.9	88.5	87.6
July	97.6	92.4			113.3	91.0					96.6	89.2	88.5
Aug	99.0	93.6	87.6	91.5	115.0	92.3	93.2	91.5	95.8	85.8	97.2	89.8	89.2
Sep	99.0	93.6			115.0	92.2					97.3	89.8	89.2
Oct	98.6	93.1			114.8	91.9					97.1	89.5	89.0
Nov	98.5	93.0	87.4	91.3	115.0	92.0	93.3	91.4	96.3	85.7	97.2	89.5	89.0
Dec	98.8	93.3			115.3	92.1					97.5	89.8	89.3
2018 Jan	99.4	93.9			116.1	92.7					97.6	89.8	89.4
Feb	99.6	93.9	88.0	91.7	117.3	93.6	93.9	91.4	97.9	86.0	97.7	89.9	89.5
Mar	99.7	94.2			117.7	93.9					97.8	90.0	89.7
Apr	99.5	93.9			117.9	94.0					97.7	89.8	89.6
May	98.1	92.8	...	...	116.6	93.1	...	...	...	...	97.4	89.4	89.4
June	97.9	92.7			116.7	93.1					97.1	89.4	89.4

* 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. 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).

lable, 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. 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

- The supervisory review and evaluation process for smaller institutions and proportionality considerations

■ Financial Stability Review

- The Eurosystem's new money market statistical reporting – initial results for Germany
- The new ESCB insurance statistics – integrated reporting flow and initial results

■ Monthly Report

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

November 2017

- The current economic situation in Germany

December 2017

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

Monthly Report articles

September 2017

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

October 2017

- Global liquidity, foreign exchange reserves and exchange rates of emerging market economies
- The natural rate of interest

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 – macro-economic 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

Statistical Supplements to the Monthly Report

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

Special Publications

Makro-ökonometrisches Mehr-Länder-Modell, November 1996³

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

Die Zahlungsbilanz der ehemaligen DDR 1975 bis 1989, August 1999³

The market for German Federal securities, May 2000

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

Bundesbank Act, September 2002

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

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

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

European economic and monetary union, April 2008

■ Special Statistical Publications

- 1 Banking statistics guidelines, January 2018^{2, 4}
- 2 Banking statistics customer classification, January 2018²
- 3 Aufbau der bankstatistischen Tabellen, July 2013^{2, 3}
- 4 Financial accounts for Germany 2011 to 2016, May 2017²
- 5 Extrapolated results from financial statements of German enterprises 1997 to 2015, December 2016²
- 6 Verhältniszahlen aus Jahresabschlüssen deutscher Unternehmen von 2014 bis 2015, May 2018^{2, 3}
- 7 Notes on the coding list for the balance of payments statistics, September 2013²
- 8 The balance of payments statistics of the Federal Republic of Germany, 2nd edition, February 1991^o
- 9 Securities deposits, August 2005
- 10 Foreign direct investment stock statistics, April 2018^{1, 2}
- 11 Balance of payments by region, July 2013
- 12 Technologische Dienstleistungen in der Zahlungsbilanz, June 2011³

■ Discussion Papers*

- 17/2018
Offshoring and the polarisation of the demand for capital
- 18/2018
Time-varying capital requirements and disclosure rules: effects on capitalization and lending decisions
- 19/2018
International trade and retail market performance and structure: theory and empirical evidence
- 20/2018
Quantitative easing, portfolio rebalancing and credit growth: micro evidence from Germany
- 21/2018
Pre-emptive sovereign debt restructuring and holdout litigation
- 22/2018
Unconventional monetary policy, bank lending, and security holdings: the yield-induced portfolio rebalancing channel
- 23/2018
Love and money with inheritance: marital sorting by labor income and inherited wealth in the modern partnership
- 24/2018
Convertible bonds and bank risk-taking
- 25/2018
Interest rate pass-through to the rates of core deposits – a new perspective

o Not available on the website.

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

For footnotes, see p 88*.

■ Banking legislation

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

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

¹ Only the headings and explanatory notes to the data contained in the German originals are available in English.

² Available on the website only.

³ Available in German only.

⁴ Only some parts of the Special Statistical Publications are provided in English. The date refers to the German issue, which may be of a more recent date than the English one.