DEUTSCHE
BUNDESBANK
EUROSYSTEM

Monthly Report
January 2018

Vol 70
No 1

Deutsche Bundesbank
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ISSN 0418-8292 (print edition)
ISSN 1862-1325 (online edition)

The German original of this *Monthly Report* went to press at 11 am on 19 January 2018.

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

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

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

Contents

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 Data unknown, not to be published or not meaningful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 continues to grow at strong underlying pace

Germany's economy is continuing to expand at an exceptionally strong underlying pace. The rate of growth in the fourth quarter of 2017 might be slightly lower than it was in the preceding quarter, however, with the brief lull in economic activity due to two "bridge" days in October playing a part in this. This will do nothing to dent the basic underlying strength and breadth of the upturn in economic growth in Germany. Industrial orders and labour market conditions are in excellent shape, as are business and consumer sentiment.

Strong, broad-based economic growth in 2017

The provisional figures of the Federal Statistical Office indicate that gross domestic product (GDP) increased by 2.2% in real terms in 2017 (2.5% after calendar adjustment). This means that the aggregate expansion showed a further marked strengthening following the already quite strong growth of 1.9% in 2016. This was primarily the result of a perceptible upturn in global activity, which allowed German industrial exports to thrive on a broad basis. This led to a substantial rise in industrial capacity utilisation levels and businesses stepping up their investment in new machinery and equipment. Construction investment provided additional stimuli, particularly in the first six months of the year. The construction sector was probably increasingly approaching its capacity limits as the year progressed, however. Not least, given the favourable outlook for employment and incomes, private consumption also remained a key pillar of the strong and broad-based upturn in economic activity in 2017.

Industry

Industrial output in November 2017 showed a very substantial seasonally adjusted increase of 4¼% on the month. This more than offset the cutbacks in production in October, when output was weak owing to an exceptional calendar constellation with two "bridge" days. On an average of October and November, there was now a perceptible increase of ½% compared with the previous quarter. Manufacturers of chemical products stood out with the strongest gains in output (+2¾%). German mechanical engineering firms, too, expanded their production substantially (+1¼%). Car manufacturers suffered a significant drop in output, however (-1%). Overall, output thus increased most in the intermediate goods industry (+1%). By contrast, manufacturers of capital goods reported only a slight rise in output of ¼%, and consumer goods output was, in fact, slightly down on the third-quarter level (-¼%).

Very steep rise in industrial output following weak October due to "bridge" days

Excellent order situation in German industry

Seasonally adjusted industrial orders in November contracted slightly on the month (-½%). However, the decline should be seen against the backdrop of the extremely dynamic inflow of orders in the months beforehand. On an average of October and November, the volume of orders increased steeply compared with the third quarter (+2¾%). For German industrial firms, the order situation looks exceptionally favourable at the moment, and the impulses are broadly based. In regional terms, demand rose strongly in all the major economic areas. While there was a considerable increase of 1¼% in domestic orders, the inflow of orders from the euro area (+4%) and non-euro area countries (+3¾%) showed an even more substantial rise. Across all the sectors too, a large number of orders landed on firms' books, first and foremost in the capital goods sector with substantial growth of 3¾%, followed by producers of consumer goods (+2¾%) and of intermediate goods (+1½%). It is true that large orders played a disproportionately big role in the overall sharp rise in new orders, but even if they are excluded there was still a considerable increase in the inflow of orders (+1¾%).

Economic conditions in Germany*

Seasonally adjusted

Period	Orders received (volume); 2010 = 100			
	Industry			Main construction
	Total	of which Domestic	of which Foreign	
2017 Q1	113.8	107.6	118.9	133.3
Q2	114.7	108.0	120.1	129.5
Q3	118.9	111.5	125.0	126.5
Sep	121.5	112.7	128.6	125.9
Oct	122.4	113.1	130.0	126.1
Nov	121.9	112.7	129.4	…
	Output; 2010 = 100			
	Industry			
	Total	of which Intermediate goods	of which Capital goods	Construction
2017 Q1	113.3	109.0	120.8	112.7
Q2	114.9	111.0	122.6	116.3
Q3	117.0	112.8	125.0	114.9
Sep	117.2	113.0	125.0	115.1
Oct	115.0	112.2	121.8	113.8
Nov	120.0	115.6	128.8	115.5
	Foreign trade; € billion			*Memo item* Current account balance in € billion
	Exports	Imports	Balance	
2017 Q1	313.40	254.03	59.37	64.39
Q2	318.48	257.75	60.73	58.71
Q3	320.67	258.13	62.54	67.51
Sep	107.48	85.62	21.86	22.58
Oct	107.12	87.20	19.92	21.11
Nov	111.56	89.23	22.33	22.26
	Labour market			
	Employment	Vacancies[1]	Unemployment	Unemployment rate in %
	Number in thousands			
2017 Q2	44,206	712	2,546	5.7
Q3	44,340	742	2,522	5.7
Q4	…	774	2,468	5.5
Oct	44,428	761	2,491	5.6
Nov	44,478	772	2,471	5.5
Dec	…	790	2,442	5.5
	Prices			
	Import prices	Producer prices of industrial products	Construction prices[2]	Harmonised consumer prices
	2010 = 100			2015 = 100
2017 Q2	101.1	104.5	116.6	101.8
Q3	100.3	104.9	117.5	102.3
Q4	…	105.7	118.4	102.7
Oct	101.7	105.5	.	102.4
Nov	102.4	105.7	.	102.7
Dec	…	106.0	.	103.0

* 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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Major countermovement in industrial sales and exports following weak October

After the weak October, industrial sales followed the major countermovement in industrial manufacturing in November and were strongly up on the previous month's level in seasonally adjusted terms (+4¾%). On an average of October and November, there was perceptible growth of ¾% compared with the average of the third quarter. Broken down by sector, manufacturers of intermediate goods posted the strongest growth in sales. Producers of consumer goods also strongly boosted sales. By contrast, capital goods manufacturers had to cope with severe losses of business. This was mainly due to weak sales in the automotive sector, which experienced a lull following quite considerable growth in the third quarter. In regional terms, sales figures in the non-euro area countries remained at the same level as in the previous quarter, while German enterprises recorded higher sales in Germany and in euro area countries. In November, nominal exports increased sharply on the month by a seasonally adjusted 4¼%. On an average of October and November, they were also significantly above their level in the third quarter (+2¼%). In real terms, there was a somewhat smaller increase of 1¾%. At 2¼%, growth in nominal imports in November was clearly weaker than it was in exports, but the stronger previous month meant that there was a similarly sharp increase when comparing the average of October and November with the average of the third quarter. In real terms, however, significantly lower growth was recorded (+¾%).

Construction

Steep rise in construction output

Construction output rose steeply in November 2017 in seasonally adjusted terms (+1½%). Even so, on an average of October and November, it was still slightly down on its third-quarter level (-¼%). This was mainly due to a marked decline in activity in the main construction sector (-¾%). By contrast, construction output in the finishing trades showed a distinct rise (+½%). Despite this slight decline, however, construction sector activity remains at a very

high level overall. Construction firms' order books also continue to be well filled. The fact that there was a marginal decline in orders received in the main construction sector in October – data are available up to then – compared with the third quarter does not alter this picture.

Labour market

Strong increase in employment; outlook remains very positive

The prolonged and strong growth in employment continued in November 2017. The seasonally adjusted number of persons in work in Germany went up by around 50,000 on the month. Nevertheless, this increase failed to match the very steep growth seen in the fourth quarter of last year, and the year-on-year figure declined marginally to a still very strong +613,000 employees, or +1.4%. Growth in total employment was sustained by the steep increase in the number of jobs subject to social security contributions. By contrast, there was a continuation of the downward trend in the number of persons working exclusively in low-paid part-time jobs and of the self-employed. Leading indicators of the demand for labour such as the Ifo employment barometer, the Federal Employment Agency's BA-X job index and the labour market barometer of the Institute for Employment Research (IAB) all showed a further rise from an exceptionally high level. These reflect both the expansionary recruitment plans of enterprises as well as their increasing difficulties in filling vacant positions.

Considerable fall in registered unemployment

Seasonally adjusted unemployment underwent a relatively steep month-on-month decline in December. There were 2.44 million persons registered as unemployed with the Federal Employment Agency, 29,000 fewer than in November. The unemployment rate was 5.5%. Compared with the previous year, 183,000 fewer persons were out of work, and the unemployment rate was 0.5 percentage point lower. Overall underemployment, which also counts the number of persons taking part in active labour market policy measures, also showed a sharp fall on the month. The latest figures of the IAB labour market barometer suggest that unemployment will go on falling over the next few months.

Prices

Crude oil prices continue to rise

Crude oil prices continued to rise in December 2017; on a monthly average they were 2½% higher than in November. There was a further marked increase in prices in the first half of January. As this report went to press, the price of a barrel of Brent crude oil stood at just over US$69. The discount on crude oil futures was US$1¾ for deliveries six months ahead and US$3¾ for deliveries 12 months ahead.

Further rise in import and producer prices in domestic sales

In November, import prices increased markedly in seasonally adjusted terms mainly due to more expensive energy imports. In the case of other goods, however, the earlier price inflation almost came to a standstill. Domestic producer prices, for which data up to December are already available, showed a similar picture, even though the rise in these energy prices was clearly weaker. The annual rate of inflation at these two upstream stages of consumer prices showed little movement overall in this instance and stood at +2½% in each case.

Distinct rise in consumer prices mainly due to volatile components

Consumer prices (HICP) rose distinctly by 0.3% in seasonally adjusted terms at the end of the year. In the case of services, the prices of travel, which are prone to fluctuate, were considerably higher than is usual in December. The prices of non-energy industrial goods were rising somewhat more strongly than in the preceding months, partly as a result of higher prices for clothing. Housing rents continued to be raised moderately and energy and food prices showed little change. Annual headline HICP inflation went down from +1.8% to +1.6%, because energy prices had undergone a steep rise in December 2016 (CPI up to +1.7% from likewise +1.8%). Excluding food and energy, however, the figure was 1.4%, compared with 1.2%. The surge in the overall rate from

+0.4% in 2016 to +1.7% on an average of 2017 was due chiefly to the energy price trend turning positive.[1] In the current year, the energy component is likely to make no more than a minor contribution to overall inflation. In the case of the other components, inflation, which hit 1.6% in 2017, is likely to accelerate further, however, owing to growing aggregate overutilisation.

Public finances[2]

Local government finances

Significant improvement in 2017 Q3 amid dynamic tax revenue growth …

Local governments' core budgets[3] recorded a surplus of just under €2 billion in the third quarter of 2017, compared with a deficit of close to €½ billion in the same period one year previously. This clear improvement was mainly due to the continued strong growth in tax revenue (+7½%, or €1½ billion) – particularly in the municipal share of income tax and, to a somewhat lesser extent, in local business tax. By comparison, the increase in both revenue from general grants from state government (+4½%, or €½ billion), which are essentially pegged to growth in state tax revenue, and in receipts from fees (+2%) was more moderate. Overall revenue growth totalled just under 4½% (€2½ billion).

… and low expenditure growth

By contrast, growth in total expenditure went up only slightly (+½%, or just under €½ billion). Staff costs and other operating expenditure increased moderately (+2½% and +2%, respectively) and fixed asset formation actually rose significantly (+5%). However, spending on social benefits declined slightly (-½%), probably largely due to reduced expenditure on support for refugees, and interest expenditure fell sharply once again (-14½%). Other expenditure, which is not broken down further in the reported benchmark figures, also declined considerably overall.

After three quarters, the surplus of the local governments' core budgets in 2017 already stood at €1½ billion. The improvement on the core budgets' results for 2016 amounted to €5½ billion. As the final quarter of 2016 was unusually strong, the rise for the year as a whole could turn out to be somewhat lower, however. The Federal Ministry of Finance's estimate for 2017, presented to the Stability Council in December, assumes an increase of €3 billion in the surplus of the core budgets, bringing them to €7½ billion. Significantly positive – albeit somewhat more moderate – results are expected for 2018 and the period up to 2021. This assumption takes into account that the Federal Government's permanent financial assistance package will enter into force this year, providing additional relief of €2½ billion net. Greater expenditure growth for fixed asset formation is anticipated for local government in 2018. This seems plausible given the politically identified needs and the financial means generally available, although the volume of the latter differs among municipalities. For instance, central government's fund to promote municipal investment, which it has equipped with a total of €7 billion, is available to financially weak local governments. Numerous planned projects are set to be completed this year, making use

Surplus for 2017 as a whole also probably significantly higher, and very favourable outlook in the medium term

1 CPI inflation rose from 0.5% to 1.8%.
2 In the short commentaries on public finances, the emphasis is on recent outturns. The quarterly editions of the Monthly Report (published in February, May, August and November), by contrast, contain a detailed description of public finance developments during the preceding quarter. For detailed data on budgetary developments and public debt, see the statistical section of this report.
3 As opposed to the usual description of local government finances in the short commentaries, the following report is based solely on the core budgets. As this report went to press, no cash data, including local government off-budget entities, were yet available from the Federal Statistical Office. Recently these entities exhibited only minor (mostly positive) fiscal balances on a regular basis. However, the growth rates of various revenue and expenditure categories were given a distinct boost by the reporting group being expanded.

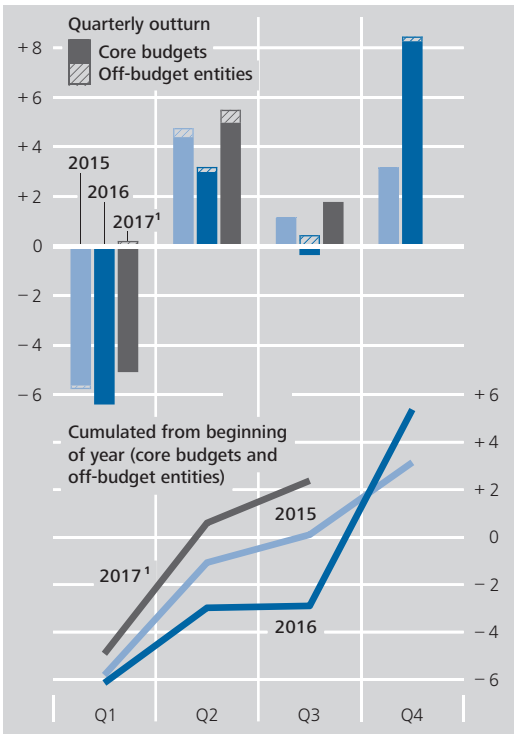
of the relevant resources.[4] Additional transfers from central government, which would result in a further marked improvement of local government finances, are planned in the event that a new Federal Government is formed on the basis of the agreements reached in the latest exploratory talks. Should any fee reductions and a legal entitlement to all-day childcare for children of primary school age be agreed upon here, it will probably be up to state governments to offset any resulting budgetary strains in accordance with the principle of related actions (a constitutionally enshrined commitment that any allocation of tasks by state to local governments be accompanied by the necessary resources). On the whole, there is scope not only for additional investment, but also for lowering the local business tax in order to reduce tax burdens for enterprises, for example.

Stronger decline in cash advances in 2017 Q3

In line with the overall positive budgetary situation, the municipalities' total debts (including their off-budget entities)[5] decreased by €1½ billion to just under €145 billion between the end of June 2017 and the end of September 2017. The bulk of this decline was accounted for by cash advances, the volume of which fell to €47½ billion. The heavily indebted municipalities throughout North Rhine-Westphalia were primarily affected. However, the overall highly indebted local governments of Saarland, Rhineland-Palatinate and Hesse reduced the volume of their outstanding cash advances in part, too. Cash advances are actually only intended to fulfil liquidity coverage requirements on a temporary basis. High stocks of advances accumulated over a number of years highlight chronic fiscal imbalances. The reduction in cash advances is therefore a positive development. However, the persistently high volume in many municipalities demonstrates the need to consistently pursue fiscal consolidation. The relevant state government is generally called upon to take action in parallel to the respective municipality. In the case of high outstanding cash advances at the local government level throughout a federal state, in addition to more effective budgetary supervision, it would seem appropriate to submit the municipal revenue-sharing scheme to a particularly thorough analysis in the light of the chosen division of tasks between the state and local government.

Local government fiscal deficit/surplus

€ billion



Source: Federal Statistical Office. **1** Values for 2017 Q3 excluding off-budget entities.
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4 In a first step, central government stocked the fund with financial assistance in the amount of €3½ billion for special investments in infrastructure in the period from 2015 to 2020. Although only €½ billion of this was called on by the end of 2017, 87% of the funds had been earmarked as at the reporting date in mid-2017. The small outflows are being attributed, first, to the fact that funds are only paid out following implementation and invoicing. Second, capacity bottlenecks in the construction sector and in local government administration are being highlighted (see also Federal Ministry of Finance, Förderung von Investitionen finanzschwacher Kommunen durch den Bund, Monthly Report, December 2017, pp 27-34). The supplementary budget for 2016 made additional assistance of €3½ billion available for investment in schools over the years up until 2022. Once the funding provisions have been defined, it will probably only be possible to invoice projects during the current year.

5 Debts owed to third parties, ie all public and non-public sector lenders apart from other municipalities and municipal special-purpose associations.

Sales and purchases of debt securities

€ billion

Item	2016 November	2017 October	2017 November
Sales			
Domestic debt securities[1]	2.6	– 10.2	22.1
of which			
Bank debt securities	– 5.2	– 9.8	0.9
Public debt securities	8.0	2.4	14.8
Foreign debt securities[2]	– 2.6	– 1.9	5.2
Purchases			
Residents	6.3	9.5	22.9
Credit institutions[3]	– 2.5	– 4.8	3.4
Deutsche Bundesbank	18.7	12.2	13.4
Other sectors[4]	– 9.9	2.2	6.2
of which			
Domestic debt securities	– 6.0	0.9	3.2
Non-residents[2]	– 6.5	– 21.6	4.4
Total sales/purchases	– 0.2	– 12.0	27.3

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

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Securities markets

Bond market

High net issuance in the German bond market

In November 2017, issuance in the German bond market stood at €86.3 billion in gross terms (previous month: €93.6 billion). After deducting redemptions, which were relatively low, and taking account of changes in issuers' holdings of their own debt securities, the outstanding volume of domestic bonds rose by €22.1 billion. Foreign debt securities worth €5.2 billion net were sold in the German market. The funds raised from sales of domestic and foreign debt securities in the German market therefore amounted to €27.3 billion.

Rise in public sector capital market debt

The public sector issued bonds totalling €14.8 billion net in the reporting month. This was attributable primarily to central government, which issued mainly two-year Federal Treasury notes (Schätze: €5.9 billion), five-year Federal notes (Bobls: €3.4 billion), and ten-year and thirty-year Federal bonds (Bunds: €3.4 billion and €2.2 billion respectively). Meanwhile, redemptions of federal state bonds were low, totalling €0.1 billion

Net issuance on the part of enterprises

Domestic enterprises also increased their capital market debt in November – by €6.3 billion in net terms. On balance, this involved almost exclusively bonds with a maturity of more than one year.

Rise in credit institutions' capital market debt

The outstanding volume of debt securities issued by domestic credit institutions rose by €0.9 billion in the reporting month. On balance, mainly other bank securities that can be structured flexibly were placed on the market (€1.6 billion), while debt securities issued by specialised credit institutions were redeemed to the tune of €1.3 billion net.

Purchases of debt securities

On balance, domestic investors were the main buyers of debt securities in November. The Deutsche Bundesbank was the primary buyer, acquiring debt securities in the amount of €13.4 billion under the Eurosystem's asset purchase programmes. Domestic non-banks increased their holdings of bonds by €6.2 billion, investing more or less equally in domestic and foreign securities. Non-resident investors added bonds worth €4.4 billion net to their portfolios. In addition, domestic credit institutions acquired debt securities totalling €3.4 billion.

Equity market

Little net issuance in the German equity market

In the reporting month, domestic enterprises placed €0.1 billion worth of new shares in the German equity market. The outstanding volume of foreign shares in the German market rose by €1.7 billion over the same period. Equities were purchased predominantly by domestic non-banks and domestic credit institutions (to the tune of €1.4 billion and €1.2 billion respectively). By contrast, foreign investors sold German shares in the amount of €0.8 billion.

Mutual funds

German mutual funds record inflows

In November 2017, domestic mutual funds sold shares totalling €8.6 billion net in the German market (previous month: €11.0 billion). On balance, fresh funds were injected chiefly into specialised funds reserved for institutional investors (€6.0 billion). Among the various asset classes, mixed securities funds in particular recorded inflows (€5.8 billion), as did, albeit to a lesser extent, equity funds and open-end real estate funds (both to the tune of €1.5 billion). By contrast, bond funds redeemed their own shares (€1.5 billion). Foreign mutual funds sold shares worth €2.2 billion in the German market in the reporting month. On balance, domestic non-banks were the sole purchasers, adding a net €15.7 billion worth of mutual fund shares to their portfolios. Foreign investors disposed of German mutual fund shares totalling €4.8 billion net. Domestic credit institutions were only marginally active in the German market, on balance.

Balance of payments

Rise in current account surplus

Germany's current account recorded a surplus of €25.4 billion in November 2017, putting it €6.6 above the October level. This was caused by an increase in the goods account surplus along with a higher invisible current transactions balance, which comprises services as well as primary and secondary income.

Wider surplus in goods account

The November surplus on the goods account was €4.5 billion up on the month at €25.4 billion, with exports of goods rising more sharply than imports of goods.

Improvements in the invisible current transactions balance, primarily due to narrower deficit in the services balance

Invisible current transactions posted a balanced account in November, compared with a deficit of €2.0 billion one month earlier. This was primarily due to a narrowing of the services account deficit by €2.8 billion to €0.6 billion, largely on account of the usual seasonal decline in travel expenditure, which greatly outstripped the month-on-month drop from the

Major items of the balance of payments

€ billion

Item	2016 Nov	2017 Oct	2017 Nov[p]
I Current account	+ 24.9	+ 18.8	+ 25.4
1 Goods[1]	+ 23.6	+ 20.9	+ 25.4
Exports (fob)	107.0	107.3	115.5
Imports (fob)	83.4	86.4	90.2
Memo item			
Foreign trade[2]	+ 22.0	+ 18.9	+ 23.7
Exports (fob)	107.6	108.0	116.5
Imports (cif)	85.7	89.1	92.8
2 Services[3]	− 0.3	− 3.4	− 0.6
Receipts	21.4	22.3	21.6
Expenditure	21.8	25.7	22.2
3 Primary income	+ 5.7	+ 5.6	+ 5.9
Receipts	14.9	14.7	14.7
Expenditure	9.3	9.2	8.8
4 Secondary income	− 4.0	− 4.2	− 5.2
II Capital account	− 0.1	− 0.2	− 0.5
III Financial account (increase: +)	+ 25.8	+ 10.9	+ 28.4
1 Direct investment	+ 5.3	+ 8.3	− 0.1
Domestic investment abroad	+ 9.9	+ 11.2	+ 7.7
Foreign investment in the reporting country	+ 4.7	+ 2.9	+ 7.8
2 Portfolio investment	+ 6.7	+ 24.7	+ 9.9
Domestic investment in foreign securities	− 0.9	+ 6.8	+ 8.6
Shares[4]	+ 2.5	+ 1.5	+ 1.2
Investment fund shares[5]	− 0.7	+ 7.2	+ 2.2
Long-term debt securities[6]	− 2.2	− 0.3	+ 6.7
Short-term debt securities[7]	− 0.4	− 1.5	− 1.5
Foreign investment in domestic securities	− 7.5	− 17.8	− 1.3
Shares[4]	0.0	+ 2.7	− 0.8
Investment fund shares	− 1.0	+ 1.0	− 4.8
Long-term debt securities[6]	+ 7.8	− 22.1	+ 6.4
Short-term debt securities[7]	− 14.3	+ 0.5	− 2.0
3 Financial derivatives[8]	+ 5.7	+ 1.4	+ 2.3
4 Other investment[9]	+ 8.0	− 24.6	+ 16.7
Monetary financial institutions[10]	− 24.9	− 11.4	− 17.3
of which Short-term	− 36.0	− 11.0	− 14.4
Enterprises and households[11]	− 0.2	+ 0.4	+ 2.2
General government	− 3.6	+ 0.7	+ 1.6
Bundesbank	+ 36.8	− 14.3	+ 30.2
5 Reserve assets	+ 0.1	+ 1.2	− 0.3
IV Errors and omissions[12]	+ 1.0	− 7.7	+ 3.5

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

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very high level of receipts derived from the use of intellectual property of October. At the same time, net receipts in the primary income account went up slightly by €0.3 billion to €5.9 billion, in large part because of reduced expenditure in the area of investment income. In the secondary income account, by contrast, the deficit widened by €1.0 billion to €5.2 billion. This was mainly attributable to higher private sector expenditure.

Capital outflows in portfolio investment

In November, the international financial markets were influenced by more upbeat global economic expectations and the firm prospect of tax reforms being implemented in the United States. Against this backdrop, Germany's cross-border portfolio investment generated net capital exports in the amount of €9.9 billion, compared with €24.7 billion in October. German investors acquired foreign securities worth €8.6 billion net, purchasing bonds (€6.7 billion), investment fund shares (€2.2 billion) and regular shares (€1.2 billion), while disposing of money market paper (€1.5 billion). In the reporting month, foreign investors divested themselves of German securities totalling €1.3 billion net. These instruments encompassed investment fund shares (€4.8 billion), money market paper (€2.0 billion) and shares (€0.8 billion). In contrast to this, and alongside an elevated level of net issuance, foreign investors acquired German bonds emanating from both the public sector (€3.8 billion) and the private sector (€2.6 billion).

Direct investment sees net capital imports

At €0.1 billion, direct investment generated modest net capital imports in November, following net capital exports of €8.3 billion one month earlier. Net funds flowing into Germany in the shape of direct investment came to €7.8 billion, of which €3.2 billion was dedicated to investments in equity – including reinvested earnings – while €4.6 billion was earmarked for intra-group loans. Domestic enterprises supplied their affiliates abroad with funds worth €7.7 billion net, doing so by augmenting their equity capital (€6.3 billion) and expanding their intra-group lending (€1.4 billion).

Outflows in other investment

Other statistically recorded investment, which comprises loans and trade credits (where these do not constitute direct investment), bank deposits and other investments, experienced net capital exports of €16.7 billion in November. This result arose from outflows in the banking system (€12.8 billion), enterprises and households (€2.2 billion) and at the general government level (€1.6 billion). While credit institutions recorded net capital inflows (€17.3 billion), the Bundesbank's net claims rose by €30.2 billion, of which €7.1 billion was accounted for by higher TARGET2 claims. Furthermore, the Bundesbank's external liabilities decreased, inter alia as a result of lower short-term deposits on the part of foreign (non-euro area) central banks.

Reserve assets

The Bundesbank's reserve assets fell – at transaction values – by €0.3 billion in November.

The impact of the internationalisation of German firms on domestic investment

The increasing internationalisation of Germany's economy is multifaceted. Key aspects of internationalisation that frequently court controversy in the public arena are production offshoring (hereinafter referred to simply as offshoring) and German foreign direct investment (FDI). One oft-repeated assertion is that offshoring and FDI crowd out domestic production and hamper investment in Germany. This article presents two recent studies that shed some light on the relationship between the internationalisation of German firms and domestic investment. The studies, which consider different aspects of German firms' international interconnectedness, find both positive and negative effects on domestic investment and show that, overall, the quantitative implications for aggregate investment in Germany are small.

One study examines the issue of how offshoring affects the production factor capital and, in particular, investment in various capital goods in Germany. The findings indicate that, as a result of offshoring, domestic demand for capital has shifted away from traditional capital goods in favour of information and communication technologies. One possible explanation for this effect is that, once production stages requiring low-skilled labour have been moved offshore, the requisite capital goods are no longer needed to the same extent as previously. Overall, offshoring by German firms is likely, in aggregate terms, to have had a slightly negative impact on domestic investment – at least until the onset of the 2007-08 financial crisis.

FDI represents another field in which firms are active abroad. Studies based on Bundesbank firm-level data and focusing on the impact of FDI on domestic investment show that the establishment or acquisition of a new foreign affiliate by a domestic parent firm is, on average, associated with higher domestic investment by said firm in the same year. This effect is linked, in particular, to better funding conditions in the host country, as well as tax-related factors in some cases. However, the comparatively small number of new affiliates abroad mean that the impact on aggregate investment in Germany is also likely to be fairly small.

Introduction

Increasing internationalisation of German economy …

The internationalisation of Germany's economy has progressed at a rapid pace over the past two decades. Lower trade and communication costs have made it possible for German firms to organise their production within global value chains and focus their domestic activities on production stages that provide a comparative advantage.[1] Furthermore, German firms have taken advantage of the increasing liberalisation of cross-border capital flows – where significant progress had been made, especially prior to the onset of the 2007-08 global financial crisis – to acquire existing firms abroad and establish new foreign affiliates.[2]

… against backdrop of recently subdued domestic investment

At the same time, firms' investment in Germany has been rather subdued recently. In addition to being of significance in terms of future economic growth potential, investment has a direct impact on the German current account surplus, which, owing to the level that it has reached, has been the subject of an annual in-depth review conducted by the European Commission since 2014 as part of its procedure for the prevention and correction of macroeconomic imbalances.[3] One oft-repeated assertion in this regard is that offshoring and FDI by German firms hamper domestic investment in Germany.

Offshoring and FDI: similarities and differences

Unlike portfolio investment, FDI is characterised by a long-term investment horizon and is aimed at influencing and controlling the business activity of investment companies abroad.[4] Possible motives for FDI include the scope for producing certain products (or parts of products) more efficiently abroad (vertical FDI) or the wish to tap new sales markets (horizontal FDI).[5] Offshoring is the outsourcing of business activities to locations in another country on the

1 For developments in trade and communication costs, see also J-F Arvis, Y Duval, B Shepherd, C Utoktham and A Raj (2016), Trade costs in the developing world: 1996-2010, World Trade Review, Vol 15, pp 451-474; R Baldwin (2016), The great convergence, Harvard University Press, Cambridge, MA.

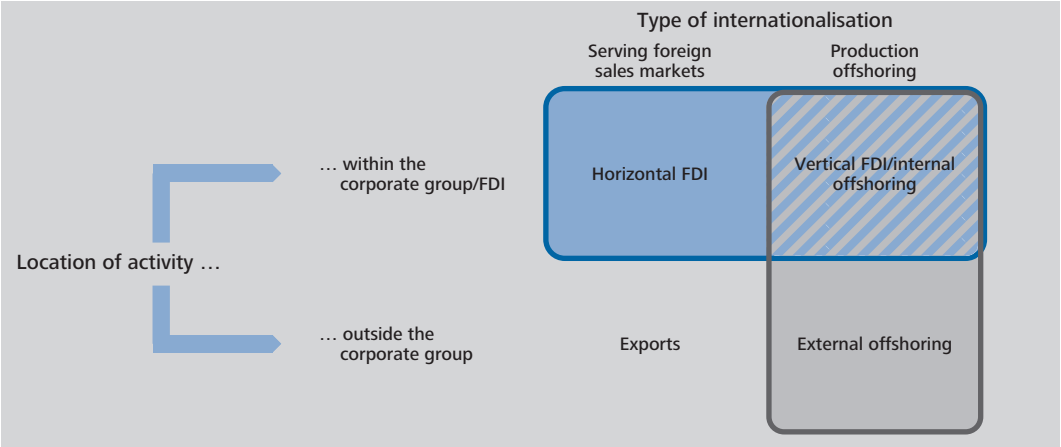
2 For the liberalisation of cross-border capital flows over time, see also M D Chinn and H Ito (2006), What matters for financial development? Capital controls, institutions, and interactions, Journal of Development Economics, Vol 81, pp 163-192; M D Chinn and H Ito (2008), A new measure of financial openness, Journal of Comparative Policy Analysis, Vol 10, pp 309-322.

3 See European Commission, Country Report Germany 2017. Including an in-depth review on the prevention and correction of macroeconomic imbalances, Brussels, 22 February 2017.

4 See also R Albuquerque (2003), The composition of international capital flows: risk sharing through foreign direct investment, Journal of International Economics, Vol 61, pp 353-383.

5 Alternatively, foreign sales markets can be tapped by exporting to them. For more information on how the decision to serve a market by means of exports or horizontal FDI is made, see also S L Brainard (1997), An empirical assessment of the proximity-concentration trade-off between multinational sales and trade, American Economic Review, Vol 87, pp 520-544.

Production offshoring and FDI – a distinction



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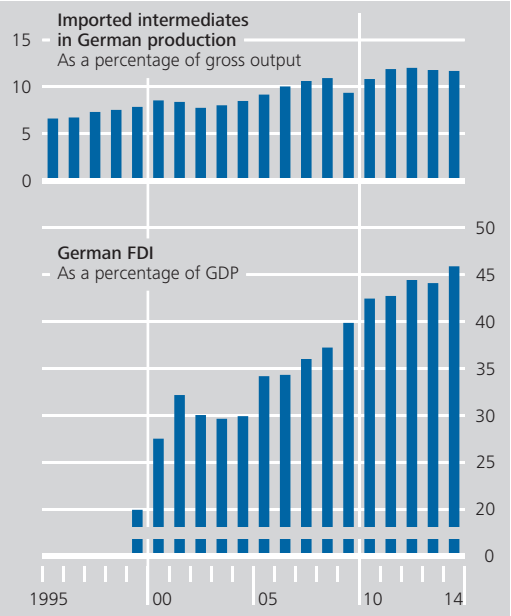
grounds of cost and efficiency.[6] This can take place within corporate groups or via supply contracts with legally independent suppliers, with the former case being identical to vertical FDI. The protection of copyright and transaction cost considerations play a major role when deciding where to locate the outsourced activity.[7]

Analysis of impact of internationalisation on level and composition of domestic investment

Econometric analyses can be used to explore the relationship between the internationalisation of the German economy and investment activity in Germany.[8] The first empirical study looks at the impact of offshoring on the composition of domestic demand for capital using a cross-country dataset. On the basis of anonymised Bundesbank microdata, a second study investigates whether German firms' FDI has caused these firms to scale back their domestic investment.

The internationalisation of the German economy



Source: Bundesbank calculations based on data from the WIOD (www.wiod.org) and the Microdatabase Direct investment (MiDi). Data on foreign intermediates for the period spanning 1995 to 1999 based on the WIOD 2013 Release; data for the period spanning 2000 to 2014 based on the WIOD 2016 Release. Year-end data for German FDI.

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Business investment developments in Germany

Nominal investment ratio experiencing downward trend; …

One commonly used measure of changes in fixed capital formation in the German corporate sector is the business investment-to-output ratio, ie expenditure on gross fixed capital formation as a percentage of gross value added. In nominal terms, this has been in decline since the early 1990s.[9] While it averaged just over 19½% in the period between 1991 and 1999, it has stood at no more than around 17½% on average over the past decade. It is not least due to this decline in the nominal investment ratio that the German economy has been deemed to have been suffering from weak investment in recent years.[10]

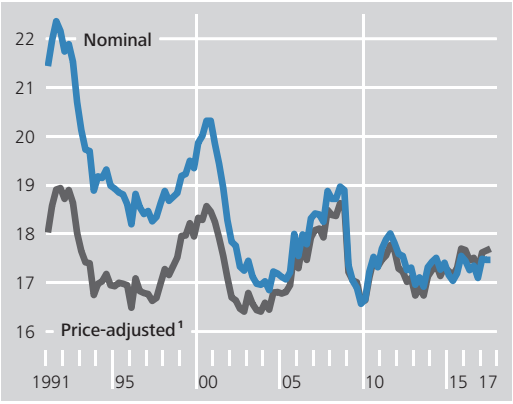
… by contrast, price-adjusted ratio moving sideways

However, it should be noted that price trends for capital goods and gross value added differed during this period. For example, while the rise in prices of capital goods between 1991 and 2016 averaged less than ½% *per annum*, the increase in the gross value added deflator was significantly higher in the same period, at just over 1% per year. Consequently, changes in the nominal investment ratio do not necessarily make it possible to draw conclusions about underlying real investment. In fact, the price-adjusted investment ratio – in contrast to the nominal ratio – shows no discernible trend and has largely fluctuated around a constant value since German reunification.

6 By contrast, domestic (or onshore) outsourcing refers to the outsourcing of business activities to locations in the same country.
7 See P Antràs (2015), Global production: firms, contracts, and trade structure, Princeton University Press, Princeton, NJ; 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.
8 The same activities conducted by non-residents in Germany, eg offshoring to Germany and FDI by foreign parent firms in Germany, do not fall within the scope of these studies.
9 The following sectors of the economy are not taken into account: agriculture, forestry and fishing; public services, education, healthcare; other service providers.
10 See, for example, German Institute for Economic Research (DIW Berlin) and Handelsblatt Research Institute Düsseldorf (HRI), Private Investitionen in Deutschland: Studie im Auftrag des Gemeinschaftsausschusses der Deutschen Gewerblichen Wirtschaft, October 2014.

Business investment-to-output ratio

Quarterly data, seasonally adjusted



1 The ratio for 2010 is calculated at current prices. Extrapolation is based on the real growth factors of gross fixed capital formation and gross value added.

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Effects of a shift towards intangible assets not clear

In addition, structural changes can have an impact on both the level and composition of business investment in Germany. In particular, the significance of intangible assets with respect to domestic investment has increased considerably since German reunification. For example, investment in research and development (R&D) as a percentage of gross fixed capital formation rose from 8½% to almost 14% between 1991 and 2016, which points to an ongoing shift in the composition of investment spending.[11] The impact of such a shift on the level of investment as a whole, however, is not clear-cut.[12]

Offshoring and domestic demand for capital

Technological progress lifts geographical barriers on production process

Offshoring is a potential factor in both the level of investment and the shift in the composition of investment in Germany, as the restructuring of the production process has made it possible to focus on certain production stages in Germany.[13] The steady decline in trade and communication costs has played a part in fundamentally transforming the production process over the past few decades. While the production of goods was constrained by the regional availability of production factors throughout much of the last century, technological advances in the fields of transportation and telecommunication have increasingly enabled firms to coordinate complex value chains across time and space and split the production process into smaller stages.

Germany relatively well integrated into international production networks

Offshoring and the resulting emergence of cross-border production networks go hand in hand with international trade in intermediates.[14] According to data from the WIOD,[15] intermediates accounted for almost two-thirds of the global trade in goods and services in 2014. Overall, imported intermediates held an 8¼% share in global production in 2014, while, in Germany, this share stood at 11¾%. Compared with other large EU countries, such as France, Italy and the United Kingdom, the German economy is relatively well integrated into international production chains. And, at only 4½% in 2014, the share of imported intermediates in production in China and the United States, the two largest economies in the world, was also well below the German figure.

Offshoring primarily in manufacturing

The share of imported intermediates varies considerably by economic sector in Germany. In manufacturing, the level of international interconnectedness measured in this manner stood at one-quarter in 2014, after almost doubling over the past two decades in some manufacturing sectors. By contrast, the share

11 Investment in other assets as a whole (intellectual property and cultivated assets) as a percentage of gross fixed capital formation rose from just over 11½% to 19% during the same period.

12 Substitution effects could raise the share of investment in intangible assets at the expense of traditional capital goods and lift capital stock productivity as a result of the higher productivity of intangible assets. While higher capital productivity probably dampens necessary capital formation to a certain extent at a given production level, it could nevertheless increase the relative demand for fixed capital formation at the same time.

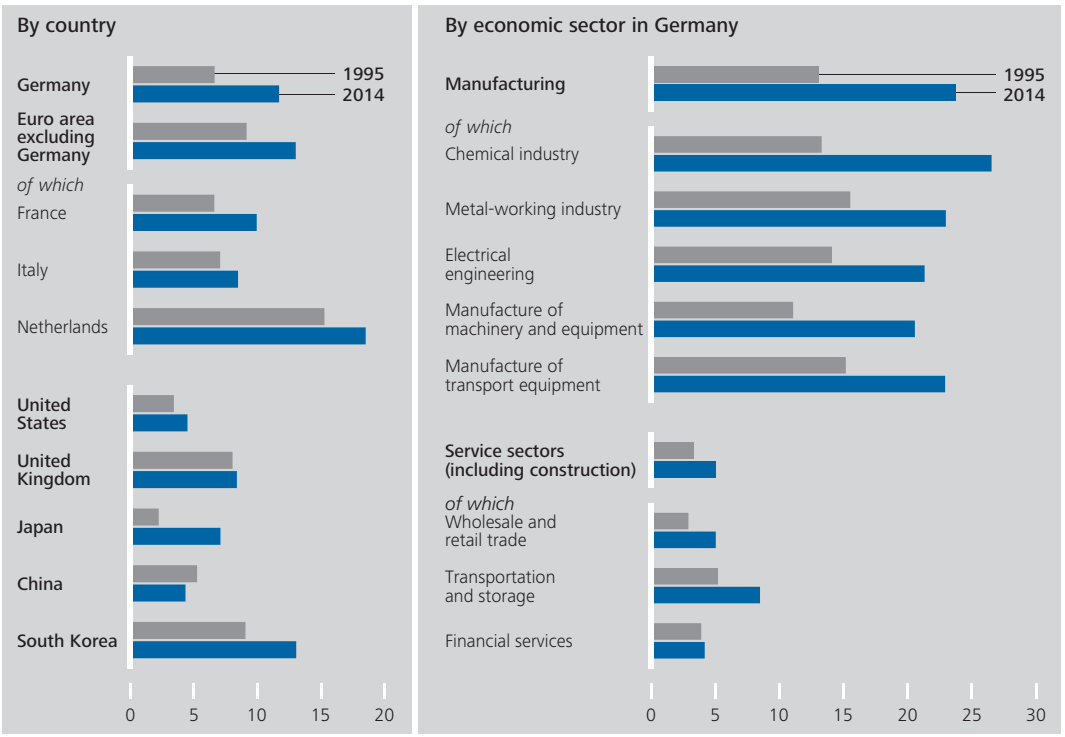
13 For more information on the impact of offshoring on investment in R&D, see also A J Glass and K Saggi (2001), Innovation and wage effects of international outsourcing, European Economic Review, Vol 45, pp 67-86; H Beladi, S Marjit and L Yang (2012), Outsourcing: volume and composition of R&D, Review of International Economics, Vol 20, pp 828-840.

14 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.

15 WIOD stands for World Input-Output Database. The data are available at www.wiod.org

Imported intermediates in production

As a percentage of gross output



Source: Bundesbank calculations based on WIOD data (www.wiod.org). Data for 1995 based on the WIOD 2013 Release; data for 2014 based on the WIOD 2016 Release.

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of imported intermediates is much lower in the service sectors, as there are limits on the extent to which some of the services they offer can be provided directly across borders – due to language barriers or country-specific requirements, for instance.

Significance of imported intermediates from China and CEECs up significantly

Imported intermediates in Germany come largely from neighbouring countries, as the geographical proximity simplifies the coordination of complex production processes and minimises transportation costs. After the fall of the Iron Curtain, central and eastern European countries (CEECs) were increasingly integrated into the German production network. However, the significance of intermediates from China has also increased markedly over the past two decades. Besides supplier relationships with EU countries, intermediates from the United States also play an important role – particularly in the high-tech sector.

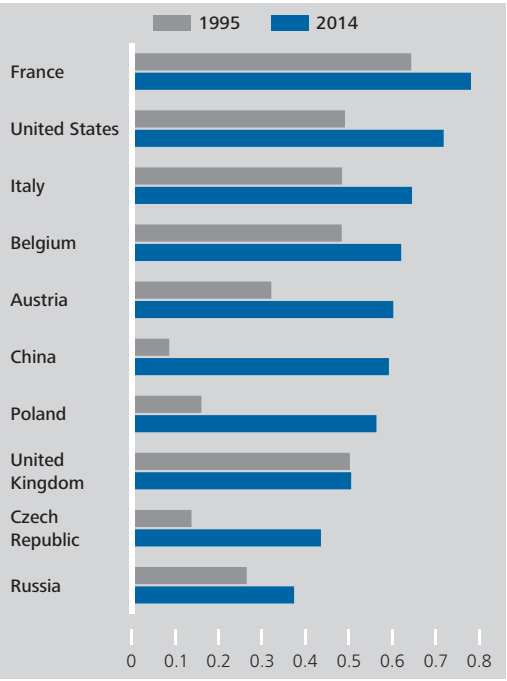
Routine tasks show most potential for offshoring

Foreign locations are attractive for offshoring if the benefits that can be derived from focusing on core competencies at home and from cost savings resulting from factor price differences outweigh the additional coordination and trade costs associated with the fragmentation of the production process. Accordingly, certain production stages show greater potential for offshoring than others. For example, routine tasks that do not require personal contacts or geographical proximity are more likely to come into consideration, while production stages that are interactive or difficult to coordinate are offshored less often.[16] The restructuring of the production process at the domestic location as a result of offshoring may also have an impact on the composition of labour demand. Empir-

16 See E E Leamer and M Storper (2001), The economic geography of the internet age, Journal of International Business Studies, Vol 32, pp 641-665; F Levy and R J Murnane (2004), The new division of labor, Princeton University Press, Princeton; A Blinder (2009), Offshoring: the next industrial revolution? Foreign Affairs, Vol 85, pp 113-128.

Origin of imported intermediates in German production

As a percentage of gross output



Source: Bundesbank calculations based on WIOD data (www.wiod.org). Data for 1995 based on WIOD 2013 Release; data for 2014 based on WIOD 2016 Release.

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ical studies show that, for example, in the United Kingdom and the United States, offshoring has played a key role in the decline in demand for low and medium-skilled workers and in the increase in the pay gap between those workers and high-skilled workers.[17]

Up to now, few insights into impact of offshoring on production factor capital

However, to date, little is known about the implications of offshoring for domestic demand for the production factor capital and its composition. If production stages that require the use of certain capital goods are moved offshore to cut costs, this could cause redundancies in the domestic capital stock. It is conceivable, for example, that moving production stages offshore would reduce the need for certain machinery, equipment and commercial properties, causing investment in these goods to fall. At the same time, specialisation in strategic and high value added functions such as development and marketing would likely attract higher investment in R&D and information and communication technology (ICT).[18]

Cross-country study on impact of offshoring on composition of demand for capital

The issue of how offshoring affects the production factor capital and, in particular, the capital goods ICT, non-ICT and R&D capital is examined in an empirical study.[19] The study is based on a panel data analysis of 32 economic sectors in 11 advanced economies, which, in addition to Germany, are Austria, Denmark, Finland, France, Italy, the Netherlands, Spain, Sweden, the United Kingdom and the United States. Detailed data on the production side are available for these countries for the period from 1995 to 2014, including information on ten different asset classes as well as on the sectoral and country-specific origin of intermediates.[20] These are used to estimate a system of relative factor demand equations in which, in a departure from the majority of existing studies, the production factor capital is considered a variable input factor in order to make it possible to directly determine elasticities of substitution between capital and offshoring.[21] The relative demand for a certain input factor is defined – in keeping with the literature – as its compensation relative to gross output.

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17 See A Hijzen, H Görg and R C Hine (2005), International outsourcing and the skill structure of labour demand in the United Kingdom, Economic Journal, Vol 115, pp 860-878; R C Feenstra and G H Hanson (1999), The impact of outsourcing and high-technology capital on wages: estimates for the United States, 1979-1990, Quarterly Journal of Economics, Vol 114, pp 907-940.

18 For information on the value added content of various production stages, see R Baldwin, T Ito and H Sato (2014), Portrait of factory Asia: production networks in Asia and its implications for growth – the "smile curve", IDE-JETRO Joint Research Program Series, No 159; M Ye, B Meng and S-J Wei (2015), Measuring smile curves in global value chains, IDE Discussion Paper, No 530.

19 See D Bursian and A J Nagengast, Offshoring and the polarisation of the demand for capital, in preparation for publication as a Deutsche Bundesbank Discussion Paper.

20 The study is based on data from EU KLEMS and the World Input-Output Database (WIOD), whose data can be accessed at www.euklems.net and www.wiod.org

21 The factor demand equations are derived from a translog cost function. In the analyses, it is ensured that the estimated translog cost function possesses characteristics that are consistent with economic theory. See L R Christensen, D W Jorgenson and L J Lau (1971), Conjugate duality and the transcendental logarithmic production function, Econometrica, Vol 39, pp 225-256. Estimates of factor demand equations based on a dynamic translog cost function that permit a sluggish adjustment to the long-term equilibrium of the input factors have no effect on the findings. For the methodology, see G J Anderson and R W Blundell (1982), Estimation and hypothesis testing in dynamic singular equation systems, Econometrica, Vol 50 (6), pp 1559-1571.

Shift in demand for capital by asset class

The results of the empirical analyses point to a shift in the demand for capital by asset class. While offshoring significantly decreases the non-ICT share in production, it has only a slightly negative effect on R&D capital.[22] By contrast, no statistically significant relationship is observed between ICT capital and offshoring. A large number of sensitivity analyses, relating to individual variable definitions and econometric specification, for example, confirm these findings. A specification with more disaggregated asset classes also shows that the relative factor demand for machinery, equipment and commercial property correlates negatively with offshoring, while there is no significant relationship for any of the ICT asset classes. Although the empirical study is based on cross-country data, additional analyses suggest that the results for Germany do not differ substantially with regard to the shift in demand for capital. Unlike the estimate for the broad group of countries, however, a similar estimate based exclusively on German data shows a slightly positive coefficient for R&D capital.

Complementarity between capital and labour is a possible explanation

One possible explanation for the decline in the non-ICT share in production is its complementarity with the factor labour in the offshored production stages.[23] As in other studies, the results of further estimations suggest that offshoring reduces the domestic share of low and medium-skilled workers. There are also indications that changes in capital and labour inputs are related. For instance, the negative impact on the share of the input factors non-ICT capital and low and medium-skilled labour is particularly pronounced in sectors with a high proportion of production stages with low skill requirements. If, in addition to this, imported intermediates are divided into two groups according to the skill level of labour, the offshoring of production stages with low skill requirements has a particularly negative impact on non-ICT capital and the use of low and medium-skilled workers in Germany.

The results obtained so far consider the partial effect of offshoring on the demand for capital, but neglect additional repercussions for firms. For instance, offshoring might strengthen the competitiveness of the firms and their profitability, which would suggest a strengthening of domestic demand for investment. However, in the approach chosen here, these feedback mechanisms can only be estimated indirectly as the path of the demand for investment without offshoring is not directly observable. To nonetheless gauge the aggregate importance of offshoring for investment in Germany, actual growth in real gross fixed capital formation is compared to a hypothetical scenario in which cross-border production did not become more interconnected in the period from 1995 to 2014.[24] On the one hand, the absence of the estimated substitution effect would mean that the capital share of production would be higher than the actual values in this hypothetical scenario. On the other hand, without productivity gains and cheaper imported intermediates, growth in gross output would probably have shown flatter development.[25] Without these scale effects, the rate of change for real gross fixed capital formation in Germany in this hypothetical scenario, excluding offshoring, would be 0.09 to 0.13 percentage point per year higher on average than the actual values, de-

Offshoring probably has a slightly negative impact on domestic investment in aggregate terms

22 An increase in the share of imported intermediates by 10 percentage points is associated with a reduction of 1.7 percentage points in the non-ICT share of production. In the case of R&D capital, the corresponding decline amounts to just 0.4 percentage point.

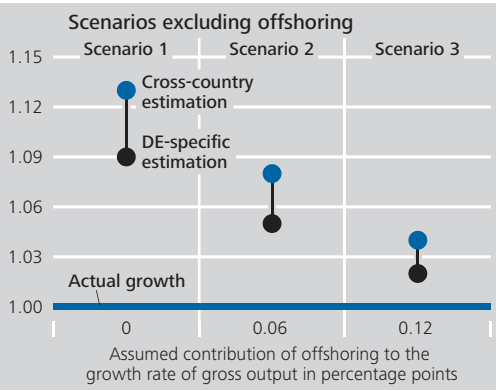
23 Even so, reductions in the price of the factor labour abroad could lead to a direct substitution of capital in Germany. All other things being equal, this would mean a reduction in the capital share of production abroad. However, empirical evidence suggests that the share of capital tended to increase in both advanced economies and emerging market economies in the period from 1995 to 2009. See M Timmer, A A Erumban, B Los, R Stehrer and G J de Vries (2014), Slicing up global value chains, Journal of Economic Perspectives, Vol 28, pp 99-118.

24 For the sake of simplicity, the calculations in this section are based on estimations using a production function with just three variable input factors (labour, capital and intermediates).

25 This hypothesis disregards potential and difficult-to-quantify price effects which may arise from changes in the terms of trade and a reduction in demand for capital in Germany. By contrast, interactions between the substitution effect and the scale effect resulting from the inclusion of gross output in the factor demand equations are taken into account. See G M Grossman and E Rossi-Hansberg (2008), Trading tasks: a simple theory of offshoring, American Economic Review, Vol 98, pp 1978-1997.

Growth in real gross fixed capital formation in Germany

1995 to 2014, as an annual percentage



Source: Bundesbank calculations based on data from EU KLEMS (www.euklems.net) and WIOD (www.wiod.org).
Deutsche Bundesbank

pending on the estimation.[26] Applying realistic scale effects, which are derived here from the relevant literature, would result in a higher growth rate for gross fixed capital formation of between 0.05 and 0.08 percentage point; in the case of the Germany-specific estimation, this would correspond to an average of around €9 billion per year, or 1¾% of the gross fixed capital formation of the respective years.[27] If very large scale effects through offshoring are assumed, this could possibly even lead to a positive relationship between offshoring and the domestic demand for capital.[28] In summary, it can be concluded from the estimations that offshoring over the period from 1995 to 2014 had a slightly negative impact on investment in Germany. This effect is likely to have been mainly concentrated on the period before the onset of the 2007-08 global financial crisis given that offshoring was significantly less common in the following years as measured by the ratio of imported intermediates.

FDI and domestic investment

Clear increase in direct investment stock since 1999

Over the last two decades, the internationalisation of German firms has taken place not only through offshoring, but also in the form of FDI. According to international standards, FDI is defined as a cross-border participation in the capital or voting rights of a firm of 10% or more. The stock of German firms' FDI rose from €412 billion in 1999 to €1,444 billion in 2015.[29] At the same time, certain countries have grown in terms of economic importance. China, in particular, as well as the central and eastern European countries of the Czech Republic, Poland and Hungary are playing an increasingly important role. In these countries, the FDI stock has risen by several times the average of other countries. Based on the UNCTAD (United Nations Conference on Trade and Development) statistics, it is striking in an international comparison that the share of the global FDI stock held by Germany has remained largely constant, while the share held by many other advanced economies, such as the United States and the United Kingdom, has declined given the increasing importance of large emerging market economies such as China, as direct investors amongst other things.

Multinational firms invest abroad for different reasons

German firms use FDI – which is a rather long-term instrument – to pursue a range of strategic objectives. In a survey by the Association of German Chambers of Commerce and Industry (DIHK) of member firms in the manufacturing sector, 45% of the companies surveyed reported that setting up sales and customer ser-

26 The offshoring coefficient for the factor capital varies between a cross-country estimate and an estimate for which only the data for Germany are used.
27 On the basis of estimates taken from the literature, the contribution of offshoring to the growth rate of gross output is calculated to be 0.06 percentage point per year in the period from 1995 to 2014. See M Amiti and S-J Wei (2008), Service offshoring and productivity: evidence from the US, The World Economy, Vol 32, pp 203-220.
28 This would mean that the scale effect of the growth in production would more than offset the decline in the capital share of output through offshoring. This is the case if the contribution of offshoring to the growth rate of the production volume is assumed to be at least around three times the figure of 0.06 percentage point per year estimated for Germany.
29 In this article, FDI includes both primary and secondary foreign direct investment. The aggregate figures are based on the Microdatabase Direct investment (MiDi). The figure of €1,444 billion in 2015 is comparable to the current figure for "claims arising from outward foreign direct investment" as reported in: Deutsche Bundesbank, Foreign direct investment stock statistics, Special Statistical Publication 10, April 2017. However, the claims arising from affiliated loans are not assigned depending on the country in which the corporate headquarters are resident.

vices was their main reason for investing abroad in 2017.[30] Furthermore, investing in foreign production sites for market development (response given by 31% of firms) was a key motivating factor. Only just under a quarter of the firms surveyed said that they mainly invested abroad to save costs, which was the reason most often given at the beginning of the 2000s.

Literature has mixed evidence on relationship between FDI and domestic investment

The academic literature provides no clear indication yet as to whether FDI tends to crowd out or complement domestic investment. Based on macroeconomic data, some studies point to a positive relationship, whilst other research identifies a substitution effect in the long term.[31] Only a few empirical studies are based on firm-level microdata which, unlike aggregate data, allow conclusions to be drawn about the direct impact of an investment abroad on the domestic investment decisions of the individual firms. The results of studies such as these tend to show a positive relationship between investment abroad and at home.[32]

Positive relationship between FDI and domestic investment at the firm level

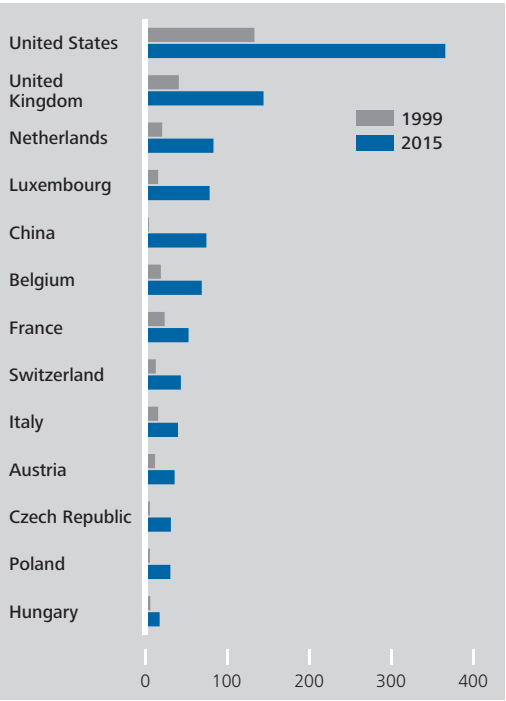
A recent study by the Bundesbank links two datasets with detailed information on German firms.[33] While the Microdatabase Direct investment (MiDi) provides information about individual investment relations to firms abroad, the corporate balance sheet statistics (*Unternehmensbilanzstatistik,* or Ustan) report, amongst other things, the level of a firm's gross fixed capital formation in Germany. An econometric analysis of the relationships at the firm level suggests that, on average, there is a positive relationship between German FDI and the gross fixed capital formation of a firm in Germany (see the box on pages 22 and 23).

Productivity gains cannot explain results

There are several possible explanations for this complementarity. For instance, although FDI can be a tool for cost-driven offshoring, it may also lead to an increase in the productivity of the domestic parent firm. Nonetheless, the overall impact of FDI on domestic investment is uncertain, since scale effects are counterbalanced by potential substitution effects between domestic and foreign capital.[34] However, these findings provide no indication that vertical FDI contributes to the expansion of domestic investment. Estimates which examine vertical motives for investing abroad or the change in

German FDI in major host countries

€ billion



Sources: Microdatabase Direct investment (MiDi) and Bundesbank calculations.
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30 See DIHK survey – Foreign investments in manufacturing industry, Foreign investments in 2017 higher than ever before, spring 2017.
31 See M A Desai, C F Foley and J Hines (2005), Foreign direct investment and the domestic capital stock, American Economic Review, Vol 95 (2), pp 33-38; Deutsche Bundesbank, Foreign direct investment and domestic investment, Monthly Report, September 2006, p 50; Deutsche Bundesbank, Foreign direct investment and domestic investment, Monthly Report, March 2014, pp 46-47; D Herzer and M Schrooten (2008), Outward FDI and domestic investment in two industrialized countries, Economics Letters, Vol 99 (1), pp 139-143.
32 See M A Desai, C F Foley and J Hines (2009), Domestic effects of the foreign activities of US multinationals, American Economic Journal: Economic Policy, Vol 1 (1), pp 181-203.
33 See S Goldbach, A J Nagengast, E Steinmüller and G Wamser, The effect of investing abroad on investment at home: on the role of technology, tax savings, and internal capital markets, Deutsche Bundesbank Discussion Paper, No 14/2017.
34 See the text on pp 22-23.

The relationship between foreign direct investment and domestic investment at the firm level*

Two Bundesbank datasets are used to examine the relationship between foreign direct investment (FDI) and domestic investment at the firm level: the Microdatabase Direct investment (MiDi) and the corporate balance sheet statistics (*Unternehmensbilanzstatistik,* or Ustan). Domestic firms are legally obliged to report information on their foreign affiliates to the Bundesbank. The MiDi database contains various balance sheet items, country information and the foreign affiliates' industry classifications. The dataset allows a distinction to be made as to whether or not a domestic parent firm has established (or acquired) a new foreign affiliate in a given year. In addition, country-specific information, such as foreign tax rates, is linked to the MiDi database.

The Bundesbank's Ustan statistics comprise balance sheet data and information from the profit and loss accounts of German firms. The dataset also contains data on gross fixed capital formation in Germany. Other empirical studies tend not to have this information at their disposal as a flow variable, which means that investment is, in these cases, determined as the change in the stock of fixed assets on the balance sheet. The calculated figure is then more in line with net fixed capital formation, as it already includes depreciation.

The MiDi data are merged with the Ustan data using a correspondence table provided by the Bundesbank's Research Data and Service Centre (RDSC).[1] Firms' investment decisions may depend on various regional factors. With that in mind, specific regional information from the national accounts at the state level and from the Federal Statistical Office's GENESIS database are also imported.

One difficulty in estimating the relationship between domestic and foreign investment at the firm level stems from the fact that a firm's foreign and domestic investment decisions are not generally independent of one another. Simply comparing domestic gross fixed capital formation between domestic parent firms that have, in a given year, established (or acquired) a new foreign affiliate and other firms that have not done so would therefore paint a distorted picture. In order to account for potential selection and simultaneity bias, the probability of a domestic parent firm establishing (or acquiring) a new foreign affiliate is determined in a first step. This is done using the following estimation equation:[2]

$$(1)\ \mathrm{Treat}_{it} = \alpha \mathrm{X}_{i,t-1} + \delta \mathrm{Z}_{s,t-1} + \beta \mathrm{C}_{k,t-1} + \gamma \mathrm{M}_{l,t-1} + \phi_t + \psi_s + \varepsilon_{it}$$

The binary variable Treat_{it} assumes a value of one if a domestic parent firm i establishes (or acquires) a new foreign affiliate in period t. Otherwise, the value is zero. The specification is based on the assumption

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* See S Goldbach, AJ Nagengast, E Steinmüller and G Wamser, The effect of investing abroad on investment at home: on the role of technology, tax savings, and internal capital markets, Deutsche Bundesbank Discussion Paper, No 14/2017.

1 See C Schild and S Schultz (2016), Linking Deutsche Bundesbank company data using machine-learning based classification, Deutsche Bundesbank, Research Data and Service Centre, Method Report 01-2016.

2 The preferred specification uses a Mundlak-Chamberlain approach, which additionally controls for the averages of the firm-specific variables over time. See Y Mundlak (1978), On the pooling of time series and cross section data, Econometrica, Vol 46 (1), pp 69-85; G Chamberlain (1982), Multivariate regression models for panel data, Journal of Econometrics, Vol 18 (1), pp 5-46.

that establishing (or buying) a new foreign affiliate depends on firm-specific variables at the domestic parent firm i ($X_{i,t-1}$), sector characteristics s ($Z_{s,t-1}$), and regional variables at the county level k ($C_{k,t-1}$) and the municipal level l ($M_{l,t-1}$) in the previous period. In addition, the estimation controls for time-specific (ϕ_t) and sector-specific (ψ_s) fixed effects. Equation (1) is estimated using a probit model. Based on the estimation coefficients and the explanatory variables, a propensity score can be calculated for every firm. These scores can be used to isolate the effect of foreign investment by forming two groups of firms with the same attributes, which differ solely in terms of the presence of a new foreign affiliate.[3] Finally, a second step is undertaken to test whether domestic investment activity differs significantly between the two groups.

The estimation results suggest that a domestic parent firm establishing (or acquiring) a new foreign affiliate is, on average, associated with a €458,000 increase in domestic investment (as measured by the change in gross fixed capital formation). The effect at the firm level is likely to be relevant in economic terms, as this figure equates to around 4% of the average gross fixed capital formation within the group under review (in this case, domestic parent firms that set up or acquire a new affiliate abroad). Alternative measures of domestic investment activity largely yield qualitatively similar results. The results do not change in various robustness tests. Consequently, there appears to be a positive relationship between FDI and domestic investment for German firms.

Estimated effects of an investment abroad on domestic investment[o]

Item	Average treatment effect on the treated[1]	Standard error
Gross fixed capital formation (€)	1,274,485***	394,017
Δ gross fixed capital formation (€)	458,126***	152,253
Gross fixed capital formation relative to stock of fixed assets in the previous period	0.044***	0.009
Net fixed capital formation (€)	669,878***	181,350
Δ net fixed capital formation (€)	– 72,639	219,040
Net fixed capital formation relative to stock of fixed assets in the previous period	0.030***	0.010

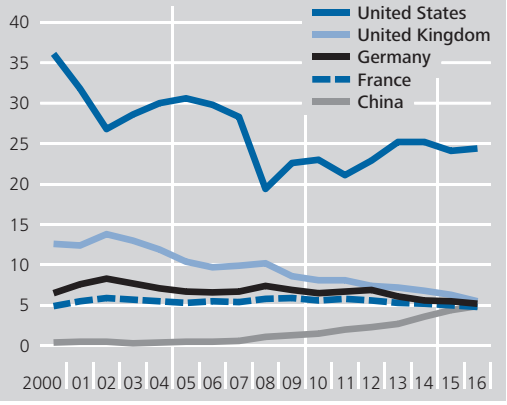
o *** Significance at the 1% level, ** significance at the 5% level, * significance at the 10% level. Standard errors are calculated using weighted regressions which take into account year fixed effects. Moreover, the estimate controls for per capita income at the county level in the period t-1. 1 The average effect of establishing (or acquiring) a foreign affiliate on the domestic investment of the parent firm in question.

Deutsche Bundesbank

3 This is done using a radius matching procedure with a calliper of 0.01.

Share of selected countries in global FDI stock*

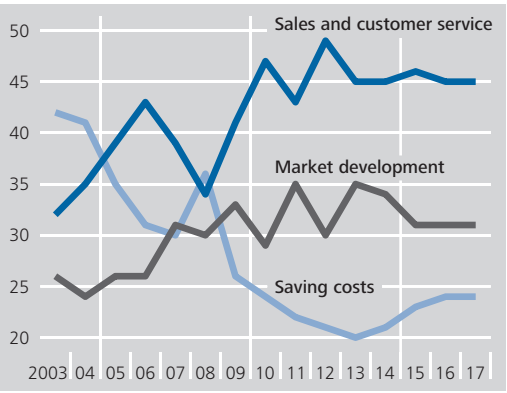
As a percentage



Source: UNCTAD. * Outward FDI.
Deutsche Bundesbank

German industrial enterprises' reasons for foreign investments

As a percentage



Source: DIHK survey – Foreign investments in manufacturing industry 2017.
Deutsche Bundesbank

the total factor productivity of multinational firms as further possible causes for domestic investment do not substantiate this hypothesis.

Tax considerations …

Another explanation for the positive relationship between FDI and domestic investment are the potential tax savings arising from the increase in internal debt vis-à-vis foreign affiliates or from transfer pricing. Empirical studies suggest that multinational firms use international tax differentials to shift corporate profits from high-tax to low-tax countries.[35] Theoretical studies show that, in the context of investment decisions, shifting profits from one location to another can reduce a firm's cost of capital and thus facilitate investment in countries with higher tax rates, such as Germany.[36] In line with this theory, the results at hand show that the impact of FDI on investment at home varies depending on the tax rate – the more German firms benefit from a low tax rate in the host country of their affiliates, the more those firms also invest domestically. Affiliates in countries with a lower tax rate than at home can therefore reduce the effective capital costs of the parent firm, thus freeing up additional resources that can be used for domestic investment. Consistent with this, domestic parent firms that invest abroad by establishing a new affiliate pay less tax overall. The higher the parent's liabilities to the foreign affiliate, for example through intra-group lending, the more the parent will save on tax. Amongst other things, the (limited) tax deductibility of borrowing costs is an important factor in that regard.

… and financing conditions in the host country play an important role, by contrast

In addition, the financing opportunities in the host country may also be of relevance. Although some studies conclude based on the assumption of financial market frictions that – all other things being equal – an increase in investment abroad raises the cost of capital for investment at home,[37] recent empirical studies conversely emphasise that multinational firms mainly fund their investments via the global and internal capital markets, meaning that access to financial resources in a given country does not necessarily limit business activity, but that improved access to the international financial markets can even reduce the cost of capital

35 See H Huizinga and L Laeven (2008), International profit shifting within multinationals: a multi-country perspective, Journal of Public Economics, Vol 92 (5-6), pp 1164-1182.
36 See M Overesch (2009), The effects of multinationals' profit shifting activities on real investments, National Tax Journal, Vol 62 (1), pp 5-23.
37 See G Stevens and R Lipsey (1992), Interactions between domestic and foreign investment, Journal of International Money and Finance, Vol 11 (1), pp 40-62; M Feldstein (1995), The effects of outbound foreign direct investment on the domestic capital stock, in The effects of taxation on multinational corporations, NBER Chapters, pp 43-66.

throughout the group.[38] According to the Bundesbank's estimates, the positive relationship is likely to be more pronounced if the level of financial market development in the host country is higher – measured here in terms of stock market capitalisation. The results also suggest that the domestic parent company's internal liabilities increase more, the higher the ratio of lending to the private sector relative to gross domestic product and the higher the stock market capitalisation is in the host country. This would appear to indicate that improved access to foreign capital goes some way towards explaining the positive relationship between FDI and domestic investment.

Effects of horizontal FDI not analysed separately

Two additional reasons for direct investment (rated as important in the DIHK survey) are sales/customer service and market development. However, the microdata available do not contain any specific information about the reasons for foreign investments, meaning that this aspect cannot be analysed separately here.

Impact on aggregate investment is likely to be small

The impact on aggregate investment can also be roughly gauged from the available estimation results. In this case, we assume that the estimated average effect applies to all parent firms with new foreign affiliates[39] and that FDI does not generate any additional indirect spillover effects to other domestic firms. According to this estimation, FDI would increase aggregate domestic gross fixed capital formation by €687 million per year on average.[40] Compared to Germany's total annual gross fixed capital formation, which amounted to €490 billion on average during the period from 2000 to 2013, this is a relatively small figure. This does not contradict the estimated impact of €458,000 at the firm level, which is economically significant to the parent firms in question in terms of their gross fixed capital formation. The extrapolation results at the macro level merely reflect the relatively small number of German firms with new affiliates abroad.

Conclusion

Assessment of the impact of internationalisation requires a differentiation by type of foreign activity and domestic asset

The internationalisation of German firms has repercussions for domestic investment. The results of the analysis presented in this article suggest that, in order to assess the impact of the internationalisation of the corporate sector on investment at home, a differentiation by both type of foreign activity and domestic asset is required.

Both capital and labour input side must be examined in order to analyse the effects of offshoring

The effects of offshoring on demand for capital at home differ depending on asset type. The results suggest that offshoring does reduce the non-ICT capital share in production but does not have any noticeable impact on the ICT capital share in output. Across countries, offshoring is likely to have caused a slight decline in the share of R&D capital in production, although the R&D share may have increased somewhat in Germany. One possible explanation for the variation of the effect by asset class are redundancies in the complementary asset classes on the capital input side which occur once production stages with low skill requirements have been moved offshore. Furthermore, offshoring allows countries to specialise in areas in which they enjoy a comparative advantage, which for advanced economies is mainly likely to be in the areas of high-skilled labour, and ICT and R&D capital. In future, the expected decline in the labour force in Germany and the resultant potential shortage of skilled workers could see firms decide to offshore production stages requiring higher-skilled labour, too. Nonetheless, rising labour costs abroad and new manufacturing opportunities at home through technological advances could also lead to production reshoring in some cases.

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38 See M A Desai, C F Foley and J Hines (2005), op cit; M A Desai, C F Foley and J Hines (2009), op cit.
39 Owing to the limited availability of the corporate balance sheet statistics data, the estimation results are based on a smaller sample of parent firms.
40 These calculations are based on the results of the change in gross fixed capital formation.

Offshoring and FDI tend to have opposing effects on domestic investment

The restructuring of the production process, which can also take place via supply contracts with legally independent suppliers, is likely to have had a slightly negative effect on aggregate business investment in Germany in the past. This was probably particularly true in the decade before the 2007-08 financial crisis broke out, given that offshoring has developed at a markedly more subdued pace since then. By contrast, offshoring is not the only reason for establishing or acquiring new foreign affiliates – they also provide German firms with access to new markets, open up additional funding opportunities and can sometimes allow tax savings if profits are shifted abroad. Here, the results of the analyses point to a positive overall firm-level relationship between FDI and gross fixed capital formation at home. All things considered, it is therefore possible to identify opposing transmission channels through which the various types of foreign activity by firms influence domestic demand for investment. However, both studies have in common that the quantitative impact on overall domestic investment is small.

The importance of bank profitability and bank capital for monetary policy

The financial and sovereign debt crisis has now also increasingly shifted the banking system's capital and profitability towards the centre of monetary policy analysis as both factors are closely linked to monetary policy. On the one hand, weak profitability, which implies a reduced ability on the part of banks to generate capital, can lead to more restrictive lending policies, thus reducing the impact of accommodative monetary policy measures. On the other hand, monetary policy can also influence banks' profitability and capital through interest rates and the term structure. Empirical studies illustrate the relevance of this bank capital channel. The net interest margins generated by banks, which constitute a significant part of their profitability, can come under pressure in prolonged periods of accommodative monetary policy and low interest rates. At the same time, low interest rates can also have a positive impact on profitability, eg in the form of reduced loan loss provisions; however, these effects may not be strong enough to compensate for decreasing net interest margins.

The relationship between monetary policy and bank profitability is particularly important if bank capital is already on the lower side, ie close to regulatory capital requirements, and if the ability to raise capital in the market is limited. Whereas the banking system's capital endowment has improved considerably over the past few years in the euro area, the stock of non-performing loans (NPLs) – despite a gradual decline at the current end – is still very high in some countries. The potential future losses resulting from this high volume of NPLs could entail implicit capital constraints.

In an environment of low interest rates, it is thus conceivable that a low level of bank capital could lead to a situation where accomodative monetary policy measures could, at least in the longer term, not stimulate but instead dampen lending. Hence, the impact of an accommodative monetary policy measure transmitted through the bank capital channel would weaken the desired policy effect. It is, therefore, of key importance for banks to have a good capital endowment, not only from a financial stability standpoint, but also from a monetary policy perspective.

Introduction

Increase in banks' capital requirements since the crisis

The financial and sovereign debt crisis in the euro area has left a clear mark on the European financial system. Since 2008, the environment in which monetary policy makers and banks have been operating has witnessed major change. Even today, many banks remain confronted with large stocks of non-performing loans (NPLs) on their balance sheets, which increase their capital needs by the same measure that additional loan loss provisions (LLPs) are required. Moreover, the implementation of Basel III has tightened regulatory capital requirements. In the past, it was the government which stepped in to address serious capital shortfalls in an emergency by introducing recapitalisation measures. However, with the entry into force of the European rules for the recovery and resolution of credit institutions (Bank Recovery and Resolution Directive, or BRRD) and the regulation establishing the Single Resolution Mechanism (SRM), this should no longer be possible in the same way.

Bank profitability and capital have become focus of monetary policy, …

Monetary policy makers, too, are now increasingly focusing on bank profitability and capital. These factors are important elements in the monetary policy transmission process, their role in maintaining the financial system's stability and proper functioning being just one reason. The currently low and, in some cases, negative interest rates – attributable, amongst other things, to the accommodative monetary policy – weigh on interest income and, all other things being equal, bank profitability and, consequently, their ability to internally generate capital from earnings.

… as banks have an important role to play in monetary policy transmission

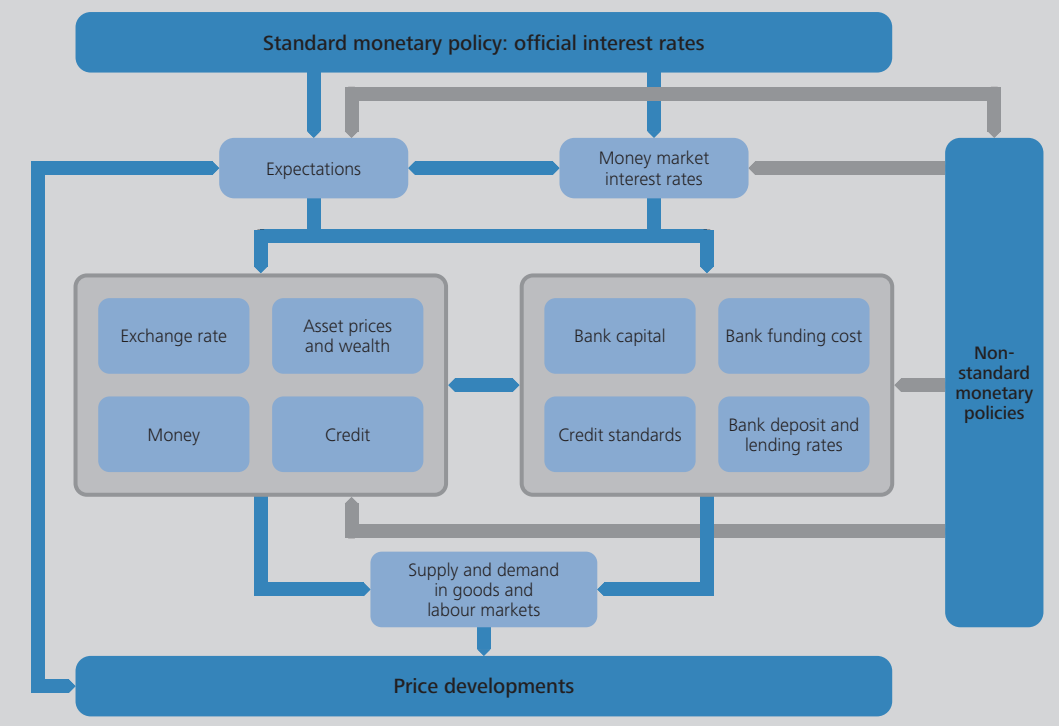
As exclusive monetary policy counterparties of the Eurosystem, banks play a key role in the transmission of monetary policy measures to the real economy and to inflation. Although alternative sources of funding have become increasingly relevant for non-financial corporations over the past few years, bank loans are of major importance in the euro area's primarily bank-based financial system as they provide external funds to the non-financial private sector.[1] However, a significant proportion of the non-financial private sector is still unable to substitute their bank loans in part or in full with other sources of funding. One of the main reasons for this imperfect substitutability is the information asymmetry that generally exists between lenders and borrowers.[2] Banks reduce this asymmetry in their function as lenders by checking and monitoring their borrowers and by establishing long-term customer ties, for example. At the same time, the relevance of banks in the realm of private sector financing goes beyond bank loans, also because banks provide funds to the private sector via other segments of the financial market.[3]

Banks' stability is therefore key to the effectiveness of monetary policy

Given the key role banks play in monetary policy, a stable and smoothly functioning banking system is essential to the effectiveness of monetary policy. Bearing that in mind, the primary responsibility for ensuring the stability of individual institutions and the banking system as a whole lies with microprudential and macroprudential regulators, eg by subjecting banks to binding minimum capital requirements. Conversely, however, standard and non-standard monetary policy measures also affect banks' economic environment and thus their financing costs, profitability and capital position. This, in turn, largely determines how banks conduct their business, including the setting of credit standards and interest rates. It is, indeed, likely that the overall impact of monetary policy measures on economic activity and inflation depend to a great extent on these relationships (see the chart on page 29).

1 See Deutsche Bundesbank, Developments in corporate financing in the euro area since the financial and economic crisis, Monthly Report, January 2018, pp 53-71.
2 Borrowers are typically better informed than lenders about the risks of the project to be financed and can, once they have received the funds, behave in a way that goes against the interests of the lender. For further information, see, for example, Deutsche Bundesbank, Bank balance sheets, bank competition and monetary policy transmission, Monthly Report, September 2001, pp 51-70.
3 For example, banks also acquire equities, bonds and secured loans. Moreover, they can sell parts of their credit portfolio by issuing securitised products.

Transmission mechanism of monetary policy



Source: A Beyer, G Nicoletti, N Papadopoulou, P Papsdorf, G Rünstler, C Schwarz, J Sousa and O Vergote (2017), The transmission channels of monetary, macro- and microprudential policies and their interrelations, ECB Occasional Paper Series No 191.
Deutsche Bundesbank

Low capital endowment may lead to lending constraints

In order for capital to fulfil its guarantee and insurance function,[4] regulators require banks to hold a specified minimum amount of capital against outstanding loans which is positively linked to the riskiness of the loan exposures.[5] Besides these regulatory provisions, investor behaviour, too, substantially influences the scope of the capital endowment, in particular, say, when investors are not prepared to provide banks with external or own funds because they regard the bank's capital as insufficient. If bank capital is only just enough, or even insufficient, to cover losses, this may constrain bank lending.[6]

Capital can be built up in two ways: by retaining profits and by issuing equity instruments

From a bank's perspective, there are two ways to avoid lending constraints by building up capital. The first one is to retain earnings; the second is to issue equity instruments (eg shares).[7] As a general rule, both approaches have their limitations, which are influenced by monetary policy, amongst other things. Earnings can only be retained at the pace at which they are generated and investors are unlikely to be willing to purchase unlimited quantities of newly issued equity instruments.[8]

4 See K F Hagenmüller (1959), Bankbetrieb und Bankpolitik, Wiesbaden.
5 For arguments on the need for banking regulation, see, for example, T Hartmann-Wendels, A Pfingsten and M Weber (2015), Bankbetriebslehre, 6th edition, Berlin Heidelberg, pp 312 ff.
6 F Somary (1934) cites four functions of capital. First, to establish trust; second, to cover losses; third, to ensure access to capital and, fourth, to enable capital investment. See F Somary (1934), Bankpolitik, J C B Mohr, Tübingen, 3rd edition.
7 Generally speaking, this applies not only to banks but also to other firms.
8 Here, too, information asymmetries and incentive problems play a role, as banks are usually better informed about the quality of their assets and the sustainability of their business model than potential investors. As claims arising from equity instruments are limited to uncertain profit distribution, information asymmetries are particularly relevant in this type of financing. Non-financial corporations, too, face information problems when raising capital. See Deutsche Bundesbank, Developments in corporate financing in the euro area since the financial and economic crisis, Monthly Report, January 2018, pp 53-71.

Bank capital and risk-taking channel

Bank capital channel models transmission of monetary policy measures to bank capital through profitability

Of the bank-side transmission channels discussed in the literature, a particularly bright light has recently been shined on the bank capital channel as the main focus for monetary policy transmission through this channel is on banks' profitability and capital endowment. Here, it is postulated that monetary policy measures impact directly on bank profitability and thus also banks' ability to build up capital.[9] With the aim of maximising profits, banks in the bank capital channel adjust their lending volume according to the development of their capital position, provided that the latter constitutes a binding restriction.[10] By impacting on banks' profitability and capital position, monetary policy measures also affect banks' lending business (for a discussion of a theoretical model for analysing the role of banks' profitability and capital endowment on transmission in the context of a monetary policy purchase programme, see the box on pages 31 to 34).

Bank capital channel effective when access to capital on the market is limited and initial capital endowment is low

The transmission mechanisms described by the bank capital channel become relevant from a macroeconomic perspective when capital endowment becomes a binding constraint on lending for a sufficiently high share of banks. This is the case when banks' capital endowment is initially small and information asymmetries between banks and potential investors are so strong that building up capital by issuing equity instruments is constrained or, in some cases, even altogether impossible. The model developed by Van den Heuvel (2007) uses a partial analysis to explain the potential relationship between banks' capital endowment and the strength of the bank capital channel.[11] The decisive factor is the size of the excess capital buffer at the time when the monetary policy measure is introduced. The excess capital buffer is the difference between the actual capital ratio and that required by regulators, with the latter depending on the volume of loan exposures. If the initial excess capital buffer is low, banks are bound by capital constraints.[12] The excess capital buffer is not static in the model; instead, it reflects banks' past performance.[13] Since a bank's net lending is restricted by its buffer, it is unable to grant new loans if it has only a very small buffer or none whatsoever. Therefore, in the case of a poorly capitalised bank, an accommodative monetary policy measure will have no effect in the short term. However, there is a certain likelihood that, by retaining profits, the capital position of a poorly capitalised bank will recover in the medium term; in principle, this should enable the bank to grant (more) loans again. This likelihood changes with a monetary policy measure's impact on profitability. Conversely, in the case of well capitalised banks, the effect of a monetary

9 In addition, bank capital is regarded as an important determinant of banks' funding costs. Hence, a worse (better) capital position increases (decreases) a bank's credit risk and correspondingly leads to higher (lower) risk premiums to be paid by the bank when acquiring funds. Borrowing funds becomes more costly if banks pass on the higher risk premiums to borrowers. See also P Disyatat (2011), The bank lending channel revisited, Journal of Money, Credit and Banking 43 (4), pp 711-734.
10 See S J Van den Heuvel (2007), The bank capital channel of monetary policy, Working Paper, Wharton School, University of Pennsylvania. See also the following papers where the term "bank capital channel" is not explicitly mentioned, but which nevertheless describe a channel through which monetary policy measures are transmitted via the banking system's profitability and capital position, ie R Chami and T F Cosimano (2010), Monetary policy with a touch of Basel, Journal of Economics and Business 62, pp 161-175; and M Woodford (2010), Financial intermediation and macroeconomic analysis, Journal of Economic Perspectives, 24(4), pp 21-44; and P Disyatat (2011), op cit.
11 See S J Van den Heuvel (2007), op cit. The model is based on the assumption that capital is generated by retaining profits alone and not by issuing equity instruments.
12 Van den Heuvel demonstrates that capital constraints become binding before the buffer is actually exhausted. A higher or lower probability of falling below minimum capital requirements in the future may already affect lending in the present. See S J Van den Heuvel (2002), Does bank capital matter for monetary transmission?, Federal Reserve Bank of New York Economic Policy Review, May 2002, pp 259-265.
13 A key difference compared with the model logic of the bank lending channel is the development of the capital ratio. In the bank lending channel, the capital ratio is assumed to be exogenous and therefore does not change in response to a monetary policy measure. The adjustments to banks' lending volume as a result of a monetary policy measure occur in the form of changes in deposit holdings, above all by households. Monetary policy thus changes the opportunity costs of holding deposits. For more on the bank lending channel, see, for example, L Gambacorta (2005), Inside the bank lending channel, European Economic Review 49 (7), pp 1737-1759. For a comparison of capital in the bank capital channel versus the bank lending channel, see S Van den Heuvel (2002), op cit.

The role of the bank capital channel in the transmission of non-standard monetary policy measures

The bank capital channel will be examined from the perspective of a macroeconomic general equilibrium model with a fully fledged financial market.[1] The purchase of government bonds is considered a non-standard monetary policy measure in this context. For the sake of simplicity, it is assumed that the central bank makes these purchases unexpectedly within a specific period and then reduces the acquired stock again over time. Although the exact characteristics of the measures considered here differ somewhat from those of the Eurosystem's asset purchase programme (APP), the macroeconomic and financial variables respond in the same way.[2] There are, however, differences in the magnitude of the effects.

In the model presented here, households decide how much they want to work, consume, and save. They either invest their savings in interest-bearing bank accounts or purchase long-term government bonds. The banks finance themselves via equity and debt capital, with the debt capital corresponding to the households' deposits. They use these funds primarily to issue loans to non-financial corporations. However, like households, they can also purchase long-term government bonds and – to a lesser extent – bonds issued by non-financial corporations.[3] Non-financial corporations invest their equity and debt in risk-bearing capital goods, which are processed into intermediate goods using the labour supplied by households. Typically, this type of model is based on the assumption that the producers of intermediate goods and suppliers of labour services have (limited) market power in their sectors, and can therefore influence the price of their goods and their wage rate respectively, although this may occur with a slight time lag in some cases.[4]

An important building block in this model is that debt contracts are concluded between non-financial corporations and banks as well as between banks and households. The debt contracts between non-financial corporations and banks are characterised by the fact that borrowers (non-financial corporations) are generally better informed about "their" project than lenders (banks). This means that information about the project is distributed asymmetrically. Under these circumstances, lenders would have to bear a significant financial burden to investigate the reasons for a potential payment default. Another feature of debt contracts is that it can be very costly, or even impossible, to recover arrears using coercive measures. Such a loan agreement is concluded between banks and households in the model. In both cases, loans are there-

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1 A New Keynesian dynamic stochastic general equilibrium (DSGE) model, as described in Kühl (2016), is used. See M Kühl, The effects of government bond purchases on leverage constraints of banks and non-financial firms, Deutsche Bundesbank Discussion Paper, No 38/2016.

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

3 In the model, there are two different groups of capital producers. The first group exclusively uses bank loans as debt capital, while the second group only issues corporate bonds.

4 The real sector therefore resembles a typical New Keynesian dynamic stochastic general equilibrium model. In this context, the producers of intermediate goods and suppliers of labour are only able to set their profit-maximising price with a certain level of probability (known as Calvo pricing). See F Smets and R Wouters (2003), An estimated dynamic stochastic general equilibrium model of the euro area, Journal of the European Economic Association, 1 (5), pp 1123-1175.

fore usually only issued if borrowers contribute their own funds to the project. This means that leverage is a key variable for both issuing bank loans as well as the willingness to hold deposits.[5] For these reasons, the economic agents in the present model – the owners of banks and non-financial corporations – must contribute their own capital.[6] The higher the leverage of the non-financial corporation, the higher the lending rate will be, as the lender would want to offset any potential losses.[7] The accounting scope of the financial and non-financial corporations is therefore limited (balance sheet constraint). If the banks' leverage in the model increases – triggered perhaps by a decline in capital – this leads to the households withdrawing part of their deposits from their accounts.[8] The liabilities side of the banks' balance sheets erodes and, inversely, the banks must reduce their total assets. A process of deleveraging takes hold.

The specific impact of unexpected asset purchases by the central bank within this model will be explored further below. As an initial reaction to the additional demand from the central bank, the prices of government bonds rise and their yields fall accordingly.[9] As securities are marked to market, thereby increasing the volume of assets on the balance sheet, the amount of capital on the liability side of the banks' balance sheets also grows. Due to the falling leverage, the households are now more willing to hold deposits with the banks. Banks respond to the changed structure of prices and balances by rebalancing their portfolios (see chart on page 42). The banking sector as a whole offers an increased volume of loans to non-financial corporations, and at better borrowing conditions than before the asset purchases began, as the market for loans would otherwise not be cleared.[10] This enables non-financial corporations to more easily service debts through decreased lending rates. Their profit and capital increase, initially allowing them to finance new investment projects primarily with these own funds.[11] Consequently, there is no substantial change in lending to the non-financial corporations in the period immediately following the asset purchases.

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5 Leverage is defined as the ratio of total assets to capital. An increase in leverage therefore increases total assets relative to capital, which ultimately implies a rise in the relative significance of debt capital.

6 The modelling of financial frictions in non-financial corporations is based on B S Bernanke, M Gertler and S Gilchrist (1999), The financial accelerator in a quantitative business cycle framework, in J Taylor and M Woodford (eds.), Handbook of Macroeconomics, pp 1341-1393, while the financial frictions in the banking sector follow M Gertler and P Karadi (2011), A model of unconventional monetary policy, Journal of Monetary Economics, 58, pp 17-34.

7 Ultimately, higher leverage means that loans are financed by less capital.

8 The inflow or outflow of deposits also plays a crucial role in another monetary policy transmission channel – the bank lending channel. However, in this case, it is triggered by changes in the opportunity costs of holding deposits or by a shortage of central bank reserves. Within the context of the model discussed here, the inflows and outflows are, by comparison, predominantly the result of changes in bank leverage. Therefore, it is investors – rather than, say, supervisors – who ultimately force the bank to comply with minimum capital requirements in the model.

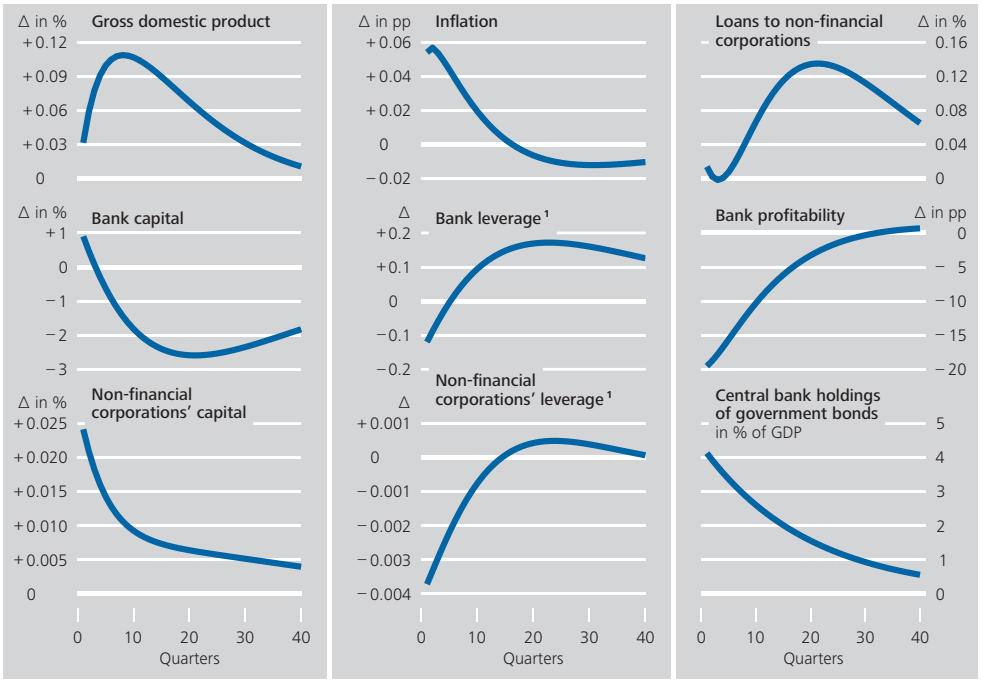
9 In this model, government bonds and other assets are imperfect substitutes, ie they differ in terms of transaction costs and degree of liquidity, for example. In this case, there are limits to arbitrage, which allows sustainable price reactions to be triggered (contradicting the assumptions of Wallace neutrality). An account of this topic can be found in H Chen, V Cúrdia and A Ferrero (2012), The macroeconomic effects of large-scale asset purchase programmes, The Economic Journal, 122, pp F289-F315; as well as in Deutsche Bundesbank (2016), op cit, pp 36-37.

10 In the model, assets are purchased regardless of developments in the real economy. This modelling approach makes it possible to measure the impact of asset purchases directly. In the real world, the central bank reacts to economic developments using non-standard measures in order to achieve its objectives. It may therefore be the case that any excess demand for loans is mitigated by portfolio rebalancing. However, the effects outlined here must be considered solely in relation to the underlying scenario.

11 In the case of old loans with longer maturities, this effect occurs with a time lag, as the lower lending rates only apply to new loans. The effect described in the main text is not fundamentally changed by this, but merely softened. See M Andreasen, M Ferman and P Zabczyk (2013), The business cycle implications of banks' maturity transformation, Review of Economic Dynamics, 16 (4), pp 581-600.

Effects of an asset purchase programme on the real economy and the financial sector*

Impulse response functions, deviations (Δ) from long-term steady state



* Based on M Kühl (2016), The effects of government bond purchases on leverage constraints of banks and non-financial firms, Deutsche Bundesbank Discussion Paper, No 38/2016. **1** Leverage is defined as the ratio of total assets to bank capital.

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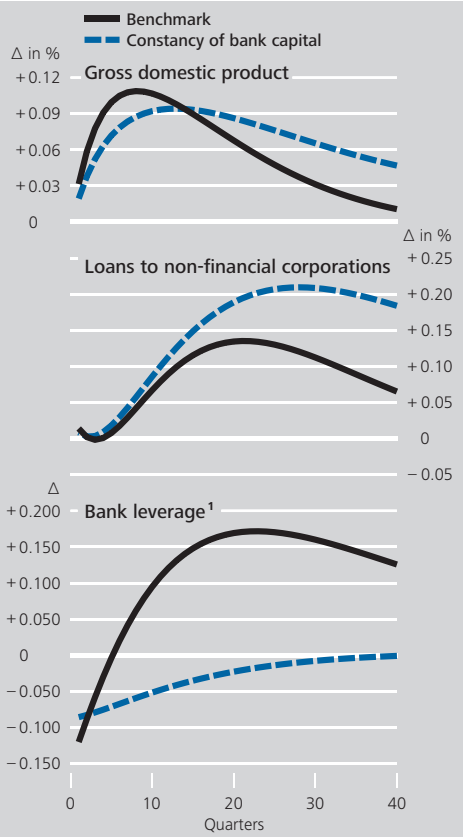
In the case of the banks, declining credit and capital market rates cause a fall in the net interest margin – the difference between the interest received on their assets and the interest paid on their debt.[12] Thus, after the initial positive stimulus, bank capital is weakened and even drops relatively quickly in the medium term to below its starting level. Their leverage rises accordingly. The mechanisms of the bank capital channel described above now operate in the opposite direction. The banks' liability-side business comes under pressure as the households are less willing to hold deposits with the banks. In this way, the households prevent a constant rise in bank leverage. The banking sector then needs to scale down its total assets to a greater extent. In the present model, it does this solely by reducing its stocks of government bonds.[13] The net interest margin goes back up and lending slowly increases. The main reason behind this development is non-financial corporations' now increased demand for credit. An expansionary stimulus on gross domestic product and inflation is the ultimate, indirect outcome of asset purchases in this model framework. At the same time, the model simulations also show that asset purchases reduce interest margins and thereby put a strain on bank capital (see above chart).

Initial experiences of the APP in practice indicate that this is not just the case in theory.[14] For the monetary policy analysis, it is therefore all the more important to assess the significance of the bank capital channel

12 Once again, it should be stressed that the effects weaken only if a maturity structure is assumed and the interest rate effect only applies to new loans.
13 As the assets on the banks' balance sheets are imperfect substitutes, the APP leads to a reduction in total assets in the model. This effect is now even more pronounced.
14 See the ad hoc questions on the APP contained in the European Central Bank's Bank Lending Survey for 2015 Q3, 2016 Q1, 2016 Q3, 2017 Q1, and 2017 Q3.

Significance of bank capital for the transmission of an asset purchase programme*

Impulse response functions, deviations (Δ) from long-term steady state



* Based on M Kühl (2016), The effects of government bond purchases on leverage constraints of banks and non-financial firms, Deutsche Bundesbank Discussion Paper, No 38/2016.
1 Leverage is defined as the ratio of total assets to bank capital.

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described above for the transmission of monetary policy stimulus. A counterfactual analysis is appropriate here. This type of analysis is a notional experiment in which a monetary policy stimulus acts on model variables, but its effect on capital is eliminated. The "actual" and "counterfactual" results described above are then compared (see chart above).[15] There are signs that, above all, the credit volume is highly sensitive to changes in bank capital in the medium and long term. In terms of the constancy of capital, the credit volume rises not only more strongly but also more persistently – almost doubling at its peak.[16] Gross domestic product also exhibits a different reaction. The initial rise in real economic activity is indeed less pronounced, but continues for a significantly longer period of time.

The present model provides crucial insight into the extent to which (non-standard) monetary policies are transmitted to bank capital and leverage as well as the magnitude of their effects on the real economy and inflation. However, the model does not contain all of the variables and channels that matter in the real world. For instance, even before the start of the APP, the Eurosystem had already introduced measures that affected bank liabilities.[17] The introduction of negative interest rates on central bank reserves is also not taken into consideration. Finally, neither regulatory policy concerns regarding asset purchases nor political-economic aspects are reflected in the framework presented in this article.

15 Bank capital remains constant in as much that anticipated shocks prevent change. A transfer of resources in order to keep bank capital unchanged therefore does not take place. The model also remains unchanged.
16 In terms of the constancy of capital, there is now a persistent decline in leverage in the banking sector. Admittedly, the profit margins in the banking sector continue to shrink. By nature, however, there is no negative effect on capital in the medium term. This ultimately prevents an increase in leverage. While there are hardly any differences in lending shortly after the start of the asset purchase programme, there are, as is the case with leverage, larger deviations in the medium term. This is due to the fact that, during this period, the non-financial corporations finance their increased investing activities predominantly using their own funds.
17 See Deutsche Bundesbank (2016), op cit.

policy measure on profitability has hardly any bearing on bank lending, as those banks are unlikely to fall short of the regulatory capital requirements, at least in the short term (for details on the importance of capital and the excess capital buffer from an economic and monetary policy point of view, see the box on pages 36 and 37).

Risk-taking channel captures monetary policy transmission through perception and tolerance of risk

The bank capital channel is closely linked to what is known as the risk-taking channel. The underlying assumption is that risk perception or tolerance by economic agents – and thus also banks – varies with interest rates, amongst other factors.[14] These economic agents may be willing to tolerate greater risks to compensate for any negative effects on profitability stemming from low interest rates, thus helping to achieve certain profitability or return objectives. In this case, the low-interest-rate environment affects risk tolerance via profitability.[15] An elevated risk tolerance by banks can, for instance, be reflected in an expansion of the lending volume to riskier borrowers or in the tolerance of higher interest rate risk. In conceptual and empirical terms, there is not always a clear separation between the risk-taking channel and the bank capital channel. The willingness to take on greater risk in the form of granting more loans as a result of a monetary policy-induced improvement in the capital position, which, from a macroeconomic perspective, can have repercussions for the pricing of risk, can be understood as a manifestation of the risk-taking channel as well.[16]

Non-performing loans and bank capital: situation in the euro area

Capital endowment has improved since the crisis, while capital requirements have become stricter …

Bank capital ratios in the euro area have been improving continuously since the global financial crisis of 2008-09.[17] Against this backdrop, it could be assumed that the banking system has extricated itself from a situation where capital constraints are relevant for the effectiveness of monetary policy. However, more stringent regulatory requirements were another factor in improved capital ratios. Whether or not capital constraints are in place cannot necessarily be directly derived from the capital ratio; instead, a comparison of the actual capital ratio and the regulatory capital ratio is needed. An increase in capital ratios is thus not a direct indicator of any existing capital constraints being mitigated.

… and the stock of NPLs has increased

In addition, the increase in capital ratios occurred at a time when the stock of NPLs grew significantly, particularly in the southern euro area countries. NPLs affect banks' capital ratios in a number of ways. For one, they have a direct adverse effect on profitability, reducing the ability to build up capital.[18] A burdening effect on profitability occurs when loans stop performing because the borrower is no longer able to meet interest payments and principal repayments in full, causing the loan to drop in value.[19] This loss in value is reflected in loan loss reserves, the amount of which is deducted from the loan's book value in the balance

14 See C Borio and H Zhu (2012), Capital regulation, risk-taking and monetary policy: A missing link in the transmission mechanism?, Journal of Financial Stability 8, pp 236-251; and Deutsche Bundesbank, The importance of macroprudential policy for monetary policy, Monthly Report, March 2015, pp 39-72.
15 See, inter alia, C Memmel, A Seymen and M Teichert (2017), Banks' interest rate risk and search for yield: a theoretical rationale and some empirical evidence, German Economic Review, forthcoming.
16 For details, see T Adrian and H S Shin (2010), Financial intermediaries and monetary economics, in: B M Friedman and M Woodford (eds), Handbook of Monetary Economics, Vol 3, pp 547-599.
17 See, for example, European Central Bank, Report on financial structures, October 2017.
18 This applies to strengthening the capital position by retaining profits. Yet the ability to strengthen the capital position by issuing equity instruments is likewise contingent on profitability. Weak profitability tends to go hand in hand with a lower market value and thus also with a reduced ability to consolidate the capital position in this way. For more information on this topic, see, for example, European Central Bank, Financial Stability Review, November 2017.
19 According to the definition by the European Banking Authority (EBA), non-performing exposures are those that are more than 90 days past due in terms of a debtor's interest and/or principal payments or those where the debtor is unlikely to pay its credit obligations in full in the future. For more information, see European Banking Authority (2013), Final draft implementing technical standards on supervisory reporting on forbearance and non-performing exposures under article 99(4) of Regulation (EU) No 575/2013; and Commission Implementing Regulation (EU) 2015/227.

Bank capital

Capital is not only a source of funding but also plays an important role in insuring any losses that occur. The higher the leverage of a firm, the more prominent capital's function as insurance becomes, at the expense of the original function of providing finance. For banks, unlike non-financial corporations, it is not capital's funding function which is more important, but rather its guarantee and insurance function. In a normal business environment, it primarily instils confidence, enabling a bank to borrow the funds it needs.[1] Whereas, for any given bank, an individual target ratio of equity to debt finance can thus be derived from capital's business management functions, this ratio is additionally dependent on the regulatory, tax and macroeconomic environment.

Seen from an economic perspective, high capital ratios are beneficial when taken in isolation, especially since they strengthen banks' ability to absorb losses and reduce the likelihood of distressed banks and the need for government rescue measures.[2] Here, the steering function of capital requirements is the most prominent feature: given limited opportunities to procure capital, high capital requirements, so the reasoning goes, would naturally constrain the bank's size and contain the distortionary impact of guarantees and subsidies.[3] It is only the reported capital ratio that is relevant to banks' ability to absorb losses caused by negative price and profitability shocks; this metric provides for a given ratio of equity financing irrespective of the assets' risk. Over time, this ratio remains relatively stable and generally rises in line with regulatory capital requirements. This would appear to indicate that banks generally attempt to maintain a given buffer in excess of regulatory capital requirements, ie they strive for a higher internal target capital ratio.[4]

The size of this excess capital buffer is not shaped by stricter regulatory requirements but is chosen freely by banks within the framework of their business decisions. There are at least three reasons for them to maintain such buffers: first, in order to be able to take advantage of sudden lucrative investment opportunities,[5] second, as "insurance" against adverse capital shocks[6] and third, owing to existing market pressure and to signal the bank's own solvency.[7] The first two reasons are largely independ-

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1 See J v Köppen (1964), Das Eigenkapital der Kreditinstitute, Frankfurt a. M., pp 165-171.
2 One very prominent proponent of this line of argument is M Hellwig. See A Admati and M Hellwig (2013), The bankers' new clothes, Princeton and Oxford; see also A N Berger, R J Herring and G P Szegö (1995), The role of capital in financial institutions, Journal of Banking & Finance 19, pp 393-430.
3 See A Admati and M Hellwig (2013), op cit, pp 217-224.
4 This part of capital is usually referred to in the literature as "excess capital" or "capital buffer". See, for example, L Gambacorta and P Mistrulli (2004), Does bank capital affect lending behaviour?, Journal of Financial Intermediation, 13, pp 436-457, and I Alfon, I Argimon and P Bascuñana-Ambrós (2004), What determines how much capital is held by UK banks and building societies?, FSA Occasional Paper Series 22.
5 See S J Van den Heuvel (2007), The bank capital channel of monetary policy, Working Paper, Wharton School, University of Pennsylvania, and J Coffinet, V Coudert, A Pop and C Pouvelle (2011), Two-way interplays between capital buffers, credit and output: evidence from French banks, Banque de France Document de Travail, No 316.
6 C Furfine (2001), Bank portfolio allocation: The impact of capital requirements, regulatory monitoring, and economic conditions, Journal of Financial Services Research 20(1), pp 33-56; I Alfon, I Argimon and P Bascuñana-Ambrós (2004), op cit; K-G Lindquist (2004), Banks' buffer capital: how important is risk, Journal of International Money and Finance 23, pp 493-513; and J Coffinet et al (2011), op cit.
7 I Alfon, I Argimon und P Bascuñana-Ambrós (2004), op cit; Lindquist (2004), op cit; and M J Flannery and K P Rangan (2008), What caused the bank capital build-up of the 1990s?, Review of Finance 12(2), pp 391-429.

ent of the amount of the regulatory capital requirements. Put differently: banks probably keep their buffers constant even given higher regulatory requirements. If market pressure declines as regulatory capital ratios increase, the third reason might actually tend to argue in favour of reducing the excess capital buffer. One example where this could be the case is if market participants regard a certain reported capital ratio as being adequate for the bank and stricter regulatory requirements lead to this ratio being achieved, on the whole, even with a lower excess capital buffer.

Whereas the aforementioned reasons could be an argument for banks to choose a relatively large buffer, tax incentives militate against the idea of banks voluntarily setting a high buffer. By distorting banks' funding costs, the tax advantage of debt financing over equity financing is currently diminishing banks' incentive to use capital to fund their assets.[8] Other risk mitigation measures taken by banks, too, reduce their desired target capital ratio. Risk sharing (diversification: by type of asset, location, or organisationally), risk compensation (through hedging) and transfer of risk to third parties (derivatives) are strategies typically employed by banks to reduce the amount of capital deemed necessary.[9] The larger the bank, the better able it is to use these risk mitigation measures.

Banks' excess capital buffers matter for monetary policy. Since higher buffers give banks more leeway and also boost the markets' confidence, they reduce cyclicality in the financial system.[10] Theoretically, the benefits to monetary policy of larger buffers could, for instance, be motivated via the bank capital channel.[11] Monetary policy is most likely to be able to act independently of profitability in the banking system if the banks are far removed enough from a situation in which they are constrained by capital requirements.

The concept of equity which "breathes" over the business cycle is also the basis for the counter-cyclical capital buffer as part of the toolkit of macroprudential instruments, which is designed to enhance resilience to systemic risks created by excessive lending and thus to mitigate the risk of financial crises.[12] Empirical studies provide evidence that a better capital base of banks impacts positively on lending.[13]

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8 See G Schepens (2016), Taxes and bank capital structure, Journal of Financial Economics, pp 585-600.
9 For an explanation of risk reduction strategies from a bank perspective, see J v Köppen (1965), op cit, pp 343ff. For a critical review of the role of derivatives, see A Admati and M Hellwig (2013), op cit, pp 69-74.
10 Using a DSGE model, Meh and Moran (2010) demonstrate that an economy with more bank capital is better able to absorb negative shocks. See CA Meh and K Moran (2010), The role of bank capital in the propagation of shocks, Journal of Economics Dynamics & Control 34, pp 555-576.
11 See L Gambacorta (2005), Inside the bank lending channel, European Economic Review 49, pp 1737-1759; and S Van den Heuvel (2007), op cit.
12 See L Gambacorta and P Mistrulli (2004), op cit; and M Brei and L Gambacorta (2016), Are bank capital ratios pro-cyclical? New evidence and perspectives, Economic Policy Volume 31, pp 357-403.
13 For more on the positive impact of a higher excess capital buffer, defined alternatively as the difference between actual and regulatory capital or as the difference between actual capital adequacy and banks' desired capital adequacy, see L Gambacorta and P Mistrulli (2004), op cit; W Watanabe (2007), Prudential regulation and the "credit crunch": Evidence from Japan, Journal of Money, Credit and Banking 39 (2-3), pp 639-665; and JM Berrospide and RM Edge (2010), The effects of bank capital on lending: What do we know, and what does it mean?, International Journal of Central Banking, 6 (4), pp 5-54. For more on the positive impact of actual bank capital, neglecting any explicit recognition of regulatory requirements or desired capital adequacy, see, for instance, L Gambacorta and HS Shin (2016), Why bank capital matters for monetary policy, BIS Working Papers No 558.

sheet.[20] In turn, the loan loss reserves are recognised in profit or loss as LLPs, ie a component of profitability. Albeit to a lesser extent, NPLs also affect net interest income as the lack of interest income they cause represents a burden as well. Furthermore, NPLs affect risk-weighted assets and, by extension, the denominator of regulatory capital ratios given that other, often higher, risk weights should be used for the non-value-adjusted share of NPLs than for performing loans.

NPLs can be indicative of losses to be expected in the future

As long as any losses which might be caused by NPLs are fully covered at all times by appropriate loan loss reserves in the balance sheet, the repercussions of NPLs are already factored into the specified regulatory capital ratios. However, if further losses from these loans are expected to materialise in the future and have not yet been covered by loan loss reserves, then the stock of NPLs contains additional information with regard to potential future capital constraints. Banks could, for example, put off forming loan loss reserves for NPLs to avoid falling below the regulatory minimum capital requirements or the capital level tolerated by the markets. In this context, it is conceivable, for instance, that banks continuously roll over loans to borrowers who can, in reality, no longer be classified as creditworthy in order to avoid a default and the recording of losses this would entail (the box on pages 39 and 41 addresses the question of the extent to which NPLs influence banks' lending policies and monetary policy transmission when the reported capital ratio is taken into consideration).[21] In the euro area, the ratio of the stock of NPLs to the sum of capital and loan loss reserves for significant institutions under the direct supervision of the ECB came to just under 60% at the end of 2015, with some countries reaching values above 100%.[22] Although a gradual decline – not least due to various policy measures – in the stock of NPLs and thus a turnaround in dynamics has been observed since then, the level continues to be very high.[23] This demonstrates that potential losses arising from NPLs which are not yet included in reported capital may well entail capital constraints in the future and implicitly even in the present.

Impact of interest rates on bank profitability

Monetary policy influences an economy's interest rates …

The interest rate level and term structure are influenced by the use of monetary policy instruments. While it is not their sole driver, monetary policy can exert significant influence over interest rates in the money market, at least in the short term. Changes in short-term interest rates are accompanied by a parallel shift in the term structure if they are replicated by interest rates at the long end. If not, or if not to the same extent, the slope of the yield curve will change accordingly. In response to the financial and sovereign debt crisis, the Eurosystem augmented its set of standard monetary policy instruments with non-standard measures. After the zero lower bound had been reached at the short end, the purchase programmes, in particular, aimed at lowering the longer-term interest rate level.[24] A reduction in longer-term interest rates is passed through to banks via a range of channels (see the chart on page 42).

Both the level of interest rates and the slope of the yield curve influence the financial perform-

20 In the case of loan loss reserves, both the gross value of the original figure and the bank's value adjustment are recorded. Alternatively, the loan can also be amortised, eliminating this amount from the balance sheet.
21 In the literature, such practices are referred to as "evergreening" or "zombie lending". For evidence regarding Japan and the adverse effects on its real economy, see R Caballero, T Hoshi and A Kashyap (2008): Zombie lending and depressed restructuring in Japan, American Economic Review 98 (5), pp 1943-1977. Evidence for the euro area is given by M Storz, M Koetter, R Setzer and A Westphal (2017), Do we want these two to tango? On zombie firms and stressed banks in Europe, ECB Discussion Paper No 2104.
22 See European Central Bank, Financial Stability Review, May 2016. The ratio mentioned in the text is also referred to as the "Texas ratio". It is the ratio of the gross volume (before provisions) of NPLs to loss absorbency capacity, which is calculated as the sum of loan loss reserves and capital.
23 See European Central Bank, Financial Stability Review, November 2017.
24 See Deutsche Bundesbank, Monetary policy indicators at the lower bound based on term structure models, Monthly Report, September 2017, pp 13-34.

The impact of non-performing loans on the pricing of new loans

In the course of the financial and sovereign debt crisis, the stock of non-performing loans (NPLs) on the balance sheets of banks in the euro area increased sharply. As a result, the significance of NPLs as a potential obstacle to lending and to the functioning of monetary policy transmission came to the fore.[1] With this in mind, this box examines the impact of NPLs on the pricing of new loans to enterprises. Of interest here are the effects produced when explicitly the capital position of the surveyed banks is controlled for. Losses arising in connection with non-performing loans, which have already been reported by banks by means of a corresponding amount of loan loss provisions, are therefore filtered out of the analysis.

In order to obtain a more accurate picture of the importance of the above factors in the euro area, the interest rates on new loans to enterprises at the level of individual banks as a function of various bank-related factors – including the stock of non-performing loans and the capital position – were modelled in an econometric analysis.[2] The required data were sourced from the Eurosystem's individual MFI Interest Rate (iMIR) database, two private-sector data providers – Bankscope (now Orbis Bank Focus) and SNL (now S&P Global Market Intelligence) – and the Eurosystem's Centralised Securities Database (CSDB). The following equation is estimated:

$$LR_{i,t} = \alpha_i + \delta LR_{i,t-1} + \beta' NPL_{j,t-1} + \gamma' x_{i,j,t,t-1} + \varepsilon_{i,t}$$

According to this equation, the average lending rate on new loans to enterprises LR at bank i in year t is explained by its own history and by various other variables. The variables in the vector NPL capture the stock of non-performing loans of banking group j, to which bank i belongs, and the interaction of this stock with a short-term market interest rate (the one-year overnight index swap (OIS) rate). The gross value of NPLs is broken down into the net stock (that part not covered by loan loss reserves) and loan loss reserves (LLRs).[3] Owing to the potential endogeneity of the variables, values from the previous year are used in each case. The vector x contains not only the regulatory capital ratio lagged by one year but also further lagged balance sheet metrics of banking group j, macroeconomic determinants for the home country of bank i (either year fixed effects and various macroeconomic variables or year-country fixed effects) and the average interest rate fixation period for the new loans to enterprises granted by bank i. The vector x also contains the market funding costs of banking group j, which are not lagged by one year.[4,5] When interpreting the results, it should be noted that effects which the stock of one bank's NPLs could have on another bank's credit pricing policy are not modelled.[6]

1 See, inter alia, S Aiyar, W Bergthaler, J M Garrido, A Ilyina, A Jobst, K Kang, D Kovtun, Y Liu, D Monaghan and M Moretti (2015), A strategy for resolving Europe's problem loans, IMF Staff Discussion Note 15/19, and European Commission (2017), A macroeconomic perspective on non-performing loans (NPLs), Quarterly report on the euro area 16(1), pp 7-21.

2 The analysis can be found in S Bredl (2017), The role of non-performing loans in the transmission of monetary policy, mimeo.

3 The LLRs are the amount of loan loss reserves reported in the balance sheet which were booked as loan loss provisions in earlier periods in the profit and loss account.

4 Calculated as the average return on market-traded debt securities less the maturity-matched risk-free interest rate.

5 The structure of the data permits multiple banks to belong to the same banking group j. Therefore, the error term ε is clustered at the level of the particular banking group when calculating the standard errors of the coefficients.

6 It is thus conceivable, for example, that a bank L with a large stock of NPLs will adjust its lending rates upwards. Thanks to its competitor's measure, bank S, with a small stock, sees greater scope for price-setting and responds by likewise raising its lending rates. The analysis can only identify that particular effect of NPLs which is reflected in the difference between both banks' lending rates but not the higher level of lending rates overall caused by bank L's large stock of NPLs.

Estimation of the impact of non-performing loans on lending rates for new loans[o]

	Year-country fixed effects		Year fixed effects and macro-economic variables	
Explanatory variable	FE	System GMM	FE	System GMM
Lending rate (– 1)	0.340***	0.565***	0.427***	0.740***
Net NPLs (– 1)	0.051***	0.099**	0.042*	– 0.012
LLRs (– 1)	– 0.012	– 0.075	– 0.064*	– 0.037
Net NPLs (– 1)*OIS	– 0.014	0.000	– 0.038*	0.004
LLRs (– 1)*OIS	– 0.011	– 0.004	0.028	– 0.044
Tier 1 ratio (– 1)	– 0.004	– 0.008	– 0.001	– 0.036**
Liquid assets (– 1)	0.008	0.000	– 0.002	– 0.014**
ROA (– 1)	– 0.012	– 0.029	– 0.028	– 0.061
Funding costs	0.017	0.028	0.046	0.043**
Number of observations	778	778	725	725
Number of banks	145	145	132	132
Number of instruments	.	147	.	55
Hansen p-value	.	1	.	0.2374
AR2 p-value	.	0.7369	.	0.8725

o This table shows the results of regressions of the average interest rate on new loans to enterprises on their own lagged value, control variables specific to banking groups, year-country fixed effects or year fixed effects and macroeconomic variables, and the average interest rate fixation period for the loans granted. Two models are estimated: one with bank-specific fixed effects (FE) and the other using a system GMM estimation (System GMM). In the latter, the lagged endogenous variable and the variables specific to the banking group (except for the funding costs) are instrumented by their own further lagged values. For the system GMM estimates, the number of instruments, the p-value of the Hansen test of overidentifying restrictions and the p-value of the test for second-order autocorrelation of the residuals are shown. In both tests, a rejection of the null hypothesis (the p-value being below the critical value, typically 0.05) indicates a misspecification of the econometric model. Net NPLs stands for the net stock of non-performing loans as a percentage of total assets; LLRs for loan loss reserves as a percentage of total assets; *OIS for interaction with the one-year overnight index swap rate in %, Tier 1 ratio for the regulatory tier 1 ratio in %; Liquid assets for liquid assets as a percentage of total liabilities; ROA for return on assets in %; and Funding costs for the market financing costs (spread over risk-free interest rate in %). (-1) represents the value lagged by one year. The estimation is based on annual data, with the estimation period covering the years from 2010 to 2016. ***, ** and * denote, respectively, significance at the 1%, 5% and 10% level.

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The estimation is performed both with bank fixed effects and using the system-generalised method of moments (GMM) approach, in which the lagged endogenous variable and the variables specific to the banking group (except for the funding costs) are instrumented by their own further lagged values. Macroeconomic factors are controlled for using year-country fixed effects or year fixed effects and various macroeconomic variables.[7]

The results are shown in the above table and in the chart on page 41. Whereas the net stock of NPLs is accompanied by higher lending rates in three of the four specifications, there tends to be a negative relationship between the LLRs and lending rates.[8] The overall impact of an increase in the net stock of NPLs and the LLRs – assuming that the ratio between these two metrics matches the average in the sample used – is not significantly different from zero. On the whole, therefore, the results indicate that a high level of non-performing loans, specifically in a scenario of low LLRs, is associated with higher lending rates. What the results also show, furthermore, is that the interaction terms between the short-term market interest rate and the net stock of NPLs and the LLRs, with the ex-

7 Although the year-country fixed effects specification appears to be more compelling, since it implicitly captures all macroeconomic factors, it entails the use of a large number of degrees of freedom, rendering the Hansen statistic, which tests the validity of assumptions made with regard to the instruments in the system GMM approach, unreliable.

8 Note that the net stock of NPLs and the LLRs are highly correlated, with a correlation coefficient of around 0.8. However, the results are relatively robust to a random variation of the sample. Moreover, the overall impact is more or less equivalent to the effect that results if, instead of the net stock of NPLs and the LLRs, only the gross stock (sum of the net stock of NPLs and LLRs) is used in the estimation.

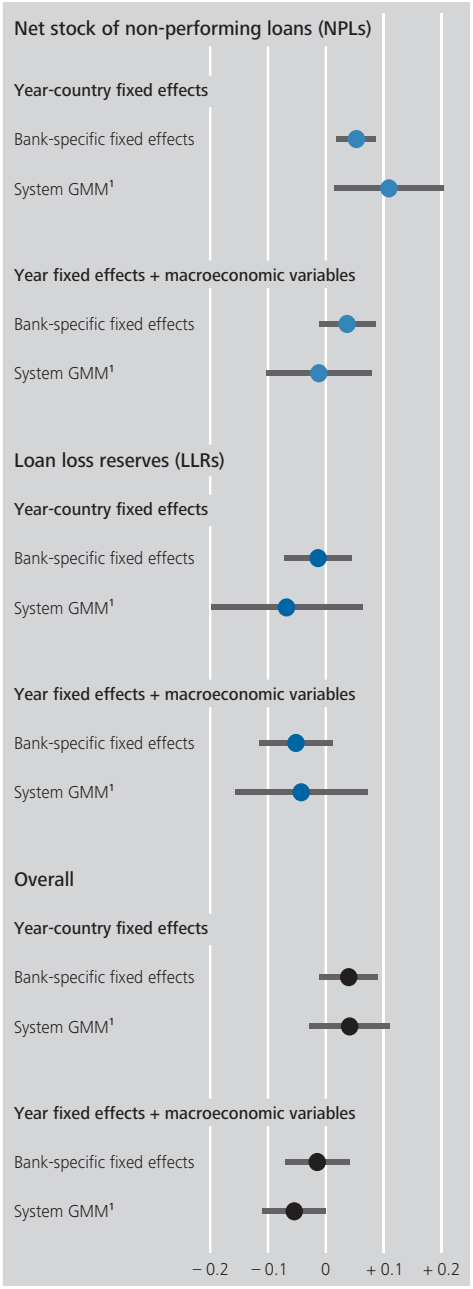
ception of one specification, are insignificant. This implies that the impact of monetary policy measures which pass through to market interest rates – defined as the difference between the lending rate in a situation with a measure and the lending rate in a hypothetical situation without a measure – is not constrained by NPLs in an analysis at the level of individual banks, in which macroeconomic factors are seen as given.[9]

The results of the estimates barely change when the funding costs specific to the banking group are excluded from the estimate. This suggests that funding costs are of little significance to the relationship between the stock of NPLs and the pricing of new loans. It should be borne in mind that macroeconomic effects are controlled for in the estimations. As a result, the funding costs variable predominantly captures the component of funding costs specific to the banking group and not the country-specific component. The potential impact of non-performing loans on lending rates brought about by the country-specific share of funding costs (which can be observed in macroeconomic variables such as the risk premium on government bond yields) is not included in the empirical study.

Overall, the results of the estimates indicate that banks make their lending conditions more restrictive if they fear that further losses may result from the stock of NPLs in future, and thus that the relevance of capital restrictions might increase later on. Provided a positive relationship can be identified between non-performing loans and lending rates, then this is attributable to the net stock of NPLs. Net NPLs ultimately indicate the extent to which further losses may be incurred in the future.

Effects of non-performing loans on lending rates for new loans*

Percentage points



***** This chart shows the effects of an increase in the gross stock of non-performing loans in relation to total assets of 2 percentage points (roughly equivalent to the average increase in the period from 2009 to 2015 in the sample used) on the lending rates for new loans to enterprises in the following year. It is assumed that LLRs amounting to 45% of the gross exposure volume are earmarked for loans which have become non-performing (broadly equivalent to the average level of coverage in the sample used). The chart shows the isolated effects of an increase in the net stock of NPLs and in LLRs as well as the overall impact. The point estimators and the 95% confidence interval are both depicted. The chart is based on the results presented in the table, where a value equal to the mean of the sample was used for the one-year overnight index swap (OIS) rate. **1** System-generalised method of moments.

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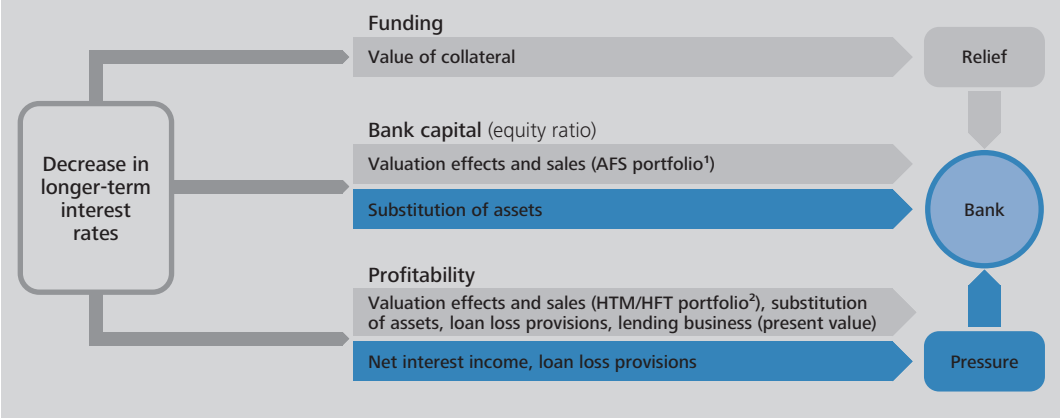
9 For more on this result, see also U Albertazzi, A Nobili and F M Signoretti (2016), The bank lending channel of conventional and unconventional monetary policy, Temi di Discussione Banca d'Italia No 1094.

Channels via which a decrease in longer-term interest rates is transmitted to banks



This chart is based on the IFRS (International Financial Reporting Standards) accounting standards for banks. **1** AFS = Available for sale. **2** HTM = Held to maturity; HFT = Held for trading.
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… and, hence, the profitability of banks

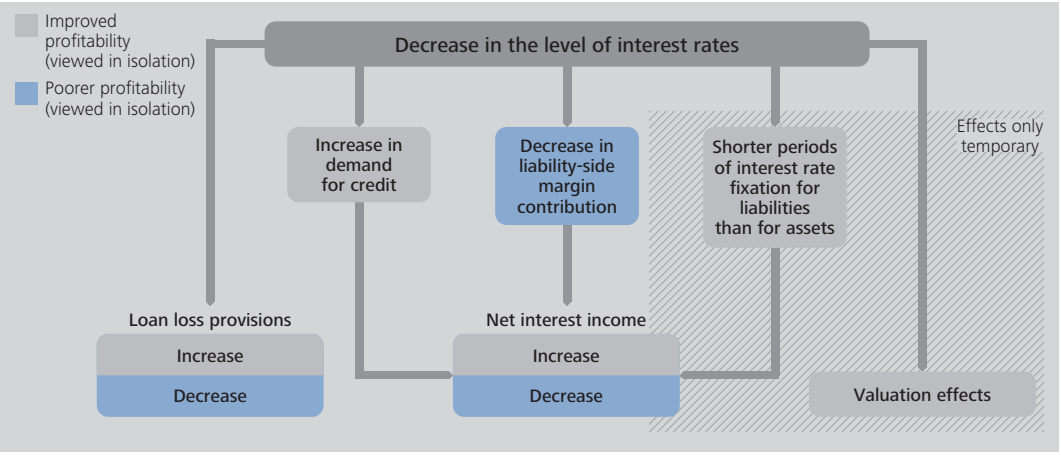
ance and profitability of banks.[25] In this context, developments in net interest income – calculated as the difference between interest received and interest paid – and in LLPs depend especially on the interest rates in an economy. For example, lower interest rates reduce borrowers' interest burden and increase the present value of their collateral, which should reduce aggregate credit default risk, thereby having positive effects on LLPs in banks' lending business (and *vice versa)*.[26] At the same time, however, the relation postulated in the risk-taking channel could also occur, according to which low interest rates raise banks' risk appetite, which ought to have a negative impact on their LLPs.[27] Furthermore, changes in the interest rate level have a one-off effect on the value of marked-to-market assets held by banks. A decrease in interest rates is typically associated with higher market values and therefore has a positive impact on profitability.

A bank's net interest income can be broken down into three components

Net interest income is the most significant component of operating income for the majority of banks in the euro area.[28] In general, banks generate their net interest income from three different sources: a mark-up on lending rates calculated using the potential yield for a comparable alternative money or capital market investment (asset-side margin contribution), a discount on deposit rates calculated using a comparable funding alternative via the money or capital market (liability-side margin contribution), and earnings from maturity transformation (structural contribution).[29] The latter item is the result of the typically longer interest rate fixation periods for loans issued and securities held by banks compared with those for their debt. Owing to the different maturities on the asset and liability sides of banks' balance sheets, the structural contribution has a positive dependency on the slope of the yield curve.

25 See P A Samuelson (1945), The effect of interest rate increases on the banking system, The American Economic Review 35(1), pp 16-27; M J Flannery (1981), Market interest rates and commercial bank profitability: an empirical investigation, The Journal of Finance 36(5), pp 1085-1101; and D Hancock (1985), Bank profitability, interest rates, and monetary policy, Journal of Money, Credit and Banking 17(2), pp 189-202.
26 In addition to the direct impact it has on LLPs, a lower interest rate level may also have indirect consequences – such as stronger economic growth induced by the decrease in interest rates.
27 See C Borio and H Zhu (2012), op cit.
28 In 2016, net interest income accounted for just over 60% of euro area banks' total operating income. For banking groups which rely mainly on traditional lending business, such as Germany's savings banks and credit cooperatives, this ratio is approximately 76%. See European Central Bank, Report on financial structures, October 2017; and Deutsche Bundesbank, The performance of German credit institutions in 2016, Monthly Report, September 2017, p 64.
29 See also C Drescher, B Ruprecht, M Gründer, M Papageorgiou, E Töws and F Brinkmann (2016), The crux of the matter with deposits: low interest rates squeezing credit institutions' margins, Deutsche Bundesbank Research Brief No 4.

Effects of a decrease in interest rates on selected components of bank profitability



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Impact of a change in interest rates on net interest income dependent on degree of maturity transformation

Changes in the interest rate level usually affect banks' lending rates as well as their funding costs. Since interest rate fixation periods on the liability side of banks' balance sheets are shorter than on the asset side, however, this means that these kinds of changes are reflected more quickly in interest paid than in interest received. When rates fall, this relieves pressure on net interest income to begin with, but over time, the "old", higher-interest loans expire and are increasingly replaced by lower-yielding loans. The shorter the interest rate fixation period is on the asset side, the faster the initial positive effect on net interest income is likely to wear off. Thus, the impact of lower interest rates on banks' loan portfolio depends on the banks' maturity transformation levels. While banks benefit from higher-yielding loan contracts with long interest rate fixation periods when interest rates fall, a rise in the interest rate level can put pressure on them.

Overall effect of interest rate decline also depends on deposit rates' sensitivity to market rates

The overall effect on net interest income of an increase in interest rates also depends on the different sensitivity of bank lending and deposit rates to market interest rates (see the above chart). For instance, the empirical literature shows that the pass-through of changes in the market rate is less complete for deposit rates than for lending rates; in other words, there is greater friction associated with the pricing of deposits.[30] Assuming a symmetrical incomplete pass-through – that is to say, irrespective of the direction of the change in the interest rate level – it follows that the liability-side margin contribution will contract with a decrease in interest rates.[31] One reason for the lagged reaction of deposit rates to a change in market interest rates is the long length of time deposits are actually held at the bank. Customer deposits are usually one of the most stable sources of funding for banks, despite depositors' ability to access them quickly and at low cost.[32]

30 For more information, see L Gambacorta (2008), How do banks set interest rates?, European Economic Review 52, pp 792-819; and S Claessens, N Coleman and M Donnelly (2017), "Low-for-long" interest rates and banks' interest margins and profitability: cross-country evidence, CEPR Discussion Paper DP 11842.

31 J C Driscoll and R A Judson (2013) demonstrate that, for the US banking sector, the degree to which deposit rate adjustments lag can vary depending on a number of factors, such as deposit type or bank size, when interest rates either rise or fall. See J C Driscoll and R A Judson (2013), Sticky deposit rates, Finance and Economics Discussion Series 2013-80, Board of Governors of the Federal Reserve System (US).

32 Drechsler et al (2016) offer another explanation for an incomplete interest rate pass-through to deposits. According to the theoretical model outlined in this paper, banks' market power in respect of setting deposit rates diminishes when interest rates fall, since the opportunity cost of holding cash declines and it becomes increasingly more attractive to hold cash than to hold deposits. This is reflected in a lower liability-side margin contribution – defined as the difference between deposit rates and market rates – and implies an incomplete pass-through of the reduction in market rates to deposit rates. See I Drechsler, A Savov and P Schnabl (2016), The deposits channel of monetary policy, NBER Working Paper Series No 22152.

Liability-side margin contribution weighs on net interest income in low-interest-rate environment

In a low-interest-rate environment, the liability-side margin contribution – at least in retail business – is under particular pressure, owing to the existence of a zero lower bound for deposit rates. For example, Busch and Memmel (2017) find that, in the case of German banks, the low-interest-rate environment of the past few years has caused margins for customer deposits to drop more steeply than in the pre-financial crisis period.[33] The results of the Bundesbank and the Federal Financial Supervisory Authority (BaFin) low-interest-rate survey among small and medium-sized German credit institutions show that a decreasing liability-side margin contribution weighs on profitability in a low-interest-rate environment.[34] When a zero lower bound exists for deposit rates, the liability-side margin contribution can even be an expense (rather than income), thus causing – in extreme cases – net interest income to erode (see the chart on page 45).[35] Banks may combat this risk in a low-interest-rate environment, *inter alia*, by factoring a mark-up into their lending rates, thereby strengthening the asset-side margin contribution, if competition permits, or generating higher profits from the structural contribution.[36] In this way, unhedged interest rate risks can stabilise profitability in the short term. In the current low-interest-rate environment, it is clear to see that some categories of banks have expanded their maturity transformation.

Aggregate demand for credit also influenced by interest rates

In addition, the interest rate level has an impact on aggregate demand for credit: when viewed in isolation, falling interest rates lead to a general rise in demand for credit.[37] Thus, banks are able to sell a higher volume of loans and raise their net interest income – all other things being equal – while the asset-side margin contribution remains constant. Banks could also use this higher demand to increase the asset-side margin contribution, although this is likely to dampen the boost in lending.

A low-interest-rate environment is exceptional not only with regard to the effect of interest rate decreases as a result of the zero lower bound on deposit rates, but also in terms of the impact of rising interest rates on net interest income. It appears that an increase in the level of interest rates, particularly coming from a low-interest-rate environment, has a positive effect on net interest income (see the box on pages 47 to 51). The reduction in income from maturity transformation resulting from the rise in interest rates is likely to have a narrowing effect on net interest income only in the short to medium term. The negative effect of subdued credit demand and the positive impact of an increase in the liability-side margin contribution on net interest income, however, prevail over the longer term. The positive impact of a higher liability-side margin contribution is likely to be significant, particularly following a period of persistently low interest rates. Overall, depending on the extent of banks' maturity transformation, an increase in interest rates should negatively affect net interest income in the short to medium term, but positively influence it over the longer term.[38]

Higher interest rates tend to have positive effect on net interest income over the long term

Net interest margin is net interest income over average earning assets

The net interest margin is typically at the centre of empirical analyses on the influence of the interest rate level on the profitability of banks. It is calculated as the ratio of net interest income to the volume of average earning assets.

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33 See R Busch and C Memmel (2017), Banks' net interest margin and the level of interest rates, Credit and Capital Markets, Vol 50, No 3, pp 363-392.

34 For more information, see C Drescher et al (2016), op cit; and http://www.bundesbank.de/Redaktion/EN/Pressemitteilungen/BBK/2017/2017_08_30_joint_press_release.html?nsc=true

35 See C Drescher et al (2016), op cit; and C Borio and B Hofmann (2017), Is monetary policy less effective when interest rates are persistently low?, BIS Working Paper No 628, pp 15-18.

36 Evidence that the zero lower bound on deposit rates also influences the setting of lending rates can be found in G B Eggertsson, R E Juelsrud and E G Wold (2017), Are negative nominal interest rates expansionary?, NBER Working Paper 24039.

37 Apart from interest rates' direct effect on demand for credit, they also impact on other variables, such as economic growth or the employment rate, which in turn influence the demand for credit.

38 For a corresponding study for Germany, see R Busch and C Memmel (2017), op cit. Equivalent results for the net interest margin are derived by P Alessandri and B D Nelson (2015), Simple banking: profitability and the yield curve, Journal of Money, Credit and Banking, Vol 47(1), pp 143-175.

$$Net\ interest\ margin_t = \frac{Average\ earning\ assets_t * Interest\ rate_t^{Assets} - Interest\text{-}bearing\ liabilities_t * Interest\ rate_t^{Liabilities}}{Average\ earning\ assets_t}$$

In empirical studies, average earning assets are often approximated by total assets or the lending and securities portfolios, since information is very limited as to the exact volume of non-trading-book assets from which banks generate interest income.[39] On account of the subdued demand for credit, average earning assets are expected to decline when interest rates rise, and *vice versa* when rates fall. If the reduction in net interest income (the numerator) outweighs the decline in average earning assets (the denominator), an interest rate hike would have a negative impact on the net interest margin in the short to medium term. However, an interest rate rise would have a positive impact on the net interest margin if either the average earning assets fell less sharply than net interest income or if the increase in interest rates were to raise net interest income, which would then cause the quotient to grow because the numerator and the denominator are moving in opposite directions. Where the volumes of average earning assets and interest-bearing liabilities are identical, the net interest margin would change solely on the basis of price adjustments by banks.

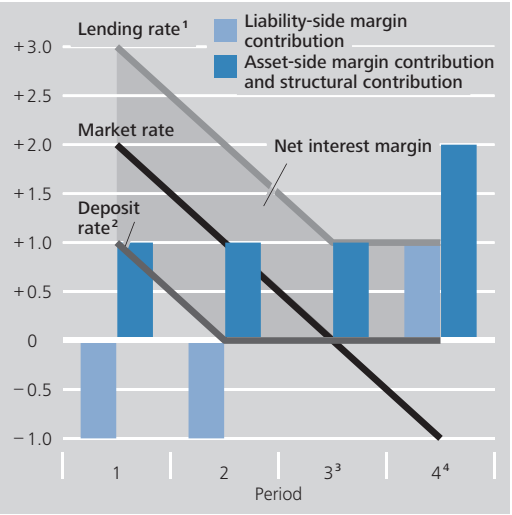
Positive relationship between net interest margin and both interest rates and slope of yield curve

In the majority of cases, recent empirical studies have found a positive relationship between the net interest margin and interest rate levels as well as the slope of the yield curve.[40] On top of this, some studies also look into the specific case of a low-interest-rate environment.[41] They reveal that the sensitivity of the net interest margin to market rates increases in a low-interest-rate environment, which suggests that the relationship between banks' net interest margin and the interest rate level in an economy is non-linear. The consensus of these studies is that a prolonged period of low interest rates, when viewed in isolation, erodes banks' profitability as measured by their interest business.

The impact of the interest rate level on LLPs is not clear *a priori* (see the chart on page 43).

Stylised view of the impact of low interest rates on banks' rate-setting behaviour given a zero lower bound for deposit rates

%



1 Lending rate equals market rate plus asset-side margin contribution and structural contribution. **2** Deposit rate equals market rate plus liability-side margin contribution. **3** If the market interest rate equals zero, the liability-side margin contribution is also equal to zero. **4** If the market interest rate is negative, the liability-side margin contribution is positive. In order to prevent a net interest margin of zero, banks increase their asset-side margin contribution and/or structural contribution.

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39 For the net interest income item in the profit and loss account, the relevant bank portfolios are those which are not marked to market in the balance sheet.

40 See U Albertazzi and L Gambacorta (2009), Bank profitability and the business cycle, Journal of Financial Stability, No 5, pp 393-409; W B English, S J Van den Heuvel and E Zakrajsek (2012), Interest rate risk and bank equity valuations, Finance and Economics Discussion Series, Board of Governors of the Federal Reserve System, pp 2012-2026; U Gunter, G Krenn and M Sigmund (2013), Macroeconomic, market and bank-specific determinants of the net interest margin in Austria, Oesterreichische Nationalbank Financial Stability Report 25, pp 87-101; H Genay and R Podjasek (2014), What is the impact of a low interest rate environment on bank profitability?, Chicago Fed Letter July, No 324; P Alessandri and B D Nelson (2015), op cit; C Borio, L Gambacorta and B Hofmann (2015), The influence of monetary policy on bank profitability, BIS Working Paper October, No 514; and J Bikker and T Vervliet (2017), Bank profitability and risk-taking under low interest rates, DNB Working Paper No 560.

41 See C Borio, L Gambacorta and B Hofmann (2015), op cit; R Busch and C Memmel (2017), op cit; and S Claessens, N Coleman and M Donnelly (2017), op cit.

Lower interest rate level tends to have positive effect on LLPs

Empirical studies indicate that the pressure on earnings from LLPs is relieved when interest rates fall, therefore running in the opposite direction to the factors depressing earnings with respect to the net interest margin.[42] LLPs are linked to banks' assessment of their credit risk, which may involve a certain degree of discretion when determining them. The pressure on banks' profitability following a decrease in the net interest margin could give them an incentive to make a more optimistic assessment of their credit risk in order to compensate for this pressure.[43] Overall, the findings of the relevant literature suggest that a decrease in the level of interest rates has a greater impact on the net interest margin than on the return on assets.[44] Some studies were no longer even able to identify an effect on the latter.[45]

Empirical analysis for the euro area of the relationship between the interest rate level and the net interest margin

Empirical analysis for the euro area focuses on the low-interest-rate environment

The empirical analysis presented in the box on pages 47 to 51 examines the link between euro area banks' net interest margin and short-term interest rates as well as the slope of the yield curve for the years 2007 to 2016, ie a period which was, for the most part, characterised by a low-interest-rate environment. The study does not break down the net interest margin into the previously mentioned components (asset-side and liability-side margin contributions and the structural contribution).

Positive relationship between interest rate level and net interest margin only when interest rates are low

The analysis concludes that the interest rate level and the slope of the yield curve have a positive impact on the net interest margin of banks in the euro area and that the relationship is concave. Thus, the positive relationship between short-term interest rates and the net interest margin exists only if the short-term interest rate level is low. This finding is consistent with the above-mentioned results in the empirical literature. According to the estimation results, a persistent low-interest-rate environment, all other things being equal, erodes the net interest margin, at least with respect to traditional lending and deposit business. This can be explained by the fact that an interest rate decrease pushes down the net interest margin over not only the short term but also the longer term, since the remaining stock of high-interest loans will increasingly be replaced by new loans at lower interest rates as time goes on. The longer the low-interest-rate environment persists, the more likely the zero lower bound on deposit interest rates is to weigh on the net interest margin. In addition, the analysis shows that the slope of the yield curve becomes even more significant for the development of the net interest margin, the longer the periods of interest rate fixation in the loan portfolio are.

Rate rises in a low-interest-rate environment thus have profit-boosting effect

The strong positive relationship between the interest rate level and the net interest margin in the low-interest-rate environment implies that rate rises have a positive impact on the net interest margin of euro area banks, despite the countervailing effect produced by subdued demand for credit. In other words, banks are able to increase their average net income per asset as a result of interest rate rises. Beyond a certain level of higher interest rates, however, this relationship is either no longer significantly different from zero or negative. Thus, interest rate rises would have a restrictive effect on banks' profitability when the interest rate level is

42 See U Albertazzi and L Gambacorta (2009), op cit; C Borio, L Gambacorta and B Hofmann (2015), op cit; and C Altavilla, M Boucinha and J L Peydró (2017), Monetary policy and bank profitability in a low interest environment, ECB Working Paper Series No 2105.
43 For evidence on the use of LLPs to smooth profits, see G Gebhardt and Z Novotny-Farkas (2011), Mandatory IFRS adoption and accounting quality of European banks, Journal of Business Finance & Accounting, Vol 38, No 3, pp 289-333. The authors come to the conclusion, however, that this smoothing practice has eased significantly since the IFRS accounting standards were introduced.
44 See C Borio, L Gambacorta and B Hofmann (2015), op cit; and H Genay and R Podjasek (2014), op cit.
45 See C Altavilla, M Boucinha and J L Peydró (2017), op cit; and C Claessens, N Coleman and M Donnelly (2017), op cit.

Empirical study on the impact of the interest rate level and the slope of the yield curve on euro area banks' net interest margin

The individual Balance Sheet Items (iBSI) microdatabase (the source of the individual balance sheet items) and the individual MFI Interest Rate (iMIR) microdatabase (based on which the net interest margin of outstanding business is calculated) are used to examine the impact of the interest rate level and the slope of the yield curve on euro area banks' net interest margin.[1] Since the iBSI and iMIR data are reported monthly, it is possible to calculate the net interest margin on a monthly basis rather than quarterly or annually. In comparison to the net interest margin from the profit and loss account, this admittedly comprises only traditional banking business; however, analysing the impact of the interest rate – a high-frequency variable – on the net interest margin at a more frequent interval is advantageous from an empirical perspective. As the analysis does not have to rely on data published in the annual financial statements of large banking groups, the sample also includes many smaller banks for which net interest income is typically by far the most relevant income component. Restricting this analysis to the traditional banking business is also not so critical because this is the focus of the theoretical literature and the discussions on the potential burden of the low-interest-rate environment (including loss of the liability-side margin contribution, for instance). However, there are no monthly data available that would enable total profitability to be analysed empirically.[2]

The benchmark model takes the following form:

$$y_{i,t} = \sum_{n=1}^{2} \beta_n Y_{i,t-n} + \lambda X_{i,t-1} + \omega Y_{j,t} + \gamma_1 \sigma_t + \gamma_2 r_t + \gamma_3 r_t^2 + \gamma_4 \theta_{j,t} + \gamma_5 \theta_{j,t}^2 + \vartheta_1,$$

where y_{it} represents the net interest margin for bank i in month t. The use of quadratic terms makes it possible to include certain types of non-linearities.[3]

Country-specific variables are indexed with j. Alongside the interest rate variables – r_t represents the three-month overnight index swap (OIS) rate and $\theta_{j,t}$ the country-specific slope of the yield curve[4] – the dynamic model is based on the first two lags of the net interest margin $y_{i,t-1}$ and $y_{i,t-2}$, on a vector $X_{i,t-1}$ of bank-specific variables (capital ratio, loan loss provisions[5] over average total assets, government bonds over total assets, customer deposits over liabilities and log total assets (excluding capital))[6], on a vector $Y_{j,t}$ of country-specific macroeconomic variables (Herfindahl concentration index, GDP growth rate, stock index growth

1 See M Klein and S Bredl (2018), The relevance of the level of interest rates for banks' net interest margin in the euro area, Mimeo.
2 Other studies use lower-frequency data to analyse total profitability; see, inter alia, C Altavilla, M Boucinha and J L Peydró (2017), Monetary policy and bank profitability in a low interest environment, ECB Working Paper Series No 2105.
3 See C Borio, L Gambacorta and B Hofmann (2015), The influence of monetary policy on bank profitability, BIS Working Paper No 514.
4 The difference between the ten-year country-specific sovereign bond yield and the three-month OIS rate represents the slope of the yield curve. The source of data on the ten-year sovereign bond yield is the ECB Statistical Data Warehouse; that of the three-month OIS rate is Thomson Reuters Datastream.
5 Loan loss provisions is a flow variable which, if positively signed, represents earnings (eg release of loan loss provisions) and, if negatively signed, represents an expense (eg formation of loan loss provisions).
6 Earnings and capital metrics (capital ratio, loan loss provisions over average total assets) are based on annual data (interpolated from monthly data) and are sourced from the S&P Global Market Intelligence (formerly SNL Financial) and Orbis Bank Focus (formerly Bankscope) databases. These data are linked to the iBSI and iMIR data at the level of the individual bank.

Regression results of the benchmark model[o]

Variables	Model 1	Model 2
Y_{t-1}	0.7573*** (0.0669)	0.7573*** (0.0774)
Y_{t-2}	0.1799*** (0.0606)	0.1799** (0.0716)
$GovBonds\_Assets_{t-1}$	– 0.0003 (0.0012)	– 0.0003 (0.0012)
log_Assets_{t-1}	0.0154 (0.0135)	0.0154 (0.0158)
$Dep\_Liabilities_{t-1}$	0.0004 (0.0004)	0.0004 (0.0004)
$CapitalRatio_{t-12}$	– 0.0021 (0.0018)	– 0.0021 (0.0020)
$LoanLossProvisions\_Assets_{t-12}$	0.0772** (0.0326)	0.0772** (0.0368)
Herfindahl_Concentration-Index	– 0.3455** (0.1589)	– 0.3455* (0.1862)
ΔGDP	0.0010 (0.0008)	0.0010 (0.0009)
ΔStockIndex	0.0002 (0.0002)	0.0002 (0.0004)
Vol_{OIS3M}	– 0.0701*** (0.0134)	– 0.0701*** (0.0188)
Short-TermRate	0.0416*** (0.0081)	0.0416*** (0.0123)
Short-TermRate^2	– 0.0056*** (0.0019)	– 0.0056 (0.0035)
YieldCurveSlope	0.0218*** (0.0046)	0.0218*** (0.0081)
YieldCurveSlope^2	– 0.0026*** (0.0005)	– 0.0026*** (0.0009)
Observations	12,045	12,043
Number of banks	174	172
AvgT	69	70
Bank FE	yes	yes
Cluster-robust standard errors at bank level	yes	yes
Cluster-robust standard errors at country * month level	no	yes

o Y_{t-n} represents the dependent variable, ie the net interest margin. The short-term interest rate is the three-month overnight index swap (OIS) rate. The slope of the yield curve is calculated from the ten-year country-specific sovereign bond yield minus the three-month OIS rate. Estimation period: August 2007 to December 2016. Cluster-robust standard errors in brackets: *** p<0.01, ** p<0.05, * p<0.1.

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rate)[7] and of the volatility of the short-term interest rate σ_t.[8] ϑ_i is the term for bank fixed effects which corrects for individual, time-constant and unobserved factors. The regressions were estimated using OLS (Within-estimator) and cluster-robust standard errors at bank level.[9,10] Owing to potential endogeneity between the dependent variables and the other bank-specific variables, the latter are fed into the estimation with a lagged term. In the case of the interpolated annual data, the first lagged observation is the preceding year. The estimation period runs from August 2007 to December 2016. Government authorities' responses to the financial and sovereign debt crisis, which occurred during this period, included enormous government rescue packages for banking sectors. By that token, the relationship between the capital ratio and the net interest margin in the empirical study is likely to be biased if there is no check for government recapitalisation measures.[11] The banks concerned are thus included in the regressions only after successful recapitalisation.[12] In addition, the dataset was adjusted to remove Greek, Cypriot and Estonian banks since either no data were available on long-term government bond yields or they took on extreme values over a lengthy period owing to the sovereign debt crisis. On the whole, the banking sample of

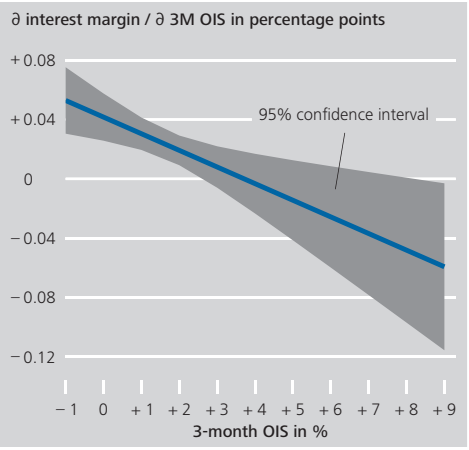
7 The data source for the Herfindahl concentration index is the ECB Statistical Data Warehouse; for seasonally adjusted GDP, Eurostat; for the stock index, Thomson Reuters Datastream.
8 The volatility of the short-term interest rate is the 12-month moving standard deviation of the three-month OIS rate.
9 To analyse for robustness, the estimation was also performed using two-way clustering (at bank level and, at the same time, using an interaction term (country * month)). The results remained virtually unchanged.
10 The Nickell bias could theoretically bias standard errors. However, for panel estimations with a large time dimension – where the average T of the model is 69 – this bias tends to be negligible. See, for example, J Breitung, The analysis of macroeconomic panel data, in B H Baltagi (2015), The Oxford Handbook of Panel Data, Oxford University Press, pp 453-492.
11 For more information on the effects of government rescue packages on bank lending, see M Brei, L Gambacorta and G von Peter (2011), Rescue packages and bank lending, BIS Working Paper No 357.
12 The time of recapitalisation was set using the European Commission's state aid database (see http://ec.europa.eu/competition/state_aid/register/).

the estimation covers around 50% of the stock of loans granted to the private non-financial sector in the euro area.

In line with the results of the empirical literature, the results of the benchmark model show that the level of the short-term interest rate and the slope of the yield curve have a positive impact on euro area banks' net interest margin (see the table on page 48). The coefficients of the quadratic terms are also significantly different from zero. They are negatively signed meaning that the relationship between the interest rate level and the net interest margin is concave. The adjacent charts give a graphic representation of this development[13] using the first derivatives of the short-term interest rate and the slope. The relationship between the short-term interest rate and the net interest margin is positive only for lower values of the short-term interest rate. Borio et al (2015) ascertain similar findings in their analysis of globally active banking groups.[14] What is striking is the dependent variables' high degree of persistence, indicating that monthly new business only has a minor impact on the net interest margin. Moreover, during the financial and sovereign debt crisis, euro area banks took a rather cautious approach to new lending, which – all other things being equal – is likely to have increased the estimated persistence of the net interest margin compared to a non-crisis period.[15]

The negative relationship in the short run, which Busch and Memmel (2017) show empirically and Alessandri and Nelson (2015) show theoretically, suggests that there are temporal frictions in the pricing of loans due to the longer interest rate fixation periods, and these, in turn, suggest that the dynamics of the model are more complex

Effect of a change in the short-term interest rate on the net interest margin*



* The chart is based on the regression results of the benchmark model. The horizontal axis shows the three-month overnight index swap (OIS) rate. The vertical axis shows the first derivative of the net interest margin as a function of the short-term interest rate.

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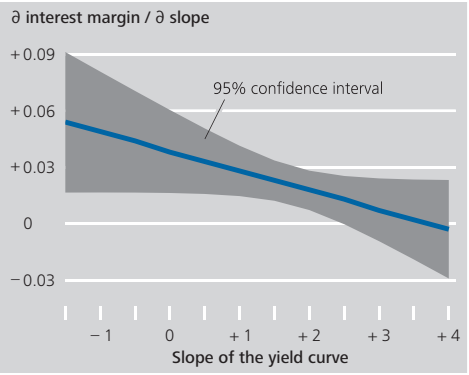
Effect of a change in the slope of the yield curve on the net interest margin*

Percentage points



* The chart is based on the regression results of the specification which contains only those countries where the banking system is characterised by long interest rate fixation periods for outstanding loans (BE, DE, FR, NL). The horizontal axis shows the country-specific slope of the yield curve. The vertical axis shows the first derivative of the net interest margin as a function of the slope (difference between the ten-year sovereign bond yield and the three-month overnight index swap (OIS) rate) of the yield curve.

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13 Concavity exists when the first derivative falls monotonically and the second derivative is negative. Both charts therefore implicitly show a concave relationship.

14 See C Borio et al (2015), op cit.

15 Persistence in empirical literature that uses quarterly and annual data is lower, but still the coefficient often lies between 0.8 and 0.9. For more information on credit growth in the euro area during the crisis period, see Deutsche Bundesbank, Recent developments in loans to euro-area non-financial corporations, Monthly Report, September 2015, pp 15-39.

Regression results of the robustness analyses[o]

Variables	Dynamic short-term interest rate	Stressed countries	Non-stressed countries	Countries with long interest rate fixation periods
Y_{t-1}	0.7559*** (0.0668)	0.9239*** (0.0188)	0.7092*** (0.0712)	0.6969*** (0.0716)
Y_{t-2}	0.1814*** (0.0605)	0.0208 (0.0193)	0.2226*** (0.0624)	0.2342*** (0.0621)
GovBonds_Assets$_{t-1}$	– 0.0002 (0.0012)	– 0.0003 (0.0012)	0.0002 (0.0019)	– 0.0011 (0.0026)
log_Assets$_{t-1}$	0.0161 (0.0134)	– 0.0090 (0.0134)	0.0436* (0.0222)	0.0553* (0.0282)
Dep_Liabilities$_{t-1}$	0.0004 (0.0004)	0.0007 (0.0004)	0.0001 (0.0007)	– 0.0003 (0.0009)
CapitalRatio$_{t-12}$	– 0.0017 (0.0019)	– 0.0025 (0.0023)	– 0.0004 (0.0031)	– 0.0003 (0.0044)
LoanLossProvisions_ Assets$_{t-12}$	0.0678** (0.0331)	0.0586 (0.0365)	– 0.0426 (0.0989)	– 0.0224 (0.1130)
Herfindahl_Concentration-Index	– 0.3690** (0.1620)	0.0158 (0.4952)	– 0.2103 (0.1577)	– 0.9670* (0.5457)
ΔGDP	0.0006 (0.0008)	0.0012* (0.0007)	– 0.0049** (0.0020)	– 0.0053* (0.0030)
ΔStockIndex	– 0.0002 (0.0002)	– 0.0001 (0.0002)	0.0004 (0.0003)	0.0005 (0.0004)
Vol$_{OIS3M}$	– 0.0554*** (0.0126)	– 0.0971*** (0.0114)	– 0.0825*** (0.0218)	– 0.0833*** (0.0248)
Short-TermRate	0.1409*** (0.0198)	0.0743*** (0.0089)	0.0278** (0.0115)	0.0304** (0.0136)
Short-TermRate$_{t-1}$	– 0.0919*** (0.0167)			
Short-TermRate^2	– 0.0070*** (0.0020)	– 0.0094*** (0.0023)	– 0.0047 (0.0031)	– 0.0065* (0.0035)
YieldCurveSlope	0.0165*** (0.0043)	0.0096* (0.0051)	0.0427*** (0.0089)	0.0384*** (0.0113)
YieldCurveSlope^2	– 0.0021*** (0.0005)	– 0.0013** (0.0005)	– 0.0065*** (0.0019)	– 0.0052* (0.0028)
Observations	12,045	4,381	7,664	5,812
Number of banks	174	60	114	82
AvgT	69	73	67	71
Bank FE	yes	yes	yes	yes

o Y_{t-n} represents the dependent variable, ie the net interest margin. The short-term interest rate is the three-month overnight index swap (OIS) rate. The slope of the yield curve is calculated from the ten-year country-specific sovereign bond yield minus the three-month OIS rate. Stressed countries are Spain, Italy, Ireland, Portugal and Slovenia. Countries where the banking system is characterised by long interest rate fixation periods are Belgium, Germany, France and the Netherlands. Estimation period: August 2007 to December 2016. Cluster-robust standard errors at bank level in brackets: *** p<0.01, ** p<0.05, * p<0.1.

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with regard to the interest rate variables.[16] To check the validity of the dynamics of the empirical model, the lagged interest rate variable is thus included in the regression by means of a robustness analysis. Furthermore, consideration is also given to the heterogeneity of the European banking sector, which also came to light in particular as a result of the crisis, by differentiating between those countries that were more affected by the sovereign debt crisis (Spain, Italy, Ireland, Portugal and Slovenia) and those that were less affected. Moreover, a separate specification is estimated for those

16 See P Alessandri and B D Nelson (2015), Simple banking: Profitability and the yield curve, Journal of Money, Credit and Banking, Vol 47(1), pp 143-175; and R Busch and C Memmel (2017), Banks' net interest margin and the level of interest rates, Credit and Capital Markets 50(3), pp 363-392.

countries where long interest rate fixation periods are highly dominant in banks' stock of loans (Belgium, Germany, France and the Netherlands).[17]

The significance of the coefficients of the lagged short-term interest rate and the lagged endogenous variable shows that the dynamics of the short-term interest rate provide additional explanatory content (see the table on page 50).[18] Overall, in terms of quality, the results are robust; the quantitative importance of the short-term interest rate and the slope of the yield curve for the net interest margin varies, however. For the countries affected by the crisis, where the banking system is characterised by variable interest rates and short interest rate fixation periods for the stock of loans, the impact of the short-term interest rate on the net interest margin, including the quadratic term, is – as expected – rather pronounced compared to the other specifications; conversely, the country-specific slope of the yield curve has virtually no impact on the net interest margin.[19] The structurally high share of long interest rate fixation periods in Belgium, Germany, France and the Netherlands is also reflected in the high importance of the slope of the yield curve. The relationship between the short-term interest rate and the margin of the banks in these countries, on the other hand, is much weaker and linear; the coefficient of the quadratic term is insignificant.

17 Data on the interest rate fixation periods for outstanding business are not available at individual bank level in the iBSI microdatabase.
18 Since the correlation between the contemporaneous short-term interest rate and its first lag is approaching one, caution should be exercised when interpreting the level of the estimated coefficient owing to multicollinearity.
19 In these countries (Spain, Italy, Ireland, Portugal and Slovenia), loans with short interest rate fixation periods and a variable interest rate make up around 80% of the stock of loans.

higher. This is consistent with the findings of Van den Heuvel (2007), who models the reactions of banks on the basis of interest rate levels of 5% and 6%.

Conclusion

Impact of monetary policy decisively dependent on banks' balance sheet situation

Bank profitability and capital have, for a number of reasons, been receiving greater attention of late, including from monetary policymakers. One reason for this is that banks play a central role in the transmission of monetary policy measures, and the stability and functioning of the banking system are therefore of key importance for monetary policy's effectiveness. Another is that recent research with differentiated modelling of bank-side transmission channels has revealed the existence of a two-way relationship between monetary policy and bank profitability and capital. By influencing the interest rate level and slope of the yield curve using their standard and non-standard measures, central banks have an impact on the development of bank profitability and capital. However, the balance sheet situation of banks (including their stock of NPLs and their capital endowment) as well as the prevailing interest rate level are decisive for the effectiveness of monetary policy.

In the low-interest-rate environment, decrease in interest rate level can negatively affect bank profitability

In light of the increased capital requirements of banks since the crisis and the persistent low-interest-rate environment, the finding presented in this article of a non-linear relationship between interest rates and banks' net interest margin is of particular interest. According to the empirical studies discussed, a strong positive relationship exists between the two variables when interest rates are at a low level, ie the net interest margin becomes even lower, the lower the interest rate level is. The net interest margin is closely tied to net interest income, which is generally the most significant component of operating income and is a key driver of a bank's overall profitability. In add-

ition, the latter is dependent on further components, such as LLPs or effects on the valuation of marked-to-market assets. While profitability is only impacted once by the effects on market prices induced by changes in the interest rate level, the effects on LLPs may also persist over the longer term. However, it is unclear whether these are sufficient to compensate for the narrowing of the net interest margin when the interest rate level is reduced in an environment of already low interest rates.

Bank capital channel can thus weaken monetary policy transmission in low-interest-rate environment

Hence, in a low-interest-rate environment, a situation may arise where expansionary monetary policy measures could, at least in the longer term, weigh on profitability, whereas restrictive measures would support profitability, impacting accordingly on banks' ability to build up capital and thus, in principle, also on lending. Ultimately, this means that, in the long term, the effect of a monetary policy measure transmitted through the bank capital channel would end up weakening the effect that was actually intended. This scenario is not consistent with previous analyses of this channel in the literature, which had considered the bank capital channel to be an amplifier of monetary policy. It should be emphasised, however, that these past studies did not factor the historically unusual environment of persistently low interest rates into their assumptions and they therefore postulated a contrasting relationship between monetary policy measures and the profitability of banks. On account of the demonstrated non-linear relationship, the empirical results of the analyses presented here show that when the general interest rate level is high, increases in central banks' official interest rates also have a restrictive effect. This is consistent with the findings of previous literature on the bank capital channel.

Good capital endowment in banking system crucial for monetary policy

The bank capital channel is likely to be particularly effective when banks' capital endowment is low – ie when they are operating at levels of capital close to those specified by regulatory requirements – and in addition, when access to capital in the market is constrained. It is precisely because the intended effects of monetary policy measures could be weakened by the bank capital channel in a low-interest-rate environment that good capital endowment – which is sufficiently above the regulatory minimum and which helps to ensure financial stability – is crucial from a monetary policy perspective. The worse the capital position of banks is, particularly in a low-interest-rate environment, the stronger any adverse reactions of the banks to monetary policy measures are likely to be, and the harder it will become for monetary policymakers to achieve their objective of maintaining price stability.

Developments in corporate financing in the euro area since the financial and economic crisis

In the wake of the financial crisis, the financing structure of non-financial corporations in the euro area as a whole and in the four large member countries (Germany, France, Italy and Spain) in particular, has changed significantly. Three main developments have been observed. First, in all of the countries considered in this article, a shift has occurred from funds raised externally (external financing) to financing with internally generated financial surpluses (internal financing). Against the backdrop of somewhat subdued investment overall, this development has been driven by relatively weak inflows through external financing and by, in some cases, a marked expansion of internal financing, which has largely been attributable to the fall in interest payments. Second, external financing has experienced a move away from borrowed capital towards equity capital, notably in Spain and Italy. In these countries, this shift can be seen as a reaction to the debt overhangs accumulated in the run-up to the financial and economic crisis and the European debt crisis. In doing so, enterprises addressed the rise in the risk of insolvency resulting from deteriorating sales opportunities and asset positions. Third, financing through bank loans, not least in Italy and Spain, has been substituted by other forms of debt such as loans from non-banks and debt securities. This development has mainly been caused by temporary supply constraints at banks.

The shift towards a higher share of internal and equity financing combined with a more diversified debt financing structure is likely to help make the financing of non-financial corporations as a whole less vulnerable to temporary financial constraints at individual sources of financing, particularly banks. The envisaged creation of a European capital market union could further advance this process. For monetary policy, it is important with regard to the transmission of monetary policy impulses through the various transmission channels to continuously monitor and analyse changes in financing behaviour and the associated financing structure of non-financial corporations.

Introduction

Financing conditions for non-financial corporations shape developments in the real economy …

Financing conditions for non-financial corporations have a significant impact on their investment behaviour, which is of great importance for both the short-term and the long-term development of the economy. Business investment, which is much more volatile than other components of gross domestic product (GDP), has a major impact on the business cycle. Moreover, through the development of the capital stock, it also plays a part in shaping the growth potential of the economy.

… and are, inter alia, affected by monetary policy

Financing conditions, for their part, are affected by factors such as monetary policy. A change in the monetary policy stance impacts on the overall financing environment and thus also on enterprises' financing costs. Changes in financing costs, in turn, have an impact on the profitability of investments and thus on demand for financing. At the same time, constraints at capital providers can affect the supply of financing for non-financial corporations, thereby impairing their investment activity. The interplay of these factors is ultimately reflected in the financing structure of enterprises.

Financing structure of euro area non-financial corporations changed since the financial and economic crisis

In the context of the financial and economic crisis, the financing structure of euro area non-financial corporations has in some cases shifted significantly. Against the backdrop of rather weak investment activity overall, three main trends have emerged despite a certain degree of country-specific heterogeneity.

- First, there has been a shift away from funds raised externally (external financing) to the use of surpluses generated through enterprises' operations (internal financing).
- Second, external financing has tended to experience a shift from borrowed capital to equity capital.
- Third, bank loans have lost some of their importance as a debt financing instrument compared with other forms of debt such as loans from non-banks and debt securities.

These three developments are described in detail and placed in context below. As the euro area aggregate in some cases masks different national changes, developments at the country level are also examined. Remarks are confined to the four large member countries of the euro area, ie Germany, France, Italy and Spain. Because of their economic importance, these four countries account for the majority of changes at the euro area level and at the same time reveal country-specific differences. The primary data source for the following remarks are the results of the financial accounts. The period under review is divided into two periods: the acute phase of the financial and economic crisis together with the subsequent recovery (2008 Q1 to 2011 Q2) and the subsequent period from the third quarter of 2011 up to the current end (2017 Q2). This breakdown is based on the business cycle in the euro area and comprises a complete upturn and downturn in each case.[1] Finally, possible macroeconomic and economic policy implications of a change in financing structure are discussed.

Theory of corporate financing

Main approaches of the theory of corporate financing

The theory of corporate financing distinguishes between two complementary main approaches to explaining the financing behaviour of non-financial corporations: the pecking order theory

1 For information on dating the business cycle, see http://cepr.org/content/euro-area-business-cycle-dating-committee

and the trade-off theory.[2] The former posits that non-financial corporations gear their financing along a hierarchy. Thus, they make use, first, of their internally generated payment surpluses (internal financing) and then use external funds in the form of borrowed capital only if the internal funds are insufficient to realise the targeted volume of non-financial asset formation.[3] Only as a last resort, according to this theory, do enterprises finance themselves through equity. The financing hierarchy is justified by the higher cost of the types of financing along the hierarchy; these, in turn, are mainly attributed to information and incentive problems between capital providers and the management of enterprises.[4] Amongst other things, this approach implies that when it comes to external financing, non-financial corporations chiefly make use of debt financing instruments.

Equity as a capital buffer to avoid insolvency

Conversely, enterprises which largely finance themselves through borrowed capital show only a low level of equity. This gives rise to the danger that even small losses may erode the enterprise's capital buffer, potentially resulting in its insolvency. This aspect is addressed by the trade-off theory, which states that enterprises build up a capital buffer to avoid the costs of a possible insolvency and, at the same time, to give them flexibility in increasing their leverage for future investment decisions.[5] This approach involves a conflict of objectives in that borrowed capital is preferable to equity because interest costs are tax-deductible. These two factors are weighed up to produce the optimal equity ratio. In this context, the (perceived) risk of insolvency very much depends on macroeconomic conditions, meaning that the optimal equity ratio may vary over time.

Choice of financing affected by structure of the corporate sector …

Shifts within and between the two categories of borrowed capital and equity may be attributable, *inter alia,* to structural and institutional factors such as, for instance, the size, age or business sector of an enterprise.[6] For example, it is easier for established large enterprises to place shares and debt securities on the capital markets, whereas young, small enterprises tend to be more dependent on bank loans or other equity, such as business shares and participating interests.

… and by supply-side conditions

In addition to these demand-side factors, supply-side conditions can generally also affect the choice between various debt instruments through changes in the relative financing costs. In this context, the interest payable by non-financial corporations depends on the financing costs and the risk premiums demanded by lenders. These, for their part, are closely linked to the balance sheet constraints and the risk appetite of investors.[7] Changes in these factors or adjustments to the regulatory framework, which affect the various capital providers in different ways, can have a crucial impact on their refinancing conditions and on the pricing of the funds they provide to non-financial corporations. This subsequently influences the relative attractiveness of the various financing instruments, which may ultimately lead to a change

2 See M Frank and V Goyal (2011), Trade-off and pecking order theories of debt, Handbook of empirical corporate finance: empirical corporate finance, S Elsevier, pp 135-202; J Berk and P DeMarzo (2014), Corporate finance, 3rd edition, chapters 15 and 16; and Deutsche Bundesbank, Long-term developments in corporate financing in Germany – evidence based on the financial accounts, Monthly Report, January 2012, pp 13-27. Empirical studies come to the conclusion that both explanatory approaches may be validated. See, for example, A De Jong, M Verbeek and P Verwijmeren (2011), Firms' debt-equity decisions when the static trade theory and the pecking order theory disagree, Journal of Banking and Finance, 35 (5), pp 1303-1314.

3 Both theories are therefore limited to the need for external financing in order to form non-financial assets. Furthermore, however, external financing can, in principle, also be raised to build up financial assets, for example in the form of equity investments.

4 See S Myers and N Majluf (1984), Corporate financing and investment decisions when firms have information that investors do not have, Journal of Financial Economics, 13 (2), pp 187-221. For more on the significance of information asymmetries for the financing of banks, see Deutsche Bundesbank, The importance of bank profitability and bank capital for monetary policy, Monthly Report, January 2018, pp 27-52.

5 See E Fama and K French (2002), Testing trade-off and pecking order predictions about dividends and debt, Review of Financial Studies, 15 (1), pp 1-33.

6 These factors, in turn, also have an impact – through the profitability and the form of fixed asset formation – on the relative importance of internal financing, financing with borrowed capital and equity financing.

7 See Deutsche Bundesbank, The importance of bank profitability and bank capital for monetary policy, Monthly Report, January 2018, pp 27-52.

in demand. Moreover, financial and regulatory restrictions at capital providers may completely deny non-financial corporations access to certain financing instruments, forcing them – where they can – to substitute them with other forms of financing.

Development of corporate financing

Total financing

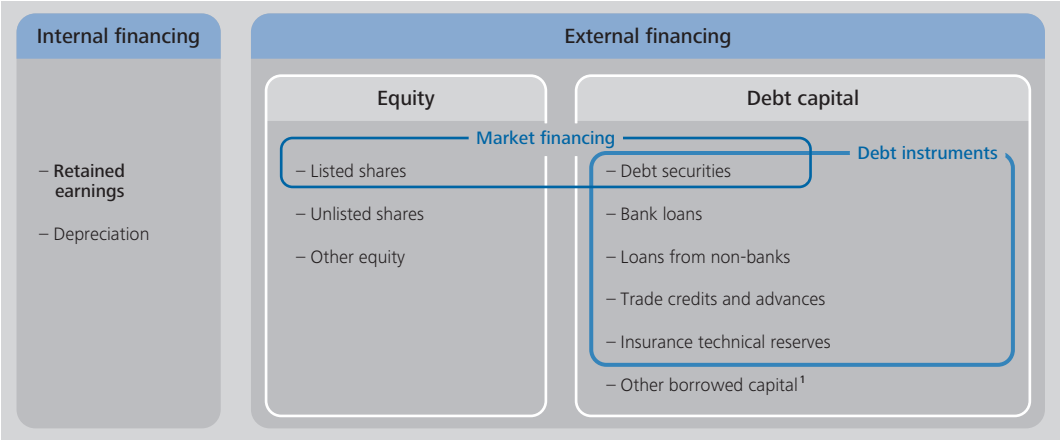
The chart on page 56 provides an overview of total financing, broken down by internal and external financing, of non-financial corporations. It shows flow figures which, in the case of external financing, correspond to transaction-related changes in outstanding liabilities. Internal financing derives from the economic activity of the business sector and corresponds to the sum of retained earnings and the equivalent of the depreciation of the capital stock.[8] In the case of external financing, external capital providers make funds available to enterprises in the form of both borrowed capital and equity capital. Borrowed capital can be further subdivided into debt instruments – bank loans, loans from non-banks, trade credits and advances, insurance technical reserves and debt securities – as well as other borrowed capital. With regard to equity capital, a distinction can be made between listed shares, unlisted shares and other equity such as business shares and participating interests. Listed shares and debt securities are often also subsumed under the term "market financing".

Accelerated growth in internal financing since 2008

The internal financing of euro area non-financial corporations has grown steadily since the end of the 1990s and accounted for 67% of total financing at mid-2017 (see the chart on page 57).[9] The main contribution came from the steady growth in depreciation, which accounted for an average of over 85% of total internal financing over the entire period under review.[10] On the other hand, internal financing fluctuated considerably in the wake of the recessions of 2008-09 and 2011-13 due to swings in retained earnings. Growth of internal financing gathered momentum slightly from 2008 as a result, in particular, of an accelerated expansion of retained earnings. This pushed the share of internal financing accounted for by

8 Depreciation of the capital stock represents expenses and thus part of the sales proceeds. It contributes to internal financing through the payment flows generated in this way.
9 In the interest of better comparability and adjustment of price effects, financing flows are expressed as a percentage of gross value added.
10 In the national accounts, depreciation is always calculated on a linear basis. This implies constant growth given an increasing capital stock.

Components of corporate financing



1 Derivatives and other liabilities.
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depreciation down to well below 80% at the current end.

Internal financing in Germany and Spain exceeding investment volume from 2009 onwards

At the country level, internal financing was stepped up in all four of the countries under review compared to the pre-crisis years, whereby the increases were especially pronounced in Germany and, even more so, in Spain. From the end of 2009, internal financing fully covered gross investment in both countries, which – according to the pecking order theory – in principle limits the need for external financing. This surplus of internal funds through investment expenditure implies that, contrary to what is commonly assumed in macroeconomic theory, the non-financial corporate sector provided the other sectors of the economy, including sectors abroad, with financing in net terms.

France and Italy with fundamental need for external financing

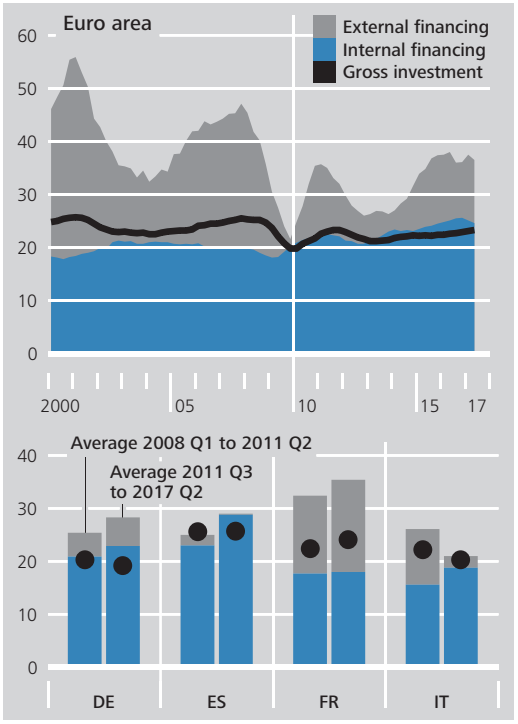
By contrast, gross investment in France and Italy exceeded internal financing on average over the entire period under review, implying a fundamental need for external financing for fixed asset formation. Whereas in France this was primarily due to strong investment activity by historical and international standards, in Italy it was mainly down to the comparative weakness of internal financing. That said, non-financial corporations in Italy steadily increased their internal financing from mid-2012, covering gross investment in its entirety from mid-2016.

External financing significantly weaker from 2008, notably in Spain

The external financing of euro area non-financial corporations has experienced significantly stronger cyclical fluctuations than internal financing; at the current end it stood at around 12% of gross value added, which was well below the levels recorded during previous upturns. Moreover, compared to the years before the global financial and economic crisis, the momentum has been considerably weaker as a whole since 2008. The decline was seen to be especially pronounced in Spain and, to a lesser extent, in Italy. The debt overhangs accumulated in both countries in the run-up to the financial and economic crisis, and the European debt crisis probably played a significant role in this.[11] As a result, the financing structure experienced a shift from external to internal financing. Moreover, within external financing as a whole there were, in some cases, opposing developments and marked shifts (for details, see the remarks on pages 60 to 71).

Financing and investment in the euro area and selected member countries

As a percentage of gross value added, four-quarter moving sums



Sources: ECB and Bundesbank calculations.
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Components of internal financing

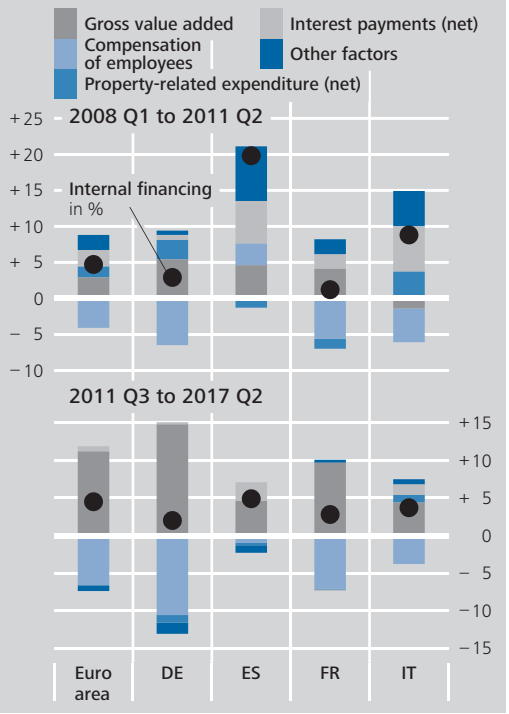
Constituent components of internal financing

In order to identify the factors that contributed to the rise in growth of internal financing, it is broken down into its contributions to growth. The key components of internal financing in the national accounts (NA) are gross value added and the compensation of employees. Moreover, net interest payments (difference

11 See Deutsche Bundesbank, Recent developments in the indebtedness of the private non-financial sector in selected euro area countries, Monthly Report, January 2017, pp 41-58.

Contributions to percentage change in internal financing

Average annual rate of change in percentage points



Sources: ECB and Bundesbank calculations.
Deutsche Bundesbank

between interest payments and interest income), other net property-related expenditure (difference between distributions to shareholders and revenue from participating interests) as well as a number of other factors such as taxes, transfers and social security contributions can affect the scope for internal financing.[12] The above chart shows the average change in internal financing in the two periods defined above, together with the individual components' contributions to growth.

Gross value added and compensation of employees as the main factors

For the euro area as a whole and for Germany and France in particular, gross value added provided the most significant positive contribution, whereas the compensation of employees made clearly negative contributions to the development of internal financing. Unlike in the other countries considered here, the compensation of employees paid by non-financial corporations in Spain declined significantly given the tense labour market situation despite the increase in gross value added, and thus had a positive impact on internal financing. In Italy, by contrast, the compensation of employees continued to rise between 2008 and 2011 and, viewed in isolation, reduced internal financing, while gross value added stagnated and consequently did not constitute a positive contribution to growth.

Net interest payments reduced by accommodative monetary policy

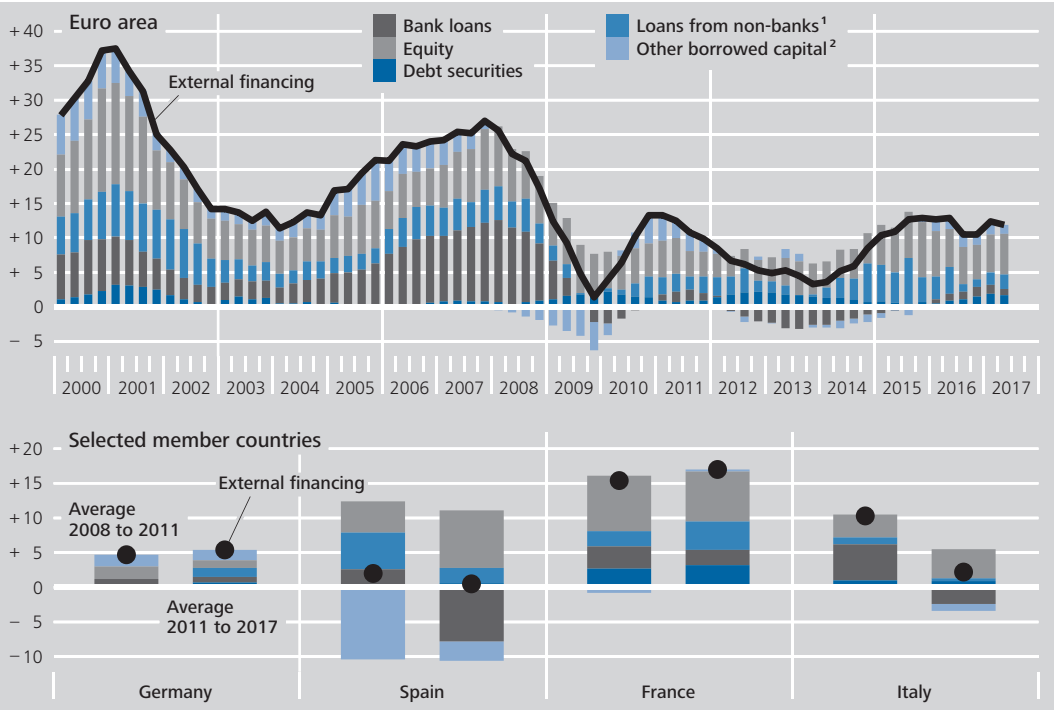
Especially in the period following the onset of the financial and economic crisis, the internal financing of euro area non-financial corporations grew, above all in Italy and Spain, as a result of the accommodative monetary policy measures not least due to a reduction in net interest payments. However, this effect was only very small in Germany due both to the great importance that borrowers attached to fixed-rate loans and to the low debt levels. Lower net property-related expenditure likewise contributed to the rise in non-financial corporations' internal financing in Germany and, above all, in Italy between 2008 and 2011. In Italy, this effect was mainly due to a reduction in profit distributions. In addition, a decrease in taxes paid led to a significant increase in internal financing in Italy and Spain.

Combined, internal financing in the euro area as a whole and at the country level in Germany, France and Spain has therefore gone up since the financial and economic crisis as a result, mainly, of an increase in value added compared with the compensation of employees.[13] By contrast, the marked rise in internal financing at non-financial corporations in Italy is primarily driven by financial factors, first and foremost the low interest rates. This means that their potential for internal financing could decline again in an environment of rising interest rates.

12 A distinction has to be made between the determinants according to the NA and the economic determining factors of internal financing (eg shocks to aggregate demand or the technology used by enterprises, or changes in factor costs), which require a structural model to derive them.
13 There was, for example, a significant shift in value added towards export-oriented and productive enterprises in Spain from the outbreak of the crisis. For more information, see Banco de España, Annual Report 2014, chapter 3, Growth and reallocation of resources in the Spanish economy, pp 33 ff.

External financing in the euro area and selected member countries

As a percentage of gross value added, four-quarter moving sums



Sources: ECB and Bundesbank calculations. **1** Comprises, inter alia, loans from non-financial corporations, other financial institutions and from other countries. **2** Corresponds to the sum of insurance technical reserves, financial derivatives and other liabilities (including trade credits).

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Development of external financing

Fall in external financing due to weak investment and abundant internal financing

The external financing of non-financial corporations in the euro area weakened considerably following the onset of the financial and economic crisis (see the above chart). While the inflows between 1999 and 2008 still averaged around 22% of gross value added and were driven, above all, by dynamic (albeit unsustainable) bank loan growth, they dropped by roughly half following the onset of the financial and economic crisis. According to the pecking order theory, this development should have been due to the lower demand for external financing as a result of subdued investment and higher availability of internal financing. However, restricted access to bank loans is also likely to have played a temporary role and, taken in isolation, may in turn have contributed to the weak investment dynamics (for further details, see the remarks on pages 60 to 71).

Developments at country level show considerable heterogeneity

Against the background of very high inflows in the pre-crisis years, the decline in external financing is very pronounced, notably in the case of non-financial corporations in Spain. The reduction in external funds raised may be interpreted as a consequence of weaker investment, the marked rise in internal financing opportunities and an active deleveraging process. In the case of non-financial corporations in France, by contrast, inflows remained comparatively strong. According to the pecking order theory, this can be explained by the development of internal financing, which was weak compared with the strong investment by historical and international standards. In Italy, external financing decreased markedly from 2008 and in the wake of the European sovereign debt crisis even experienced significant outflows. Whereas low investment activity by historical and international standards, when viewed in isolation, dampened the need for external financing, the fact that internal financing was also weak led to positive net demand for

external financing. With the exception of the second half of 2009, non-financial corporations in Germany recorded a consistently positive development in external financing, albeit somewhat weaker than before the crisis. The reduced recourse to external financing is attributable to the increase in internal financing paired with moderate investment growth which, taken in isolation, lowered the need for external financing.

Shift from financing with borrowed capital to equity financing

Shift from borrowed capital to equity in Italy and Spain

From the onset of the financial and economic crisis, the structure of external financing in euro area non-financial corporations shifted from borrowed capital to equity. This contrasts, in part, with the shifts seen in other highly developed currency areas (for details, see the box on pages 61 to 63). This change was driven mainly by developments in Italy and Spain; in both countries it can be interpreted as a reaction to the debt overhangs accumulated prior to the crisis.[14] While this adjustment process got underway in Spain following the onset of the financial and economic crisis, in the case of non-financial corporations in Italy it only began in the wake of the European sovereign debt crisis and was significantly less pronounced.[15] The take-up of equity capital took place, in particular, in the form of unlisted shares as well as of business shares and participating interests. According to the trade-off theory, enterprises reacted to an increase in the risk of insolvency resulting from deteriorating sales opportunities and asset positions in the wake of the crises.

Slight increase in leverage in Germany

In Germany, by contrast, the structure of external financing has shifted slightly in favour of borrowed capital since 2008. The increased use of borrowed capital can be interpreted, on the one hand, as a response to the improved solvency of non-financial corporations in Germany in light of the favourable economic developments which, generally speaking, allow for higher leverage. On the other hand, the low financing costs for borrowed capital are also likely to have played a part. With regard to non-financial corporations in France, inflows of equity and borrowed capital roughly balanced each other out, as they had done pre-crisis. The financing structure was therefore unchanged.

Substitution by debt instruments

Temporary outflows for bank loans; at the same time, inflows of other debt instruments

Debt financing experienced, at times, countervailing developments. In 2009 and between 2012 and 2015, there were net outflows of bank loans at the euro area level, contrasting with simultaneous inflows of funds through other debt instruments. At the country level, this constellation was particularly pronounced in Italy and Spain. Non-financial corporations in Italy mainly raised funds through debt securities and loans from other financial institutions. In addition to the latter, Spain also made large-scale use of loans from foreign capital providers. Considered together with the findings of the empirical literature, this suggests that, in both time periods, supply-side restrictions probably made it harder for non-financial corporations in Italy and Spain to access bank

14 See Deutsche Bundesbank, Recent developments in the indebtedness of the private non-financial sector in selected euro-area countries, Monthly Report, January 2017, pp 41-58.

15 Thus, empirical analyses based on aggregated data and individual company data suggest that non-financial corporations in Italy have the highest leverage in the euro area in structural terms. See A De Sociao and P Russo (2016), The debt of Italian non-financial firms: an international comparison, Banca d'Italia Occasional Paper, No 308.

Development of the financing structure of non-financial corporations: an international comparison

The financial and economic crisis was of global proportions and had an impact not only on the financing structure of non-financial corporations in the euro area, but also on other major currency areas. Just as the financing structures had already differed prior to the crisis, the nature of the shifts brought about as a result of the crisis also varied to some extent.

The chart on page 62 shows the development of selected external financing instruments for non-financial corporations in the euro area, the United Kingdom, the United States and Japan. Whilst equity financing has, when viewed in isolation, decreased in all the currency areas under consideration since the financial crisis, the change in the importance of equity in the different currency areas in relation to the likewise declining trend in overall external financing varies. On the one hand, equity has consistently served as a relevant financing instrument in the United Kingdom and the euro area and also, to a lesser extent, in Japan and has gained in importance since 2008 as an external financing instrument, especially in the euro area, not least as a result of the need for deleveraging which became apparent during the crisis.[1] On the other hand, no additional equity was raised in the United States. On the contrary, the transactions related to equity resulted, on average, in a decline both before and after the crisis. One of the main reasons for this is likely to have been share buy-backs, which have played a major role in the United States in recent years, partly financed by borrowed capital.[2] Overall, the United States – unlike the other currency areas – has seen a shift from equity capital to financing by means of borrowed capital since the year 2000.

The heterogeneous nature of developments in the various currency areas is also reflected in financing through borrowed capital, which alongside bank loans comprises other borrowed capital, including loans from other lenders and debt securities, but also other accounts payable that are difficult to interpret from an economic perspective. While net inflows in the form of other borrowed capital in the euro area have dwindled since the financial and economic crisis and have even reverted to outflows in Japan, other borrowed capital in the United Kingdom and the United States has largely remained stable. In the United Kingdom, this was due, among other things, to loans from non-banks such as other non-financial corporations, and in the United States to debt securities. In the case of the latter, in particular, other accounts payable throughout the entire period under review also contributed significantly to the fact that other borrowed capital played an exceptionally important role compared with other countries.

A somewhat more homogenous picture emerges with regard to financing via bank loans, which has been significantly lower in all countries since 2008 than in the pre-crisis period. At the same time, the inflows between 2008 and 2017 remained positive

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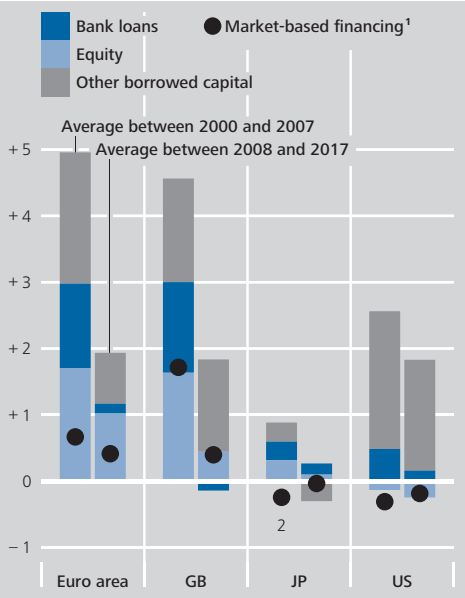
1 For information on the debt situation in the euro area, see, for example, Deutsche Bundesbank, Private debt – status quo, need for adjustment and policy implications, Monthly Report, January 2014, pp 53-65; and Deutsche Bundesbank, Recent developments in the indebtedness of the private non-financial sector in selected euro area countries, Monthly Report, January 2017, pp 41-58.

2 For information on the significance and potential implications of share buy-backs, see, for example, J Gruber and S Kamin (2017), Corporate buybacks and capital investment: an international perspective, IFDP Note, 11 April; or G Gutierrez and T Philippon (2016), Investment-less growth: an empirical investigation, NBER Working Paper No 22897.

Selected forms of financing

As a percentage of the outstanding liabilities, four-quarter moving sums



Sources: ECB, Bank of Japan, Federal Reserve and Bundesbank calculations. **1** Market-based financing includes debt securities and listed shares. **2** Data on bank loans to non-financial corporations (and thus also other debt financing) are only available from 2005 onwards for Japan.

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on average across the board, with the exception of the United Kingdom. This general observation does, however, conceal the large-scale slumps in financing via bank loans that occurred around the year 2009 in all the currency areas under consideration. This was partly due to temporary bank loan supply restrictions in the context of the financial and economic crisis.[3] Against this backdrop, equity financing in the United Kingdom and the euro area has gained slightly in importance since the financial crisis, which – consistent with the trade-off theory – is likely to have been prompted by the increased risk of insolvency following the crisis. That said, however, this stood in contrast to developments in the United States. While financing via bank loans to non-financial corporations in the United Kingdom and the euro area was still lagging behind the pre-crisis trend at the current end, the recovery in bank lending following the crisis was comparatively quick and strong in Japan and the United States. In this setting, the sustained great importance of total debt financing, especially in the United States, has generated a gradual increase in the debt ratio since 2012.[4]

As a subtype of external financing, non-financial corporations also have recourse to funding via financial instruments traded on the capital market, such as listed shares and debt securities. With regard to market-based financing, the United Kingdom and the euro area differed fundamentally from Japan and the United States. In the United Kingdom and the euro area, inflows via market-based funding in the years leading up to the financial crisis, and in particular at the start of the millennium, were comparatively strong, but later flattened out somewhat between 2008 and 2017. Measured in terms of overall external financing, however, inflows rose in both regions and continued to account for a significant share, especially in the United Kingdom.[5] In Japan and the United States, on the other hand, market-based liabilities were scaled back on balance over much of the period under consideration, which in the case of the United States, in particular, was mainly caused by share buy-backs, compounded

3 For the United States, see, for example, V Ivashina and D Scharfstein (2010), Bank lending during the financial crisis of 2008, Journal of Financial Economics 97, pp 319-338; and for the United Kingdom, for example, S Akbar, S Rehman and P Ormrod (2013), The impact of recent financial shocks on the financing and investment policies of UK private firms, International Review of Financial Analysis 26, pp 59-70. For a study on enterprises in the United States, Europe and Asia, see M Campello, J Graham and C Harvey (2010), The real effects of financial constraints: evidence from a financial crisis, Journal of Financial Economics 97, pp 470-487.

4 For long time series on total credit to the private non-financial sector, see Bank for International Settlements, BIS total credit statistics, available at: https://www.bis.org/statistics/totcredit.htm

5 For more details on the importance of market-based financing for non-financial corporations in the United Kingdom, especially in the aftermath of the financial crisis, see A Pattani, G Vera and J Wackett, Going public: UK companies' use of capital markets, Bank of England Quarterly Bulletin 2011 Q4, pp 319-330.

by the decline in the number of initial public offerings since the turn of the millennium.[6] Since the financial crisis, however, outflows have decreased on average in both Japan and the United States (in the case of the latter, this arose, in particular, from an increase in the issuance of debt securities).[7]

Although the evolution of external financing in the non-financial corporate sector in the euro area is in some ways similar to the situation in other currency areas, an international comparison reveals a clear heterogeneous pattern on the whole. While equity funding in the United Kingdom and the euro area was consistently positive, the United States has seen a shift from equity capital to borrowed capital since the year 2000, which has not reversed in the wake of the financial and economic crisis. Enterprises in the United Kingdom and the euro area also responded to temporary restrictions on access to bank loans in the context of the financial and economic crisis by, *inter alia,* building up equity, whereas in Japan and the United States bank loans played a more important role and recovered more quickly and strongly in the aftermath of the crisis. Parallel to this, in contrast to the situation in the United Kingdom and the euro area, non-financial corporations in Japan and the United States did not record any positive inflows of capital from market-based funding instruments over the entire observation period.

6 See, for example, C Doidge, G Karolyi and R Stulz (2013), The U.S. left behind? Financial globalization and the rise of IPOs outside the U.S., Journal of Financial Economics 110, pp 546-573; and OECD (2015), Strengthening market-based financing of corporate investments, Business and Finance Outlook, pp 201-227.
7 For information on the importance of market-based financing in general and debt securities in the United States, see, in particular, OECD (2015), op cit.

loans, and that these were substituted by other debt instruments.[16]

BLS shows poorer access to bank loans for 2009 and 2011-12

In line with this, the Eurosystem's quarterly Bank Lending Survey (BLS) shows that credit standards for loans to enterprises were tightened in 2009 as well as in 2011-12. The majority of enterprises participating in the European Central Bank (ECB) Survey on the access to finance of enterprises (SAFE) also reported a deterioration in their access to bank loans during this period.

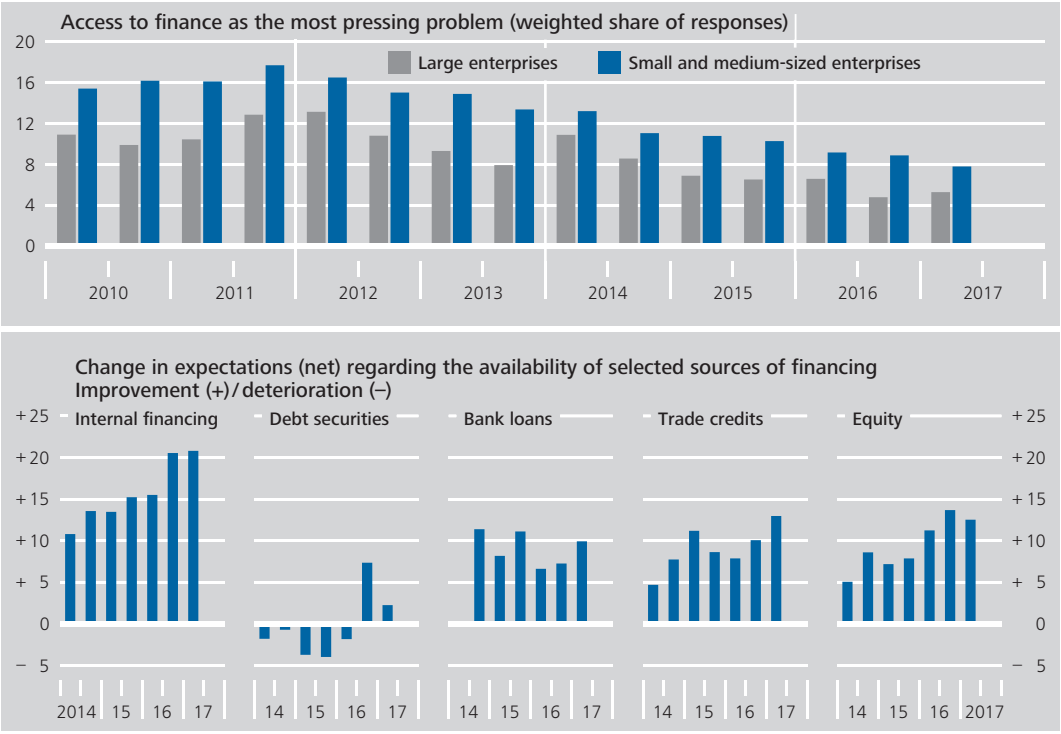
Bank supply constraints mainly in Italy and Spain during European debt crisis

This situation generally prevailed in all of the four major euro area economies.[17] In 2012, however, bank supply constraints were especially marked in Italy and Spain. Unlike French and German banks, Italian and Spanish credit institutions were experiencing particular strains owing to the debt crisis. For example, since the onset of the financial crisis – and particularly when the European debt crisis was raging – banks' financing costs had been rising markedly due to the interconnectedness of the government and banking sectors in both Italy and Spain.[18] Added to this were the large amounts

16 See C Altavilla, M Darracq Paries and D Nicoletti (2015), Loan supply, credit markets and the euro area financial crisis, ECB Working Paper Series, No 1861; and A Ferrando and K Mulier (2015), The real effects of credit constraints: evidence from discouraged borrowers in the euro area, ECB Working Paper Series No 1842. A similar development was also observed in the United States during the financial and economic crisis. For more information, see T Adrian, P Colla and H Shin (2013), Which financial frictions? Parsing the evidence from the financial crisis of 2007-9, D Acemoglu, J Parker and M Woodford (eds), NBER Macroeconomics Annual, Volume 27, pp 159-214, The University of Chicago Press; and B Becker and V Ivashina (2014), Cyclicality of credit supply: firm level evidence, Journal of Monetary Economics 62 (C), pp 76-93. For international evidence, see R Levine, C Lin and W Xie (2016), Spare tire? Stock markets, banking crises, and economic recoveries, Journal of Financial Economics, Vol 120 (1), pp 81-101; and T Grjebinea, U Szczerbowiczb and F Tripier (2018), Corporate debt structure and economic recoveries, European Economic Review, Vol 101, pp 77-100.
17 For Germany, the BLS and SAFE survey results in 2011-12 do not point to restrictive adjustments of the loan supply.
18 See Deutsche Bundesbank, Recent developments in loans to euro area non-financial corporations, Monthly Report, September 2015, pp 15-39.

Access to finance of non-financial corporations in the euro area*

As a percentage of surveyed enterprises (weighted)



Sources: Survey on the Access to Finance of Enterprises in the Euro Area (SAFE). * Data comparable only to a limited extent through time owing to the fact that the questions were subject to revision over the duration of the survey.

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of non-performing loans in their banking systems, which had an adverse impact on the banking industry's financing conditions.[19] Since the end of 2012 there has been a steady improvement in the general financing situation in the periphery countries. Along with the lowering of monetary policy rates, the non-standard monetary policy measures adopted by the Eurosystem, in particular, also helped to bring down financing costs.

Small and medium-sized enterprises switch to trade credits

Temporary bank supply restrictions on financing conditions and the availability of external financing are likely to have had a stronger impact on small and medium-sized enterprises (SMEs) than on larger firms. This is due to the fact that SMEs typically have only limited access to alternative sources of financing, such as debt securities. The ECB's SAFE survey on enterprises' access to finance confirms the suspicion that SMEs are exposed to significantly larger financial constraints than large enterprises (see the above chart). This situation was particularly pronounced in the case of very small, unproductive and highly indebted enterprises.[20] At the same time, a number of empirical studies indicate that SMEs were able to substitute banks loans, above all, by means of increased recourse to trade credits.[21] This

19 For information on the high levels of non-performing loans, see Deutsche Bundesbank, The importance of banks' profitability and capital for monetary policy, Monthly Report, January 2018, pp 27-52.

20 See A Ferrando and N Griesshaber (2011), Financing obstacles among euro area firms. Who suffers the most?, ECB Working Paper, No 1293; C Artola and V Genre (2011), Euro area SMEs under financial constraints: belief or reality?, CESifo Working Paper No 3650; as well as A Ferrando and K Mulier (2015), Firms' financing constraints: do perceptions match the actual situation?, The Economic and Social Review, Vol 46 (1), pp 87-118.

21 See E Cayes and C O'Toole (2014), Bank lending constraints, trade credit and alternative financing during the financial crisis: evidence from European SMEs, Journal of Corporate Finance, Vol 27, pp 173-193; M Psillaki and K Eleftherious (2015), Trade credit, bank credit, and flight to quality: evidence from French SMEs, Journal of Small Business Management, Vol 53 (4), pp 1219-1240; as well as S Carbo-Valverde, F Rodríguez-Fernández and G Udell (2016), Trade credit, the financial crisis, and SME access to finance, Journal of Money, Credit and Banking, Vol 48 (1), pp 113-143.

means that, at least in some cases, SMEs were in a position to substitute bank loans with alternative forms of financing.

Bank supply-side constraints have become less important

Bank supply-side constraints at the aggregate level now appear to have become markedly less important in all the four large member states. Since 2016, positive inflows of bank loans have been seen again in the euro area, with this development being driven mainly by non-financial corporations in France and Germany. As a result of the Eurosystem's Corporate Sector Purchase Programme (CSPP), there was also a rebound in the net issuance of debt securities.[22] The most significant inflows in this instance were likewise recorded for the non-financial corporations in France, which were already strongly active in the capital market.

The maturity of borrowed capital

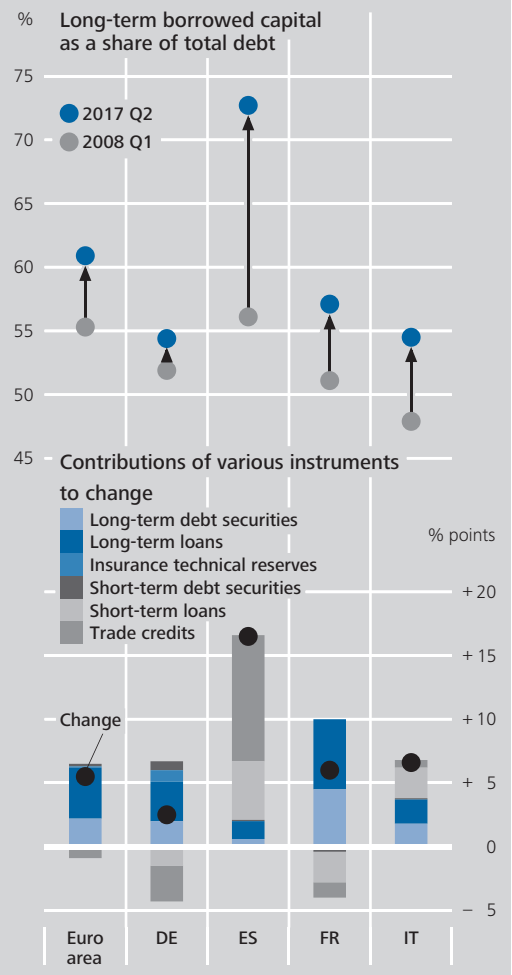
Increase in the maturity of borrowed capital …

Besides the changes in the financing structure discussed above, there have latterly also been marked adjustments to the maturity of the borrowed capital. The adjacent chart shows the share of long-term borrowed capital in relation to the total amount of borrowed capital at the beginning and the end of the observation period (2008 Q1 to 2017 Q2).[23] An increasing percentage of long-term debt is apparent at the euro area level. While the increase in Germany was smaller than in the euro area as a whole, there has been a marked rise in this percentage above all in Spain and, according to the latest data available, it was also at a higher level than in the other countries under consideration here.

… driven by differing factors at the country level

The increases are due in each case to country-specific developments with regard to the financing instruments. In the euro area as a whole and at the country level in France and Germany, the growing share was due principally to stronger recourse to long-term loans and debt securities. In France and Germany, there was, in addition, also an expansion of short-term debt instruments, although this was not as great as the increase in long-term debt financing. In Italy and Spain, on the other hand, the rising percentage was driven in large part by a perceptible decline in short-term debt instruments. In this context, the lower overall amount of borrowed capital, particularly in Spain, is also

Maturity of borrowed capital*



Sources: ECB and Bundesbank calculations. * Long-term borrowed capital comprises long-term debt securities, long-term loans as well as insurance technical reserves, while short-term debt capital consists of short-term debt securities, short-term loans and trade credits.
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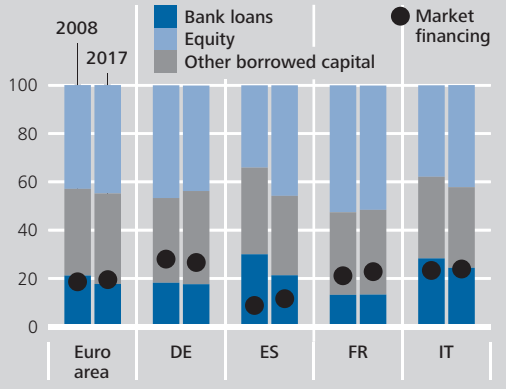
22 See Deutsche Bundesbank, The market for corporate bonds in the low-interest-rate environment, July 2017, pp 17-32.
23 In line with the definition of maturity in the financial accounts, short-term debt securities, short-term loans as well as trade credits and advances are deemed to be short-term sources of borrowed capital. By contrast, long-term debt securities, long-term loans as well insurance technical reserves are summarised as long-term financing instruments.

Selected financing instruments*

As a percentage of total liabilities



Sources: ECB, Bundesbank calculations. * 1999 Q1 levels extrapolated using transactions; price effects and other changes in level thus eliminated.

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to be seen, not least, against the backdrop of the marked increase in internal financing. With regard to the interest rate fixation period for bank loans, given very low long-term interest rates, it is apparent that bank loans with variable interest rates declined as a percentage of total borrowed capital in the euro area.[24]

Interest expenditure might increase somewhat more slowly as a result of monetary policy normalisation

The highlighted trends in maturity and interest fixation could ultimately also have repercussions for the structure of corporate financing. Owing to the longer maturities with simultaneous longer fixation of the current low rates of interest, the interest expenditure of the non-financial corporations might increase somewhat more slowly during the monetary policy normalisation process and thus, taken in isolation, reduce internal financing only to a lesser extent.

Implications for the balance sheet structure

Shift in the funding structure also impacts on the stocks of liabilities

A persistent shift in the relative importance of various external financing instruments is reflected over the medium term in the stocks of liabilities, too. Against this background, the above chart shows the structure of the liabilities of non-financial corporations in the euro area and in its four large member states, with the liabilities being divided into bank loans, other debt capital and equity capital.[25] Additionally, the share of market-based funding – the sum of debt securities and listed shares – is shown.

Bank loans becoming less important, market-based borrowing more important

At the euro area level, bank loans accounted for less than 18% of total liabilities in mid-2017.[26] This means that, at the euro area level, bank loans have a significant but, at least in terms of quantity, not a dominant position in the structure of non-financial corporations' liabilities. This holds true not only for big non-financial corporations but also for SMEs.[27] With the exception of France, bank loans have also become less important at the country level, with this development being especially marked in Spain. By contrast, market-based financing gained slightly in importance except in the case of non-financial corporations in Germany, with this being attributable primarily to an increase in debt securities. In both France and Germany, market-based instruments played a larger part than bank loans in the financing of non-financial corporations. In Italy and Spain, on the other hand,

24 According to the ECB's monetary financial institutions balance sheet statistics, compared with 2014 Q1 variable interest bank loans as a share of total debt had fallen by 2.6 percentage points to 57.0% in 2017 Q2. In this context, variable interest loans comprise loans with an original or residual maturity of less than 12 months as well as loans with an interest rate adjustment date of 12 months.

25 Initial stocks extrapolated by cumulative transactions are used for this purpose. This avoids price fluctuations distorting the importance of individual liabilities. The category of other debt capital is produced by the difference between total liabilities and the individually considered instruments.

26 If the liabilities are measured at market prices, bank loans as a share of total liabilities amount to around 13%.

27 The data of the BACH database of the European Committee of Central Balance-Sheet Data Offices (ECCBSO) confirm that even the balance sheets of small and medium-sized enterprises display a structure similar to that of large enterprises and that bank loans do not have a pre-eminent position. Accordingly, in 2015 SMEs' share of bank loans in total liabilities was just over 25%, with corresponding figures of just under 17% in France, 18% in Italy and 19% in Spain. See also Deutsche Bundesbank, An international comparison of the importance of bank credit as a debt financing instrument for non-financial corporations, November 2014, pp 42-43; and H Friedrichs and T Körting (2011), Die Rolle der Bankkredite im Finanzierungsspektrum der deutschen Wirtschaft, Wirtschaftsdienst, Vol 91 (1), pp 31-38.

bank loans continued to play a more important role than market-based financing.

Increase in the share of equity capital, primarily though non-market-based instruments

At the euro area level, there has been an increase in equity capital as a percentage of total liabilities, although this development was shaped by non-market-based equity instruments, such as shares and investments and was heterogeneous in form at the country level. The percentage declined slightly in the case of non-financial corporations in France and Germany, but showed a marked rise in Italy and, especially, in Spain.

Macroeconomic and economic policy implications of a changed financing structure

Financial development can be conducive to growth, …

The preceding comments have highlighted the fact that euro area non-financial corporations have seen a shift in their external financing and balance sheet structure from borrowed to equity capital. At the same time, there has been a marked reduction in the importance of bank loans and market-based borrowed capital has become slightly less important. What impact could this have on the medium-term growth outlook for the euro area and its largest member states? Answers to this question are provided by the literature on the connection between financing and growth. Here, there had long prevailed the view that the size of the total volume of funding made available to the private non-financial sector has a unambigiously positive impact on economic growth, irrespective of whether it is provided by banks or markets.[28]

… but too much debt turns the positive relationship into a negative one

More recent studies, however, come to the conclusion that it is only up to a certain point that economic growth can be boosted by an increase in debt. Stepping over a certain threshold of debt turns the positive relationship into a negative one, with this being irrespective of whether the debt comprises bank loans or other debt instruments.[29] This is mostly attributed to the fact that increasing debt leads to a misallocation of resources, which ultimately reduces productivity growth.[30] These results imply that, starting from a level of debt beyond the threshold value, a reduction in debt is likely to foster growth over the medium term. A comparison of current figures for debt as a ratio of GDP, for example, with the threshold value of 90%, calculated by Cecchetti et al (2011), above which debt has a negative effect on economic growth, shows that the non-financial corporations in the euro area and in all four observed countries lie markedly above it in some cases.[31] At the same time, debt ratios

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28 See R Levine (2002), Bank-based or market-based financial systems: which is better?, Journal of Financial Intermediation 11, pp 398-428. From a theoretical perspective, too, it is unclear whether banks or markets ensure higher growth. See R Levine (2005), Finance and growth: theory and evidence, in P Aghion and S Durlauf (eds), Handbook of Economic Growth, Vol 1A. More recent studies highlight the fact that bank-based financial systems have a stabilising impact on real economic activity in normal recessions. If the recession is accompanied by a financial crisis, however, economic recovery sets in earlier in market-based financial systems. See L Gambacorta, J Yang and K Tsatsaronis (2014), Financial structure and growth, BIS Quarterly Review, March 2014. At the same time, the positive effect of securities markets becomes stronger with the level of economic development, while it weakens for bank loans. See A Demirgüc-Kunt, E Feyen and R Levine (2012), The evolving importance of banks and securities markets, The World Bank Review, Vol 27 (3), pp 476-490.

29 See S Cecchetti, M Mohanty and F Zampolli (2011), The real effects of debt, BIS Working Papers No 352; R Beck, G Georgiadis and R Straub (2014), The finance and growth nexus revisited, Economics Letters, Vol 124, pp 382-385; S Law and N Singh (2014), Does too much finance harm economic growth?, Journal of Banking & Finance, Vol 41, pp 36-44; as well as J Arcand, E Berkes and U Panizza (2015), Too much finance?, Journal of Economic Growth, Vol 20 (2), pp 105-148.

30 There is, furthermore, a related literature which is concerned with the significance of debt for the economic cycle. In this it is argued that excessive debt is accompanied by the build-up of a debt overhang. This leads to the economic actors actively reducing their debt, which dampens economic growth because of weakened demand. See A Mian, K Rao and A Sufi (2013), Household balance sheets, consumption, and the economic slump, The Quarterly Journal of Economics, Vol 128 (4), pp 1687-1726; as well as A Mian, A Sufi and E Verner (2017), Household debt and business cycles worldwide, The Quarterly Journal of Economics, Vol 132 (4), pp 1755-1817.

31 The results of Cecchetti et al (2011), loc cit, are deliberately singled out, as a separate value for non-financial corporations is calculated in this instance. Other studies, such as Beck et al (2014), Law and Singh (2014) and Arcand et al (2015), loc cit, however, calculate threshold values for the non-financial private sector as a whole. Taking into consideration the fact that different definitions of indebtedness are used in some cases, all the studies nevertheless arrive at similar results.

have shown a very obvious decline from their peaks in Spain and, to a lesser extent, in Italy.[32] The reduction in debt that has taken place over the past few years combined with the shift in corporate financing towards equity, taken in isolation, could therefore have strengthened the medium-term growth potential.[33]

Capital markets union could be used to expand equity markets

This is also the context in which to see the European Commission's plan, launched in 2015, to create a capital markets union, which is designed to promote the development of a single market for financing instruments in the European Union.[34] In light of the findings regarding the connection between financial developments and economic growth, it seems reasonable to focus on the expansion and cross-border integration of markets for equity capital. Besides the potential positive growth impulses, this should strengthen non-financial corporations' resilience to negative shocks, as the value of equity capital and profit distributions – unlike in the case of borrowed capital – can adjust directly to changed economic conditions.[35]

Diversification of the financing structure makes enterprises less dependent on constraints in the supply of bank loans …

The diversfication of the financing structure of non-financial corporations that has taken place over the past few years could also have a stabilising impact with regard to short-term cyclical fluctuations. Theoretical studies, for instance, show that the possibility of substituting bank loans by using other financing instruments, such as debt certificates, mitigates the real economic consequences of restrictions on the supply of bank credit.[36] In line with this, empirical analyses for the euro area indicate that a bank loan supply shock has a clearly negative effect on real corporate investment only if there is no possibility of substituting bank loans with other financing instruments (see the box on pages 69 to 71).

… and probably changes the relative importance of individual monetary policy transmission channels

The shifts in the financing structure of non-financial corporations might also have implications for the transmission of monetary policy. The reduced importance of bank loans in corporate financing combined with a more diversified financing structure is likely, taken on its own terms, to weaken the direct transmission of monetary policy measures through bank credit.[37] At the same time, however, the strengthened role of other sources of financing and the slight increase in the direct provision of funds via the financial markets imply that market-related variables, especially asset prices, have a greater importance in monetary policy transmission.[38] In turn, when viewed in isolation, this should heighten the effectiveness of monetary policy measures to the extent that changed asset prices are reflected in the quality of the financial intermediaries' balance sheets and, through this, in their funding costs. Taken altogether, there is likely to have been a change in the relative importance of individual transmission channels owing to developments in enterprises' financing structure.[39]

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32 Cecchetti et al (2011), loc cit, calculate their threshold value of 90% of GDP based on a very broad definition of debt, which comprises all borrowed capital. The following values can be recorded for 2017 Q2: Germany 96%, Spain 139%, France 166%, Italy 116% and the euro area 139%. The highest levels were 105% in Germany (2009 Q1), 188% in Spain (2007 Q4) and 128% in Italy (2012 Q4). For non-financial corporations in France, the value at the current end is the highest level. For the euro area, the value has been fluctuating around 140% since early 2008.

33 Empirical studies come to the conclusion that well-developed stock markets have a monotonically positive impact on real per capita income. For more information, see L Gambacorta, J Yang and K Tsatsaronis (2014), loc cit, as well as O Peia and K Roszbach (2015), Finance and growth: time series evidence on causality, Journal of Financial Stability 19, pp 105-118. It is nevertheless unclear whether these findings with regard to stock markets can be transferred to equity capital in the wider sense.

34 For details, see European Commission (2015), Building a capital markets union, Green Paper, COM(2015) 63 final.

35 See the Deutsche Bundesbank's reply to the European Commission's Green Paper "Building a capital markets union", available online at https://www.bundesbank.de/Redaktion/EN/Downloads/Topics/2015_05_21_statement_capital_market_union_background.pdf?__blob=publicationFile

36 See F De Fiore and H Uhlig (2015), Corporate debt structure and the financial crisis, Journal of Money, Credit and Banking, Vol 47 (8), pp 1571-1598.

37 Examples of important papers on the role of bank loans in the transmission of monetary policy are B Bernanke and M Gertler (1995), Inside the black box: the credit channel of monetary policy transmission, Journal of Economic Perspectives 9 (4), pp 27-48; as well as P Disyatat (2011), The bank lending channel revisited, Journal of Money, Credit and Banking 43 (4), pp 711-734.

38 See T Adrian and H Shin (2010), Liquidity and leverage, Journal of Financial Intermediation, 19 (3), pp 418-437.

39 See Deutsche Bundesbank, The shadow banking system in the euro area: overview and monetary policy implications, Monthly Report, March 2014, pp 15-34.

Substitution of bank loans and investment activity in the euro area

During the financial and economic crisis as well as the European debt crisis, the euro area saw bank loans being substituted by other debt instruments and equity. This raises the question as to whether the option of having recourse to alternative financing instruments is, in principle, able to mitigate the negative effects of restrictive bank loan supply shocks on the real economy.[1] This question can be examined by means of a vector autoregression (VAR) method. This time series model is based on the simultaneous estimation of several equations of the endogenous variables to be examined, which are described by means of their own historical values and by the historical values of the other endogenous variables. This makes it possible to estimate the interdependencies between a large number of variables. The residuals calculated on the basis of individual equations are then converted into shocks that can be interpreted economically by setting theory-motivated restrictions. These shocks can then be used as a basis for estimating how the variables in the model respond to exogenous changes, such as changes to the supply of bank loans. The model used here employs Bayesian methods for estimation, where exogenous shocks are identified by combining sign and zero restrictions.[2]

In addition to the real investment by non-financial corporations in the euro area, the deflator for aggregate gross fixed capital formation, the overnight interbank rate EONIA and the bank loan rate for non-financial corporations, the empirical model also includes flows of bank loans to non-financial corporations and flows from other financing instruments (calculated as the difference between total external financing and bank loans).[3] The model covers the observation period from the first quarter of 2000 to the first quarter of 2017.[4]

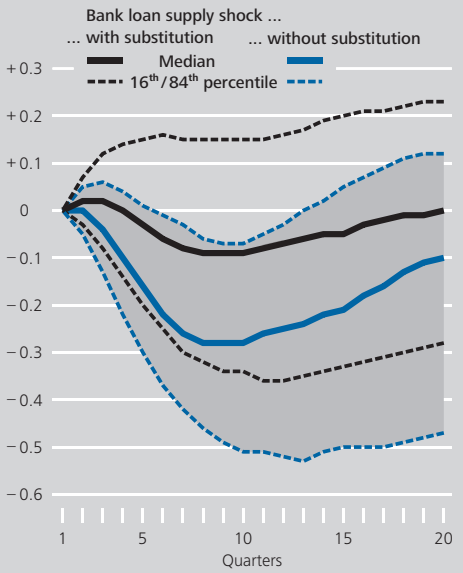
The effects of two bank loan supply shocks which have been identified differently are compared: while for one of the shocks it is assumed that bank loans are substituted by other financing instruments, such a substitution is not permitted for the other shock. Comparing how real investment by enterprises responded to these two shocks may indicate whether a substitution of bank loans by other financing instruments is able to mitigate the negative real economic repercussions.

A restrictive bank loan supply shock with substitution effects is identified by a decline in the flows of bank loans, a rise in lending rates and an increase in the flows of other financing instruments. The identification of a bank loan supply shock via opposing sign restrictions in bank lending rates and bank lending volume can be deduced from a

1 The following deliberations are based on I Aldasoro and R Unger (2017), External financing and economic activity in the euro area – why are bank loans special?, Deutsche Bundesbank Discussion Paper, No 04/2017.
2 The estimations are made using the BEAR toolbox. For more information, see A Dieppe, R Legrand and B van Roye (2016), The BEAR Toolbox, ECB Working Paper Series No 1934. Both prior and posterior distributions are of the frequently used normal-inverse-Wishart type. The sign restrictions set out below apply contemporaneously.
3 The other financing instruments thus include, amongst others, shares, other equity, debt securities, loans from non-banks, trade credits and advances.
4 The number of lags is two periods. Except for the flows of bank loans and other means of financing, the variables are entered into the equation in the (log) level. Unlike in the existing literature, the financing variables are used as the first differences of the log level. The level variables are calculated by extrapolating the base level with transactions in order to exclude non-transaction-related changes in the financing instruments.

Response of real investment by non-financial corporations in the euro area to bank loan supply shocks*

Percentage points



Sources: ECB and Bundesbank calculations. * Shock amounting to one standard deviation. The impulse response functions were derived from a structural VAR model, which was identified by means of sign and zero restrictions.

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large number of theoretical models and is widespread in the empirical literature.[5] The positive sign restriction on the other financing instruments is inspired by the work of Becker and Ivashina (2014), who postulate that a negative bank loan supply shock necessarily goes hand in hand with an increase in demand for other sources of financing.[6] This is compared with a bank loan supply shock in which the decline in bank loans is not simultaneously substituted by other financing instruments. This is implemented technically by imposing an additional zero restriction to the flows of other financing instruments.[7]

The chart above shows the response of real investment by enterprises to the bank loan supply shock with and without substitution effects by other financing instruments. The continuous lines show the median and the dotted lines show the 16th and 84th percentiles of the distribution of potential developments of real investment. The median of the distribution can be regarded as a central trend within the possible developments. If the bulk of the probability distribution, delineated by the 16th and 84th percentiles, runs below (above) zero, it is assumed here that the effect of the shock on the respective variable is with a high degree of probability negative (positive).

The estimation results suggest that a restrictive bank loan supply shock in which bank loans are not substituted by other financing instruments is highly likely to result in a sharp decline in real investment by enterprises. The decline hits bottom after

5 Theoretical models which can be used to derive opposing sign restrictions for bank lending rates and bank lending volumes include, for example, V Cúrdia and M Woodford (2010), Credit spreads and monetary policy, Journal of Money, Credit and Banking 42 (S1), pp 3-35; and A Gerali, S Neri, L Sessa and F Signoretti (2010), Credit and Banking in a DSGE model of the euro area, Journal of Money, Credit and Banking 42 (S1), pp 107-141. Empirical studies that use these sign restrictions include, for example, U Busch, M Scharnagl and J Scheithauer (2010), Loan supply in Germany during the financial crisis, Deutsche Bundesbank Discussion Paper, No 05/2010; N Hristov, O Hülsewig and T Wollmershäuser (2012), Loan supply shocks during the financial crisis: Evidence for the euro area, Journal of International Money and Finance 31 (3), pp 569-592; L Gambetti and A Musso (2016), Loan supply shocks and the business cycle, Journal of Applied Econometrics, Vol 32 (4), pp 764-782; and Deutsche Bundesbank, Recent developments in loans to euro area non-financial corporations, Monthly Report, September 2015, pp 15-39.

6 See B Becker and V Ivashina (2014), op cit. In the literature cited above, both financing instruments may in principle move in the same direction in the event of credit supply shocks. Consequently, only a subset of these shocks are covered.

7 In order to distinguish the bank loan supply shock from goods supply and demand shocks, additional zero restrictions are also placed on real investment by enterprises and the deflator for aggregate gross fixed capital formation in both specifications. For a similar approach, see, for example, M Breitenlechner, J Scharler and F Sindermann (2016), Banks' external financing costs and the bank lending channel: Results from a SVAR analysis, Journal of Financial Stability, Vol 26, pp 228-246; S Eickmeier and B Hofmann (2013), Monetary policy, housing booms, and financial (im)balances, Macroeconomic Dynamics 17 (4), pp 830-860; and G Peersman and W Wagner (2015), Shocks to bank lending, risk-taking, securitization, and their role for U.S. business cycle fluctuations, CEPR Discussion Papers, No 10547.

around nine quarters. The effect of the shock then slowly peters out. If the declining bank loans are substituted by other financing sources, however, the fall in investment becomes less intense in the median of the distribution and is considerably less likely to enter negative territory. Thus, the results of the empirical study indicate that the option of substituting bank loans with other sources of financing could mitigate the negative effects of a restrictive bank loan supply shock on the investment activity of non-financial corporations.[8]

8 These results are consistent with the theoretical findings in F De Fiore and H Uhlig (2015), op cit, and the microeconomic findings in B Becker and V Ivashina (2014), op cit, and R Levine, C Lin and W Xie (2016), op cit.

Conclusions

Since 2008 shift from borrowed to equity capital and from bank loans to other debt instruments, …

The financing structure of non-financial corporations in the euro area has clearly changed over the past few years. External financing in the 2000s was marked primarily by inflows of borrowed capital, predominantly in the form of bank loans. With the outbreak of the financial and economic crisis, external financing shifted from borrowed to equity capital and, within borrowed capital, from bank loans to other debt instruments. External financing simultaneously became less important in relation to internal financing.

The shift towards a larger share of internal and equity financing combined with a more diversified debt financing structure is likely to help make the funding of non-financial corporations as a whole less vulnerable to temporary financial constraints at individual providers of financing, particularly banks. The envisaged creation of a European Capital Market Union could further advance this process. With regard to the transmission of monetary policy impulses through the various transmission channels, it is important for monetary policy that there is a continuous monitoring and analysis of changes in financing behaviour and of the associated financing structure of non-financial corporations.

… which could make non-financial corporations in the euro area more resilient

Finalising Basel III

On 7 December 2017, the Group of Central Bank Governors and Heads of Supervision (GHOS) concluded an intensive and difficult round of negotiations by endorsing the final Basel III package of reforms. This wrapped up the fundamental reform of the global regulatory framework for banks which had been initiated in response to the financial crisis. The first part of the Basel III reform package, which defined far stricter capital, liquidity and leverage ratio standards, was adopted by the Basel Committee on Banking Supervision back in 2010. The December 2017 round of reforms amend the requirements for the calculation of credit and operational risk which banks are expected to back with capital. Updated minimum capital requirements for market risk had been adopted by the GHOS at the beginning of 2016.

The idea behind the reform package was to make the Basel standards more risk-sensitive and to limit the scope available to institutions which quantify risk – and thus determine their capital requirements – using their own internal models. These regulatory constraints, it is hoped, will curb unwarranted variation in calculation results across banks. Furthermore, the new rules will require institutions to comply with binding leverage ratios, with a surcharge being added for global systemically important banks (G-SIBs). Negotiations on the Basel III reform package proved to be particularly contentious over the calibration of an output floor requirement for institutions which use internal models for measuring risk. That output floor limits the extent to which the capital requirements calculated using banks' internal models can vary from the capital requirements derived under standardised approaches. One group of countries was pushing for banks' internal risk measurement models to play a more prominent role in the calculation of capital requirements, while another wanted to place greater constraints on their use. In the end, it was agreed to calibrate the output floor at 72.5%. What this means is that the capital benefit which a bank can gain from using an internal risk measurement model can be no more than 27.5% of the capital requirement computed solely on the basis of the standardised approaches.

The new Basel standards are scheduled for implementation on 1 January 2022, though a phase-in period running until 1 January 2027 will ease transition to the new output floor, giving banks plenty of time to acclimatise to the new regulatory setting. Implementing the stricter standards will pose a challenge for German institutions, but their sound capital base and the extended phase-in period should make it a manageable task.

The new global Basel III standards will add to the resilience of international financial markets and make for a more level playing field in global markets. Now it is a question of implementing the endorsed standards rigorously and in good time across all the member countries of the Basel Committee.

Introduction

The Basel III reform package[1] finalised in December 2017 by the Basel Committee on Banking Supervision (the "Basel Committee")[2] forms part of an array of measures which address the vulnerabilities that the 2007-09 financial crisis had exposed in the international regulatory architecture for banks. By endorsing this reform package, the Basel Committee has implemented standards formulated in the action plan aimed at strengthening the resilience of the financial system, which the G20 leaders had adopted in November 2008 in response to the financial crisis and specified at later summits. The initial phase of the Basel III reforms, which was concluded in December 2010,[3] saw the Basel Committee adopt stricter capital rules (definition, capital ratios, introduction of capital buffers) and uniform global liquidity standards, besides introducing a leverage ratio.[4] In Europe, these measures were implemented by way of the EU-wide Capital Requirements Directive (CRD[5]) and Capital Requirements Regulation (CRR[6]), which both entered into force on 1 January 2014.[7]

The Basel Committee then turned its attention to risk matters – in other words, to the techniques used to calculate risk-weighted assets (RWAs). These are the subject of the December 2017 reform package finalising Basel III.

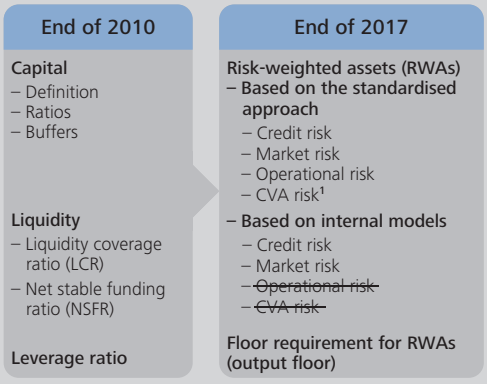
Not covered by the current reform package is the regime governing exposures to central governments and other sovereign entities, which the Basel Committee is discussing as a separate item (see the box on pages 77 and 78).

Goals: reducing RWA variability and curbing model risk while maintaining the balance between risk sensitivity and regulatory complexity

One key objective of the reform package finalising Basel III was to reduce unwarranted variability in RWA calculations across banks in an effort to restore faith in the results those calculations produced, which had evaporated during the financial crisis. The Basel Committee sought to achieve this goal by enhancing the robustness and risk sensitivity of the standardised approaches for credit and operational risk, curbing the use of internal models, and complementing the risk-weighted capital ratio with a finalised leverage ratio and a revised, more robust output floor.[8]

A range of studies by the Basel Committee had found wide variation in the capital requirements or RWAs which institutions calculated

Evolution of Basel III



1 A credit value adjustment reflects a change in the value of a derivative in response to changes in counterparty credit spreads.

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1 See Basel III: Finalising post-crisis reforms, https://www.bis.org/bcbs/basel3.htm
2 The Basel Committee on Banking Supervision is the primary global standard-setter for the prudential regulation of banks. It comprises high-level representatives from central banks and authorities with formal responsibility for the supervision of banking business from 28 countries (see https://www.bis.org/bcbs/membership.htm). The Basel Committee on Banking Supervision usually convenes every three months. Its standing secretariat is located at the Bank for International Settlements (BIS) in Basel. Germany is currently represented by Dr Andreas Dombret from the Deutsche Bundesbank and Raimund Röseler from the Federal Financial Supervisory Authority (BaFin).
3 See Basel III: A global regulatory framework for more resilient banks and banking systems, https://www.bis.org/publ/bcbs189.pdf, and Basel III: International framework for liquidity risk measurement, standards and monitoring, https://www.bis.org/publ/bcbs188.pdf
4 The liquidity coverage ratio (LCR) already applies as a mandatory minimum requirement in Europe on account of the CRR. The net stable funding ratio (NSFR) and the leverage ratio are scheduled for introduction as compulsory minimum standards when the CRR is revised (CRR II).
5 Directive 2013/36/EU of 26 June 2013.
6 Regulation (EU) No 575/2013 of 26 June 2013.
7 See Deutsche Bundesbank, Implementing Basel III in European and national law, Monthly Report, June 2013, pp 55-71.
8 See https://www.bis.org/bcbs/publ/d424.htm

Chronology

Date	Measures	Implementation
July 1988	Basel I[1] – Minimum capital ratio of 8% for credit risk – Capital requirements for market risk added in 1996[2]	EU law: Solvency Directive[3] Own Funds Directive[4] National law: Banking Act *(Kreditwesengesetz*, or KWG), Principle I[5]
June 2004	Basel II[6] (enhancement to the Basel I Capital Accord) – Introduction of a three-pillar approach: – Pillar 1: capital requirements for credit, market and operational risk; introduction of internal ratings-based (IRB) approaches – Pillar 2: qualitative prudential principles (supervisory review process) and risk management principles – Pillar 3: disclosure requirements to strengthen market discipline	EU law: Banking Directive[7] Capital Adequacy Directive[8] National law:[9] KWG, Solvency Regulation *(Solvabilitätsverordnung,* or SolvV), Minimum Requirements for Risk Management *(Mindestanforderungen an das Risikomanagement,* or MaRisk)
July 2009 (updated in 2010 and 2011)	Basel 2.5[10] (initial short-term measures adopted in response to the financial crisis; enhancements to the Basel II framework) – Higher capital requirements for securitisation and market risk – Higher risk management and disclosure standards	EU law: Capital Requirements Directive (CRD) National law: KWG, SolvV, MaRisk
December 2010 (revised in June 2011)	Basel III[11] (further measures adopted in response to the financial crisis) – Stricter capital requirements plus capital buffers – Revised definition of capital – Leverage ratio – Liquidity requirements (liquidity coverage ratio (LCR), net stable funding ratio (NSFR))	EU law: CRR, CRD National law:[12] KWG, SolvV
December 2017	Finalisation of Basel III[13] – Revision of the rules on calculating capital requirements for – Credit risk[14] – Operational risk – Market risk[15] – Adjustment of the output floor – Leverage ratio surcharge for global systemically important banks	Implementation by amending the following legal frameworks: EU law: CRR,[16] CRD National law: KWG

1 International convergence of capital measurement and capital standards, https://www.bis.org/publ/bcbs04a.pdf **2** Amendment to the Capital Accord to incorporate market risks, https://www.bis.org/publ/bcbs24.htm **3** Council Directive 89/647/EEC (no longer in force). **4** Council Directive 89/299/EEC (no longer in force). **5** See Deutsche Bundesbank, The new Principle I, Monthly Report, May 1998, pp 65-73. **6** International convergence of capital measurement and capital standards: A revised framework (comprehensive version), https://www.bis.org/publ/bcbs128.pdf **7** Directive 2006/48/EC (repealed by Directive 2013/36/EU). **8** Directive 2006/49/EC (repealed by Directive 2013/36/EU). **9** See Deutsche Bundesbank, The new Basel Capital Accord (Basel II), Monthly Report, April 2001, pp 15-41. **10** Enhancements to the Basel II framework, https://www.bis.org/publ/bcbs157.pdf **11** See Basel III: A global regulatory framework for more resilient banks and banking systems, https://www.bis.org/publ/bcbs189.pdf, and Basel III: International framework for liquidity risk measurement, standards and monitoring, https://www.bis.org/publ/bcbs188.pdf **12** See Deutsche Bundesbank, Implementing Basel III in European and national law, Monthly Report, June 2013, pp 55-71. **13** See Basel III: Finalising post-crisis reforms, https://www.bis.org/bcbs/basel3.htm **14** The securitisation framework had already been revised in 2014 (see Revisions to the securitisation framework, https://www.bis.org/bcbs/publ/d303.htm). **15** The revised minimum capital requirements for market risk had already been endorsed in January 2016; see https://www.bis.org/bcbs/publ/d352.pdf **16** The validity of the floor provisions set out in Article 500(1) of CRR had been limited until 31 December 2017.

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using internal models that could not be explained solely by differences in the riskiness of their portfolios. A degree of variability is unproblematic for supervisors, given that it can be attributed to idiosyncrasies in individual banks' risk management practices. In an effort to curb undesirable excessive variability in the calculation of RWAs, the Basel Committee fundamentally revised the relevant areas of the regulatory architecture, singling out the rules governing the calculation of capital requirements for credit and operational risk as well as the standards for market risk. Another new feature is the introduction of a surcharge on the minimum leverage ratio for global systemically important banks (G-SIBs).

GHOS expectation that finalising Basel III should not significantly increase capital requirements posed a particular challenge

The expectation articulated by the GHOS that finalising Basel III should not, on average, significantly increase overall capital requirements posed a particular challenge while wrapping up the Basel III package. Differences in financial systems across stakeholder countries made it difficult to strike a universally acceptable balance. One example of the difficulties the Basel Committee faced was the calibration of the output floor, where it was only possible to reach a compromise following intensive and difficult talks.[9]

Standardised approach for credit risk

CRSA a standalone procedure and a floor for the IRB approach

The regulatory standardised approach for credit risk (CRSA) is a methodology used for calculating a bank's minimum capital requirements for credit risk. In future, banks using internal ratings-based (IRB) approaches to calculate their credit risk will be expected to quantify their capital requirements under the CRSA as well, since the latter will then be used to determine the output floor. This will make the CRSA significantly more important, including for large institutions. In light of this development, the revision primarily set out to forge stronger links between the CRSA and the internal model methods (eg by harmonising the definitions used), enhance risk sensitivity by boosting the granularity of risk weights, and adjust the CRSA's calibration to incorporate recent loss experience.

External ratings still permissible risk indicators

The fourth major objective – reducing mechanistic reliance on external ratings – was put on the backburner after it came in for heavy criticism from many members of the Basel Committee and the banking community. The idea of doing away with external ratings altogether as a means of calibrating CRSA risk weights was rejected because alternative risk drivers (financial metrics such as revenues and leverage in the case of exposures to corporates) are neither straightforward nor sufficiently risk-sensitive. What is more, external ratings of corporates and banks had proven to be a valuable source of information in the past. Institutions will, however, be expected to perform due diligence on the ratings released by external credit rating agencies and also raise their risk weights as appropriate.

Two techniques for determining capital requirements for interbank exposures

The revised CRSA offers two techniques for determining the capital requirements for interbank exposures: the external credit risk assessment (ECRA) approach and the standardised credit risk assessment (SCRA) approach. In a move that is aimed at loosening the sovereign-bank nexus, it will now no longer be possible to derive the risk weight of the obligor bank from the risk weight of the jurisdiction in which it is incorporated. While the risk weight can continue to be determined using the external rating of the obligor bank itself under the ECRA approach, the ratings used here are not allowed to incorporate any assumptions of implicit government support. The SCRA is used for any exposures without an external rating and in jurisdictions which no longer use external ratings for regulatory purposes, such as the United States. In the SCRA approach, the lending bank, having taken into account the prudential capital and liquidity metrics and performed due

9 See the speech by Andreas Dombret, Look ahead, 14 November 2017, https://www.bis.org/review/r171116b.htm

Regulatory treatment of sovereign exposures

In parallel to the publication of the finalised Basel III standard, the Basel Committee on Banking Supervision published a discussion paper on the regulatory treatment of sovereign exposures.[1] While the Basel reforms were finalised, the issue of sovereign exposures was handled separately, as they play a special role in many ways. Take, for example, the importance of exposures to central banks and central governments for the implementation of monetary policy measures. What is more, these exposures often have a key role to play in financial markets, as collateral and reference instruments for financial market transactions.

Currently, the regulatory treatment of sovereign exposures is more favourable than that of other asset classes in various respects. The Basel framework allows for sovereign exposures denominated and funded in domestic currency to be given a zero risk weight under the standardised approach for credit risk. This means that no capital has to be held against them. Moreover, sovereign exposures are exempted from the large exposure limit of 25% of Tier 1 capital, which applies to other exposure classes.

However, sovereign exposures entail various risks, which can affect the banking system and the broader economy through a number of channels. In particular, an overly strong sovereign-bank nexus poses a risk to financial stability, as high levels of sovereign exposures on bank balance sheets could threaten the solvency of those institutions if sovereign debt sustainability were to deteriorate. Because credit and concentration risk are not taken into account, banks' sovereign bond portfolios often lack diversification. Regulation should therefore aim to reduce the sovereign-bank nexus through suitable measures.

The discussion paper centres on three reform elements: a better definition of sovereign counterparties, and capital requirements for both credit risk and concentration risk. The special economic functions of sovereign exposures outlined above mainly apply to exposures to central governments. It is therefore appropriate to afford this exposure class preferential treatment. The conditions under which this treatment can be extended to include other sovereign entities, such as regional and local governments, is a key component of the discussion paper. In this context, it is necessary to bear in mind that the institutional settings of implicit and explicit guarantees between other sovereign entities and their central government differ from one country to the next.

The paper discusses positive risk weights for sovereign exposures as a way to take credit risk into account. As described above, central governments would receive a positive risk weight, preferential to other sovereign entities, depending on their rating. Other sovereign entities could receive the same regulatory treatment as central governments provided they are either supported by their central government or are autonomous. Sovereign entities which receive guarantees from their central government would meet the support criterion. The autonomy criterion would allow other sovereign entities to receive the same regulatory treatment as central governments provided

1 Basel Committee on Banking Supervision, Discussion paper, The regulatory treatment of sovereign exposures, December 2017, https://www.bis.org/bcbs/publ/d425.htm

that those entities are able to service their liabilities autonomously, by levying taxes, for example, and thus without the support of the central government. In this case, the other sovereign entity would also be given a preferential risk weight, but based on its own credit rating – in other words, it would be treated as a central government in its own right. All remaining other sovereign entities would receive a non-preferential, and therefore higher, risk weight to cover credit risk.

As for the mitigation of concentration risk, the paper does not propose upper limits, but instead discusses incremental risk weight add-ons that would vary based on the exposure amount. This kind of price-based approach sets incentives to limit excessive exposures to a sovereign entity. The exposures that would be consolidated to determine the risk weights for concentration risk would hinge on the above definition of sovereign entities. All exposures to other sovereign entities that meet the support criterion would be combined with exposures to their central government. The capital add-on for concentration risk would therefore be higher. Exposures to "autonomous" entities would be treated separately. Exposures to all remaining other sovereign entities would be subject to a 25% Tier 1 capital limit. This approach sets incentives for banks to hold more broadly diversified sovereign portfolios.

As constitutional and economic settings of liability between a country's sovereign entities vary widely across the world, the aforementioned criteria will have to be subject to national discretion. Allocating an entity to the central government would reduce risk weights for credit risk. But if capital requirements for concentration risk were introduced at the same time, this would result in higher risk weight add-ons for this risk, as described, leading national authorities to weigh up their decision on sovereign definitions.

The discussion paper envisages that exposures to central banks will continue to be exempted from any regulatory treatment. This reflects the cash-like nature of a deposit with the central bank and prevents any potential friction with the conduct of monetary policy. Interested stakeholders are now invited to comment on the ideas presented in the discussion paper by responding to the specific questions it contains, and thus to actively inform the Basel Committee's thinking.[2] Even though the Basel Committee has made clear that it does not currently intend to change the existing rules for sovereign exposures, a complete overhaul at the global level is a possible option in the long term. In the shorter term, ideas on this topic could be taken up at the national or European level, and this debate is already underway, especially in the European context. Amongst others, a recently published study commissioned by the European Parliament outlined similar approaches to mitigating concentration risk as those offered in the discussion paper.[3] In the continuing discussions about deepening the banking union, Europe needs to actively debate risk reduction. The Bundesbank considers the regulatory treatment of sovereign exposures to be a pivotal issue in this debate.[4]

2 https://www.bis.org/bcbs/publ/d425.htm
3 European Parliament (external author: Nicolas Véron), Sovereign concentration charges: A new regime for banks' sovereign exposures, November 2017.
4 See the speech by Andreas Dombret, The other side of the coin – why European supervision needs international regulation, 15 May 2017, https://www.bis.org/review/r170515a.htm

diligence, is required to assign the obligor bank to one of three risk weight buckets, which indicates the appropriate risk weight to be applied.

Covered bonds – a new exposure class

A fresh addition to the Basel framework is a separate exposure class for covered bonds, for which the relevant risk weights are derived either from the issue-specific external rating of the covered bond or from the issuing institution's risk weight. These requirements are essentially consistent with the legislation which is already in force in the European Union in the shape of the CRR.

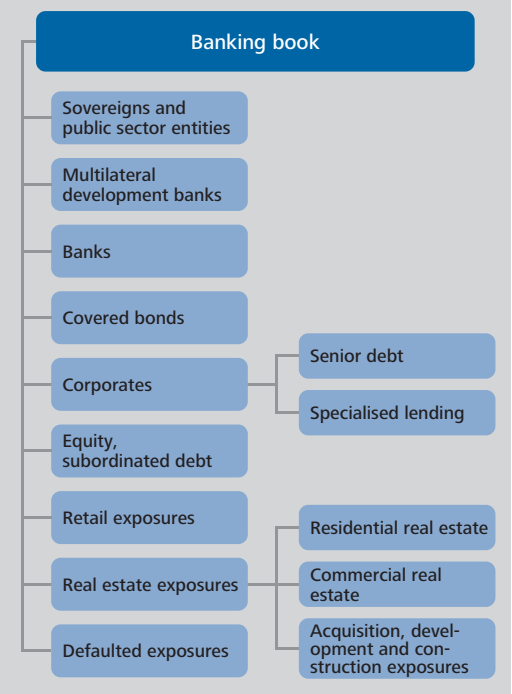
More granular approach for exposures to corporates, …

A more granular approach has also been introduced for the corporates exposure class. In future, it will be possible to apply a risk weight of 85% to exposures to small and medium-sized enterprises (SMEs), ie entities with consolidated annual revenues of less than €50 million. This provision acknowledges that while these exposures are often secured, the collateral usually cannot be taken into account in determining an institution's minimum capital requirements. In addition, specialised lending exposures – loans where the primary source of repayment is the income generated by the financed assets or projects – should also be allocated to a separate exposure class. As hitherto, the risk weights of all corporate exposures will be based on external ratings (eg 20% for an external rating of between AAA and AA-). A flat risk weight of 100% is assigned, as before, to unrated exposures and to the bulk of unrated specialised lending exposures. Here again, there is a procedure for jurisdictions that no longer permit the use of external ratings for regulatory purposes which allows a risk weight of 65%, rather than 100%, to be applied if the lending bank assesses the corporate in question to be "investment grade". That procedure is only available if the corporate in question has securities listed on an exchange, however.

… equity, …

To account for the higher risk of loss from subordinated exposures and equity, these risk positions will likewise be assigned to a separate exposure class in future. The risk weight treatment here varies by riskiness, and can be as high as 400% for speculative unlisted equity exposures, for example.

Exposure classes in the revised standardised approach for credit risk (CRSA)



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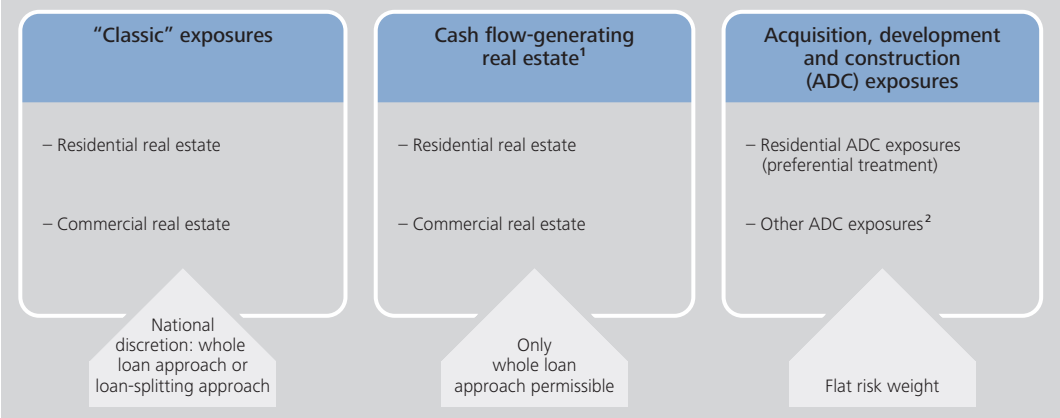
… and retail exposures

The future prudential treatment of retail exposures distinguishes between revolvers (where credit is typically drawn down) and transactors (where the facility is solely to facilitate transactions). The latter category includes credit card claims, for instance. If the bank can demonstrate that drawdowns of a transacting credit facility are repaid regularly, supervisors will assume that there is a lower risk of loss and apply a risk weight of 45%, rather than the flat 75% risk weight normally applied to retail exposures.

A major overhaul of the rules for mortgage loans

The most extensive, and, for Germany's banking sector, particularly significant changes made by the Basel III reform package affected the treatment of real estate exposures. First, the requirements governing the prudential recognition of real estate collateral were specified

Real estate exposures in the revised standardised approach for credit risk (CRSA)



1 Exposures where repayment of the loan is materially dependent on cash flows generated by the property. **2** These can include exposures secured by both residential and commercial real estate.

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in greater detail in the CRSA as well so as to bring them into line with the existing rules under the IRB approach. For instance, a bank wishing to count real estate as collateral in its calculation of minimum capital requirements must now ensure the legal enforceability of the collateral agreement as well as the prudent valuation of the property, and make sure that the value of the property does not depend materially on the performance of the borrower and that the borrower is able to service the debt. Exposures secured by mortgages must be assigned to separate exposure classes.

A distinction must be made between residential and commercial real estate collateral. Furthermore, banks are required to assess whether the mortgage loan can be repaid out of the borrower's income ("classic" real estate exposure) or whether repayment is materially dependent on cash flows generated by the property or properties. This is an area where the Basel Committee has taken note of a phenomenon observed in a large number of countries during the financial crisis, namely that the latter exposure type (income-producing real estate) can be more at risk of default than the "classic" variety. Income-producing real estate will therefore be subject to stricter capital requirements in future.

LTV used as a risk indicator

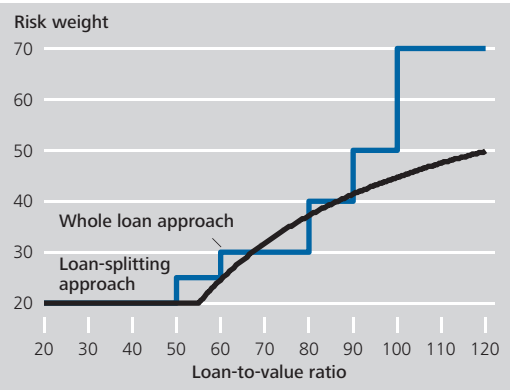
In the CRSA approach, the risk weight applied to real estate exposures is determined by the loan-to-value ratio (LTV) – the higher the LTV ratio, the higher the capital requirements. In the case of "classic" real estate exposures, national authorities implementing the Basel regime can choose between two techniques for determining the minimum capital requirements. The first, the whole loan approach, provides separate LTV buckets to which the entire exposure is assigned according to its LTV ratio and which show what risk weight should be applied.

The second technique, the loan-splitting approach, is already used in the European Union. In this approach, a portion of the exposure (LTV of up to 55%) is deemed to be secured by the property and is assigned a fixed risk weight (20% for residential real estate exposures and 60% for commercial real estate exposures). The remainder of the exposure is treated as unsecured and is assigned the same risk weight that would be applied to any other unsecured exposure to the same obligor (eg 75% in the case of a retail obligor in a residential real estate exposure). The risk weight of the entire exposure is then calculated as the weighted average of the risk weights for the "secured" and "unsecured" portions of the exposure. Since loans for which repayment is materially de-

pendent on cash flows generated by the property or properties are not based on the obligor's underlying capacity to service the debt from other sources, only the whole loan approach is normally permitted in these cases. If, however, loss rates from commercial real estate lending in a given country do not exceed certain ceilings (based on what is known as the "hard test"[10]), national competent authorities may allow the rules for "classic" real estate exposures, ie the loan-splitting approach as well, to be applied. The option of applying the loan-splitting approach, together with the hard test, take greater regulatory account of conditions in national property markets.

Comparison of risk weights in the whole loan and loan-splitting approaches*

%



* Residential real estate exposure, counterparty risk weight: 75%.

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The third category of mortgage loans introduced by the Basel III package of reforms concerns loans to companies or special-purpose vehicles (SPVs) financing land acquisition for development and construction purposes, or development and construction of any residential or commercial property (ADC exposures). Here again, the prudential risk assessment is geared to the property value, which means that these exposures are assigned fixed risk weights regardless of the borrower's creditworthiness. As a general rule, a risk weight of 150% is applied to ADC exposures.

Capital requirements higher for exposures in foreign currency

Also new is a risk weight multiplier for unhedged foreign currency exposures, ie exposures where the lending currency differs from the currency of the borrower's source of income. This currency mismatch multiplier is applied to regulatory retail exposures and residential real estate exposures and covers the risk that a marked appreciation in the value of the lending currency against the currency of the borrower's source of income might leave the borrower unable to service its debts.

CCFs also for unconditionally cancellable commitments (UCCs)

In a departure from the Basel II regime, commitments that are unconditionally cancellable at any time (UCCs), which currently are not subject to capital requirements, must be recognised as an exposure under the revised CRSA by applying a credit conversion factor (CCF) equal to 10% of their nominal amount and be backed with capital according to the borrower's risk weight. The previous rationale for exempting institutions from the requirement to set aside capital, which gave credit institutions the ability to cancel the commitments of customers whose creditworthiness had deteriorated as a way of preventing them from drawing down the credit line, is not considered feasible in practice. To guarantee that the credit line can always be cancelled in good time (for only then would exemption from the requirement to set aside capital truly be justified), the institution would have to be in a position to judge the customer's creditworthiness, and any changes in that status, better and more quickly than the customer itself.

Some collateral eligibility provisions revised

Changes were also made to the rules governing how collateral is treated when calculating minimum capital requirements. For one thing, the supervisory haircuts applied when counting financial collateral have been brought into line with market developments observed of late. For another, institutions using the CRSA will be required to apply the supervisory haircuts, rather than their own estimates, in future.

10 See Basel III: Finalising post-crisis reforms, op cit, footnote 49.

Internal ratings-based (IRB) approaches

IRB approaches reformed to reduce RWA variability

IRB approaches allow credit institutions to use their own internal parameters to calculate their capital requirements for credit risk. A distinction is made between the foundation IRB approach, under which institutions are only permitted to use their own borrower PD (probability of default) estimates, and the advanced IRB approach, which allows them to also estimate LGD (loss given default) as well as CCFs (credit conversion factors) for off-balance-sheet items. The Basel Committee revised the IRB approaches primarily with a view to reducing excessive RWA variability among banks. RWA variability occurs when different institutions assess similar risks in different ways, resulting in varying levels of capital requirements. Those differences can occur, for instance, if risk parameters are estimated on the basis of poor data or different practices are used in the development and approval of internal models.

The Basel Committee's deliberations on reducing RWA variability sought to get to the bottom of a fundamental question: in which portfolios does it make sense to use internal modelling in the first place? Low-default portfolios especially (ie portfolios exhibiting only small numbers of loss events) were sometimes found to differ significantly across institutions in terms of parameter estimates, even though those portfolios had a similar profile.

Use of the advanced IRB approach curbed

In light of the problems observed in the estimation of LGDs and CCFs for low-default portfolios, the Basel Committee decided to no longer permit the use of the advanced IRB approach in the banks and financial institutions exposure classes. In the corporates exposure class, its use is confined to corporates with consolidated annual revenues of €500 million or less. The advanced IRB approach will be retained for the retail and specialised lending exposures classes and for sovereigns. Since the treatment of sovereign exposures was excluded from the finalisation of Basel III, the new rules fail to address a problem which might face the low-default portfolio of sovereign exposures – that of inappropriate internal modelling and instable parameter estimates whenever loss event data are scarce.

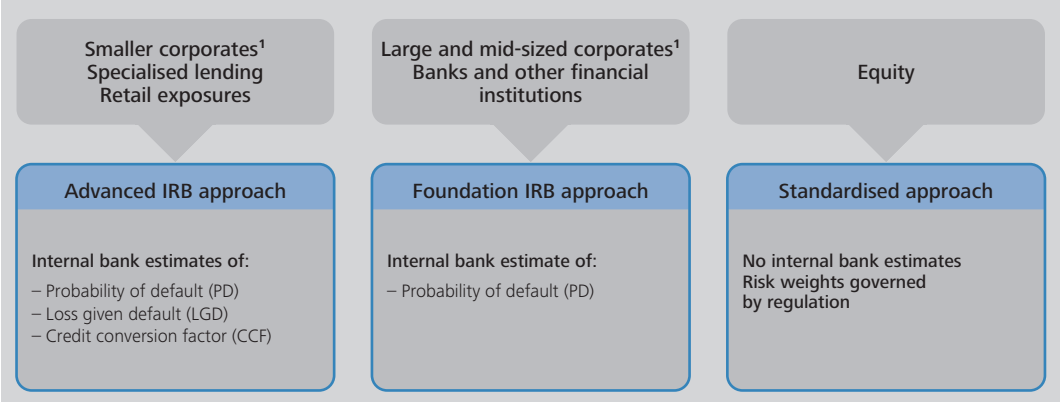
Foundation IRB approach largely retained

While the new rules constrain the use of internal models overall, banks will still be able to use them for the bulk of their portfolios in future.

Pros and cons of input floors for risk parameters

The second key measure aimed at reducing RWA variability was the adoption of minimum input floor values for bank-estimated risk par-

Internal ratings-based (IRB) approaches and their use by exposure class



1 Smaller corporates: consolidated annual revenues ≤ €500 million; large and mid-sized corporates: consolidated annual revenues > €500 million.

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Input floor overview

Item	Probability of default (PD)	Loss given default (LGD)		Credit conversion factor (CCF)
		Unsecured	Secured	
Corporate exposures	0.05%	25%	Varying by collateral type: – 0% financial – 10% residential or commercial real estate – 10% receivables – 15% other physical	50% of the corresponding credit conversion factor in the standardised approach
Retail classes: Mortgages	0.05%	–	5%	
Qualifying revolving retail exposures:				
– transactors	0.05%	50%	–	
– revolvers	0.10%	50%	–	
Other retail	0.05%	30%	Varying by collateral type: – 0% financial – 10% residential or commercial real estate – 10% receivables – 15% other physical	

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ameters. The thinking behind this measure was as follows: the smaller a parameter value – the PD of a low-default portfolio, for example – the greater the number of observations needed to validate that parameter value to a statistically significant degree. However, since observations are often scarce in practice, it is not possible to sufficiently validate small parameter values, hence the risk of underestimating the risks involved. One impact of the use of input floors, though, is that the resulting increase in parameter values will primarily affect risks previously deemed to be minor. As a result, there is the danger that institutions will tend to take on greater risks which promise superior returns but will lead to similar capital requirements on account of the input floor.

The existing input floor for PD was raised from three to five basis points, while an input floor equal to half of the corresponding CCFs from the CRSA has been introduced for the CCFs in the advanced IRB approach. As regards LGDs, the input floor calibration varies by exposure class for unsecured exposures and by collateral type for secured exposures.

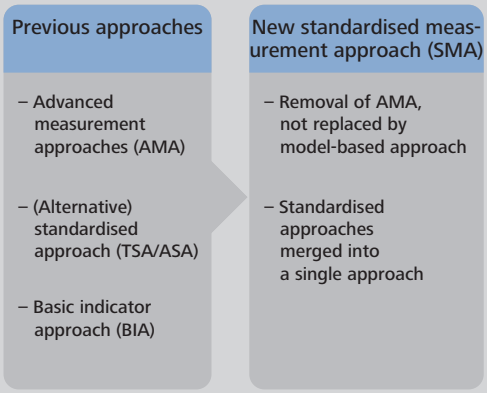
Foundation IRB approach recalibrated and …

Furthermore, the new rules change a number of technical details. The foundation IRB approach, which will now play a greater role due to the constraints placed on the advanced IRB approach, has been recalibrated to account for the regulatory LGD parameter values. This will slightly reduce the overall capital requirements under the foundation IRB approach for the exposures in question.

… 1.06 scaling factor removed

The Basel Committee also decided that the 1.06 scaling factor currently applied to risk weights under the IRB approach will no longer apply. Introduced in 2004, this scaling factor prevented an excessive reduction in capital requirements under the IRB approach adopted as part of Basel II. Following the comprehensive recalibration of the CRSA and the IRB approach, that scaling factor is now no longer required.

New standardised approach for operational risk



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Operational risk

Further changes

In the area of operational risk, the capital requirement can currently be determined using three approaches. Two of them, the basic indicator approach and the standardised approach, use the institution's average gross income for the last three years as a basis on which the calculations for operational risk are made. The capital requirement is then determined as a percentage, prescribed by supervisors, of this average income. In the third option, the advanced measurement approaches, institutions may determine their capital requirement themselves using internal models, provided these have been audited and approved by supervisors.

Removal of internal models

In the course of the revision of the rules, it was found that gross income is not a suitable proxy for operational risk in a financial crisis. In the case of banks which use an advanced measurement approach, no uniform methodology could be established, which led to the calculated capital requirements varying excessively. Against this background, banks may now determine their capital requirements only on the basis of a single, new standardised measurement approach; internal approaches are no longer permitted for this purpose.

The new standardised measurement approach is similar to the basic indicator approach in its main features. The capital requirement is calculated as a percentage of the three-year average of a relevant indicator. Gross income will no longer be used as this indicator, instead being replaced by the business indicator. This is made up of three components:

– Net interest income including income from leases

– Maximum of fee income and fee expenses as well as maximum of other operating income and other operating expenses

– Net profit and loss on the trading book and the banking book.

All components feed into the indicator with a positive sign, which means that even if the trading book result is negative, for example, the indicator increases.

Higher multiplier for large banks

As large institutions are exposed to comparatively higher operational risk, a variable supervisory coefficient will be used for the first time. For example, the capital requirement for small institutions is just 12% of the business indicator, whereas it can be up to 18% for large institutions. In order to increase the risk sensitivity of the standardised measurement approach, a loss component has been newly introduced. The capital requirement increases if the losses incurred by an institution are higher than average in a long-term comparison. If the losses incurred are relatively low, the capital requirement for operational risk can be reduced by just under half. However, the loss component is not mandatory and can, at national discretion, also be disregarded.

Market risk

The Fundamental review of the trading book (FRTB) is a part of the supervisory reforms triggered by the last financial crisis.

In response to the financial crisis, the Basel Committee introduced a more comprehensive measurement methodology for market risk (Basel 2.5) in 2009, which increased the capital requirement for banks using market risk models by a factor of roughly 2.5 at the national and EU level.

The Basel Committee has since fundamentally revised the concepts and methods in both the standardised approach and the internal models-based approach and has refined the trading book definition. The FRTB, which sets out a revised Basel market risk framework, was already adopted and published in January 2016. The EU implementation process for the FRTB began in November 2016 with the publication of the European Commission's CRR review proposal. In parallel with the adoption of the Basel III reform package on 7 December 2017, the GHOS decided to postpone the deadline for the implementation of the new market risk rules from the start of 2019 to 1 January 2022, bringing it into line with the entry into force of the finalised Basel III package.[11]

Banks therefore have more time to make the necessary enhancements to the systems infrastructure that will be needed to apply the complex framework. A number of issues concerning the modelling requirements are still being clarified by the Basel Committee. These include a review of the calibrations of the capital requirements under the standardised and internal models-based approaches.

New definition of the trading book boundary

The boundary between the trading book and the banking book has been revised with the aim of making instruments attributable to the trading book more consistent across banks. The key criterion for assigning instruments to the trading book is still the trading intent. Whereas in the current regulatory framework, credit institutions have themselves determined the criteria for the intention to trade in relation to their trading instruments, under the FRTB there are a number of instruments that must be assigned to the trading book. Exceptions to this rule, as well as shifting positions between the trading book and the banking book, require supervisory approval.

New internal models-based approach

The internal models-based approach will continue to use internal, mathematical-statistical models to measure market risk, accompanied by a series of processes concerning, for example, data quality. In contrast to previous practice, the supervisory approval of an internal models-based approach will no longer be granted for entire risk categories (such as general interest rate risk, specific interest rate risk, commodity risk). Instead, it will be granted on a more granular basis per trading desk, for which equity risk, interest rate risk, commodity risk, exchange rate risk and credit spread risk are determined in each case.

A key change in the new approach is that the previously used risk measure value-at-risk (VaR), as well as stressed VaR introduced under Basel 2.5, will be replaced by the risk measure expected shortfall (ES). The risk measure ES is determined for a pre-defined stress period for the approved trading desks.

A weakness of previous market risk models was that they assumed that all instruments were equally liquid and had a uniform liquidity horizon of ten days. The new framework provides for horizons of between ten and 120 days, depending on risk factor categories.

Adequate modelling of market risk requires sufficiently broad data of good quality. Where data is inadequate, the capital requirements will be determined separately and conservatively within the internal models-based approach.

New standardised approach for market risk

In comparison with the internal models-based approach, the standardised approach is a methodologically simpler approach for measuring market risk that is fully prescribed by super-

11 See https://www.bis.org/press/p171207.htm

visors.[12] The new standardised approach measures linear risks using price sensitivities and takes risk-reducing diversification effects into account. For options, non-linear risks are also considered. Unlike the previous standardised approach, the new standardised approach also covers default risk. The new standardised approach is also to be used in combination with the internal models-based approach and serves as a fallback solution in case the latter cannot or may not be used for given trading desks. For small institutions, the existing (Basel II) standardised approach will be maintained as a simplified approach.

Credit valuation adjustment risk

The credit value adjustment (CVA) framework is aimed at OTC derivatives. These harbour not only market risk, but also credit risk. If, for example, the credit quality of the derivative counterparty worsens, this negatively affects the value of the derivative. In order to measure this relationship between market risk and credit risk, one looks at the difference in value between two portfolios: a credit-risk-free portfolio and an identical portfolio that takes into account potentially changing creditworthiness. This difference in value is called the CVA. Credit institutions are required to measure the risk of a change in CVA values (CVA risk). As described above, a change in CVA values can be caused by a change in the credit quality of the counterparty (credit risk), by a change in the absolute price of the derivative (market risk), or by a combination of the two.

During the financial crisis, banks incurred significant CVA losses, and it was therefore decided to introduce a capital requirement for CVA in the Basel III framework. Therefore, barring some exceptions, capital must be held against CVA risk for all OTC derivatives. This framework has now been revised. One of the aims was to establish methodological consistency with the FRTB. In future, procedures based on internal models will no longer be permitted for calculating the CVA capital requirement.

Standardised approach for CVA

The standardised approach for CVA is consistent with the standardised approach used in the aforementioned revised market risk framework (FRTB). It is intended for banks with a more sophisticated derivatives portfolio. In particular, this approach must be approved by the competent supervisory authorities. While the current CVA framework already takes into account hedges of derivatives' credit risk, the new CVA framework also recognises hedges of derivatives' market risk.

Basic approach for CVA

The basic approach is intended as a method of calculating the CVA capital requirement for institutions that are not authorised to use the standardised approach. It is relatively easy to implement and uses data that have already been determined for the calculation of counterparty credit risk and which, therefore, are already available to credit institutions. With regard to CVA hedges, credit risk hedges are only taken into account under certain conditions, whereas market risk hedges are (on the other hand) not recognised at all.

Simplified method

The simplified method is intended for institutions whose aggregate notional amount of non-centrally cleared derivatives is less than €100 billion. These institutions can set their CVA capital equal to 100% of the bank's capital requirement for counterparty credit risk. The capital requirements for counterparty credit risk are thereby doubled. A bank's relevant supervisory authority can, however, remove this option if CVA risk materially contributes to the bank's overall risk.

12 The new standardised approach corresponds to a variance-covariance approach with correlations prescribed by supervisors.

Output floor: minimum capital requirement

Motivation for an output floor

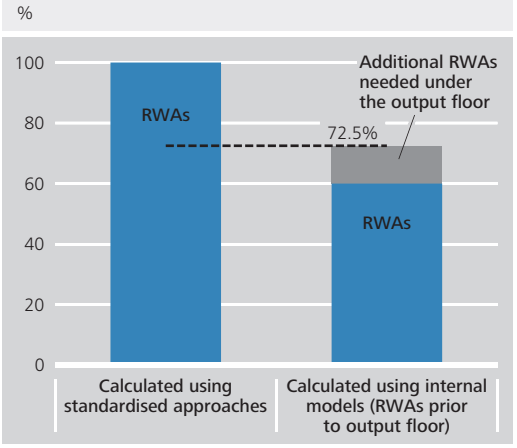
When institutions calculate their risks with internal models rather than supervisory standardised methods, they can usually reduce their regulatory capital requirement. This is intended to create incentives for banks to improve their internal risk management. The calculation of RWAs based on internal models usually leads to lower capital requirements than under the standardised approach, especially for low-risk exposures. As banks hold different portfolios, the RWAs determined for the same exposure class differ from one bank to another (desired variability). At the same time, banks have considerable room for discretion when using their internal models. If institutions make use of this to unduly reduce their capital requirements, this constitutes unwarranted variability of RWAs. Furthermore, internal models can also impede the comparability of capital requirements between institutions and jurisdictions if the calculated RWAs for the same or similar risks turn out to vary excessively.

Supervisors limit unwarranted variability by means of approval inspections and ongoing monitoring.[13] Furthermore, some members of the Basel Committee advocated restricting the potential capital benefit gained from the use of internal models by imposing an output floor in order to limit the variability of RWAs and thus ensure a minimum capital level in the banking system. However, the output floor has the shortcoming of limiting both desired and unwarranted RWA variability.

Calculating the output floor

The output floor set by the Basel Committee following intense negotiations defines, on the basis of the standardised approaches of the Basel III framework, a lower bound for the RWAs that must be backed by regulatory capital. It only concerns institutions that use internal models for the calculation of credit and/or market risk. Under the output floor, the RWAs of an institution must amount to at least 72.5% of the RWAs that would be calculated if the entire portfolio of the institution had been assessed solely using standardised approaches. The capital benefit that a bank using internal models can derive relative to the standardised approaches is therefore limited to 27.5%. The output floor is calculated at the level of the bank as a whole. When calculating the output floor, all risk categories are therefore included, irrespective of whether an internal model is authorised or not. This is why the regulatory framework refers to it as an "aggregate" output floor.

Calculating the floor requirement for RWAs* (output floor)



Source: BIS. * Risk-weighted assets.
Deutsche Bundesbank

In the calibration of the output floor, it was important that regulation should not unduly hamper incentives for the use of internal models and thus for risk-oriented governance in banking business. Here, it should be borne in mind that the leverage ratio, similarly to the output floor, also limits the leeway for modelling. The leverage ratio is a non-risk-based instrument that captures all exposures without any prior risk weighting. The impact of an output floor cannot be viewed in isolation, but must be considered in conjunction with the leverage ratio. It is conceivable, for example, that the output floor increases RWAs but does not lead

13 The SSM is currently carrying out the large-scale TRIM project with a view to establishing a single standard for internal models.

to any additional capital requirements because the leverage ratio imposes higher capital requirements which already cover the requirements set by the output floor.

Revision of the Basel I floor

The output floor is not a completely new concept. Already under the Basel II framework, which for the first time enabled the use of internal models to calculate risk, a minimum for regulatory capital was defined on the basis of the capital requirement under Basel I or the standardised approach under Basel II (excluding market risk). This arrangement has now been revised on the basis of the new standardised approaches.

Leverage ratio

Leverage ratio already included as a new non-risk-based instrument in the regulatory framework in 2010

The leverage ratio was incorporated into the regulatory framework in the first part of Basel III in 2010. The leverage ratio is a non-risk based measure which is intended to limit the build-up of bank leverage. Especially in crisis situations, excessive leverage at banks can lead to destabilising deleveraging processes. This, in turn, can initially harm individual institutions, but ultimately also the financial system as a whole and the real economy.

Binding minimum leverage ratio of 3% intended to complement risk-based capital requirements as of 2018

So far, the leverage ratio has not been a binding minimum requirement. Institutions only needed to report it to supervisors and to publicly disclose it. According to the Basel framework, the leverage ratio will be introduced as binding from 2018 onwards. All banks will then be expected to have a leverage ratio of at least 3%. The leverage ratio will complement the risk-based capital requirements and ensure a minimum level of capital at banks, regardless of risk levels. In the Basel III framework, the leverage ratio is therefore termed a non-risk-based "backstop" measure that is intended to reinforce risk-based capital requirements, which remain the primary instrument of the solvency rules governing banks.

Calculating the leverage ratio: Tier 1 capital as a percentage of the exposure measure

The leverage ratio is defined as the ratio of a bank's Tier 1 capital to its total leverage exposure (exposure measure). This measure encompasses all on- and off-balance sheet exposures.

Competent supervisory authorities may allow a temporary exemption for central bank reserves

In the context of finalising Basel III, a possible exception for central bank reserves was included in the leverage ratio framework. From 2022 onwards, the competent authorities can decide in the case of exceptional macroeconomic circumstances to exempt central bank reserves from the leverage ratio exposure measure on a temporary basis. This is intended to ensure the proper functioning of central banks' monetary policy in these exceptional circumstances. However, the competent supervisory authority must then, in turn, raise the general leverage ratio requirement in order to maintain banks' resilience to crises at the same level as before the exemption.

From 2022 onwards, G-SIBs must hold an additional leverage ratio buffer depending on their systemic importance

As part of finalising Basel III, an additional leverage ratio buffer for G-SIBs was introduced. In addition to maintaining a minimum leverage ratio, as of 2022 they must, pursuant to the new rules agreed in December 2017, also maintain a leverage ratio buffer whose size depends on the degree of the systemic importance of these institutions. The methodology applied in the risk-based capital requirements is used for determining systemic importance.[14] The leverage ratio buffer for G-SIBs is then set at 50% of their risk-based capital buffer. For example, a bank that is required to hold a 2% risk-based G-SIB capital buffer would also need to hold a leverage ratio buffer of 1% in addition to the 3% minimum leverage ratio requirement (ie a total of 4%). G-SIBs must meet the leverage ratio buffer with Tier 1 capital. As in the case of the risk-based capital requirements, capital distribution constraints will be activated in the leverage ratio framework if a G-SIB does not fully meet its additional leverage ratio buffer requirement.

14 See Basel Committee on Banking Supervision (2014), The G-SIB assessment methodology – score calculation, http://www.bis.org/bcbs/publ/d296.pdf

Implementation deadlines

A partly staggered phase-in period over several years is planned for the implementation of Basel III. The rules on the CRSA, the IRB approach, operational risk and the leverage ratio buffer for G-SIBs are to be applied in full from 1 January 2022. This also applies to the market risk rules already agreed at the beginning of 2016, whose implementation was postponed by three years until 1 January 2022. The output floor is to be introduced gradually over a period of five years and will apply at the full level of 72.5% as of 1 January 2027. During this phase-in period, the increase in RWAs resulting from the floor can, at national discretion, be capped at 25% of a bank's RWAs before the application of the floor. Furthermore, institutions must disclose the amount of their RWAs for credit and market risk on the basis of the standardised approaches. This is intended to allow market participants to compare capital requirements determined using internal models with those determined using standardised approaches.

In addition, the Basel Committee will, after the implementation of the floor, carry out further quantitative and qualitative assessments of the effectiveness of the reform package in terms of reducing RWA variability. Furthermore, the variability of the RWAs estimated by the banks will be monitored in the context of a peer review and benchmarking process, as will the countermeasures taken by the supervisory authorities to tackle unwarranted variability in the RWA calculation results.

The Basel III package of reforms is to be regarded as positive on the whole. While internal models are constrained by the new rules, Basel III remains a risk-sensitive approach overall. The long phase-in period up to and including 2026 gives institutions sufficient time to adapt to the new rules. Implementing the stricter rules will pose a challenge for German institutions, but their sound capital base and the extended phase-in period should make it a manageable task.[15] It is important that all member countries in the Basel Committee implement the agreed standards consistently. The GHOS members have explicitly endorsed this expectation.[16] Basel III should therefore be implemented in full in European law, and as quickly as possible.

15 See the speech by Andreas Dombret, Shared challenges, different perspectives, shared solutions?, 14 December 2017, https://www.bis.org/review/r180104c.htm
16 See https://www.bis.org/press/p171207.htm

Statistical Section

Contents

V Minimum reserves

VI Interest rates

VII Insurance corporations and pension funds

VIII Capital market

IX Financial accounts

X Public finances in Germany

XI Economic conditions in Germany

XII External sector

I Key economic data for the euro area

1 Monetary developments and interest rates

	Money stock in various definitions [1,2]				Determinants of the money stock [1]			Interest rates		
			M 3 [3]							
	M1	M2		3-month moving average (centred)	MFI lending, total	MFI lending to enterprises and households	Monetary capital formation [4]	Eonia [5,7]	3-month Euribor [6,7]	Yield on European government bonds outstanding [8]
Period	Annual percentage change							% Annual percentage as a monthly average		
2016 Mar	10.2	5.6	5.2	5.0	3.2	1.1	– 3.2	– 0.29	– 0.23	0.9
Apr	9.7	5.3	4.8	5.0	3.5	1.3	– 2.6	– 0.34	– 0.25	0.9
May	9.1	5.1	4.9	4.9	3.7	1.4	– 2.2	– 0.34	– 0.26	0.8
June	8.7	5.1	5.1	5.1	4.0	1.5	– 2.1	– 0.33	– 0.27	0.7
July	8.7	5.1	5.2	5.1	3.9	1.3	– 2.4	– 0.33	– 0.29	0.6
Aug	8.6	5.0	5.0	5.1	3.9	1.6	– 2.3	– 0.34	– 0.30	0.5
Sep	8.3	5.0	5.0	4.8	4.0	1.9	– 2.2	– 0.34	– 0.30	0.6
Oct	8.0	4.6	4.5	4.7	4.3	2.2	– 1.6	– 0.35	– 0.31	0.7
Nov	8.5	4.8	4.7	4.7	4.4	2.2	– 1.5	– 0.35	– 0.31	1.0
Dec	8.8	4.8	5.0	4.8	4.7	2.4	– 1.6	– 0.35	– 0.32	1.0
2017 Jan	8.4	4.6	4.7	4.8	4.5	2.4	– 1.4	– 0.35	– 0.33	1.1
Feb	8.3	4.7	4.6	4.8	4.3	2.2	– 1.0	– 0.35	– 0.33	1.2
Mar	8.9	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	9.5	5.2	4.8	4.8	4.1	2.8	– 1.1	– 0.36	– 0.33	1.0
July	9.2	5.0	4.5	4.8	3.9	2.6	– 0.8	– 0.36	– 0.33	1.2
Aug	9.5	5.4	5.0	4.9	3.8	2.3	– 0.8	– 0.36	– 0.33	1.0
Sep	9.8	5.4	5.2	5.1	3.9	2.5	– 0.7	– 0.36	– 0.33	1.0
Oct	9.4	5.4	5.0	5.0	3.8	2.6	– 1.3	– 0.36	– 0.33	1.1
Nov	9.1	5.3	4.9	...	3.9	2.9	– 1.2	– 0.35	– 0.33	0.9
Dec	...	...	...	...	...	...	...	– 0.34	– 0.33	0.9

1 Source: ECB. **2** Seasonally adjusted. **3** Excluding money market fund shares/units, money market paper and debt securities with a maturity of up to two years held by non-euro-area residents. **4** Longer-term liabilities to euro-area non-MFIs. **5** Euro OverNight Index Average. **6** Euro Interbank Offered Rate. **7** See also footnotes to Table VI.4, p 43• **8** GDP-weighted yield on ten-year government bonds. Countries include:DE,FR,NL,BE,AT,FI,IE,PT,ES,IT,GR,SK.

2 External transactions and positions *

	Selected items of the euro-area balance of payments r								Euro exchange rates [1]		
	Current account		Financial account							Effective exchange rate [3]	
	Balance	*of which* Goods	Balance	Direct investment	Portfolio investment	Financial derivatives [2]	Other investment	Reserve assets	Dollar rate	Nominal	Real
Period	€ million								1 EUR = ... USD	Q1 1999 = 100	
2016 Mar	+ 38,060	+ 38,431	+ 34,418	+ 28,095	– 9,247	– 261	+ 14,691	+ 1,141	1.1100	93.6	88.8
Apr	+ 34,678	+ 35,828	+ 32,995	– 13,812	+ 132,693	– 22,205	– 62,204	– 1,476	1.1339	94.4	89.5
May	+ 18,451	+ 32,635	+ 20,637	+ 22,024	+ 692	– 14,460	+ 9,269	+ 3,113	1.1311	94.6	89.9
June	+ 38,432	+ 39,130	+ 21,352	+ 441	+ 399	– 10,507	+ 30,394	+ 625	1.1229	94.4	89.7
July	+ 34,064	+ 33,814	+ 20,275	+ 16,364	+ 44,592	+ 12,999	– 52,738	– 942	1.1069	94.6	89.8
Aug	+ 24,225	+ 25,247	+ 36,314	+ 36,165	+ 54,943	+ 6,248	– 63,016	+ 1,974	1.1212	94.9	90.0
Sep	+ 36,416	+ 33,600	+ 61,444	+ 75,335	+ 21,913	+ 4,333	– 46,882	+ 6,746	1.1212	95.1	90.1
Oct	+ 34,178	+ 28,338	+ 16,836	+ 21,989	+ 44,325	+ 6,346	– 51,876	– 3,949	1.1026	95.1	90.2
Nov	+ 37,311	+ 34,182	+ 6,029	– 251	– 27,345	+ 2,918	+ 28,161	+ 2,545	1.0799	94.6	89.6
Dec	+ 45,185	+ 33,239	+ 76,341	+ 56,256	+ 18,499	+ 6,620	– 11,081	+ 6,046	1.0543	93.7	88.9
2017 Jan	– 361	+ 7,175	+ 5,685	+ 6,488	– 4,530	+ 6,954	+ 1,817	– 5,043	1.0614	93.9	89.1
Feb	+ 25,041	+ 25,573	+ 24,978	+ 29,164	+ 54,508	+ 7,418	– 68,156	+ 2,044	1.0643	93.4	88.8
Mar	+ 45,751	+ 37,850	+ 38,773	– 37,535	+ 49,269	+ 8,802	+ 17,518	+ 719	1.0685	94.0	89.2
Apr	+ 20,037	+ 24,870	+ 15,786	+ 31,152	+ 18,172	+ 2,433	– 31,829	– 4,142	1.0723	93.7	89.0
May	+ 16,196	+ 29,774	+ 6,689	+ 20,958	– 21,586	+ 3,792	+ 2,394	+ 1,132	1.1058	95.6	90.5
June	+ 34,535	+ 34,630	+ 39,912	– 43,315	+ 29,400	– 8,570	+ 60,959	+ 1,438	1.1229	96.3	91.3
July	+ 43,265	+ 32,684	+ 56,698	+ 5,454	+ 28,625	– 2,651	+ 30,464	– 5,194	1.1511	97.6	92.4
Aug	+ 39,200	+ 26,276	+ 37,502	– 7,563	+ 89,942	– 5,073	– 39,123	– 682	1.1807	99.0	93.6
Sep	+ 46,578	+ 36,338	+ 68,037	+ 18,013	+ 29,812	– 2,930	+ 16,722	+ 6,421	1.1915	99.0	93.6
Oct	+ 35,947	+ 27,291	+ 37,272	+ 28,954	+ 50,659	– 595	– 39,095	– 2,651	1.1756	98.6 p	93.1
Nov	...	...	...	...	...	...	...	...	1.1738	98.5 p	92.9
Dec	...	...	...	...	...	...	...	...	1.1836	98.8 p	93.2

* Source: ECB, according to the international standards of the Balance of Payments Manual in the 6th edition of the International Monetary Fund. **1** See also Tables XII.10 and 12, pp 81–82• **2** Including employee stock options. **3** Vis-à-vis the currencies of The-EER-19 group.

I Key economic data for the euro area

3 General economic indicators

Period	Euro area	Belgium	Germany	Estonia	Finland	France	Greece	Ireland	Italy	Latvia
	Real gross domestic product [1,2]									
2015	2.1	1.4	1.7	1.7	0.0	1.1	– 0.3	25.6	1.0	2.8
2016	1.8	1.5	1.9	2.1	1.9	1.2	– 0.2	5.1	0.9	2.1
2017	...	...	2.2	...	...	...	...	...	...	...
2016 Q2	1.8	1.6	3.3	0.9	1.8	1.8	– 0.6	5.4	1.3	2.6
Q3	1.7	1.6	1.7	2.0	2.2	0.6	1.1	2.7	0.7	0.5
Q4	1.9	1.5	1.3	3.1	2.0	1.0	– 1.3	9.9	0.5	2.8
2017 Q1	2.1	1.8	3.4	4.6	3.8	1.5	0.7	5.1	2.0	4.0
Q2	2.4	1.5	1.0	5.7	3.0	1.2	1.5	6.3	1.2	4.0
Q3	2.8	1.6	2.3	4.2	2.8	2.1	1.3	10.5	1.4	5.8
	Industrial production [1,3]									
2014	0.8	1.1	1.4	4.3	– 1.9	– 0.8	– 2.0	20.9	– 0.7	– 0.9
2015	2.1	– 0.0	0.8	0.1	– 1.2	1.8	1.0	36.9	1.1	3.4
2016	1.5	4.3	1.0	1.8	2.3	0.3	2.6	0.7	1.7	4.9
2016 Q2	1.1	3.5	0.6	– 1.2	3.7	0.5	5.3	0.7	0.2	4.3
Q3	1.0	4.9	0.6	3.0	2.6	– 0.6	2.0	– 0.8	1.6	1.4
Q4	2.4	4.5	1.4	7.6	3.2	0.5	4.0	3.2	3.6	9.8
2017 Q1	1.3	1.6	1.0	10.4	2.5	0.8	9.7	– 6.0	1.6	8.6
Q2	2.7	3.5	3.1	11.2	4.3	1.6	3.2	– 1.1	2.9	9.3
Q3	3.7	4.6	4.3	4.6	4.0	2.9	3.9	– 3.4	4.0	11.4
	Capacity utilisation in industry [4]									
2015	81.3	79.7	84.5	71.4	79.2	82.7	66.2	–	75.5	71.5
2016	81.8	80.0	85.0	73.6	78.0	83.2	67.6	–	76.3	72.6
2017	83.0	81.8	86.5	74.9	82.3	84.8	70.0	–	76.8	74.5
2016 Q3	81.6	79.7	84.8	73.0	73.8	83.8	67.8	–	76.0	71.8
Q4	82.3	80.9	85.7	75.0	80.6	83.6	69.3	–	75.7	73.1
2017 Q1	82.5	80.7	85.9	74.4	81.0	84.6	68.6	–	76.5	74.5
Q2	82.6	81.4	86.0	76.4	82.1	84.3	68.1	–	76.0	74.8
Q3	83.2	82.0	86.7	73.9	82.6	84.7	72.0	–	77.0	74.5
Q4	83.8	82.9	87.2	74.8	83.6	85.4	71.2	–	77.6	74.2
	Standardised unemployment rate [5]									
2014	11.6	8.5	5.0	7.4	8.7	10.3	26.5	11.9	12.7	10.8
2015	10.9	8.5	4.6	6.2	9.4	10.4	24.9	9.9	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 June	9.1	7.2	3.7	6.5	8.6	9.5	21.2	6.5	11.1	9.0
July	9.0	7.2	3.7	6.0	8.6	9.6	20.9	6.5	11.3	8.9
Aug	9.0	7.1	3.8	5.4	8.5	9.6	20.7	6.4	11.1	8.7
Sep	8.9	7.0	3.7	5.7	8.5	9.4	20.5	6.4	11.1	8.4
Oct	8.8	6.8	3.8	5.1	8.4	9.3	...	6.3	11.1	8.2
Nov	8.7	6.7	3.5	...	8.4	9.2	...	6.1	11.0	8.1
	Harmonised Index of Consumer Prices [1]									
2015	[6] 0.0	0.6	0.1	0.1	– 0.2	0.1	– 1.1	0.0	0.1	0.2
2016	0.2	1.8	0.4	0.8	0.4	0.3	0.0	– 0.2	– 0.1	0.1
2017	1.5	2.2	1.7	3.7	0.8	1.2	1.1	0.3	1.3	2.9
2017 July	1.3	1.8	1.5	3.9	0.6	0.8	0.9	– 0.2	1.2	2.6
Aug	1.5	2.0	1.8	4.2	0.8	1.0	0.6	0.4	1.4	3.2
Sep	1.5	2.0	1.8	3.9	0.8	1.1	1.0	0.2	1.3	3.0
Oct	1.4	1.8	1.5	4.0	0.5	1.2	0.5	0.5	1.1	2.7
Nov	1.5	2.1	1.8	4.5	0.9	1.2	1.1	0.5	1.1	2.7
Dec	1.4	2.1	1.6	3.8	0.5	1.2	1.0	0.5	1.0	2.2
	General government financial balance [7]									
2015	– 2.1	– 2.5	0.6	0.1	– 2.7	– 3.6	– 5.7	– 1.9	– 2.6	– 1.2
2016	– 1.5	– 2.5	0.8	– 0.3	– 1.7	– 3.4	0.5	– 0.7	– 2.5	0.0
2017	...	...	1.2	...	...	...	...	...	...	...
	General government debt [7]									
2014	91.8	106.8	74.6	10.7	60.2	95.0	179.0	104.5	131.8	40.9
2015	89.9	106.0	70.9	10.0	63.6	95.8	176.8	76.9	131.5	36.9
2016	88.9	105.7	68.1	9.4	63.1	96.5	180.8	72.8	132.0	40.6

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	7.2	2.3	1.1	1.8	3.9	2.3	3.4	2.0	2015
2.3	3.1	5.5	2.2	1.4	1.5	3.3	3.1	3.3	3.0	2016
...	...	...	...	...	...	...	...	...	...	2017
1.7	3.4	4.9	2.3	1.9	1.2	3.8	3.2	3.6	2.6	2016 Q2
1.8	5.0	4.9	2.4	1.0	1.7	2.7	3.4	3.3	3.0	Q3
3.6	4.3	5.7	2.4	1.1	1.9	3.2	3.5	2.5	3.7	Q4
4.2	3.8	6.5	3.2	3.2	3.2	3.0	5.1	2.8	3.8	2017 Q1
4.1	2.0	7.9	3.3	2.7	2.7	3.7	4.6	3.2	4.0	Q2
3.1	3.2	7.2	3.0	3.2	2.5	3.4	4.5	2.9	3.8	Q3
										Industrial production [1,3]
0.3	4.4	– 5.7	– 2.9	0.9	1.6	3.6	1.7	1.3	– 0.7	2014
4.6	1.2	6.3	– 3.4	2.2	2.1	7.3	5.1	3.4	3.4	2015
2.8	0.2	– 3.8	2.2	2.8	2.4	4.8	7.8	1.8	7.9	2016
– 0.3	1.1	– 4.6	3.4	2.4	2.1	7.2	6.6	1.3	8.7	2016 Q2
3.0	– 0.7	– 3.3	3.4	1.4	1.6	3.0	7.9	0.9	6.2	Q3
3.1	– 1.7	– 2.0	5.6	4.3	1.6	4.2	9.3	1.8	7.1	Q4
5.9	– 3.9	7.3	2.2	2.1	3.4	7.7	6.4	1.9	9.0	2017 Q1
6.7	0.0	4.0	1.5	3.6	2.4	1.8	7.6	2.2	5.3	Q2
8.8	2.5	4.5	1.8	6.0	5.7	3.3	8.2	2.8	7.6	Q3
										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
75.5	77.6	79.8	81.5	83.2	79.6	84.3	83.7	78.4	58.7	2016 Q3
76.0	81.3	79.9	82.1	85.1	80.3	85.4	84.1	79.1	59.6	Q4
76.5	82.6	79.3	81.4	85.1	79.8	87.1	84.5	78.8	58.1	2017 Q1
77.4	82.1	79.1	82.5	86.6	79.1	86.5	85.4	78.1	57.6	Q2
77.6	80.1	80.0	83.1	86.9	80.9	84.4	85.1	78.7	61.5	Q3
77.4	81.1	82.8	83.1	88.0	81.7	83.0	85.2	79.1	59.1	Q4
										Standardised unemployment rate [5]
10.7	6.0	5.8	7.4	5.6	14.1	13.2	9.7	24.5	16.1	2014
9.1	6.5	5.4	6.9	5.7	12.6	11.5	9.0	22.1	15.0	2015
7.9	6.3	4.7	6.0	6.0	11.2	9.7	8.0	19.6	13.0	2016
7.0	5.7	4.0	4.9	5.4	9.1	8.1	6.7	17.0	11.1	2017 June
6.8	5.8	4.0	4.8	5.4	8.9	8.1	6.7	16.9	10.6	July
6.8	5.7	4.0	4.7	5.5	8.7	8.0	6.7	16.8	10.5	Aug
7.0	5.7	3.9	4.7	5.4	8.5	7.8	6.7	16.8	10.4	Sep
7.1	5.5	3.6	4.5	5.4	8.4	7.6	6.5	16.7	10.5	Oct
7.0	5.5	3.6	4.4	5.4	8.2	7.5	6.5	16.7	11.0	Nov
										Harmonised Index of Consumer Prices [1]
– 0.7	0.1	1.2	0.2	0.8	0.5	– 0.3	– 0.8	– 0.6	– 1.5	2015
0.7	0.0	0.9	0.1	1.0	0.6	– 0.5	– 0.2	– 0.3	– 1.2	2016
3.7	2.1	1.3	1.3	2.2	1.6	1.4	1.6	2.0	0.7	2017
4.1	1.8	1.2	1.5	2.0	1.0	1.5	1.2	1.7	– 0.1	2017 July
4.6	2.3	1.2	1.5	2.1	1.3	1.6	1.4	2.0	0.5	Aug
4.6	2.0	1.2	1.4	2.5	1.6	1.8	1.4	1.8	0.1	Sep
4.2	2.0	1.5	1.3	2.4	1.9	1.8	1.3	1.7	0.4	Oct
4.2	2.0	1.5	1.5	2.4	1.8	2.1	1.4	1.8	0.2	Nov
3.8	1.6	1.3	1.2	2.3	1.6	2.0	1.9	1.2	– 0.4	Dec
										General government financial balance [7]
– 0.2	1.4	– 1.1	– 2.1	– 1.0	– 4.4	– 2.7	– 2.9	– 5.3	– 1.2	2015
0.3	1.6	1.1	0.4	– 1.6	– 2.0	– 2.2	– 1.9	– 4.5	0.5	2016
...	...	...	...	...	...	...	...	...	...	2017
										General government debt [7]
40.5	22.7	63.8	68.0	83.8	130.6	53.5	80.3	100.4	107.5	2014
42.6	22.0	60.3	64.6	84.3	128.8	52.3	82.6	99.4	107.5	2015
40.1	20.8	57.6	61.8	83.6	130.1	51.8	78.5	99.0	107.1	2016

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	*of which* Securities	Total	*of which* Securities	Total	Claims on non-euro-area residents	Liabilities to non-euro-area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) **2**	Capital and reserves **3**
2016 Apr	96.8	47.7	27.7	49.1	43.9	– 61.6	119.0	180.7	1.5	– 3.7	– 1.3	– 0.5	7.1
May	70.8	20.7	12.9	50.2	56.4	– 0.9	62.0	62.9	3.4	– 5.0	– 0.5	0.4	8.5
June	55.6	5.1	– 7.0	50.5	62.1	31.2	– 23.2	– 54.4	– 10.3	– 20.8	– 0.8	– 10.3	21.6
July	54.5	29.5	14.7	25.0	24.1	– 84.9	56.9	141.8	– 25.4	– 7.1	– 0.5	– 23.8	6.0
Aug	17.3	16.9	27.1	0.4	9.0	– 39.7	7.8	47.5	2.0	– 4.9	– 0.6	– 0.3	7.9
Sep	41.8	26.6	– 7.3	15.2	19.4	– 16.9	– 69.0	– 52.0	– 22.9	– 12.2	– 0.5	– 19.6	9.4
Oct	84.9	37.3	5.6	47.6	45.1	– 45.5	153.8	199.3	4.7	– 5.6	– 0.6	– 2.6	13.5
Nov	105.9	55.8	16.0	50.1	62.1	7.2	– 21.6	– 28.7	0.3	– 7.9	– 0.8	– 1.1	10.1
Dec	– 58.4	– 51.0	– 8.3	– 7.5	– 0.7	36.4	– 154.2	– 190.6	– 8.7	0.1	– 1.0	– 13.8	6.0
2017 Jan	131.2	43.6	31.3	87.6	69.7	– 12.8	233.5	246.4	– 18.3	– 9.9	– 0.2	– 3.7	– 4.6
Feb	45.8	30.6	4.0	15.2	35.3	– 45.6	53.4	99.0	13.4	– 6.1	– 0.5	– 3.4	23.3
Mar	151.6	92.8	25.3	58.8	62.6	– 8.8	– 51.7	– 43.0	– 13.6	1.8	– 0.5	– 22.1	7.2
Apr	54.9	24.7	20.2	30.1	27.6	– 39.4	77.6	117.0	– 22.2	– 12.2	– 0.3	– 0.7	– 9.0
May	50.7	26.1	16.3	24.6	35.1	– 0.3	– 4.2	– 3.8	18.4	– 5.4	– 2.4	16.9	9.4
June	23.6	28.9	0.4	– 5.3	– 5.3	58.2	– 108.4	– 166.6	– 3.9	– 12.9	– 0.1	– 6.7	15.9
July	7.2	0.1	15.3	7.0	9.4	7.9	105.0	97.2	– 5.6	– 7.8	– 0.9	– 1.5	4.6
Aug	11.9	– 20.5	– 15.0	32.4	38.4	– 29.7	– 2.6	27.1	6.4	– 5.9	– 0.8	– 2.8	15.8
Sep	58.1	46.5	– 13.8	11.7	17.1	7.5	– 34.3	– 41.7	– 20.2	– 8.6	– 0.9	– 30.5	19.8
Oct	63.8	52.3	– 9.5	11.5	11.3	– 68.7	87.6	156.3	– 31.4	– 27.1	– 0.7	– 7.9	4.3
Nov	124.3	97.2	20.5	27.1	35.1	21.5	– 0.8	– 22.3	1.8	0.9	– 0.8	– 1.8	3.6

(b) German contribution

Period	I Lending to non-banks (non-MFIs) in the euro area					II Net claims on non-euro-area residents			III Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
		Enterprises and households		General government									
	Total	Total	*of which* Securities	Total	*of which* Securities	Total	Claims on non-euro-area residents	Liabilities to non-euro-area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) **2**	Capital and reserves **3**
2016 Apr	25.7	12.3	0.7	13.4	8.8	– 40.1	13.6	53.7	0.6	– 3.3	– 1.1	1.6	3.3
May	24.8	16.2	4.9	8.6	11.9	1.5	1.1	– 0.4	7.5	0.8	– 1.0	4.7	3.0
June	4.7	1.7	0.5	2.9	8.6	– 2.9	23.9	26.8	– 3.5	– 1.5	– 0.7	– 7.5	6.2
July	30.2	13.3	1.6	16.9	13.8	– 18.4	7.1	25.5	– 6.0	– 0.8	– 0.9	– 5.4	1.1
Aug	11.1	8.9	1.5	2.2	4.0	– 16.5	2.5	19.0	2.0	– 1.8	– 0.8	3.9	0.6
Sep	24.6	13.2	3.4	11.4	12.6	– 37.2	– 11.1	26.1	– 7.2	– 1.1	– 0.7	– 6.2	0.9
Oct	21.5	11.8	2.6	9.6	6.5	– 3.2	42.4	45.7	7.1	2.2	– 0.8	5.8	– 0.2
Nov	28.1	18.4	4.4	9.7	14.4	– 22.4	– 25.7	– 3.3	9.2	– 0.6	– 0.5	9.6	0.8
Dec	– 10.1	– 8.1	0.4	– 2.1	8.4	19.6	– 9.5	– 29.1	– 2.6	– 2.0	– 0.4	– 2.9	2.7
2017 Jan	23.6	15.0	2.3	8.6	8.5	– 24.4	31.8	56.2	9.8	– 3.1	– 0.7	15.9	– 2.3
Feb	17.3	12.5	3.9	4.9	5.5	– 30.2	7.5	37.8	– 1.4	– 1.4	– 0.6	– 0.1	0.8
Mar	18.2	12.7	1.8	5.5	9.5	– 3.6	6.3	9.9	2.7	– 1.0	– 0.5	– 1.3	5.5
Apr	14.9	7.8	– 1.5	7.1	5.4	– 19.0	– 7.3	11.6	9.3	– 3.5	– 0.5	1.3	11.9
May	13.8	13.3	3.5	0.6	7.9	7.1	– 13.0	– 20.1	2.7	– 0.1	– 0.4	1.8	1.4
June	11.8	11.5	6.2	0.4	2.6	22.7	16.2	– 6.4	6.0	– 2.0	– 0.4	2.8	5.6
July	18.1	12.8	1.8	5.3	3.5	– 10.3	– 23.0	– 12.7	– 4.0	– 1.3	– 0.8	– 1.4	– 0.5
Aug	13.6	10.2	– 0.6	3.4	8.3	14.7	– 13.8	– 28.5	4.5	0.1	– 0.8	3.5	1.7
Sep	17.8	14.1	– 1.8	3.7	8.0	– 22.3	9.2	31.5	– 5.9	– 0.2	– 0.6	– 7.3	2.3
Oct	15.9	8.6	0.4	7.3	6.5	6.1	– 11.4	– 17.5	– 11.4	– 1.0	– 0.8	– 9.5	– 0.1
Nov	27.1	18.3	6.4	8.8	11.2	23.2	– 2.6	– 25.7	0.0	0.7	– 0.6	0.1	– 0.1

***** The data in this table are based on the consolidated balance sheet of monetary financial institutions (MFIs) (Table II.2); statistical breaks have been eliminated from the flow figures (see also the "Notes on the figures" in the "Explanatory notes" in the Statistical Supplement to the Monthly Report 1, p 30•). **1** Source: ECB. **2** Excluding MFIs' portfolios. **3** After deduction of inter-MFI participations. **4** Including the counterparts of monetary liabilities of central governments. **5** Including the monetary liabilities of central governments (Post Office, Treasury). **6** In Germany, only savings deposits. **7** Paper held by residents outside the euro area has been eliminated.

II Overall monetary survey in the euro area

(a) Euro area

IV Deposits of central governments	V Other factors: Total [4]	V Other factors: *of which* Intra-Eurosystem liability/ claim related to banknote issue	VI Money stock M3: Total	Money stock M2: Total	Money stock M1: Total	Money stock M1: Currency in circulation	Money stock M1: Overnight deposits [5]	Deposits with an agreed maturity of up to 2 years [5]	Deposits at agreed notice of up to 3 months [5,6]	Repo transactions	Money market fund shares (net) [2,7,8]	Debt securities with maturities of up to 2 years (incl money market paper) (net) [2,7]	Period
– 35.9	– 31.0	–	100.5	75.1	92.6	4.6	88.0	– 17.2	– 0.3	– 4.5	17.1	2.7	2016 Apr
20.1	12.9	–	33.6	35.0	47.4	2.3	45.1	– 20.2	7.9	– 9.5	– 0.1	– 2.0	May
60.5	17.6	–	19.0	31.4	34.7	8.4	26.3	– 1.9	– 1.4	2.5	– 9.6	5.9	June
– 29.0	– 72.4	–	96.5	73.5	66.9	10.1	56.9	6.1	0.5	– 22.7	15.6	5.0	July
– 54.7	41.2	–	– 10.9	– 8.9	– 5.1	– 3.5	– 1.6	– 4.5	0.7	2.4	0.6	– 2.5	Aug
2.7	42.6	–	2.4	18.3	23.7	2.2	21.5	1.4	– 6.7	– 4.8	– 1.8	– 5.9	Sep
– 3.0	7.0	–	30.7	14.4	50.2	3.2	47.0	– 29.6	– 6.2	– 16.9	18.0	2.1	Oct
5.1	20.3	–	87.4	82.7	95.0	1.2	93.7	– 10.3	– 1.9	– 2.2	7.0	1.2	Nov
– 48.2	– 16.7	–	51.6	72.1	90.1	16.1	74.1	– 24.4	6.4	4.4	– 6.0	– 7.4	Dec
62.7	46.1	–	27.9	6.3	– 6.6	– 11.9	5.3	3.0	9.9	– 17.4	11.6	– 0.9	2017 Jan
– 17.4	– 25.5	–	29.7	30.8	30.8	3.0	27.8	– 2.1	2.1	– 8.6	– 4.2	6.5	Feb
24.2	25.4	–	106.8	92.4	92.7	4.3	88.5	– 5.6	5.3	14.8	12.0	– 0.6	Mar
– 5.5	– 9.9	–	53.0	72.5	101.1	6.8	94.3	– 31.1	2.5	– 5.9	– 4.3	– 16.9	Apr
13.5	– 13.5	–	32.0	30.1	41.9	0.5	41.5	– 21.0	9.2	– 11.7	– 4.7	5.2	May
20.4	21.6	–	43.7	72.8	80.8	9.5	71.3	– 10.5	2.6	– 16.6	– 20.6	– 0.2	June
– 7.7	– 17.4	–	45.8	31.7	35.4	5.7	29.8	– 6.1	2.4	– 24.1	13.6	– 1.4	July
– 18.3	– 59.9	–	54.1	45.9	31.8	– 2.0	33.8	8.1	6.0	2.6	9.1	– 7.2	Aug
41.3	24.4	–	20.0	22.8	47.6	0.5	47.1	– 21.6	– 3.1	7.0	– 3.9	10.2	Sep
– 43.5	53.8	–	16.1	12.9	23.3	2.9	20.4	– 7.9	– 2.5	19.8	7.8	– 6.7	Oct
– 11.8	73.3	–	82.5	75.0	83.6	0.9	82.6	– 7.5	– 1.0	17.1	– 1.0	0.6	Nov

(b) German contribution

IV Deposits of central governments	V Other factors: Total	V Other factors: *of which* Intra-Eurosystem liability/ claim related to banknote issue [9,11]	V Other factors: *of which* Currency in circulation	VI Money stock M3 [10]: Total	Components of the money stock: Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits at agreed notice of up to 3 months [6]	Repo transactions	Money market fund shares (net) [7,8]	Debt securities with maturities of up to 2 years (incl money market paper)(net) [7]	Period
– 17.4	– 20.7	1.2	1.0	23.1	24.1	– 1.0	– 0.7	0.5	– 0.5	0.7	2016 Apr
18.7	– 19.8	2.9	– 0.5	19.9	21.5	0.3	– 0.6	– 0.2	– 0.4	– 0.7	May
13.0	– 7.9	4.2	1.5	0.2	2.0	– 0.7	– 0.4	– 1.0	0.0	0.4	June
– 31.8	25.0	3.7	2.1	24.5	12.3	4.0	– 0.1	0.9	– 0.2	7.6	July
8.8	– 22.3	2.3	– 0.8	6.2	11.3	– 1.6	0.1	– 0.2	– 0.1	– 3.4	Aug
8.6	– 21.2	4.7	– 0.6	7.2	3.0	5.5	– 0.6	– 0.3	0.0	– 0.5	Sep
– 8.8	18.6	3.2	– 0.5	1.4	12.0	– 10.2	0.2	0.3	– 0.1	– 0.8	Oct
6.9	– 48.2	1.9	0.3	37.8	36.2	3.3	0.1	– 0.2	0.0	– 1.7	Nov
– 13.6	30.4	3.3	2.4	– 4.8	– 4.9	– 1.5	2.7	– 0.9	– 0.0	– 0.1	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	11.4	1.2	– 0.0	32.7	33.7	– 1.7	0.2	0.3	0.0	0.2	Nov

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

II Overall monetary survey in the euro area

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

End of year/month	Total assets or liabilities	Assets										
		Lending to non-banks (non-MFIs) in the euro area									Claims on non-euro-area residents	Other assets
		Total	Enterprises and households				General government					
			Total	Loans	Debt securities 2	Shares and other equities	Total	Loans	Debt securities 3			
	Euro area (€ billion) 1											
2015 Oct	26,337.3	16,576.0	12,732.6	10,661.8	1,288.0	782.8	3,843.4	1,125.0	2,718.5	5,251.2	4,510.1
Nov	26,653.5	16,691.8	12,803.5	10,716.5	1,295.5	791.5	3,888.3	1,117.1	2,771.2	5,314.1	4,647.6
Dec	25,850.7	16,541.4	12,703.0	10,627.4	1,296.3	779.3	3,838.4	1,110.2	2,728.2	5,034.5	4,274.8
2016 Jan	26,414.5	16,689.5	12,731.3	10,656.8	1,307.0	767.5	3,958.2	1,127.1	2,831.2	5,149.6	4,575.4
Feb	26,749.2	16,774.6	12,771.6	10,700.6	1,313.1	757.8	4,003.0	1,118.6	2,884.4	5,228.2	4,746.4
Mar	26,406.9	16,825.5	12,776.4	10,709.9	1,312.1	754.4	4,049.1	1,117.9	2,931.3	5,030.7	4,550.7
Apr	26,557.7	16,909.0	12,815.8	10,721.4	1,325.7	768.7	4,093.2	1,127.9	2,965.3	5,173.9	4,474.7
May	26,807.0	16,993.9	12,842.6	10,733.4	1,341.4	767.8	4,151.4	1,121.7	3,029.6	5,270.0	4,543.1
June	27,072.9	17,041.4	12,829.3	10,732.4	1,344.2	752.7	4,212.1	1,110.6	3,101.4	5,278.2	4,753.4
July	27,135.0	17,093.7	12,852.6	10,737.6	1,359.7	755.3	4,241.1	1,111.6	3,129.5	5,326.7	4,714.7
Aug	27,037.8	17,105.7	12,866.5	10,723.2	1,365.1	778.2	4,239.1	1,102.9	3,136.2	5,321.4	4,610.7
Sep	26,973.2	17,147.5	12,892.5	10,756.7	1,359.3	776.5	4,255.0	1,098.8	3,156.2	5,266.4	4,559.3
Oct	27,050.9	17,202.6	12,923.2	10,785.2	1,363.1	775.0	4,279.4	1,101.0	3,178.4	5,422.4	4,425.8
Nov	27,160.6	17,295.2	12,983.4	10,830.1	1,383.3	770.0	4,311.8	1,088.9	3,222.9	5,451.6	4,413.9
Dec	26,678.3	17,234.9	12,925.7	10,772.3	1,372.2	781.2	4,309.2	1,079.4	3,229.7	5,208.1	4,235.3
2017 Jan	26,758.5	17,317.9	12,957.0	10,777.1	1,393.4	786.4	4,360.9	1,097.4	3,263.6	5,377.4	4,063.3
Feb	27,020.5	17,378.7	12,994.7	10,807.3	1,398.4	789.0	4,384.0	1,076.2	3,307.8	5,497.8	4,144.0
Mar	26,971.6	17,511.2	13,077.2	10,863.6	1,423.7	789.9	4,434.0	1,072.8	3,361.2	5,418.0	4,042.4
Apr	27,060.7	17,556.3	13,092.0	10,859.1	1,429.8	803.0	4,464.3	1,075.4	3,388.9	5,450.3	4,054.1
May	26,978.9	17,596.1	13,109.0	10,859.5	1,451.1	798.3	4,487.1	1,062.4	3,424.7	5,360.7	4,022.2
June	26,659.1	17,574.1	13,095.9	10,858.2	1,441.3	796.3	4,478.3	1,063.0	3,415.2	5,195.9	3,889.0
July	26,613.8	17,568.6	13,083.3	10,830.5	1,460.1	792.6	4,485.3	1,060.2	3,425.1	5,227.9	3,817.3
Aug	26,646.9	17,574.9	13,051.7	10,817.6	1,444.2	789.9	4,523.2	1,054.5	3,468.6	5,198.8	3,873.3
Sep	26,528.9	17,622.7	13,097.6	10,873.2	1,433.2	791.2	4,525.1	1,045.9	3,479.2	5,171.9	3,734.4
Oct	26,726.5	17,699.9	13,156.4	10,935.4	1,422.7	798.3	4,543.5	1,046.1	3,497.4	5,292.7	3,733.9
Nov	26,753.6	17,810.0	13,235.8	11,002.8	1,430.0	803.0	4,574.1	1,038.2	3,535.9	5,245.5	3,698.1
	German contribution (€ billion)										
2015 Oct	6,041.8	3,832.3	2,994.6	2,578.6	150.5	265.6	837.7	368.4	469.2	1,257.1	952.5
Nov	6,104.8	3,865.0	3,019.5	2,594.8	153.5	271.2	845.5	363.9	481.6	1,236.6	1,003.2
Dec	5,925.1	3,840.1	3,003.6	2,586.5	155.7	261.3	836.5	358.3	478.2	1,166.4	918.6
2016 Jan	6,057.8	3,858.2	3,004.8	2,592.8	154.8	257.3	853.4	362.0	491.4	1,191.2	1,008.3
Feb	6,155.3	3,874.9	3,014.0	2,607.0	151.1	255.9	860.9	362.0	498.9	1,209.7	1,070.8
Mar	6,060.6	3,885.5	3,015.6	2,607.8	151.8	256.0	869.9	361.6	508.3	1,163.7	1,011.4
Apr	6,050.2	3,908.3	3,026.3	2,617.8	152.2	256.3	882.1	366.1	515.9	1,181.7	960.2
May	6,091.2	3,934.7	3,043.0	2,629.7	153.3	260.0	891.7	362.8	528.9	1,187.1	969.4
June	6,221.2	3,939.7	3,042.5	2,629.1	152.9	260.5	897.2	357.3	540.0	1,221.3	1,060.1
July	6,245.6	3,968.5	3,054.3	2,639.3	155.3	259.7	914.2	360.3	553.8	1,228.3	1,048.8
Aug	6,218.9	3,977.8	3,062.7	2,646.2	155.3	261.2	915.1	358.5	556.6	1,226.9	1,014.2
Sep	6,202.1	4,001.8	3,075.1	2,655.3	157.6	262.1	926.8	357.2	569.5	1,215.0	985.4
Oct	6,208.1	4,019.0	3,087.3	2,664.9	161.9	260.5	931.7	360.3	571.4	1,260.2	928.9
Nov	6,186.1	4,046.1	3,107.1	2,680.4	165.0	261.7	939.0	355.5	583.5	1,243.2	896.8
Dec	6,131.1	4,037.0	3,099.2	2,671.7	164.0	263.6	937.8	345.2	592.6	1,234.7	859.4
2017 Jan	6,131.6	4,054.1	3,112.0	2,682.7	165.0	264.3	942.1	345.2	596.8	1,260.2	817.4
Feb	6,196.5	4,075.7	3,124.9	2,691.3	168.1	265.5	950.8	344.6	606.2	1,281.9	839.0
Mar	6,176.3	4,089.6	3,136.8	2,701.2	169.6	266.0	952.8	340.6	612.3	1,281.0	805.7
Apr	6,174.4	4,103.1	3,143.3	2,709.1	170.4	263.9	959.8	342.3	617.5	1,264.2	807.1
May	6,160.2	4,114.5	3,157.3	2,719.6	172.6	265.0	957.2	332.2	624.9	1,234.6	811.2
June	6,106.3	4,120.6	3,165.9	2,722.5	173.2	270.2	954.7	330.8	623.9	1,238.6	747.1
July	6,069.0	4,135.9	3,176.7	2,731.5	175.2	269.9	959.2	332.6	626.7	1,201.4	731.7
Aug	6,084.5	4,152.3	3,186.3	2,741.6	174.3	270.3	966.1	327.8	638.3	1,185.1	747.2
Sep	6,076.7	4,167.7	3,200.9	2,757.6	174.3	269.1	966.8	323.2	643.6	1,194.6	714.3
Oct	6,082.0	4,185.9	3,210.4	2,766.1	174.6	269.8	975.4	324.0	651.4	1,188.5	707.7
Nov	6,088.6	4,211.0	3,227.4	2,777.0	178.8	271.6	983.6	321.5	662.1	1,177.2	700.4

* Monetary financial institutions (MFIs) comprise banks (including building and loan associations), money market funds, and the European Central Bank and national central banks (the Eurosystem). **1** Source: ECB. **2** Including money market paper of enterprises. **3** Including Treasury bills and other money market paper issued by general government. **4** Euro currency in circulation (see also footnote 8 on p 12•) Excluding MFIs' cash in hand (in euro). The German contribution includes the volume

II Overall monetary survey in the euro area

Liabilities										
	Deposits of non-banks (non-MFIs) in the euro area									
			Enterprises and households							
					With agreed maturities of			At agreed notice of [6]		
Currency in circulation [4]	Total	*of which* in euro [5]	Total	Overnight	up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	End of year/month
										Euro area (€ billion) [1]
1,028.8	11,498.7	10,739.6	10,848.6	5,244.8	972.9	349.1	2,092.0	2,112.5	77.3	2015 Oct
1,034.5	11,524.3	10,774.3	10,870.1	5,288.7	970.8	343.9	2,081.4	2,109.6	75.7	Nov
1,048.9	11,486.9	10,813.9	10,922.8	5,326.1	981.5	343.8	2,083.3	2,112.9	75.2	Dec
1,037.7	11,611.8	10,852.4	10,953.3	5,365.2	973.3	344.1	2,074.6	2,121.8	74.3	2016 Jan
1,038.9	11,621.1	10,871.9	10,976.1	5,385.2	967.8	340.6	2,085.3	2,124.1	73.1	Feb
1,042.5	11,686.5	10,916.7	11,007.2	5,418.9	973.3	339.8	2,076.3	2,126.7	72.3	Mar
1,047.1	11,715.7	10,978.1	11,072.9	5,504.4	963.0	337.5	2,071.0	2,126.5	70.5	Apr
1,049.3	11,766.9	11,005.9	11,092.6	5,545.2	945.2	331.9	2,066.3	2,134.0	70.0	May
1,057.7	11,829.3	11,001.4	11,089.4	5,565.3	944.9	330.2	2,046.5	2,133.1	69.3	June
1,067.8	11,849.6	11,053.7	11,133.7	5,615.1	952.1	325.6	2,039.3	2,132.9	68.8	July
1,064.3	11,783.5	11,037.8	11,120.8	5,611.4	952.6	320.7	2,034.0	2,134.1	68.1	Aug
1,066.5	11,788.9	11,032.4	11,130.6	5,637.1	960.1	315.0	2,021.8	2,129.2	67.4	Sep
1,069.7	11,797.5	11,047.9	11,134.7	5,680.7	936.8	307.6	2,018.8	2,123.8	67.2	Oct
1,071.0	11,882.2	11,107.7	11,212.2	5,780.1	926.6	303.3	2,013.9	2,121.8	66.4	Nov
1,087.1	11,891.0	11,172.8	11,282.7	5,870.1	910.5	294.0	2,014.1	2,128.5	65.6	Dec
1,075.1	11,946.4	11,152.8	11,267.6	5,867.2	912.9	286.6	1,997.7	2,138.2	65.0	2017 Jan
1,078.1	11,955.2	11,171.6	11,291.2	5,891.9	917.9	284.5	1,992.1	2,140.2	64.6	Feb
1,082.4	12,064.9	11,241.1	11,383.8	5,987.6	909.3	285.3	1,992.4	2,145.1	64.1	Mar
1,089.2	12,102.7	11,284.6	11,417.8	6,064.0	885.3	278.6	1,978.6	2,147.6	63.7	Apr
1,089.7	12,115.3	11,302.4	11,407.6	6,086.1	859.3	272.9	1,970.5	2,156.7	62.0	May
1,099.1	12,176.7	11,346.6	11,446.2	6,153.5	852.6	265.6	1,953.2	2,159.5	61.9	June
1,104.8	12,174.1	11,357.3	11,440.9	6,164.8	847.8	262.3	1,942.9	2,164.7	58.4	July
1,102.8	12,191.2	11,387.2	11,469.6	6,188.3	856.8	260.1	1,936.0	2,170.7	57.7	Aug
1,103.3	12,239.3	11,399.9	11,487.3	6,238.5	841.5	256.2	1,926.3	2,168.0	56.8	Sep
1,106.2	12,184.5	11,387.6	11,474.8	6,258.6	844.7	250.5	1,899.2	2,165.5	56.2	Oct
1,107.1	12,212.5	11,437.7	11,508.0	6,332.2	830.6	246.2	1,878.8	2,164.8	55.5	Nov
										German contribution (€ billion)
240.1	3,349.1	3,271.6	3,154.0	1,698.6	170.8	32.9	657.5	530.3	64.0	2015 Oct
241.9	3,386.8	3,309.9	3,182.3	1,732.8	168.6	33.2	653.8	531.1	62.8	Nov
244.2	3,379.0	3,293.1	3,168.8	1,711.8	176.9	34.4	649.6	534.1	61.9	Dec
242.2	3,398.2	3,312.7	3,191.1	1,739.2	172.6	35.6	647.9	535.1	60.7	2016 Jan
242.7	3,412.8	3,319.7	3,197.4	1,747.9	172.1	35.8	645.5	536.7	59.4	Feb
243.3	3,428.4	3,315.7	3,188.8	1,735.7	176.5	37.5	644.9	535.9	58.3	Mar
244.2	3,429.1	3,334.3	3,208.5	1,759.1	178.5	38.3	640.3	535.1	57.2	Apr
243.7	3,469.8	3,356.2	3,222.9	1,779.2	175.2	37.3	640.6	534.4	56.2	May
245.2	3,481.5	3,352.9	3,218.7	1,779.1	173.1	38.3	638.8	533.9	55.4	June
247.4	3,464.1	3,368.1	3,233.1	1,793.5	174.7	38.2	638.3	533.8	54.6	July
246.5	3,480.0	3,376.0	3,238.3	1,803.0	173.4	38.2	636.2	533.8	53.8	Aug
245.9	3,494.5	3,380.7	3,247.0	1,807.9	179.4	38.3	635.0	533.3	53.1	Sep
245.4	3,489.6	3,386.4	3,254.0	1,821.1	172.1	37.8	637.3	533.5	52.3	Oct
245.7	3,536.5	3,424.0	3,288.1	1,857.7	171.0	37.4	636.6	533.7	51.7	Nov
248.1	3,517.1	3,419.8	3,284.1	1,851.0	171.5	38.4	635.6	536.3	51.3	Dec
245.4	3,526.3	3,439.3	3,306.3	1,873.8	174.0	38.7	632.1	537.1	50.6	2017 Jan
246.6	3,532.6	3,448.3	3,313.4	1,881.5	175.3	38.8	630.0	537.9	50.0	Feb
247.7	3,549.3	3,449.2	3,318.1	1,886.4	177.4	39.9	628.4	536.5	49.5	Mar
249.3	3,540.9	3,447.5	3,317.0	1,895.9	170.7	40.0	624.7	536.6	49.0	Apr
248.6	3,566.1	3,465.8	3,327.4	1,910.5	167.5	40.2	624.1	536.4	48.7	May
249.5	3,590.5	3,482.0	3,339.9	1,928.7	165.5	40.3	621.4	535.7	48.3	June
251.6	3,583.1	3,472.8	3,333.0	1,927.8	162.6	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	3,644.1	3,518.9	3,381.2	1,990.6	157.2	37.4	615.6	538.3	42.1	Nov

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

II Overall monetary survey in the euro area

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

End of year/month	Liabilities (cont'd)												
	Deposits of non-banks (non-MFIs) in the euro area (cont'd)								Repo transactions with non-banks in the euro area		Money market fund shares (net) [3]	Debt securities	
	General government												
	Central governments	Other general government											
		Total	Overnight	With agreed maturities of			At agreed notice of [2]		Total	*of which* Enterprises and households		Total	*of which* denominated in euro
				up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months					
	Euro area (€ billion) [1]												
2015 Oct	315.5	334.6	157.4	98.6	13.2	39.6	20.9	4.7	297.6	288.1	481.2	2,337.6	1,640.5
Nov	298.5	355.7	168.0	108.4	13.0	39.7	21.9	4.7	301.4	296.2	497.1	2,367.3	1,646.3
Dec	227.4	336.6	154.4	104.6	13.7	39.7	19.5	4.7	272.8	270.9	475.1	2,319.4	1,634.3
2016 Jan	315.1	343.4	160.9	102.3	14.3	39.7	21.0	5.2	294.5	292.9	485.5	2,301.4	1,615.0
Feb	301.0	344.0	162.6	98.1	14.4	39.9	24.0	5.1	339.1	335.1	484.2	2,288.0	1,597.6
Mar	333.3	345.9	159.5	102.0	15.1	40.8	23.6	5.0	332.3	329.1	471.7	2,271.4	1,590.3
Apr	297.6	345.2	161.9	97.2	15.4	42.2	23.5	4.9	327.9	323.1	489.1	2,275.8	1,586.3
May	317.7	356.6	167.0	102.1	15.5	43.1	24.0	4.9	318.7	312.8	489.2	2,284.5	1,575.9
June	378.3	361.6	171.3	102.4	15.9	43.7	23.5	4.8	321.3	318.0	479.7	2,281.8	1,569.3
July	349.2	366.7	174.1	101.6	18.2	43.8	24.2	4.8	298.6	297.4	494.8	2,258.2	1,543.7
Aug	294.6	368.1	175.7	100.8	18.7	44.3	23.8	4.9	301.0	299.9	495.5	2,253.2	1,534.5
Sep	297.4	361.0	170.5	99.5	19.4	44.4	22.3	5.0	286.5	285.7	493.7	2,227.1	1,517.1
Oct	295.3	367.4	182.2	94.3	19.9	44.5	21.3	5.3	266.4	265.7	511.8	2,226.0	1,503.3
Nov	300.4	369.6	178.7	98.8	21.1	44.2	21.6	5.2	264.5	263.8	518.8	2,244.1	1,506.1
Dec	253.1	355.1	169.8	93.9	21.5	43.3	21.4	5.1	268.9	268.2	512.8	2,230.4	1,502.6
2017 Jan	316.8	362.0	170.7	99.5	21.3	43.4	21.7	5.5	250.1	249.5	524.3	2,209.7	1,487.5
Feb	300.0	364.1	176.2	96.2	20.2	44.1	21.9	5.4	241.7	241.0	520.1	2,221.0	1,493.4
Mar	324.1	357.0	166.6	96.5	21.5	44.6	22.3	5.4	256.5	255.8	532.1	2,194.0	1,480.5
Apr	318.6	366.2	177.7	92.4	23.7	44.7	22.2	5.5	250.4	249.7	527.8	2,164.8	1,466.1
May	332.2	375.5	182.9	94.5	25.3	45.2	22.9	4.7	238.4	237.7	523.0	2,171.8	1,490.1
June	352.5	378.0	182.5	95.7	26.6	45.8	22.7	4.7	221.7	221.0	502.2	2,154.7	1,478.3
July	344.8	388.4	192.2	95.3	26.7	46.2	23.1	4.8	197.4	196.8	516.0	2,135.9	1,473.0
Aug	326.5	395.1	198.4	94.9	27.8	46.2	23.2	4.7	199.6	198.9	525.0	2,119.2	1,465.2
Sep	362.5	389.5	194.4	91.9	28.1	47.5	22.8	4.7	206.6	205.9	521.1	2,098.6	1,448.2
Oct	318.9	390.9	199.1	87.6	28.3	48.3	22.9	4.7	226.5	225.8	528.9	2,090.1	1,431.5
Nov	307.2	397.3	201.8	89.4	29.8	49.0	22.6	4.6	243.5	242.9	528.0	2,102.7	1,445.4
	German contribution (€ billion)												
2015 Oct	13.4	181.6	54.1	80.9	9.8	33.1	3.1	0.6	6.6	5.0	3.9	555.3	275.2
Nov	12.3	192.2	55.6	90.2	9.5	33.2	3.1	0.6	6.1	4.5	3.8	562.5	270.9
Dec	22.6	187.6	54.3	86.0	10.2	33.4	3.1	0.5	2.5	2.0	3.4	533.4	254.9
2016 Jan	21.8	185.2	54.5	83.2	10.5	33.4	3.1	0.5	2.8	2.7	3.7	534.8	257.0
Feb	28.9	186.5	59.1	79.7	10.5	33.7	3.1	0.5	4.2	3.7	3.6	527.9	250.2
Mar	49.3	190.2	57.4	84.1	10.8	34.3	3.1	0.5	3.2	2.0	3.4	518.7	250.5
Apr	31.9	188.7	58.2	80.3	10.9	35.6	3.2	0.5	3.7	2.4	3.0	521.8	249.1
May	50.6	196.3	60.4	84.9	11.1	36.2	3.3	0.5	3.5	2.4	2.5	530.9	244.9
June	63.6	199.2	62.2	85.0	11.5	36.6	3.3	0.5	2.5	2.3	2.6	523.0	241.2
July	31.9	199.1	59.9	85.2	13.3	36.8	3.3	0.5	3.4	3.2	2.4	524.2	241.2
Aug	40.6	201.0	61.7	84.6	13.6	37.2	3.4	0.5	3.2	3.2	2.3	524.4	241.5
Sep	49.3	198.3	59.7	83.5	14.0	37.2	3.4	0.5	2.9	2.9	2.4	516.7	240.8
Oct	40.5	195.1	58.8	80.4	14.9	37.2	3.4	0.5	3.2	3.2	2.3	526.0	242.2
Nov	47.4	201.0	59.5	84.2	16.1	37.3	3.3	0.6	3.0	3.0	2.3	542.1	251.4
Dec	33.8	199.1	61.6	80.5	16.6	36.6	3.3	0.6	2.2	2.2	2.3	541.3	250.6
2017 Jan	21.2	198.8	55.1	86.6	16.4	36.9	3.2	0.6	4.8	4.8	2.2	553.4	261.4
Feb	17.5	201.8	61.5	83.2	15.7	37.7	3.1	0.6	4.5	4.5	2.2	556.7	262.6
Mar	31.6	199.5	58.7	82.5	16.5	38.2	3.1	0.6	2.6	2.6	2.1	551.8	263.6
Apr	25.0	198.9	59.0	79.4	18.8	38.2	3.0	0.6	3.5	3.5	2.1	546.7	264.9
May	32.7	206.1	61.6	81.6	20.6	38.7	3.1	0.6	2.4	2.4	2.1	542.6	263.2
June	39.8	210.9	63.4	82.6	22.0	39.3	3.0	0.6	1.8	1.8	2.1	542.7	266.0
July	42.3	207.8	60.3	81.5	22.6	39.8	3.0	0.7	3.3	3.3	2.1	534.5	264.9
Aug	49.7	212.4	64.0	81.0	23.6	40.1	3.0	0.7	3.4	3.4	2.3	534.4	267.8
Sep	59.5	210.9	63.2	78.5	24.3	41.2	3.0	0.7	2.6	2.6	2.3	529.1	264.0
Oct	45.3	208.2	64.4	73.5	24.7	41.9	3.0	0.7	2.3	2.3	2.0	521.8	252.3
Nov	51.7	211.3	65.5	72.9	26.2	43.1	2.9	0.7	2.6	2.6	2.0	518.3	251.1

***** Monetary financial institutions (MFIs) comprise banks (including building and loan associations), money market funds, and the European Central Bank and national central banks (the Eurosystem). **1** Source: ECB. **2** In Germany, only savings deposits. **3** Excluding holdings of MFIs; for the German contribution, excluding German MFIs' portfolios of securities issued by MFIs in the euro area. **4** In Germany, bank debt securities with maturities of up to one year are classed as money market paper. **5** Excluding liabilities arising from securities issued. **6** After deduction of inter-MFI participations. **7** The German contributions to the Eurosystem's monetary aggregates should on no account be interpreted as national monetary aggregates and are therefore not comparable with the erstwhile German money stocks M1, M2 or M3. **8** including DM banknotes still in circulation (see also footnote 4 on p 10•) **9** For the German contribution, the difference between the volume of

II Overall monetary survey in the euro area

issued (net) [3]						Other liability items		*Memo item*					
	With maturities of							Monetary aggregates [7] (From 2002, German contribution excludes currency in circulation)					
up to 1 year [4]	over 1 year and up to 2 years	over 2 years	Liabilities to non-euro-area residents [5]	Capital and reserves [6]	Excess of inter-MFI liabilities	Total [8]	*of which* Intra-Eurosystem-liability/ claim related to banknote issue [9]	M1 [10]	M2 [11]	M3 [12]	Monetary capital formation [13]	Monetary liabilities of central governments (Post Office, Treasury) [14]	End of year/month
Euro area (€ billion) [1]													
32.6	47.2	2,257.9	3,852.2	2,560.1	– 75.9	4,356.8	–	6,525.5	10,114.1	10,776.0	7,031.7	115.7	2015 Oct
31.1	49.2	2,286.9	3,905.8	2,565.3	– 77.1	4,534.8	–	6,592.5	10,180.7	10,841.5	7,053.7	121.9	Nov
22.9	47.8	2,248.7	3,652.6	2,549.2	– 50.1	4,095.9	–	6,631.8	10,228.4	10,840.9	7,000.7	123.0	Dec
28.9	50.6	2,221.8	3,800.3	2,573.0	– 77.2	4,387.6	–	6,666.0	10,264.2	10,908.5	6,988.6	123.6	2016 Jan
33.4	54.2	2,200.4	3,912.2	2,609.9	– 98.7	4,554.5	–	6,688.4	10,278.4	10,942.5	7,013.7	122.8	Feb
37.2	51.9	2,182.3	3,724.8	2,592.4	– 94.6	4,379.8	–	6,721.6	10,322.7	10,968.4	6,969.1	121.3	Mar
41.7	50.0	2,184.2	3,912.4	2,604.3	– 99.6	4,285.0	–	6,815.4	10,399.2	11,070.5	6,977.2	122.7	Apr
39.9	49.2	2,195.4	4,018.4	2,600.8	– 84.1	4,363.2	–	6,867.6	10,440.8	11,110.7	6,980.5	126.6	May
49.8	47.2	2,184.8	3,941.0	2,664.9	– 62.9	4,560.1	–	6,901.6	10,472.1	11,131.7	7,014.0	127.7	June
54.6	47.8	2,155.8	4,071.9	2,678.7	– 105.5	4,521.0	–	6,967.7	10,543.0	11,225.5	6,991.1	131.5	July
53.9	46.2	2,153.1	4,113.9	2,676.2	– 85.2	4,435.5	–	6,962.0	10,533.4	11,214.3	6,980.4	131.4	Aug
48.7	46.1	2,132.3	4,069.0	2,698.3	– 45.3	4,388.4	–	6,984.6	10,550.9	11,216.3	6,969.1	131.3	Sep
53.5	43.6	2,129.0	4,278.6	2,683.3	– 28.9	4,246.4	–	7,043.6	10,568.0	11,250.0	6,948.0	131.8	Oct
54.7	42.8	2,146.6	4,317.8	2,662.6	– 55.6	4,255.2	–	7,145.5	10,659.4	11,345.5	6,939.0	136.4	Nov
48.1	42.0	2,140.3	4,039.0	2,658.0	– 42.5	4,033.6	–	7,238.4	10,732.3	11,397.9	6,926.4	135.4	Dec
44.2	45.8	2,119.7	4,244.7	2,645.8	– 14.7	3,877.1	–	7,227.7	10,732.3	11,420.0	6,877.1	139.1	2017 Jan
49.4	47.2	2,124.4	4,375.4	2,696.0	– 20.4	3,953.2	–	7,262.0	10,767.3	11,454.2	6,926.7	140.1	Feb
48.5	47.2	2,098.3	4,315.5	2,676.4	– 4.4	3,854.2	–	7,352.5	10,856.7	11,557.7	6,881.3	140.0	Mar
35.1	43.8	2,085.9	4,399.0	2,662.5	0.0	3,864.3	–	7,449.0	10,922.9	11,604.4	6,841.0	142.1	Apr
42.2	42.8	2,086.9	4,332.9	2,659.1	2.0	3,846.7	–	7,479.8	10,935.4	11,619.2	6,828.4	145.0	May
42.5	42.1	2,070.2	4,134.0	2,630.8	8.9	3,730.8	–	7,556.7	11,003.2	11,657.4	6,766.6	145.5	June
40.8	41.2	2,054.0	4,177.5	2,615.8	8.7	3,683.7	–	7,585.9	11,029.9	11,696.8	6,722.1	148.0	July
35.3	40.2	2,043.7	4,177.2	2,647.0	– 1.6	3,686.5	–	7,614.3	11,071.4	11,747.0	6,735.2	148.5	Aug
43.6	39.9	2,015.0	4,154.6	2,650.8	16.7	3,538.1	–	7,662.7	11,095.2	11,765.7	6,701.1	150.4	Sep
39.1	37.9	2,013.2	4,336.4	2,665.3	11.5	3,577.1	–	7,689.0	11,112.2	11,786.2	6,686.9	148.7	Oct
43.4	38.2	2,021.1	4,282.7	2,657.2	42.0	3,577.9	–	7,768.8	11,175.4	11,861.0	6,666.2	150.9	Nov
German contribution (€ billion)													
25.8	7.8	521.7	737.2	558.6	– 735.5	1,566.6	293.1	1,752.7	2,580.5	2,624.6	1,835.4	–	2015 Oct
26.4	9.6	526.5	724.9	553.7	– 754.5	1,621.4	295.2	1,788.4	2,624.1	2,670.0	1,830.6	–	Nov
26.3	9.3	497.8	659.6	552.5	– 742.7	1,537.4	297.8	1,766.1	2,610.8	2,652.3	1,795.8	–	Dec
25.2	11.2	498.4	702.8	560.8	– 766.0	1,620.7	297.1	1,793.6	2,633.8	2,676.6	1,801.7	–	2016 Jan
25.5	11.8	490.7	739.6	574.8	– 790.7	1,683.0	297.7	1,807.0	2,644.8	2,689.9	1,804.6	–	Feb
24.0	10.9	483.8	699.0	569.9	– 784.5	1,622.4	299.8	1,793.1	2,641.1	2,682.7	1,791.6	–	Mar
23.9	11.7	486.1	753.1	575.6	– 803.0	1,566.8	300.9	1,817.3	2,663.6	2,705.9	1,795.3	–	Apr
22.8	12.3	495.8	758.5	571.4	– 823.1	1,577.5	303.9	1,839.6	2,685.7	2,726.9	1,800.7	–	May
23.8	11.8	487.5	783.3	592.6	– 834.3	1,670.0	308.0	1,841.3	2,686.4	2,727.1	1,811.5	–	June
30.5	12.6	481.1	807.8	595.1	– 824.9	1,673.4	311.7	1,853.4	2,702.0	2,750.9	1,806.5	–	July
27.4	12.5	484.5	826.1	589.2	– 846.9	1,640.6	314.1	1,864.6	2,711.7	2,757.1	1,801.3	–	Aug
26.4	12.9	477.4	851.2	594.2	– 876.5	1,616.7	318.8	1,867.6	2,719.5	2,764.2	1,797.3	–	Sep
25.3	13.4	487.3	899.9	585.7	– 863.2	1,564.6	322.0	1,879.9	2,721.9	2,766.1	1,800.2	–	Oct
22.7	14.6	504.7	905.9	578.4	– 918.6	1,536.5	323.9	1,917.2	2,762.9	2,805.6	1,809.3	–	Nov
23.1	14.2	504.0	878.8	580.3	– 897.1	1,506.3	327.3	1,912.6	2,759.2	2,801.0	1,808.4	–	Dec
22.8	14.4	516.2	930.2	575.5	– 926.5	1,465.7	328.3	1,928.9	2,784.9	2,829.2	1,811.9	–	2017 Jan
22.2	15.2	519.2	972.2	587.9	– 944.3	1,484.8	330.1	1,943.0	2,797.0	2,841.1	1,825.3	–	Feb
19.5	15.9	516.4	979.6	586.5	– 957.7	1,462.2	331.9	1,945.1	2,801.0	2,841.1	1,819.5	–	Mar
17.7	16.9	512.1	985.8	597.9	– 965.5	1,463.1	335.2	1,954.8	2,803.4	2,843.5	1,822.6	–	Apr
18.4	16.8	507.4	957.7	595.0	– 967.6	1,461.9	338.1	1,972.1	2,821.5	2,861.2	1,814.4	–	May
19.3	16.4	507.0	946.6	591.5	– 981.1	1,412.1	342.8	1,992.1	2,841.2	2,880.9	1,808.1	–	June
18.8	16.2	499.5	926.1	589.1	– 975.5	1,406.4	345.0	1,988.1	2,835.9	2,876.2	1,793.6	–	July
18.5	15.8	500.0	894.5	597.2	– 970.2	1,422.2	348.6	2,002.3	2,846.8	2,886.8	1,801.4	–	Aug
19.3	15.4	494.4	927.7	594.2	– 982.9	1,387.5	352.1	2,008.2	2,853.5	2,893.0	1,792.0	–	Sep
18.6	15.7	487.5	913.6	596.3	– 946.7	1,386.3	354.2	2,023.0	2,859.6	2,898.2	1,785.4	–	Oct
18.5	15.9	484.0	883.4	593.7	– 940.3	1,384.6	355.5	2,056.1	2,890.9	2,929.9	1,779.3	–	Nov

euro banknotes actually issued by the Bundesbank and the amount disclosed in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2). **10** Overnight deposits (excluding central governments' deposits), and (for the euro area) currency in circulation, central governments' overnight monetary liabilities, which are not included in the consolidated balance sheet. **11** M1 plus deposits with agreed maturities of up to 2 years and at agreed notice of up to 3 months (excluding central governments' deposits) and (for the euro area) central governments' monetary liabilities with such maturities. **12** M2 plus repo transactions, money market fund shares, money market paper and debt securities up to 2 years. **13** Deposits with agreed maturities of over 2 years and at agreed notice of over 3 months, debt securities with maturities of over 2 years, capital and reserves. **14** Non-existent in Germany.

II Overall monetary survey in the euro area

3 Banking system's liquidity position * Stocks

€ billion; period averages of daily positions

Reserve maintenance period ending in 1	Liquidity-providing factors					Liquidity-absorbing factors						
		Monetary policy operations of the Eurosystem										
	Net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations 3	Deposit facility	Other liquidity-absorbing operations 4	Banknotes in circulation 5	Central government deposits	Other factors (net) 6	Credit institutions' current account balances (including minimum reserves) 7	Base money 8
Eurosystem 2												
2015 July	642.9	82.4	443.2	0.3	471.8	103.1	0.0	1 042.7	96.3	17.2	381.4	1 527.2
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Sep	627.4	72.4	462.2	0.6	550.8	148.0	0.0	1 055.3	63.4	18.1	428.4	1 631.8
Oct	619.1	70.2	462.1	0.1	643.2	152.8	0.0	1 052.4	95.2	28.9	465.3	1 670.5
Nov	.	.	.	.	.	.	.	.	.	.	.	.
Dec	612.2	66.1	459.3	0.0	730.7	173.1	0.0	1 056.5	93.5	51.5	493.8	1 723.4
2016 Jan	611.6	71.6	466.9	0.2	811.8	196.6	0.0	1 072.8	82.5	53.2	557.1	1 826.5
Feb	.	.	.	.	.	.	.	.	.	.	.	.
Mar	607.8	62.9	461.7	0.1	907.6	230.5	0.0	1 063.4	115.6	73.9	556.5	1 850.4
Apr	627.3	58.1	460.8	0.2	1 000.1	262.0	0.0	1 069.3	147.4	97.7	570.0	1 901.3
May	.	.	.	.	.	.	.	.	.	.	.	.
June	640.3	53.9	456.3	0.2	1 105.3	309.0	0.0	1 076.6	123.9	122.8	623.8	2 009.4
July	666.1	47.6	471.6	0.1	1 227.1	323.1	0.0	1 087.1	175.5	169.4	657.5	2 067.7
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Sep	685.0	43.5	483.7	0.0	1 339.7	355.1	0.0	1 096.2	137.8	214.0	748.8	2 200.2
Oct	687.8	37.4	503.5	0.1	1 447.0	387.3	0.0	1 094.7	168.3	248.0	777.4	2 259.4
Nov	.	.	.	.	.	.	.	.	.	.	.	.
Dec	687.4	34.0	511.8	0.2	1 570.2	439.4	0.0	1 103.1	159.7	277.6	823.9	2 366.3
2017 Jan	674.7	34.6	548.9	0.2	1 670.8	434.4	0.0	1 119.1	143.1	313.6	919.0	2 472.6
Feb	.	.	.	.	.	.	.	.	.	.	.	.
Mar	662.4	29.0	554.3	0.3	1 787.5	479.2	0.0	1 110.8	160.3	322.2	960.9	2 550.9
Apr	.	.	.	.	.	.	.	.	.	.	.	.
May	678.6	18.5	707.4	0.3	1 905.3	550.0	0.0	1 118.4	182.0	378.8	1 081.1	2 749.4
June	683.1	13.7	767.4	0.2	1 995.0	593.7	0.0	1 126.0	163.6	397.4	1 178.7	2 898.5
July	656.9	9.4	767.4	0.2	2 076.1	595.3	0.0	1 136.3	229.8	379.4	1 169.2	2 900.8
Aug	.	.	.	.	.	.	.	.	.	.	.	.
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
Deutsche Bundesbank												
2015 July	155.4	2.1	36.4	0.0	102.5	25.5	0.0	246.2	3.4	– 101.4	122.8	394.4
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Sep	151.2	1.8	40.0	0.0	119.1	42.4	0.0	249.5	2.9	– 118.3	135.9	427.7
Oct	148.4	2.8	40.8	0.0	138.2	40.8	0.0	248.8	5.2	– 115.9	151.2	440.9
Nov	.	.	.	.	.	.	.	.	.	.	.	.
Dec	146.1	3.2	43.3	0.0	156.3	56.1	0.0	249.1	9.3	– 116.3	150.7	455.9
2016 Jan	144.8	3.6	48.4	0.1	174.0	50.0	0.0	252.4	18.0	– 124.0	174.4	476.8
Feb	.	.	.	.	.	.	.	.	.	.	.	.
Mar	143.7	1.9	46.3	0.0	193.9	59.8	0.0	250.4	26.1	– 113.3	162.9	473.1
Apr	152.2	3.1	45.0	0.0	214.1	67.6	0.0	252.1	37.3	– 105.1	162.4	482.1
May	.	.	.	.	.	.	.	.	.	.	.	.
June	156.4	3.3	45.3	0.0	237.2	87.3	0.0	254.7	41.1	– 127.2	186.5	528.4
July	163.3	2.7	44.7	0.0	263.4	89.8	0.0	257.4	47.2	– 117.0	196.6	543.9
Aug	.	.	.	.	.	.	.	.	.	.	.	.
Sep	168.3	1.9	44.0	0.0	288.2	90.8	0.0	258.7	36.2	– 112.6	229.3	578.9
Oct	168.7	1.5	50.6	0.0	311.9	105.2	0.0	258.6	50.5	– 125.2	243.6	607.4
Nov	.	.	.	.	.	.	.	.	.	.	.	.
Dec	167.7	0.9	54.0	0.0	339.2	129.7	0.0	260.3	43.7	– 141.9	270.0	660.0
2017 Jan	163.8	0.9	62.0	0.0	361.5	132.7	0.0	264.2	35.4	– 146.1	302.0	698.9
Feb	.	.	.	.	.	.	.	.	.	.	.	.
Mar	159.4	0.8	63.5	0.0	386.6	153.7	0.0	262.3	23.1	– 169.8	341.0	757.0
Apr	.	.	.	.	.	.	.	.	.	.	.	.
May	164.4	1.0	86.0	0.1	412.4	181.4	0.0	264.1	29.7	– 185.3	374.0	819.5
June	165.8	0.3	95.0	0.0	431.8	181.2	0.0	266.2	32.4	– 204.9	418.0	865.4
July	159.6	0.5	95.0	0.0	447.9	170.1	0.0	269.0	52.7	– 201.6	412.7	851.9
Aug	.	.	.	.	.	.	.	.	.	.	.	.
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

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
	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												
– 12.8	– 13.5	+ 36.6	+ 0.2	+ 88.7	+ 3.4	± 0.0	+ 15.3	+ 19.8	– 17.3	+ 78.0	+ 96.7	2015 July
– 15.5	– 10.0	+ 19.0	+ 0.3	+ 79.0	+ 44.9	± 0.0	+ 12.6	– 32.9	+ 0.9	+ 47.0	+ 104.6	Aug
– 8.3	– 2.2	– 0.1	– 0.5	+ 92.4	+ 4.8	± 0.0	– 2.9	+ 31.8	+ 10.8	+ 36.9	+ 38.7	Sep
– 6.9	– 4.1	– 2.8	± 0.0	+ 87.5	+ 20.3	± 0.0	+ 4.1	– 1.7	+ 22.6	+ 28.5	+ 52.9	Oct
– 0.6	+ 5.5	+ 7.6	+ 0.1	+ 81.1	+ 23.5	± 0.0	+ 16.3	– 11.0	+ 1.7	+ 63.3	+ 103.1	Nov
– 3.8	– 8.7	– 5.2	– 0.1	+ 95.8	+ 33.9	± 0.0	– 9.4	+ 33.1	+ 20.7	– 0.6	+ 23.9	Dec
+ 19.5	– 4.8	– 0.9	+ 0.1	+ 92.5	+ 31.5	± 0.0	+ 5.9	+ 31.8	+ 23.8	+ 13.5	+ 50.9	2016 Jan
+ 13.0	– 4.2	– 4.5	± 0.0	+ 105.2	+ 47.0	± 0.0	+ 7.3	– 23.5	+ 25.1	+ 53.8	+ 108.1	Feb
+ 25.8	– 6.3	+ 15.3	– 0.1	+ 121.8	+ 14.1	± 0.0	+ 10.5	+ 51.6	+ 46.6	+ 33.7	+ 58.3	Mar
+ 18.9	– 4.1	+ 12.1	– 0.1	+ 112.6	+ 32.0	± 0.0	+ 9.1	– 37.7	+ 44.6	+ 91.3	+ 132.5	Apr
+ 2.8	– 6.1	+ 19.8	+ 0.1	+ 107.3	+ 32.2	± 0.0	– 1.5	+ 30.5	+ 34.0	+ 28.6	+ 59.2	May
– 0.4	– 3.4	+ 8.3	+ 0.1	+ 123.2	+ 52.1	± 0.0	+ 8.4	– 8.6	+ 29.6	+ 46.5	+ 106.9	June
– 12.7	+ 0.6	+ 37.1	± 0.0	+ 100.6	– 5.0	± 0.0	+ 16.0	– 16.6	+ 36.0	+ 95.1	+ 106.3	July
– 12.3	– 5.6	+ 5.4	+ 0.1	+ 116.7	+ 44.8	± 0.0	– 8.3	+ 17.2	+ 8.6	+ 41.9	+ 78.3	Aug
+ 16.2	– 10.5	+ 153.1	± 0.0	+ 117.8	+ 70.8	± 0.0	+ 7.6	+ 21.7	+ 56.6	+ 120.2	+ 198.5	Sep
+ 4.5	– 4.8	+ 60.0	– 0.1	+ 89.7	+ 43.7	± 0.0	+ 7.6	– 18.4	+ 18.6	+ 97.6	+ 149.1	Oct
– 26.2	– 4.3	± 0.0	± 0.0	+ 81.1	+ 1.6	± 0.0	+ 10.3	+ 66.2	– 18.0	– 9.5	+ 2.3	Nov
– 17.9	– 3.9	+ 1.2	+ 0.1	+ 74.1	+ 16.1	± 0.0	+ 6.2	– 48.0	+ 5.7	+ 73.5	+ 95.9	Dec
– 4.0	+ 1.2	– 3.3	– 0.1	+ 89.0	+ 36.7	± 0.0	+ 0.3	+ 36.5	– 1.2	+ 10.6	+ 47.5	2017 Jan
– 0.5	– 3.7	– 1.6	± 0.0	+ 94.3	+ 34.4	± 0.0	+ 3.8	– 29.8	+ 23.7	+ 56.4	+ 94.6	Feb
Deutsche Bundesbank												
– 3.8	– 1.5	+ 7.6	– 0.0	+ 18.6	– 3.1	± 0.0	+ 3.7	+ 1.4	– 1.0	+ 19.9	+ 20.5	Mar
– 4.1	– 0.3	+ 3.7	+ 0.0	+ 16.6	+ 16.9	± 0.0	+ 3.2	– 0.4	– 17.0	+ 13.1	+ 33.2	Apr
– 2.9	+ 0.9	+ 0.8	– 0.0	+ 19.1	– 1.5	± 0.0	– 0.6	+ 2.3	+ 2.4	+ 15.4	+ 13.2	May
– 2.3	+ 0.4	+ 2.5	– 0.0	+ 18.1	+ 15.2	± 0.0	+ 0.3	+ 4.1	– 0.4	– 0.6	+ 15.0	June
– 1.3	+ 0.5	+ 5.1	+ 0.1	+ 17.7	– 6.0	± 0.0	+ 3.3	+ 8.7	– 7.6	+ 23.7	+ 21.0	July
– 1.0	– 1.7	– 2.1	– 0.0	+ 19.9	+ 9.8	± 0.0	– 2.1	+ 8.1	+ 10.7	– 11.5	– 3.8	Aug
+ 8.4	+ 1.1	– 1.3	+ 0.0	+ 20.3	+ 7.8	± 0.0	+ 1.7	+ 11.3	+ 8.2	– 0.4	+ 9.0	Sep
+ 4.3	+ 0.3	+ 0.4	– 0.0	+ 23.1	+ 19.7	± 0.0	+ 2.6	+ 3.8	– 22.1	+ 24.1	+ 46.3	Oct
+ 6.9	– 0.6	– 0.6	– 0.0	+ 26.2	+ 2.6	± 0.0	+ 2.8	+ 6.1	+ 10.2	+ 10.1	+ 15.4	Nov
+ 5.1	– 0.8	– 0.7	– 0.0	+ 24.8	+ 1.0	± 0.0	+ 1.3	– 11.0	+ 4.4	+ 32.7	+ 35.0	Dec
+ 0.4	– 0.5	+ 6.6	+ 0.0	+ 23.7	+ 14.4	± 0.0	– 0.1	+ 14.3	– 12.6	+ 14.2	+ 28.5	2016 Jan
– 0.9	– 0.5	+ 3.3	+ 0.0	+ 27.3	+ 24.4	± 0.0	+ 1.7	– 6.8	– 16.7	+ 26.5	+ 52.6	Feb
– 4.0	– 0.1	+ 8.1	– 0.0	+ 22.3	+ 3.0	± 0.0	+ 3.9	– 8.3	– 4.3	+ 31.9	+ 38.8	Mar
– 4.4	– 0.0	+ 1.4	+ 0.0	+ 25.1	+ 21.0	± 0.0	– 1.9	– 12.2	– 23.6	+ 39.0	+ 58.1	Apr
+ 4.9	+ 0.1	+ 22.6	+ 0.0	+ 25.9	+ 27.7	± 0.0	+ 1.8	+ 6.6	– 15.6	+ 33.0	+ 62.5	May
+ 1.5	– 0.7	+ 9.0	– 0.1	+ 19.4	– 0.2	± 0.0	+ 2.1	+ 2.6	– 19.6	+ 44.0	+ 45.9	June
– 6.2	+ 0.2	+ 0.0	+ 0.0	+ 16.1	– 11.1	± 0.0	+ 2.8	+ 20.3	+ 3.3	– 5.3	– 13.6	July
– 4.4	– 0.2	– 0.1	+ 0.0	+ 15.4	– 4.6	± 0.0	+ 0.9	– 0.2	+ 9.0	+ 5.8	+ 2.1	Aug
– 0.4	– 0.1	– 0.1	– 0.0	+ 18.3	+ 5.5	± 0.0	– 0.5	+ 13.5	– 5.0	+ 4.2	+ 9.2	Sep
– 0.6	+ 0.2	– 0.0	– 0.0	+ 19.9	+ 16.5	± 0.0	+ 0.9	– 9.9	– 21.0	+ 33.1	+ 50.4	Oct
												Nov
												Dec

allocated on a monthly basis to the ECB. The counterpart of this adjustment is shown under "Other factors". The remaining 92% of the value of the euro banknotes in circulation is allocated, likewise on a monthly basis, to the NCBs, with each NCB showing in its balance sheet the percentage of the euro banknotes in circulation that corresponds to its paid-up share in the ECB's capital. The difference between the value of the euro banknotes allocated to an NCB and the value of the euro banknotes which that NCB has put into circulation is likewise shown under "Other factors". From 2003 euro banknotes only. **6** Remaining items in the consolidated financial statement of the Eurosystem and the financial statement of the Bundesbank. **7** Equal to the difference between the sum of liquidity-providing factors and the sum of liquidity-absorbing factors. **8** Calculated as the sum of the "deposit facility", "banknotes in circulation" and "credit institutions' current account holdings".

III Consolidated financial statement of the Eurosystem

1 Assets *

€ billion

On reporting date/ End of month [1]	Total assets	Gold and gold receivables	Claims on non-euro area residents denominated in foreign currency			Claims on euro area residents denominated in foreign currency	Claims on non-euro area residents denominated in euro		
			Total	Receivables from the IMF	Balances with banks, security investments, external loans and other external assets		Total	Balances with banks, security investments and loans	Claims arising from the credit facility under ERM II
Eurosystem [2]									
2017 May 5	4,156.8	404.1	319.7	77.4	242.4	34.6	16.8	16.8	–
12	4,170.6	404.1	320.9	77.4	243.5	32.3	17.0	17.0	–
19	4,185.7	404.1	320.6	77.4	243.2	32.7	17.4	17.4	–
26	4,195.7	404.1	321.2	77.4	243.7	30.3	15.9	15.9	–
June 2	4,204.5	404.1	321.2	77.4	243.8	30.2	16.3	16.3	–
9	4,218.1	404.1	321.5	77.4	244.1	29.9	16.7	16.7	–
16	4,232.9	404.1	322.9	77.6	245.3	28.7	18.3	18.3	–
23	4,246.2	404.1	321.6	77.6	244.0	30.7	18.5	18.5	–
30	4,209.5	379.1	304.8	74.4	230.4	31.2	18.0	18.0	–
July 7	4,214.7	379.1	303.5	74.6	228.9	30.5	17.2	17.2	–
14	4,229.3	379.1	302.9	74.2	228.7	31.6	17.2	17.2	–
21	4,235.8	379.1	300.7	74.3	226.4	33.4	15.9	15.9	–
28	4,248.3	379.1	302.0	74.3	227.7	33.9	16.7	16.7	–
Aug 4	4,246.5	379.1	299.2	74.4	224.8	36.9	16.4	16.4	–
11	4,256.0	379.1	301.2	74.5	226.8	35.3	15.9	15.9	–
18	4,265.7	379.1	300.1	74.5	225.6	35.2	16.5	16.5	–
25	4,278.9	379.1	299.2	74.5	224.7	35.6	16.2	16.2	–
Sep 1	4,283.7	379.1	298.8	74.5	224.3	34.2	16.4	16.4	–
8	4,299.8	379.1	302.0	74.5	227.4	33.7	15.1	15.1	–
15	4,308.9	379.1	302.9	74.5	228.4	31.0	16.6	16.6	–
22	4,328.2	379.1	302.5	74.5	228.0	33.4	16.8	16.8	–
29	4,318.6	379.0	296.9	73.0	223.8	30.8	17.7	17.7	–
2017 Oct 6	4,337.7	379.0	295.9	73.0	222.8	33.4	16.9	16.9	–
13	4,371.6	379.0	297.2	73.0	224.2	32.1	16.7	16.7	–
20	4,363.4	379.0	297.4	73.0	224.4	32.8	17.3	17.3	–
27	4,371.2	379.0	295.5	72.9	222.5	34.6	15.5	15.5	–
Nov 3	4,373.2	379.0	296.4	72.9	223.5	33.9	15.0	15.0	–
10	4,387.7	379.0	297.4	72.7	224.6	32.4	14.8	14.8	–
17	4,411.9	379.0	297.6	72.2	225.3	34.6	15.7	15.7	–
24	4,427.5	379.0	298.3	72.2	226.1	33.0	15.8	15.8	–
Dec 1	4,440.8	379.0	299.9	72.3	227.5	32.9	16.0	16.0	–
8	4,456.6	379.0	300.5	72.3	228.2	33.1	16.2	16.2	–
15	4,471.9	379.0	299.9	72.1	227.8	31.8	17.7	17.7	–
22	4,487.3	379.0	300.6	70.7	230.0	39.4	16.5	16.5	–
29	4,471.7	376.5	296.2	70.2	226.0	38.1	19.4	19.4	–
2018 Jan 5	4,466.0	376.3	294.6	70.2	224.4	38.6	16.1	16.1	–
Deutsche Bundesbank									
2016 Feb	1 043.7	105.8	55.0	22.0	33.0	0.0	–	–	–
Mar	1 077.6	117.8	53.4	21.5	32.0	0.0	–	–	–
Apr	1 112.7	117.8	54.1	21.5	32.7	0.0	0.0	0.0	–
May	1 159.5	117.8	54.9	21.5	33.4	0.0	–	–	–
June	1 214.0	129.0	55.7	21.5	34.1	0.7	–	–	–
July	1 209.4	129.0	56.0	21.5	34.5	0.2	–	–	–
Aug	1 239.2	129.0	56.1	21.4	34.7	0.3	–	–	–
Sep	1 305.3	128.8	55.0	21.3	33.7	2.3	0.4	0.4	–
Oct	1 312.2	128.8	54.9	21.3	33.6	– 0.0	0.3	0.3	–
Nov	1 376.5	128.8	55.0	21.1	33.9	0.1	0.4	0.4	–
Dec	1 392.7	119.3	56.5	21.5	35.0	1.8	0.4	0.4	–
2017 Jan	1 449.7	119.3	56.4	21.5	34.9	0.1	1.8	1.8	–
Feb	1 484.8	119.3	56.2	21.2	35.0	0.1	1.5	1.5	–
Mar	1 558.0	126.2	55.7	21.1	34.7	2.7	1.7	1.7	–
Apr	1 582.8	126.1	55.7	21.0	34.7	0.0	2.4	2.4	–
May	1 608.2	126.1	55.7	21.0	34.7	0.0	2.0	2.0	–
June	1 616.4	118.2	53.1	20.0	33.0	1.3	2.1	2.1	–
July	1 621.0	118.2	53.5	20.0	33.6	0.0	2.8	2.8	–
Aug	1 625.1	118.2	52.6	19.9	32.7	0.0	2.8	2.8	–
Sep	1 663.9	118.2	51.7	19.6	32.2	1.4	3.1	3.1	–
Oct	1 644.4	118.2	52.9	19.5	33.4	0.0	1.9	1.9	–
Nov	1 665.0	118.2	52.6	19.3	33.4	0.0	2.0	2.0	–
Dec	1 727.7	117.3	49.5	18.3	31.2	7.2	4.4	4.4	–

* The consolidated financial statement of the Eurosystem comprises the financial statement of the European Central Bank (ECB) and the financial statements of the national central banks of the euro area member states (NCBs). The balance sheet items for foreign currency, securities, gold and financial instruments are valued at the

III Consolidated financial statement of the Eurosystem

Lending to euro area credit institutions related to monetary policy operations denominated in euro							Other claims on euro area credit institutions denominated in euro	Securities of euro area residents in euro			General government debt denominated in euro	Other assets	On reporting date/ End of month [1]
Total	Main refinancing operations	Longer-term refinancing operations	Fine-tuning reverse operations	Structural reverse operations	Marginal lending facility	Credits related to margin calls		Total	Securities held for monetary policy purposes	Other securities			
Eurosystem [2]													
782.0	14.4	767.3	–	–	0.3	–	78.6	2 257.5	1 959.9	297.6	26.4	237.1	2017 May 5
781.2	13.7	767.3	–	–	0.2	–	79.6	2 271.4	1 974.7	296.8	26.4	237.6	12
781.5	14.0	767.3	–	–	0.2	–	78.6	2 285.2	1 989.0	296.2	26.4	239.3	19
783.5	15.9	767.3	–	–	0.2	–	75.9	2 299.1	2 002.4	296.7	26.4	239.3	26
780.1	12.1	767.8	–	–	0.3	–	74.5	2 311.0	2 015.2	295.8	26.4	240.7	June 2
780.0	12.1	767.8	–	–	0.1	–	73.7	2 325.6	2 029.8	295.9	26.4	240.3	9
779.1	11.0	767.8	–	–	0.3	–	75.5	2 338.7	2 045.0	293.7	26.4	239.2	16
779.6	11.5	767.8	–	–	0.3	–	73.1	2 352.1	2 058.4	293.7	26.4	240.1	23
779.3	11.6	767.3	–	–	0.3	–	70.9	2 358.6	2 064.4	294.2	25.8	241.9	30
775.7	8.3	767.3	–	–	0.1	–	69.5	2 374.4	2 081.3	293.1	25.7	239.0	July 7
774.6	7.1	767.3	–	–	0.2	–	69.0	2 390.4	2 097.5	292.9	25.7	238.8	14
774.3	6.8	767.3	–	–	0.2	–	67.7	2 400.0	2 108.3	291.7	25.7	239.0	21
776.3	7.4	768.7	–	–	0.2	–	63.3	2 411.3	2 119.2	292.1	25.7	240.0	28
773.1	4.3	768.7	–	–	0.2	–	63.6	2 414.8	2 128.2	286.6	25.7	237.5	Aug 4
773.5	4.6	768.7	–	–	0.2	–	61.4	2 426.0	2 139.7	286.3	25.7	237.8	11
773.7	4.8	768.7	–	–	0.2	–	62.2	2 435.4	2 149.3	286.1	25.7	237.7	18
776.3	7.3	768.7	–	–	0.3	–	60.4	2 446.2	2 160.1	286.1	25.7	240.2	25
774.7	5.9	768.6	–	–	0.2	–	59.2	2 456.1	2 170.4	285.8	25.7	239.4	Sep 1
772.8	4.3	768.4	–	–	0.1	–	61.0	2 471.7	2 185.9	285.8	25.7	238.6	8
772.5	4.0	768.4	–	–	0.1	–	61.5	2 484.1	2 200.0	284.2	25.7	235.3	15
773.6	5.1	768.4	–	–	0.1	–	59.4	2 498.5	2 214.1	284.3	25.7	239.1	22
768.5	4.2	764.1	–	–	0.2	–	53.3	2 504.4	2 221.3	283.1	25.7	242.3	29
767.5	3.2	764.1	–	–	0.2	–	54.9	2 521.9	2 238.9	283.0	25.7	242.5	2017 Oct 6
785.5	21.3	764.1	–	–	0.1	–	55.0	2 537.6	2 254.4	283.2	25.7	242.7	13
768.2	3.8	764.1	–	–	0.3	–	56.7	2 547.4	2 265.1	282.3	25.7	238.9	20
769.4	5.3	763.7	–	–	0.3	–	55.4	2 560.0	2 278.4	281.6	25.7	236.2	27
766.9	3.0	763.7	–	–	0.2	–	52.6	2 568.1	2 287.7	280.4	25.7	235.7	Nov 3
766.5	2.7	763.7	–	–	0.1	–	52.7	2 583.9	2 303.2	280.7	25.1	235.9	10
766.8	2.8	763.7	–	–	0.2	–	56.7	2 599.0	2 318.3	280.7	25.1	237.4	17
767.1	3.0	763.7	–	–	0.4	–	55.6	2 614.0	2 333.4	280.6	25.1	239.6	24
768.9	5.0	763.7	–	–	0.2	–	50.7	2 627.3	2 347.3	279.9	25.1	241.1	Dec 1
766.1	2.3	763.7	–	–	0.1	–	52.2	2 643.1	2 364.8	278.3	25.1	241.3	8
765.7	1.9	763.7	–	–	0.1	–	54.9	2 655.8	2 380.3	275.5	25.1	241.9	15
764.3	3.4	760.6	–	–	0.3	–	43.1	2 668.3	2 393.3	275.0	25.1	250.9	22
764.3	3.4	760.6	–	–	0.3	–	37.6	2 660.7	2 386.0	274.7	25.0	254.0	29
763.6	2.9	760.6	–	–	0.1	–	35.2	2 662.4	2 388.9	273.5	25.0	254.2	2018 Jan 5
Deutsche Bundesbank													
44.9	1.9	43.0	–	–	0.0	–	2.3	197.6	197.6	–	4.4	633.6	2016 Feb
49.7	3.7	46.0	–	–	0.0	–	3.4	210.4	210.4	–	4.4	638.4	Mar
49.7	4.2	45.5	–	–	0.0	–	4.3	227.3	227.3	–	4.4	655.0	Apr
48.8	3.8	45.0	–	–	0.0	–	4.3	244.8	244.8	–	4.4	684.4	May
47.3	2.8	44.5	–	–	0.0	–	5.2	261.8	261.8	–	4.4	710.0	June
46.4	2.3	44.1	–	–	0.0	–	5.5	279.9	279.9	–	4.4	688.0	July
46.3	2.3	44.1	–	–	0.0	–	5.5	292.6	292.6	–	4.4	705.0	Aug
55.3	1.3	54.0	–	–	–	–	5.7	309.3	309.3	–	4.4	744.1	Sep
55.5	0.9	53.9	–	–	0.7	–	5.4	326.7	326.7	–	4.4	736.2	Oct
55.2	1.0	53.9	–	–	0.3	–	4.8	345.4	345.4	–	4.4	782.3	Nov
65.5	1.8	63.5	–	–	0.1	–	3.0	357.7	357.7	–	4.4	784.1	Dec
64.0	0.6	63.4	–	–	0.0	–	4.1	375.7	375.7	–	4.4	823.9	2017 Jan
63.9	0.7	63.2	–	–	0.0	–	4.5	392.6	392.6	–	4.4	842.4	Feb
95.6	0.4	95.0	–	–	0.2	–	3.9	408.8	408.8	–	4.4	859.0	Mar
95.7	0.6	95.0	–	–	0.1	–	4.2	421.4	421.4	–	4.4	872.8	Apr
95.3	0.3	95.0	–	–	0.0	–	4.0	434.3	434.3	–	4.4	886.4	May
96.4	1.2	95.0	–	–	0.1	–	3.9	445.8	445.8	–	4.4	891.3	June
95.5	0.5	94.9	–	–	0.1	–	4.4	457.2	457.2	–	4.4	884.8	July
95.2	0.2	94.9	–	–	0.1	–	4.4	467.1	467.1	–	4.4	880.4	Aug
95.1	0.2	94.8	–	–	0.0	–	3.7	478.3	478.3	–	4.4	908.1	Sep
95.2	0.3	94.8	–	–	0.0	–	3.8	490.5	490.5	–	4.4	877.5	Oct
96.3	1.4	94.8	–	–	0.0	–	2.8	503.6	503.6	–	4.4	885.0	Nov
94.3	1.0	93.3	–	–	–	–	0.5	512.1	512.1	–	4.4	937.9	Dec

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

III Consolidated financial statement of the Eurosystem

2 Liabilities *

€ billion

On reporting date/ End of month 1	Total liabilities	Banknotes in circulation 2	Liabilities to euro area credit institutions related to monetary policy operations denominated in euro						Other liabilities to euro-area credit institutions denominated in euro	Debt certificates issued	Liabilities to other euro area residents denominated in euro		
			Total	Current accounts (covering the minimum reserve system)	Deposit facility	Fixed-term deposits	Fine-tuning reverse operations	Deposits related to margin calls			Total	General government	Other liabilities
Eurosystem 4													
2017 May 5	4,156.8	1,125.1	1,773.1	1,172.7	600.4	–	–	0.0	12.4	–	256.0	114.2	141.8
12	4,170.6	1,124.7	1,766.3	1,165.6	600.7	–	–	0.0	10.8	–	283.1	140.8	142.2
19	4,185.7	1,123.2	1,760.3	1,169.5	590.7	–	–	0.0	9.6	–	314.5	177.1	137.4
26	4,195.7	1,124.1	1,748.4	1,159.5	588.9	–	–	0.1	10.3	–	353.1	209.3	143.9
June 2	4,204.5	1,131.3	1,796.2	1,194.2	602.0	–	–	0.0	11.3	–	299.9	157.7	142.2
9	4,218.1	1,130.5	1,800.6	1,199.2	601.3	–	–	0.1	9.1	–	310.2	172.5	137.7
16	4,232.9	1,131.7	1,776.2	1,168.4	607.8	–	–	0.0	7.4	–	351.7	209.7	142.1
23	4,246.2	1,131.3	1,735.3	1,158.1	577.2	–	–	0.0	7.7	–	400.8	259.1	141.7
30	4,209.5	1,136.9	1,723.1	1,106.1	617.0	–	–	0.1	9.2	–	347.6	210.1	137.5
July 7	4,214.7	1,140.0	1,787.3	1,166.6	620.7	–	–	0.0	9.8	–	340.1	209.1	131.0
14	4,229.3	1,141.2	1,792.1	1,197.8	594.2	–	–	0.1	9.8	–	360.2	230.7	129.6
21	4,235.8	1,140.4	1,764.1	1,186.9	577.2	–	–	0.0	9.2	–	380.8	254.1	126.7
28	4,248.3	1,142.3	1,784.2	1,200.7	583.5	–	–	0.1	9.6	–	369.8	239.3	130.5
Aug 4	4,246.5	1,144.7	1,867.3	1,245.9	621.3	–	–	0.0	10.4	–	273.7	147.1	126.6
11	4,256.0	1,145.9	1,870.4	1,240.9	629.4	–	–	0.0	9.7	–	285.5	158.3	127.2
18	4,265.7	1,144.1	1,836.3	1,238.6	597.7	–	–	0.0	9.0	–	321.6	194.8	126.8
25	4,278.9	1,139.9	1,824.0	1,230.8	593.2	–	–	0.0	8.0	–	352.3	225.4	126.9
Sep 1	4,283.7	1,142.1	1,891.7	1,263.4	628.3	–	–	0.0	8.4	–	286.7	158.8	128.0
8	4,299.8	1,142.7	1,900.0	1,264.2	635.8	–	–	0.0	14.5	–	292.4	162.5	129.9
15	4,308.9	1,142.0	1,888.0	1,238.9	649.0	–	–	0.0	6.7	–	324.3	198.1	126.2
22	4,328.2	1,140.2	1,865.2	1,217.6	647.6	–	–	0.0	10.7	–	362.3	236.2	126.1
29	4,318.6	1,143.5	1,824.3	1,175.2	649.0	–	–	0.1	9.7	–	351.9	229.6	122.3
2017 Oct 6	4,337.7	1,144.9	1,920.2	1,257.3	662.9	–	–	0.0	9.2	–	321.4	200.2	121.2
13	4,371.6	1,145.2	1,942.5	1,283.7	658.8	–	–	0.0	8.1	–	333.7	210.4	123.3
20	4,363.4	1,143.0	1,913.7	1,261.7	652.0	–	–	0.0	6.8	–	357.1	233.5	123.6
27	4,371.2	1,145.3	1,950.4	1,312.1	638.3	–	–	0.0	8.3	–	327.6	205.1	122.5
Nov 3	4,373.2	1,147.3	1,982.6	1,312.0	670.6	–	–	0.0	6.4	–	279.8	158.6	121.2
10	4,387.7	1,143.2	1,982.6	1,303.4	679.0	–	–	0.2	8.6	–	296.3	174.6	121.7
17	4,411.9	1,141.3	1,972.6	1,274.8	697.8	–	–	0.0	7.5	–	337.3	208.6	128.7
24	4,427.5	1,140.0	1,972.9	1,270.4	702.4	–	–	0.0	6.5	–	360.2	232.0	128.1
Dec 1	4,440.8	1,146.7	2,034.8	1,340.0	694.9	–	–	0.0	6.5	–	292.9	170.3	122.5
8	4,456.6	1,153.6	2,029.1	1,334.8	694.3	–	–	0.0	11.8	–	287.0	165.3	121.8
15	4,471.9	1,157.0	1,984.9	1,319.6	665.2	–	–	0.0	12.9	–	321.3	197.1	124.2
22	4,487.3	1,168.2	1,942.8	1,266.5	676.2	–	–	0.0	19.5	–	295.8	177.5	118.3
29	4,471.7	1,170.7	1,881.6	1,185.8	695.8	–	–	0.0	21.0	–	287.6	168.5	119.2
2018 Jan 5	4,466.0	1,162.6	1,962.0	1,262.5	699.4	–	–	0.0	11.8	–	280.1	163.7	116.4
Deutsche Bundesbank													
2016 Feb	1 043.7	250.1	231.5	165.9	65.6	–	–	–	–	–	88.2	18.7	69.5
Mar	1 077.6	251.9	227.3	167.8	59.6	–	–	–	–	–	108.8	39.9	69.0
Apr	1 112.7	252.5	272.4	180.8	91.6	–	–	–	–	–	96.3	24.2	72.1
May	1 159.5	253.4	293.2	200.0	93.2	–	–	–	–	–	121.2	41.8	79.4
June	1 214.0	255.6	299.7	214.4	85.3	–	–	0.0	–	–	130.6	56.5	74.1
July	1 209.4	258.0	320.7	235.4	85.4	–	–	0.0	–	–	101.4	25.3	76.1
Aug	1 239.2	257.1	334.5	242.3	92.2	–	–	0.0	0.0	–	110.4	33.5	76.9
Sep	1 305.3	257.9	362.6	244.7	117.9	–	–	–	0.1	–	122.4	43.9	78.6
Oct	1 312.2	259.2	380.0	260.5	119.5	–	–	–	0.3	–	110.8	35.6	75.3
Nov	1 376.5	259.5	428.0	293.1	134.9	–	–	–	0.3	–	116.6	40.0	76.6
Dec	1 392.7	264.9	411.4	284.9	126.4	–	–	–	0.5	–	105.8	32.5	73.4
2017 Jan	1 449.7	260.9	499.0	348.3	150.7	–	–	–	2.2	–	92.9	17.1	75.8
Feb	1 484.8	261.3	507.1	347.0	160.1	–	–	–	1.7	–	97.3	12.4	84.9
Mar	1 558.0	262.1	543.2	353.8	189.3	–	–	–	1.7	–	115.4	26.8	88.6
Apr	1 582.8	264.7	591.2	402.7	188.5	–	–	–	4.1	–	88.9	20.0	68.9
May	1 608.2	264.9	607.1	433.6	173.5	–	–	–	2.5	–	102.9	27.8	75.1
June	1 616.4	267.4	586.1	418.6	167.5	–	–	–	3.4	–	112.9	40.0	72.9
July	1 621.0	268.8	597.0	422.3	174.7	–	–	0.0	3.8	–	112.2	40.8	71.4
Aug	1 625.1	268.4	585.6	422.9	162.7	–	–	0.0	4.1	–	114.7	47.0	67.7
Sep	1 663.9	269.0	613.2	411.1	202.1	–	–	0.0	3.8	–	121.5	59.3	62.2
Oct	1 644.4	269.8	624.6	478.1	146.5	–	–	0.0	3.6	–	100.7	45.1	55.6
Nov	1 665.0	269.3	665.2	458.0	207.2	–	–	0.0	2.8	–	103.9	48.5	55.4
Dec	1 727.7	275.4	609.8	392.8	217.0	–	–	0.0	2.7	–	118.8	67.0	51.8

***** The consolidated financial statement of the Eurosystem comprises the financial statement of the European Central Bank (ECB) and the financial statements of the national central banks of the euro area member states (NCBs). The balance sheet items for foreign currency, securities, gold and financial instruments are valued at market rates at the end of the quarter. **1** For Eurosystem: financial statements for specific weekly dates; for the Bundesbank: end-of-month financial statements. **2** According to the accounting regime chosen by the Eurosystem on the issue of euro banknotes, a share of 8% of the total value of the euro banknotes in circulation is allocated to the ECB on a monthly basis. The counterpart of this adjustment is disclosed as an "Intra-Eurosystem liability related to euro banknote issue". The

III Consolidated financial statement of the Eurosystem

Liabilities to non-euro area residents denominated in euro	Liabilities to euro area residents in foreign currency	Liabilities to non-euro area residents denominated in foreign currency			Counterpart of special drawing rights allocated by the IMF	Other liabilities [3]	Intra-Eurosystem liability related to euro banknote issue [2]	Revaluation accounts	Capital and reserves	On reporting date/ End of month [1]
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
Eurosystem [4]										
175.2	4.1	11.4	11.4	–	59.0	226.3	–	412.0	102.3	2017 May 5
170.5	3.7	11.1	11.1	–	59.0	227.2	–	412.0	102.2	12
162.0	3.7	11.6	11.6	–	59.0	227.4	–	412.0	102.3	19
145.5	2.9	11.1	11.1	–	59.0	226.9	–	412.0	102.3	26
150.7	2.8	10.7	10.7	–	59.0	228.3	–	412.0	102.3	June 2
152.7	2.8	10.8	10.8	–	59.0	228.1	–	412.0	102.3	9
149.0	3.0	11.0	11.0	–	59.0	229.5	–	412.0	102.3	16
152.1	3.0	12.5	12.5	–	59.0	230.1	–	412.0	102.3	23
222.5	4.1	10.8	10.8	–	56.7	224.4	–	371.9	102.3	30
168.8	5.0	10.3	10.3	–	56.7	222.5	–	371.9	102.3	July 7
156.4	5.0	11.2	11.2	–	56.7	222.5	–	371.9	102.3	14
170.7	5.5	10.8	10.8	–	56.7	223.5	–	371.9	102.3	21
169.3	6.2	12.7	12.7	–	56.7	223.2	–	371.9	102.3	28
175.8	8.9	10.5	10.5	–	56.7	224.2	–	371.9	102.3	Aug 4
171.3	8.7	10.8	10.8	–	56.7	222.7	–	371.9	102.3	11
182.2	7.5	10.9	10.9	–	56.7	223.3	–	371.9	102.3	18
181.3	7.4	10.9	10.9	–	56.7	224.2	–	371.9	102.3	25
182.1	6.8	10.1	10.1	–	56.7	224.8	–	371.9	102.3	Sep 1
175.2	8.5	11.0	11.0	–	56.7	224.7	–	371.9	102.3	8
175.5	7.7	9.8	9.8	–	56.7	224.1	–	371.9	102.3	15
173.6	8.7	10.8	10.8	–	56.7	225.9	–	371.9	102.3	22
231.1	5.9	10.4	10.4	–	55.6	218.9	–	364.9	102.3	29
177.8	9.0	10.8	10.8	–	55.6	221.5	–	364.9	102.3	2017 Oct 6
176.5	8.6	11.4	11.4	–	55.6	222.7	–	364.9	102.3	13
175.1	8.9	12.4	12.4	–	55.6	223.5	–	364.9	102.3	20
171.6	9.5	11.3	11.3	–	55.6	224.3	–	364.9	102.3	27
186.8	9.8	10.9	10.9	–	55.6	226.5	–	364.9	102.3	Nov 3
186.4	8.2	11.8	11.8	–	55.6	227.7	–	364.9	102.3	10
174.4	10.1	11.6	11.6	–	55.6	234.3	–	364.9	102.3	17
170.2	8.7	11.2	11.2	–	55.6	235.0	–	364.9	102.3	24
185.5	9.2	11.4	11.4	–	55.6	230.9	–	364.9	102.3	Dec 1
198.2	8.5	12.8	12.8	–	55.6	232.7	–	364.9	102.3	8
219.5	7.5	12.0	12.0	–	55.6	233.9	–	364.9	102.3	15
286.1	6.5	11.9	11.9	–	55.6	233.6	–	364.9	102.3	22
354.6	3.8	11.3	11.3	–	55.2	225.5	–	358.0	102.3	29
291.1	3.9	11.4	11.4	–	55.2	227.7	–	357.9	102.3	2018 Jan 5
Deutsche Bundesbank										
28.0	0.0	0.2	0.2	–	15.3	22.0	297.7	105.7	5.0	2016 Feb
30.5	0.0	0.3	0.3	–	14.9	22.8	299.8	116.2	5.0	Mar
30.7	0.0	0.8	0.8	–	14.9	22.9	300.9	116.2	5.0	Apr
27.2	0.0	1.4	1.4	–	14.9	23.1	303.9	116.2	5.0	May
47.0	0.0	1.0	1.0	–	15.2	23.4	308.0	128.5	5.0	June
43.8	0.0	1.4	1.4	–	15.2	23.6	311.7	128.5	5.0	July
48.9	0.0	1.7	1.7	–	15.2	23.7	314.1	128.5	5.0	Aug
70.3	0.0	1.1	1.1	–	15.1	24.0	318.8	128.0	5.0	Sep
66.5	0.0	1.0	1.0	–	15.1	24.3	322.0	128.0	5.0	Oct
74.7	0.0	1.0	1.0	–	15.1	24.4	323.9	128.0	5.0	Nov
117.0	0.0	1.2	1.2	–	15.4	24.7	327.3	119.7	5.0	Dec
100.5	0.0	0.6	0.6	–	15.4	25.2	328.3	119.7	5.0	2017 Jan
121.3	0.0	0.9	0.9	–	15.4	24.5	330.1	119.7	5.6	Feb
131.3	0.0	0.5	0.5	–	15.3	25.1	331.9	126.0	5.6	Mar
125.9	0.0	0.7	0.7	–	15.3	25.3	335.2	126.0	5.6	Apr
119.4	0.0	0.7	0.7	–	15.3	25.8	338.1	126.0	5.6	May
140.4	0.0	1.1	1.1	–	14.7	26.2	342.8	115.8	5.6	June
130.0	0.0	1.7	1.7	–	14.7	26.4	345.0	115.8	5.6	July
139.9	0.0	1.1	1.1	–	14.7	26.6	348.6	115.8	5.6	Aug
140.9	0.0	1.7	1.7	–	14.4	27.1	352.1	114.6	5.6	Sep
127.4	0.0	2.2	2.2	–	14.4	27.3	354.2	114.6	5.6	Oct
103.8	0.0	2.2	2.2	–	14.4	27.7	355.5	114.6	5.6	Nov
199.8	0.0	1.0	1.0	–	14.3	27.9	359.3	113.1	5.6	Dec

remaining 92 % of the value of the euro banknote in circulation is also allocated to the NCBs on a monthly basis, and each NCB shows in its balance sheet the share of the euro banknotes issued which corresponds to its paid-up share in the ECB's capital. The difference between the value of the euro banknotes allocated to the NCB according to the aforementioned accounting regime and the value of euro banknotes put into circulation is also disclosed as an "Intra-Eurosystem claim/ liability related to banknote issue". **3** For the Deutsche Bundesbank: including DM banknotes still in circulation. **4** Source: ECB.

IV Banks

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

€ billion

Period	Balance sheet total [1]	Cash in hand	Lending to banks (MFIs) in the euro area							Lending to non-banks (non-MFIs) in the			
				to banks in the home country			to banks in other member states				to non-banks in the home country		
												Enterprises and households	
			Total	Total	Loans	Securities issued by banks	Total	Loans	Securities issued by banks	Total	Total	Total	Loans
	End of year or month												
2008	7,892.7	17.8	2,681.8	1,990.2	1,404.3	585.8	691.6	452.9	238.8	3,638.2	3,163.0	2,686.9	2,357.3
2009	7,436.1	17.2	2,480.5	1,813.2	1,218.4	594.8	667.3	449.5	217.8	3,638.3	3,187.9	2,692.9	2,357.5
2010	8,304.8	16.5	2,361.6	1,787.8	1,276.9	510.9	573.9	372.8	201.0	3,724.5	3,303.0	2,669.2	2,354.7
2011	8,393.3	16.4	2,394.4	1,844.5	1,362.2	482.2	550.0	362.3	187.7	3,673.5	3,270.5	2,709.4	2,415.1
2012	8,226.6	19.2	2,309.0	1,813.2	1,363.8	449.4	495.9	322.2	173.7	3,688.6	3,289.4	2,695.5	2,435.7
2013	7,528.9	18.7	2,145.0	1,654.8	1,239.1	415.7	490.2	324.6	165.6	3,594.3	3,202.1	2,616.3	2,354.0
2014	7,802.3	19.2	2,022.8	1,530.5	1,147.2	383.3	492.3	333.9	158.4	3,654.5	3,239.4	2,661.2	2,384.8
2015	7,665.2	19.5	2,013.6	1,523.8	1,218.0	305.8	489.8	344.9	144.9	3,719.9	3,302.5	2,727.4	2,440.0
2016	7,792.6	26.0	2,101.4	1,670.9	1,384.2	286.7	430.5	295.0	135.5	3,762.9	3,344.5	2,805.6	2,512.0
2016 Feb	7,913.1	16.2	2,072.2	1,566.4	1,263.3	303.1	505.8	361.1	144.7	3,734.6	3,317.1	2,739.2	2,453.8
Mar	7,783.4	17.5	2,039.2	1,547.2	1,243.5	303.7	492.0	347.9	144.1	3,736.0	3,316.8	2,742.1	2,458.5
Apr	7,806.5	17.2	2,089.1	1,594.3	1,291.0	303.3	494.8	352.8	142.0	3,747.3	3,329.8	2,753.3	2,467.1
May	7,817.2	18.7	2,070.3	1,587.2	1,284.7	302.4	483.1	342.8	140.4	3,759.2	3,334.1	2,762.8	2,476.2
June	7,920.6	19.3	2,072.8	1,592.2	1,292.9	299.3	480.6	338.2	142.4	3,745.9	3,321.4	2,759.7	2,473.7
July	7,942.1	19.7	2,086.0	1,604.7	1,308.1	296.6	481.2	341.4	139.8	3,758.8	3,333.6	2,766.6	2,479.7
Aug	7,908.5	19.7	2,086.1	1,611.7	1,317.0	294.7	474.4	336.0	138.5	3,758.4	3,335.4	2,774.3	2,486.3
Sep	7,863.9	21.0	2,074.5	1,636.4	1,343.9	292.5	438.2	300.7	137.5	3,766.0	3,343.0	2,785.6	2,497.3
Oct	7,868.7	22.8	2,079.5	1,641.2	1,349.4	291.8	438.3	301.6	136.7	3,773.0	3,349.9	2,793.6	2,502.5
Nov	7,911.6	22.9	2,154.7	1,712.1	1,421.7	290.5	442.6	306.3	136.2	3,785.7	3,361.6	2,810.0	2,518.4
Dec	7,792.6	26.0	2,101.4	1,670.9	1,384.2	286.7	430.5	295.0	135.5	3,762.9	3,344.5	2,805.6	2,512.0
2017 Jan	7,889.3	24.6	2,210.1	1,777.0	1,490.7	286.3	433.1	299.8	133.3	3,769.9	3,347.6	2,813.5	2,519.3
Feb	7,944.8	23.9	2,225.4	1,783.3	1,497.9	285.4	442.1	307.6	134.5	3,774.5	3,347.6	2,819.5	2,525.6
Mar	7,926.1	23.6	2,237.5	1,797.8	1,513.2	284.6	439.7	306.9	132.7	3,776.8	3,351.3	2,828.1	2,533.8
Apr	7,954.6	24.7	2,276.6	1,847.6	1,563.1	284.6	428.9	298.2	130.8	3,780.1	3,357.1	2,836.6	2,541.1
May	7,947.0	25.6	2,286.5	1,864.4	1,579.4	285.0	422.1	290.1	132.0	3,782.1	3,360.7	2,847.3	2,552.6
June	7,849.7	27.3	2,245.7	1,830.9	1,548.9	282.1	414.8	284.2	130.6	3,780.7	3,364.7	2,859.4	2,559.7
July	7,818.7	26.6	2,258.5	1,840.3	1,560.2	280.0	418.2	289.0	129.2	3,787.1	3,370.5	2,867.1	2,567.3
Aug	7,807.7	27.5	2,243.1	1,828.2	1,553.7	274.5	415.0	286.9	128.0	3,792.2	3,377.0	2,876.6	2,576.3
Sep	7,811.3	28.4	2,262.7	1,847.3	1,578.3	269.0	415.4	288.4	127.0	3,799.4	3,385.3	2,890.2	2,589.5
Oct	7,825.7	28.4	2,285.3	1,873.3	1,604.0	269.2	412.1	285.1	127.0	3,804.7	3,393.5	2,899.1	2,598.2
Nov	7,849.8	28.0	2,312.8	1,901.5	1,633.0	268.5	411.3	285.5	125.8	3,818.1	3,411.2	2,919.0	2,612.6
	Changes [3]												
2009	– 454.5	– 0.5	– 189.0	– 166.4	– 182.2	15.8	– 22.5	– 1.8	– 20.7	17.4	38.3	17.0	6.6
2010	– 136.3	– 0.7	– 111.6	– 15.6	58.5	– 74.1	– 95.9	– 80.9	– 15.1	96.4	126.0	– 13.7	0.7
2011	54.1	– 0.1	32.6	58.7	91.7	– 33.0	– 26.0	– 12.1	– 13.9	– 51.8	– 35.3	38.7	56.7
2012	– 129.2	2.9	– 81.9	– 28.4	3.0	– 31.4	– 53.5	– 39.7	– 13.8	27.5	27.7	17.0	28.8
2013	– 703.6	– 0.5	– 257.1	– 249.2	– 216.5	– 32.7	– 7.9	1.6	– 9.5	13.6	16.6	23.6	21.6
2014	206.8	0.4	– 126.2	– 128.6	– 95.3	– 33.4	2.4	7.2	– 4.8	55.1	40.0	52.3	36.8
2015	– 191.4	0.3	– 18.2	– 12.1	66.1	– 78.2	– 6.1	6.6	– 12.8	64.8	64.1	68.1	56.6
2016	184.3	6.5	120.3	178.4	195.3	– 16.8	– 58.1	– 49.2	– 8.8	57.5	53.4	88.8	81.0
2016 Mar	– 107.0	1.3	– 29.0	– 17.2	– 18.4	1.2	– 11.8	– 11.2	– 0.6	4.5	1.7	4.7	6.7
Apr	31.0	– 0.3	49.9	47.2	47.6	– 0.4	2.7	4.8	– 2.1	13.0	14.4	12.6	9.9
May	35.2	1.5	8.4	20.2	21.4	– 1.2	– 11.7	– 10.1	– 1.6	11.4	5.3	10.6	10.0
June	108.2	0.7	3.7	5.6	8.2	– 2.6	– 1.9	– 4.2	2.3	– 10.4	– 11.4	– 1.7	– 1.2
July	23.5	0.4	13.1	12.4	15.2	– 2.8	0.7	3.4	– 2.7	14.5	13.4	8.2	7.3
Aug	– 31.5	– 0.0	0.4	7.1	9.0	– 1.9	– 6.7	– 5.3	– 1.4	0.2	2.1	8.0	6.8
Sep	– 42.7	1.3	– 11.3	24.9	26.9	– 2.0	– 36.3	– 35.2	– 1.1	8.3	8.3	11.7	11.4
Oct	– 0.5	1.8	4.8	5.2	5.6	– 0.4	– 0.3	0.5	– 0.9	6.5	7.1	7.9	5.2
Nov	25.9	0.1	72.2	69.4	71.4	– 2.0	2.8	3.4	– 0.5	11.6	11.3	15.8	15.2
Dec	– 121.7	3.1	– 53.6	– 41.3	– 37.8	– 3.5	– 12.3	– 11.7	– 0.6	– 23.1	– 17.0	– 4.4	– 6.1
2017 Jan	108.8	– 1.4	110.7	107.1	107.1	0.0	3.5	5.7	– 2.2	9.4	4.6	9.3	8.5
Feb	47.4	– 0.7	14.0	5.6	6.8	– 1.2	8.4	7.1	1.2	4.3	0.3	6.3	6.5
Mar	– 13.0	– 0.3	13.1	14.9	15.5	– 0.6	– 1.8	– 0.0	– 1.8	3.2	4.3	9.0	8.9
Apr	40.0	1.1	41.0	50.7	50.5	0.2	– 9.7	– 7.8	– 1.9	4.7	6.8	9.4	8.2
May	8.8	0.9	12.6	18.0	17.1	0.9	– 5.4	– 6.8	1.4	4.0	4.6	9.0	9.9
June	– 85.4	1.7	– 38.0	– 31.5	– 29.2	– 2.3	– 6.5	– 5.2	– 1.4	0.5	5.3	13.2	8.0
July	– 14.3	– 0.7	14.5	10.5	12.2	– 1.7	4.0	5.2	– 1.2	8.6	7.1	8.9	8.6
Aug	– 4.7	0.9	– 14.3	– 11.6	– 6.3	– 5.3	– 2.8	– 1.6	– 1.2	5.6	6.8	9.9	9.3
Sep	4.8	0.9	21.8	21.5	26.0	– 4.5	0.3	1.2	– 0.9	6.9	7.1	12.0	13.5
Oct	8.6	0.1	21.9	25.5	25.4	0.1	– 3.7	– 3.7	0.1	4.6	8.0	8.6	8.6
Nov	24.6	– 0.4	27.5	28.2	29.0	– 0.8	– 0.7	0.4	– 1.2	13.8	18.1	20.2	14.6

* This table serves to supplement the "Overall monetary survey" in section II. Unlike the other tables in section IV, this table includes – in addition to the figures reported by banks (including building and loan associations) – data from money market funds. **1** See footnote 1 in Table IV.2. **2** Including debt securities arising from the

IV Banks

euro area														
				to non-banks in other member states						Claims on non-euro-area residents			
	General government				Enterprises and households		General government						
Securities	Total	Loans	Securities [2]	Total	Total	*of which* Loans	Total	Loans	Securities	Total	*of which* Loans	Other assets [1]	Period
End of year or month													
329.6	476.1	342.8	133.4	475.1	348.1	172.1	127.0	27.6	99.4	1,279.2	1,008.6	275.7	2008
335.4	495.0	335.1	160.0	450.4	322.2	162.9	128.2	23.5	104.7	1,062.6	821.1	237.5	2009
314.5	633.8	418.4	215.3	421.6	289.2	164.2	132.4	24.8	107.6	1,021.0	792.7	1,181.1	2010
294.3	561.1	359.8	201.2	403.1	276.9	161.2	126.2	32.6	93.6	995.1	770.9	1,313.8	2011
259.8	594.0	350.3	243.7	399.2	275.1	158.1	124.1	30.4	93.7	970.3	745.0	1,239.4	2012
262.3	585.8	339.2	246.6	392.3	267.6	144.6	124.6	27.8	96.9	921.2	690.5	849.7	2013
276.4	578.2	327.9	250.4	415.0	270.0	142.7	145.0	31.9	113.2	1,050.1	805.0	1,055.8	2014
287.4	575.1	324.5	250.6	417.5	276.0	146.4	141.5	29.4	112.1	1,006.5	746.3	905.6	2015
293.6	538.9	312.2	226.7	418.4	281.7	159.5	136.7	28.5	108.2	1,058.2	802.3	844.1	2016
285.4	578.0	328.0	249.9	417.4	274.6	153.0	142.8	29.5	113.4	1,031.4	767.7	1,058.7	2016 Feb
283.6	574.7	327.8	246.9	419.2	273.3	149.1	145.9	29.3	116.6	992.1	727.7	998.5	Mar
286.2	576.5	331.6	244.8	417.6	272.8	150.4	144.8	30.0	114.8	1,005.6	741.1	947.2	Apr
286.6	571.3	329.5	241.9	425.1	280.0	153.3	145.1	28.9	116.2	1,012.9	750.5	956.2	May
286.0	561.8	323.9	237.9	424.4	281.2	155.2	143.2	28.9	114.3	1,036.4	774.7	1,046.2	June
286.8	567.0	327.0	240.0	425.2	284.2	159.3	141.0	28.9	112.1	1,041.7	785.1	1,036.0	July
288.0	561.0	324.9	236.1	423.1	283.3	159.7	139.8	29.1	110.7	1,042.6	786.2	1,001.7	Aug
288.3	557.5	323.0	234.5	422.9	282.2	157.8	140.7	29.8	110.9	1,030.5	774.4	971.9	Sep
291.0	556.4	326.3	230.0	423.0	284.6	162.1	138.5	29.5	108.9	1,077.9	823.1	915.5	Oct
291.6	551.6	321.9	229.7	424.1	285.9	161.9	138.3	29.2	109.1	1,065.1	811.1	883.2	Nov
293.6	538.9	312.2	226.7	418.4	281.7	159.5	136.7	28.5	108.2	1,058.2	802.3	844.1	Dec
294.2	534.1	312.2	221.9	422.4	284.6	163.1	137.7	28.6	109.2	1,080.8	826.0	803.9	2017 Jan
294.0	528.0	311.6	216.5	427.0	289.4	165.6	137.6	28.6	109.0	1,095.4	843.6	825.5	Feb
294.3	523.2	307.1	216.1	425.5	290.8	167.2	134.7	29.0	105.7	1,097.1	847.5	791.1	Mar
295.5	520.5	307.9	212.6	423.0	287.1	167.8	135.8	29.9	105.9	1,080.7	832.2	792.5	Apr
294.6	513.4	298.9	214.6	421.4	288.5	166.8	132.9	28.9	103.9	1,056.3	808.0	796.5	May
299.7	505.4	296.4	208.9	416.0	283.4	162.6	132.6	29.9	102.6	1,064.9	817.0	731.1	June
299.8	503.4	298.3	205.1	416.6	285.0	164.1	131.7	29.9	101.8	1,028.5	780.9	717.9	July
300.4	500.4	293.4	207.0	415.2	283.8	165.2	131.4	30.0	101.4	1,011.0	765.3	733.9	Aug
300.7	495.1	289.0	206.1	414.1	283.0	167.9	131.1	29.8	101.3	1,021.2	776.3	699.6	Sep
301.0	494.4	289.2	205.3	411.2	281.6	167.7	129.6	30.4	99.2	1,014.2	768.9	693.0	Oct
306.4	492.2	287.3	205.0	406.8	276.8	164.2	130.0	29.8	100.2	1,005.3	759.4	685.6	Nov
Changes [3]													
10.5	21.3	– 5.1	26.4	– 20.9	– 20.9	– 7.1	0.0	– 3.9	3.9	– 182.5	– 162.3	– 99.8	2009
– 14.3	139.7	83.4	56.3	– 29.6	– 36.4	0.2	6.8	3.1	3.7	– 74.1	– 61.9	– 46.3	2010
– 18.0	– 74.0	– 59.1	– 14.9	– 16.6	– 13.8	– 5.5	– 2.7	8.0	– 10.7	– 39.5	– 34.9	112.9	2011
– 11.8	10.7	– 10.5	21.2	– 0.2	– 0.7	– 1.5	0.5	– 2.2	2.7	– 15.5	– 17.7	– 62.2	2012
2.0	– 7.0	– 10.9	3.9	– 3.0	– 3.4	– 9.3	0.5	– 2.6	3.1	– 38.8	– 47.2	– 420.8	2013
15.5	– 12.3	– 15.1	2.9	15.1	0.4	– 4.0	14.6	0.9	13.8	83.6	72.0	194.0	2014
11.5	– 3.9	– 4.2	0.3	0.7	4.4	1.8	– 3.7	– 1.0	– 2.8	– 88.3	– 101.0	– 150.1	2015
7.8	– 35.4	– 12.1	– 23.3	4.0	8.2	14.6	– 4.2	– 0.9	– 3.3	51.4	55.0	– 51.4	2016
– 1.9	– 3.0	– 0.2	– 2.9	2.8	– 0.3	– 2.8	3.1	– 0.2	3.3	– 23.5	– 25.4	– 60.2	2016 Mar
2.7	1.8	3.9	– 2.1	– 1.4	– 0.3	1.7	– 1.1	0.7	– 1.8	12.9	13.1	– 44.4	Apr
0.6	– 5.2	– 2.3	– 2.9	6.1	5.7	1.4	0.4	– 1.0	1.4	0.9	3.7	13.0	May
– 0.5	– 9.7	– 5.7	– 4.0	1.0	2.0	2.4	– 1.0	0.0	– 1.0	24.7	25.5	89.5	June
0.8	5.3	3.1	2.2	1.0	3.2	4.4	– 2.2	– 0.0	– 2.1	6.7	11.9	– 11.1	July
1.2	– 5.9	– 2.0	– 3.9	– 1.9	– 0.6	0.6	– 1.3	0.2	– 1.5	2.3	2.4	– 34.3	Aug
0.3	– 3.4	– 1.8	– 1.6	0.0	– 0.8	– 1.7	0.8	0.6	0.1	– 10.8	– 10.5	– 30.3	Sep
2.8	– 0.9	3.5	– 4.3	– 0.6	1.9	4.0	– 2.5	– 0.3	– 2.2	42.7	44.1	– 56.4	Oct
0.6	– 4.5	– 4.3	– 0.2	0.4	0.6	– 1.2	– 0.2	– 0.4	0.1	– 25.7	– 24.1	– 32.3	Nov
1.7	– 12.6	– 9.7	– 2.9	– 6.0	– 4.4	– 2.3	– 1.6	– 0.7	– 0.9	– 9.4	– 11.4	– 38.8	Dec
0.8	– 4.7	0.0	– 4.8	4.9	3.7	4.2	1.2	0.1	1.1	30.4	31.0	– 40.2	2017 Jan
– 0.2	– 6.1	– 0.6	– 5.4	4.0	4.2	2.1	– 0.2	0.0	– 0.2	8.2	11.7	21.6	Feb
0.2	– 4.7	– 4.4	– 0.3	– 1.2	1.7	2.1	– 2.9	0.4	– 3.3	5.5	7.5	– 34.5	Mar
1.2	– 2.6	0.8	– 3.4	– 2.1	– 3.3	1.1	1.2	0.9	0.3	– 8.2	– 7.4	1.4	Apr
– 0.8	– 4.4	– 6.4	2.0	– 0.6	2.3	– 0.1	– 3.0	– 1.0	– 2.0	– 12.7	– 13.1	4.0	May
5.2	– 7.9	– 2.3	– 5.6	– 4.8	– 3.5	– 2.7	– 1.3	0.1	– 1.3	15.6	15.3	– 65.2	June
0.3	– 1.7	2.0	– 3.7	1.4	2.4	2.4	– 1.0	– 0.2	– 0.8	– 24.4	– 24.9	– 12.3	July
0.6	– 3.0	– 4.9	1.9	– 1.2	– 0.8	1.5	– 0.4	0.0	– 0.4	– 12.9	– 11.3	16.0	Aug
– 1.5	– 4.9	– 4.2	– 0.7	– 0.2	0.2	2.4	– 0.4	– 0.2	– 0.2	8.3	9.0	– 33.1	Sep
0.1	– 0.7	0.2	– 0.9	– 3.4	– 1.8	– 0.4	– 1.6	0.6	– 2.2	– 11.3	– 11.3	– 6.6	Oct
5.6	– 2.1	– 1.9	– 0.3	– 4.3	– 4.6	– 3.5	0.4	– 0.6	1.0	– 8.8	– 9.5	– 7.4	Nov

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

IV Banks

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

€ billion

Period	Balance sheet total [1]	Deposits of banks (MFIs) in the euro area			Deposits of non-banks (non-MFIs) in the euro area								
						Deposits of non-banks in the home country						Deposits of non-banks	
			of banks					With agreed maturities		At agreed notice			
		Total	in the home country	in other member states	Total	Total	Over-night	Total	*of which* up to 2 years	Total	*of which* up to 3 months	Total	Over-night
	End of year or month												
2008	7,892.7	1,827.7	1,583.0	244.7	2,798.2	2,687.3	809.5	1,342.7	598.7	535.2	424.8	74.2	22.4
2009	7,436.1	1,589.7	1,355.6	234.0	2,818.0	2,731.3	997.8	1,139.1	356.4	594.4	474.4	63.9	17.7
2010	8,304.8	1,495.8	1,240.1	255.7	2,925.8	2,817.6	1,089.1	1,110.3	304.6	618.2	512.5	68.4	19.3
2011	8,393.3	1,444.8	1,210.3	234.5	3,033.4	2,915.1	1,143.3	1,155.8	362.6	616.1	515.3	78.8	25.9
2012	8,226.6	1,371.0	1,135.9	235.1	3,091.4	2,985.2	1,294.9	1,072.8	320.0	617.6	528.4	77.3	31.2
2013	7,528.9	1,345.4	1,140.3	205.1	3,130.5	3,031.5	1,405.3	1,016.2	293.7	610.1	532.4	81.3	33.8
2014	7,802.3	1,324.0	1,112.3	211.7	3,197.7	3,107.4	1,514.3	985.4	298.1	607.7	531.3	79.7	34.4
2015	7,665.2	1,267.8	1,065.9	201.9	3,307.1	3,215.1	1,670.2	948.4	291.5	596.4	534.5	80.8	35.3
2016	7,792.6	1,205.2	1,033.2	172.0	3,411.3	3,318.5	1,794.8	935.3	291.2	588.5	537.0	84.2	37.2
2016 Feb	7,913.1	1,264.9	1,062.1	202.8	3,324.6	3,227.5	1,694.0	937.1	283.2	596.3	537.0	86.0	42.5
Mar	7,783.4	1,252.3	1,058.8	193.5	3,319.6	3,221.8	1,682.6	944.7	290.4	594.4	536.2	86.8	40.1
Apr	7,806.5	1,258.6	1,060.8	197.8	3,332.8	3,240.8	1,704.9	943.2	291.0	592.7	535.6	82.4	38.4
May	7,817.2	1,230.3	1,027.5	202.8	3,348.6	3,253.7	1,717.2	945.3	292.6	591.1	535.0	84.9	41.7
June	7,920.6	1,241.7	1,039.1	202.6	3,350.9	3,250.2	1,718.1	942.1	290.9	590.0	534.5	89.4	44.9
July	7,942.1	1,226.7	1,023.7	203.0	3,362.7	3,267.1	1,733.1	945.0	295.2	589.1	534.5	85.5	40.7
Aug	7,908.5	1,211.5	1,016.5	195.0	3,369.5	3,274.0	1,744.5	941.2	292.8	588.4	534.6	85.5	40.4
Sep	7,863.9	1,194.8	1,029.1	165.7	3,372.1	3,274.9	1,743.8	944.0	297.4	587.1	534.0	88.0	41.4
Oct	7,868.7	1,186.8	1,025.4	161.3	3,378.8	3,286.5	1,763.9	936.0	288.5	586.6	534.3	83.7	37.1
Nov	7,911.6	1,205.6	1,042.2	163.4	3,420.0	3,320.5	1,795.0	939.3	292.8	586.1	534.4	89.8	43.4
Dec	7,792.6	1,205.2	1,033.2	172.0	3,411.3	3,318.5	1,794.8	935.3	291.2	588.5	537.0	84.2	37.2
2017 Jan	7,889.3	1,237.0	1,053.4	183.6	3,433.4	3,337.5	1,807.5	941.6	300.1	588.4	537.7	88.4	42.2
Feb	7,944.8	1,245.6	1,055.3	190.3	3,435.3	3,336.9	1,812.7	935.8	295.0	588.5	538.3	89.6	41.7
Mar	7,926.1	1,259.8	1,077.3	182.5	3,433.9	3,334.5	1,813.5	934.4	296.4	586.6	537.0	91.2	39.6
Apr	7,954.6	1,254.1	1,075.4	178.8	3,452.0	3,352.3	1,840.8	925.4	290.7	586.2	536.9	91.2	41.7
May	7,947.0	1,259.3	1,079.9	179.4	3,463.2	3,360.6	1,848.6	926.4	292.7	585.7	536.8	93.5	44.2
June	7,849.7	1,235.2	1,054.2	181.0	3,477.7	3,362.0	1,865.6	911.8	290.3	584.6	536.2	107.1	44.8
July	7,818.7	1,239.8	1,062.3	177.5	3,470.9	3,353.4	1,862.3	907.6	287.9	583.4	538.2	107.5	45.8
Aug	7,807.7	1,243.3	1,065.8	177.4	3,486.1	3,368.4	1,880.5	905.5	285.7	582.4	537.9	108.3	47.5
Sep	7,811.3	1,256.2	1,071.9	184.3	3,494.8	3,371.4	1,886.8	902.8	284.3	581.8	537.9	114.7	50.7
Oct	7,825.7	1,272.0	1,081.9	190.1	3,505.8	3,388.0	1,912.7	893.9	277.3	581.5	538.4	109.2	46.3
Nov	7,849.8	1,275.5	1,081.0	194.5	3,540.2	3,414.8	1,939.9	893.9	276.9	581.0	538.6	113.6	52.1
	Changes [4]												
2009	– 454.5	– 235.4	– 224.6	– 10.8	31.9	43.9	205.0	– 220.4	– 259.3	59.3	50.3	– 9.6	– 4.1
2010	– 136.3	– 75.2	– 99.4	24.2	72.3	59.7	88.7	– 53.0	– 52.2	24.0	38.3	– 4.4	2.2
2011	54.1	– 48.4	– 28.8	– 19.6	102.1	97.4	52.4	47.6	58.8	– 2.6	1.3	4.8	6.5
2012	– 129.2	– 68.7	– 70.0	1.3	57.8	67.1	156.1	– 90.4	– 50.2	1.5	14.1	– 1.4	5.4
2013	– 703.6	– 106.2	– 73.9	– 32.3	39.1	47.8	111.5	– 56.3	– 26.6	– 7.3	4.0	2.6	3.3
2014	206.8	– 28.4	– 32.2	3.9	62.7	71.6	106.0	– 32.1	3.1	– 2.4	– 2.4	– 2.5	– 0.0
2015	– 191.4	– 62.1	– 50.3	– 11.9	104.1	104.8	153.2	– 37.0	– 10.1	– 11.3	4.2	– 0.4	– 0.3
2016	184.3	– 31.6	– 2.2	– 29.4	105.7	105.2	124.3	– 11.1	1.4	– 8.0	2.4	2.7	1.9
2016 Mar	– 107.0	– 10.1	– 1.9	– 8.3	– 3.2	– 4.6	– 10.1	7.4	7.0	– 1.9	– 0.8	1.1	– 2.3
Apr	31.0	6.3	2.0	4.3	13.1	18.9	22.2	– 1.5	0.6	– 1.8	– 0.7	– 4.5	– 1.6
May	35.2	– 1.4	– 5.7	4.2	14.8	12.0	11.7	1.8	1.4	– 1.5	– 0.6	2.4	3.2
June	108.2	13.0	12.4	0.6	2.2	– 3.0	1.0	– 2.9	– 1.5	– 1.1	– 0.4	3.9	3.2
July	23.5	– 14.9	– 15.4	0.5	11.9	17.1	15.1	2.9	4.3	– 0.9	– 0.1	– 3.9	– 4.2
Aug	– 31.5	– 15.0	– 7.1	– 7.9	7.0	7.0	11.5	– 3.8	– 2.4	– 0.7	0.1	0.1	– 0.3
Sep	– 42.7	– 16.5	12.7	– 29.2	2.7	1.0	– 0.6	2.9	4.6	– 1.2	– 0.5	2.5	1.1
Oct	– 0.5	– 8.4	– 3.7	– 4.7	6.2	11.2	19.8	– 8.1	– 8.9	– 0.6	0.2	– 4.3	– 4.4
Nov	25.9	17.3	15.9	1.4	39.7	32.7	30.1	3.0	4.0	– 0.4	0.1	5.8	6.1
Dec	– 121.7	– 0.9	– 9.3	8.4	– 9.0	– 2.2	– 0.4	– 4.1	– 1.3	2.3	2.7	– 5.7	– 6.2
2017 Jan	108.8	32.8	20.7	12.1	23.0	19.7	13.3	6.4	9.1	– 0.0	0.7	4.4	5.1
Feb	47.4	7.6	1.6	6.1	1.2	– 0.7	4.7	– 5.5	– 4.8	0.1	0.7	1.1	– 0.5
Mar	– 13.0	14.8	22.2	– 7.4	– 1.0	– 2.1	1.1	– 1.3	1.5	– 1.9	– 1.4	1.6	– 2.1
Apr	40.0	– 4.4	– 1.3	– 3.1	19.1	18.7	27.8	– 8.7	– 5.5	– 0.5	– 0.0	0.2	2.2
May	8.8	6.7	5.3	1.5	12.7	9.5	8.7	1.3	2.2	– 0.5	– 0.1	2.5	2.6
June	– 85.4	– 22.2	– 24.3	2.1	15.3	11.1	17.5	– 5.4	– 2.3	– 1.0	– 0.7	4.7	0.7
July	– 14.3	5.3	8.9	– 3.5	– 5.3	– 7.4	– 2.4	– 3.9	– 2.1	– 1.2	– 0.4	0.7	1.1
Aug	– 4.7	4.1	3.8	0.3	15.8	15.5	18.5	– 1.9	– 2.1	– 1.1	– 0.3	0.9	1.7
Sep	4.8	3.0	– 3.8	6.7	8.4	2.9	6.1	– 2.6	– 1.5	– 0.6	0.0	6.4	3.2
Oct	8.6	15.2	9.8	5.5	10.3	16.0	25.5	– 9.1	– 7.1	– 0.3	0.5	– 5.6	– 4.4
Nov	24.6	3.6	– 0.8	4.4	34.3	26.8	27.3	0.0	– 0.4	– 0.5	0.2	4.5	5.8

* This table serves to supplement the "Overall monetary survey" in section II. Unlike the other tables in section IV, this table includes – in addition to the figures reported by banks (including building and loan associations) – data from money market funds. **1** See footnote 1 in Table IV.2. **2** Excluding deposits of central

IV Banks

in other member states [2]				Deposits of central governments		Liabilities arising from repos with non-banks in the euro area	Money market fund shares issued [3]	Debt securities issued [3]		Liabilities to non-euro-area residents	Capital and reserves	Other Liabilities [1]	Period
With agreed maturities		At agreed notice											
Total	*of which* up to 2 years	Total	*of which* up to 3 months	Total	*of which* domestic central governments			Total	*of which* with maturities of up to 2 years [3]				
End of year or month													
49.5	24.9	2.4	1.8	36.6	34.8	61.1	16.4	1,609.9	233.3	666.3	461.7	451.5	2008
43.7	17.0	2.5	2.0	22.8	22.2	80.5	11.4	1,500.5	146.3	565.6	454.8	415.6	2009
46.4	16.1	2.8	2.2	39.8	38.7	86.7	9.8	1,407.8	82.3	636.0	452.6	1,290.2	2010
49.6	18.4	3.3	2.5	39.5	37.9	97.1	6.2	1,345.7	75.7	561.5	468.1	1,436.6	2011
42.3	14.7	3.8	2.8	28.9	25.9	80.4	7.3	1,233.1	56.9	611.4	487.3	1,344.7	2012
44.0	16.9	3.5	2.7	17.6	16.0	6.7	4.1	1,115.2	39.0	479.5	503.0	944.5	2013
42.0	15.9	3.3	2.7	10.6	10.5	3.4	3.5	1,077.6	39.6	535.3	535.4	1,125.6	2014
42.2	16.0	3.3	2.8	11.3	9.6	2.5	3.5	1,017.7	48.3	526.2	569.3	971.1	2015
43.9	15.8	3.1	2.6	8.6	7.9	2.2	2.4	1,030.3	47.2	643.4	591.5	906.3	2016
40.1	14.9	3.3	2.7	11.2	8.5	4.2	3.7	1,020.2	51.2	595.3	579.5	1,120.8	2016 Feb
43.5	18.6	3.3	2.7	11.0	8.3	3.2	3.5	1,014.7	49.0	557.1	576.3	1,056.7	Mar
40.7	17.0	3.2	2.7	9.6	7.9	3.7	3.1	1,019.3	50.3	606.6	583.6	998.9	Apr
40.0	15.9	3.2	2.7	10.0	8.1	3.5	2.7	1,029.8	49.8	611.6	583.9	1,007.0	May
41.3	17.1	3.2	2.7	11.3	8.8	2.5	2.7	1,023.9	50.0	618.1	587.3	1,093.4	June
41.6	16.2	3.2	2.7	10.1	8.1	3.4	2.5	1,021.8	56.6	656.1	578.1	1,090.9	July
42.0	17.0	3.2	2.7	10.0	7.9	3.2	2.4	1,020.1	52.7	663.4	581.9	1,056.4	Aug
43.4	17.9	3.1	2.7	9.2	8.1	2.9	2.5	1,011.1	51.9	655.7	596.9	1,028.0	Sep
43.6	16.6	3.1	2.6	8.5	7.6	3.2	2.4	1,019.6	50.7	710.2	594.9	972.9	Oct
43.4	16.0	3.1	2.6	9.7	8.2	3.0	2.4	1,035.2	48.4	711.7	591.2	942.6	Nov
43.9	15.8	3.1	2.6	8.6	7.9	2.2	2.4	1,030.3	47.2	643.4	591.5	906.3	Dec
43.2	15.6	3.0	2.6	7.5	6.9	4.8	2.3	1,043.2	47.5	716.8	585.0	866.9	2017 Jan
44.8	18.0	3.0	2.6	8.8	7.7	4.5	2.3	1,050.8	48.0	734.1	588.5	883.7	Feb
48.6	19.9	3.0	2.6	8.3	7.9	2.6	2.2	1,045.7	45.9	730.2	594.1	857.6	Mar
46.6	18.3	3.0	2.6	8.5	7.6	3.5	2.2	1,042.1	43.9	749.0	598.3	853.4	Apr
46.4	17.2	3.0	2.6	9.1	7.8	2.4	2.1	1,042.5	44.6	724.9	603.2	849.4	May
59.3	20.1	3.0	2.6	8.6	7.9	1.8	2.2	1,039.2	44.8	689.8	610.2	793.5	June
58.8	19.1	3.0	2.6	10.0	7.9	3.3	2.2	1,029.2	43.9	684.2	606.2	782.9	July
57.8	18.3	3.0	2.6	9.4	7.9	3.4	2.4	1,024.7	42.6	643.1	608.1	796.7	Aug
61.0	20.5	2.9	2.6	8.7	8.0	2.6	2.4	1,015.2	42.2	669.5	612.4	758.2	Sep
59.9	18.3	2.9	2.6	8.6	7.9	2.3	2.2	1,008.9	40.7	667.9	612.7	753.9	Oct
58.6	16.7	2.9	2.6	11.8	8.3	2.6	2.2	1,004.7	40.2	664.3	609.8	750.5	Nov
Changes [4]													
– 5.7	– 7.7	0.1	0.2	– 2.4	– 0.8	19.4	– 5.0	– 104.6	– 87.1	– 95.3	– 0.3	– 65.0	2009
– 6.8	– 5.8	0.3	0.3	17.0	16.5	6.2	– 1.6	– 106.7	– 63.2	54.4	– 7.1	– 78.6	2010
– 2.2	1.7	0.5	0.3	– 0.1	– 0.7	10.0	– 3.7	– 76.9	– 6.6	– 80.5	13.7	137.8	2011
– 7.2	– 3.6	0.5	0.3	– 7.9	– 9.2	– 19.6	1.2	– 107.0	– 18.6	54.2	21.0	– 68.5	2012
– 0.5	2.2	– 0.3	– 0.1	– 11.3	– 10.0	4.1	– 3.2	– 104.9	– 17.6	– 134.1	18.9	– 417.1	2013
– 2.3	– 1.2	– 0.2	– 0.1	– 6.4	– 4.8	– 3.4	– 0.6	– 63.7	– 0.2	35.9	26.1	178.3	2014
– 0.1	0.0	0.0	0.1	– 0.4	– 1.9	– 1.0	– 0.0	– 86.8	7.7	– 30.3	28.0	– 143.2	2015
1.1	0.0	– 0.3	– 0.1	– 2.2	– 1.2	– 0.3	– 1.1	8.6	– 1.3	116.1	26.4	– 39.5	2016
3.5	4.0	– 0.0	– 0.0	0.3	0.4	– 0.9	– 0.2	4.8	– 1.8	– 30.7	– 0.2	– 66.4	2016 Mar
– 2.8	– 1.6	– 0.0	– 0.0	– 1.3	– 0.5	0.5	– 0.4	3.9	1.2	49.3	7.2	– 48.8	Apr
– 0.8	– 1.1	– 0.0	– 0.0	0.4	0.3	– 0.2	– 0.4	4.8	– 0.7	1.0	4.3	12.3	May
0.7	0.8	– 0.0	– 0.0	1.3	0.7	– 1.0	0.0	– 5.0	0.3	8.4	3.9	86.7	June
0.3	– 0.3	– 0.0	– 0.0	– 1.3	– 0.7	0.9	– 0.2	– 1.2	6.6	38.6	– 8.9	– 2.7	July
0.4	0.8	– 0.0	– 0.0	– 0.1	– 0.2	– 0.2	– 0.1	– 1.1	– 3.8	7.9	6.6	– 36.6	Aug
1.5	0.8	– 0.0	– 0.0	– 0.8	0.1	– 0.3	0.0	– 8.1	– 0.8	– 7.0	12.0	– 25.5	Sep
0.1	– 1.3	– 0.1	– 0.0	– 0.7	– 0.5	0.3	– 0.1	5.3	– 1.3	52.6	– 2.9	– 53.5	Oct
– 0.3	– 0.7	– 0.0	– 0.0	1.2	0.6	– 0.2	0.1	7.3	– 2.6	– 5.1	– 6.2	– 27.0	Nov
0.5	– 0.2	– 0.0	0.0	– 1.1	– 0.3	– 0.8	– 0.0	– 6.8	– 1.3	– 69.7	– 0.2	– 34.3	Dec
– 0.6	– 0.1	– 0.0	– 0.0	– 1.1	– 1.0	2.6	– 0.1	17.9	0.5	76.7	– 5.1	– 38.9	2017 Jan
1.6	2.3	0.0	0.0	0.8	0.3	– 0.3	– 0.1	3.4	0.3	14.4	2.4	18.7	Feb
3.7	2.0	– 0.0	– 0.0	– 0.6	0.3	– 1.9	– 0.1	– 2.8	– 2.0	– 2.2	6.2	– 26.1	Mar
– 1.9	– 1.6	– 0.0	0.0	0.2	– 0.3	0.9	– 0.0	1.4	– 1.8	22.7	5.6	– 5.3	Apr
– 0.1	– 1.0	0.0	0.0	0.6	0.2	– 1.1	– 0.0	7.8	0.9	– 18.5	7.0	– 5.7	May
4.0	2.9	– 0.0	– 0.0	– 0.5	0.1	– 0.6	0.1	1.0	0.3	– 31.9	8.9	– 56.0	June
– 0.5	– 0.9	– 0.0	– 0.0	1.4	– 0.0	1.4	– 0.0	– 3.1	– 0.7	– 0.1	– 1.9	– 10.6	July
– 0.9	– 0.8	– 0.0	– 0.0	– 0.6	– 0.1	0.1	0.2	– 1.7	– 1.2	– 39.0	2.7	13.0	Aug
3.2	2.2	– 0.0	– 0.0	– 0.8	0.0	– 0.7	0.0	– 10.2	– 0.5	25.3	4.7	– 25.6	Sep
– 1.2	– 2.2	– 0.0	0.0	– 0.1	– 0.2	– 0.3	– 0.3	– 9.6	– 1.6	– 3.8	– 0.5	– 2.6	Oct
– 1.3	– 1.6	– 0.0	– 0.0	3.0	0.3	0.3	0.0	– 5.5	– 1.9	– 3.6	– 1.6	– 2.9	Nov

governments. **3** In Germany, debt securities with maturities of up to one year are classed as money market paper; up to the January 2002 Monthly Report they were published together with money market fund shares. **4** Statistical breaks have been eliminated from the flow figures (see also footnote * in Table II.1).

IV Banks

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

€ billion

End of month	Number of reporting institutions	Balance sheet total [1]	Cash in hand and credit balances with central banks	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)					Participating interests	Other assets [1]
					of which			*of which*					
								Loans					
				Total	Balances and loans	Securities issued by banks	Total	for up to and including 1 year	for more than 1 year	Bills	Securities issued by non-banks		
All categories of banks													
2017 June	1,689	7,897.2	465.0	2,434.6	1,942.6	488.4	4,053.0	351.9	2,965.4	0.6	727.7	113.1	831.6
July	1,673	7,865.5	464.7	2,416.5	1,927.6	485.1	4,053.9	350.4	2,972.5	0.6	723.4	113.2	817.2
Aug	1,668	7,854.3	470.1	2,384.7	1,903.7	477.3	4,052.8	345.5	2,977.9	0.5	722.1	113.6	833.0
Sep	1,651	7,857.6	462.5	2,423.1	1,948.3	471.5	4,060.9	352.9	2,982.9	0.6	717.2	113.1	798.0
Oct	1,639	7,871.8	526.4	2,375.2	1,900.0	472.3	4,066.0	351.5	2,993.2	0.5	713.6	113.0	791.2
Nov	1,634	7,895.7	508.7	2,410.5	1,936.0	472.2	4,080.2	351.9	3,002.4	0.5	717.8	113.0	783.4
Commercial banks [6]													
2017 Oct	264	3,165.8	356.9	985.1	908.2	76.3	1,203.7	192.7	793.5	0.4	213.7	51.0	569.1
Nov	264	3,178.8	339.5	1,012.5	937.1	75.2	1,217.0	197.4	798.4	0.4	217.2	51.2	558.6
Big banks [7]													
2017 Oct	4	1,757.0	169.9	516.2	485.0	31.2	494.3	107.2	289.2	0.1	95.9	44.7	531.9
Nov	4	1,751.0	178.3	509.3	479.1	30.2	497.3	107.9	291.1	0.1	95.4	45.0	521.1
Regional banks and other commercial banks													
2017 Oct	153	1,001.3	87.7	251.8	209.2	42.1	628.1	61.5	458.0	0.2	107.2	5.0	28.7
Nov	153	1,012.2	93.2	248.8	206.8	41.9	636.3	63.9	460.2	0.2	111.3	5.0	28.9
Branches of foreign banks													
2017 Oct	107	407.5	99.4	217.1	214.0	3.1	81.2	24.0	46.2	0.1	10.6	1.3	8.6
Nov	107	415.7	67.9	254.4	251.3	3.1	83.4	25.5	47.1	0.1	10.5	1.2	8.7
Landesbanken													
2017 Oct	8	904.4	56.9	268.3	202.6	64.9	477.2	53.4	348.4	0.1	73.6	9.9	92.1
Nov	8	898.1	57.2	267.4	200.8	65.7	470.7	50.2	346.2	0.1	72.8	9.9	92.8
Savings banks													
2017 Oct	391	1,186.5	33.8	175.5	62.0	113.4	947.0	48.2	742.2	0.0	156.4	14.2	16.0
Nov	391	1,195.2	37.8	175.9	62.4	113.5	950.0	47.3	745.3	0.0	157.2	14.2	17.3
Credit cooperatives													
2017 Oct	922	880.3	15.3	168.6	62.6	105.5	661.3	31.8	521.5	0.0	108.0	16.6	18.5
Nov	917	886.6	17.1	169.6	63.0	106.1	664.5	31.9	524.4	0.0	108.1	16.6	18.8
Mortgage banks													
2017 Oct	14	255.6	4.0	39.9	28.8	11.2	204.1	3.1	169.5	–	31.6	0.1	7.3
Nov	14	254.9	4.3	39.3	28.1	11.1	204.0	3.1	169.5	–	31.4	0.1	7.3
Building and loan associations													
2017 Oct	20	230.6	1.4	58.7	41.8	16.9	165.5	1.5	139.2	.	24.8	0.3	4.7
Nov	20	229.1	1.8	56.6	40.5	16.1	165.8	1.2	139.6	.	24.9	0.3	4.6
Banks with special, development and other central support tasks													
2017 Oct	20	1,248.6	58.0	679.0	594.0	84.2	407.2	20.9	278.9	–	105.6	20.8	83.5
Nov	20	1,253.1	51.0	689.2	604.2	84.5	408.2	20.8	279.0	–	106.2	20.7	83.9
***Memo item:* Foreign banks [8]**													
2017 Oct	142	1,109.2	152.3	388.1	348.6	39.0	474.3	68.2	301.9	0.3	101.5	4.6	89.9
Nov	143	1,138.3	124.0	433.4	394.9	38.4	487.4	73.5	307.8	0.3	103.9	4.5	89.0
***of which:* Banks majority-owned by foreign banks [9]**													
2017 Oct	35	701.7	52.9	171.0	134.7	35.9	393.1	44.2	255.7	0.2	90.9	3.3	81.4
Nov	36	722.6	56.0	179.0	143.6	35.3	403.9	48.0	260.7	0.2	93.4	3.3	80.3

***** Assets and liabilities of monetary financial institutions (MFIs) in Germany. The assets and liabilities of foreign branches, of money market funds (which are also classified as MFIs) and of the Bundesbank are not included. For the definitions of the respective items, see the footnotes to Table IV.3. **1** Owing to the Act Modernising Accounting Law (Gesetz zur Modernisierung des Bilanzrechts) of 25 May 2009, derivative financial instruments in the trading portfolio (trading portfolio derivatives) within the meaning of section 340e (3) sentence 1 of the German Commercial Code (Handelsgesetzbuch) read in conjunction with section 35 (1) No 1a of the Credit Institution Accounting Regulation (Verordnung über die Rechnungslegung der Kreditinstitute) are classified under "Other assets and liabilities" as of the December 2010 reporting date. Trading portfolio derivatives are listed separately in the Statistical Supplement to the Monthly Report 1, Banking statistics, in Tables I.1 to I.3. **2** For building and

IV Banks

Deposits of banks (MFIs)			Deposits of non-banks (non-MFIs)										
	of which			*of which*									
					Time deposits [2]			Savings deposits [4]					
Total	Sight deposits	Time deposits	Total	Sight deposits	for up to and including 1 year	for more than 1 year [2]	*Memo item* Liabilities arising from repos [3]	Total	*of which* At three months' notice	Bank savings bonds	Bearer debt securities out-standing [5]	Capital including published reserves, partici-pation rights capital, funds for general banking risks	Other liabi-lities [1]	End of month
All categories of banks														
1,774.3	588.8	1,185.5	3,630.1	1,992.9	295.3	694.3	54.7	592.4	542.9	55.1	1,139.6	509.6	843.7	2017 June
1,754.1	566.0	1,188.0	3,644.0	2,003.7	300.8	694.0	79.8	591.2	545.0	54.3	1,124.7	510.5	832.4	July
1,713.2	510.4	1,202.8	3,662.5	2,017.4	305.8	695.7	83.6	590.0	544.6	53.6	1,120.5	512.0	846.1	Aug
1,763.0	550.7	1,212.3	3,659.8	2,025.2	296.3	695.5	71.5	589.4	544.6	53.5	1,116.1	511.3	807.4	Sep
1,768.6	556.3	1,212.2	3,679.3	2,049.1	294.0	694.0	78.4	589.0	545.1	53.1	1,110.1	511.2	802.6	Oct
1,774.0	554.7	1,219.3	3,708.6	2,084.5	287.5	695.5	74.5	588.5	545.2	52.6	1,103.1	511.2	798.9	Nov
Commercial banks [6]														
857.3	394.6	462.8	1,460.0	910.1	173.6	251.1	57.3	101.2	92.9	24.0	153.2	177.6	517.6	2017 Oct
865.5	395.4	470.0	1,475.5	931.2	165.9	253.4	55.2	101.0	92.9	23.9	150.6	177.6	509.7	Nov
Big banks [7]														
415.8	163.6	252.2	642.0	374.0	112.2	88.1	57.3	61.4	60.1	6.3	121.3	103.9	474.0	2017 Oct
418.3	167.4	250.9	646.1	385.1	104.4	89.1	55.2	61.3	60.0	6.3	119.4	103.9	463.2	Nov
Regional banks and other commercial banks														
211.3	62.1	149.2	659.7	426.9	40.6	136.7	–	39.3	32.5	16.1	31.6	65.2	33.5	2017 Oct
212.2	62.1	150.1	667.6	434.9	39.9	137.7	–	39.2	32.5	16.0	30.9	65.2	36.2	Nov
Branches of foreign banks														
230.2	168.8	61.4	158.4	109.1	20.8	26.3	–	0.5	0.3	1.6	0.3	8.5	10.1	2017 Oct
235.0	166.0	69.0	161.7	111.2	21.7	26.6	–	0.6	0.3	1.7	0.2	8.4	10.3	Nov
Landesbanken														
261.8	69.1	192.7	301.3	130.7	59.5	97.9	18.7	12.5	12.1	0.7	195.4	50.9	95.1	2017 Oct
259.5	67.8	191.7	298.9	128.6	59.5	97.5	16.1	12.4	12.0	0.7	196.0	50.9	92.8	Nov
Savings banks														
130.1	6.1	124.0	892.5	552.1	14.5	14.9	–	290.1	265.2	20.9	14.3	108.3	41.3	2017 Oct
128.8	5.0	123.8	901.0	561.5	14.3	14.9	–	289.8	265.2	20.5	14.6	108.3	42.5	Nov
Credit cooperatives														
113.1	1.7	111.4	653.5	415.8	32.5	14.4	–	184.8	174.5	5.9	8.3	74.3	31.2	2017 Oct
113.4	1.8	111.6	659.0	421.9	32.2	14.3	–	184.8	174.6	5.8	8.4	74.3	31.5	Nov
Mortgage banks														
52.0	3.3	48.7	95.2	3.5	5.2	86.5	–	–	–	.	90.1	9.6	8.7	2017 Oct
51.4	4.0	47.4	94.3	3.6	4.7	86.1	0.1	–	–	.	90.9	9.6	8.7	Nov
Building and loan associations														
28.6	4.8	23.8	175.7	3.4	1.4	170.3	–	0.4	0.4	0.1	2.8	11.0	12.7	2017 Oct
26.6	4.1	22.6	175.8	3.4	1.4	170.5	–	0.4	0.4	0.1	3.0	11.0	12.7	Nov
Banks with special, development and other central support tasks														
325.8	76.8	248.9	101.2	33.6	7.1	58.9	2.4	–	–	.	646.2	79.5	96.0	2017 Oct
328.9	76.6	252.3	104.2	34.4	9.5	58.7	3.1	–	–	.	639.6	79.5	100.9	Nov
***Memo item:* Foreign banks [8]**														
401.6	240.6	161.0	540.5	379.8	51.8	78.9	8.6	20.9	20.4	9.0	22.9	49.7	94.4	2017 Oct
415.0	238.2	176.7	557.2	392.3	52.0	83.0	9.4	20.8	20.3	9.1	22.8	50.1	93.2	Nov
***of which:* Banks majority-owned by foreign banks [9]**														
171.4	71.8	99.7	382.2	270.7	31.0	52.7	8.6	20.4	20.1	7.4	22.6	41.2	84.3	2017 Oct
180.0	72.3	107.7	395.4	281.1	30.3	56.4	9.4	20.3	20.0	7.3	22.6	41.6	83.0	Nov

loan associations: Including deposits under savings and loan contracts (see Table IV.12). **3** Included in time deposits. **4** Excluding deposits under savings and loan contracts (see also footnote 2). **5** Including subordinated negotiable bearer debt securities; excluding non-negotiable bearer debt securities. **6** Commercial banks comprise the sub-groups "Big banks", "Regional banks and other commercial banks" and "Branches of foreign banks". **7** Deutsche Bank AG, Dresdner Bank AG (up to Nov. 2009), Commerzbank AG, UniCredit Bank AG (formerly Bayerische Hypo- und Vereinsbank AG) and Deutsche Postbank AG. **8** Sum of the banks majority-owned by foreign banks and included in other categories of banks and the category "Branches (with dependent legal status) of foreign banks". **9** Separate presentation of the banks majority-owned by foreign banks included in other banking categories.

IV Banks

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

€ billion

Period	Cash in hand (euro-area banknotes and coins)	Credit balances with the Bundesbank	Lending to domestic banks (MFIs)						Lending to domestic non-banks (non-MFIs)				
			Total	Credit balances and loans	Bills	Negotiable money market paper issued by banks	Securities issued by banks	*Memo item* Fiduciary loans	Total	Loans	Bills	Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks [1]
													End of year or month *
2007	17.5	64.6	1,751.8	1,222.5	0.0	25.3	504.0	2.3	2,975.7	2,647.9	1.6	1.5	324.7
2008	17.4	102.6	1,861.7	1,298.1	0.0	55.7	507.8	2.0	3,071.1	2,698.9	1.2	3.1	367.9
2009	16.9	78.9	1,711.5	1,138.0	–	31.6	541.9	2.2	3,100.1	2,691.8	0.8	4.0	403.5
2010	16.0	79.6	1,686.3	1,195.4	–	7.5	483.5	1.8	3,220.9	2,770.4	0.8	27.9	421.8
2011	15.8	93.8	1,725.6	1,267.9	–	7.1	450.7	2.1	3,197.8	2,774.6	0.8	6.4	415.9
2012	18.5	134.3	1,655.0	1,229.1	–	2.4	423.5	2.4	3,220.4	2,785.5	0.6	2.2	432.1
2013	18.5	85.6	1,545.6	1,153.1	0.0	1.7	390.8	2.2	3,131.6	2,692.6	0.5	1.2	437.2
2014	18.9	81.3	1,425.9	1,065.6	0.0	2.1	358.2	1.7	3,167.3	2,712.2	0.4	0.7	454.0
2015	19.2	155.0	1,346.6	1,062.6	0.0	1.7	282.2	1.7	3,233.9	2,764.0	0.4	0.4	469.0
2016	25.8	284.0	1,364.9	1,099.8	0.0	0.8	264.3	2.0	3,274.3	2,823.8	0.3	0.4	449.8
2016 June	19.1	213.5	1,356.7	1,078.8	0.0	1.6	276.2	1.7	3,252.1	2,797.2	0.3	1.8	452.9
July	19.4	233.0	1,349.1	1,074.3	0.0	1.3	273.4	1.7	3,264.5	2,806.4	0.3	1.7	456.1
Aug	19.4	240.9	1,348.1	1,075.2	0.0	1.2	271.7	1.7	3,265.9	2,810.9	0.3	1.3	453.5
Sep	20.7	246.0	1,368.1	1,097.3	0.0	1.2	269.5	1.7	3,274.2	2,819.9	0.3	1.6	452.4
Oct	22.6	258.7	1,360.3	1,090.2	0.0	1.4	268.7	1.7	3,281.0	2,828.6	0.2	1.6	450.6
Nov	22.6	291.7	1,397.6	1,128.8	0.0	1.1	267.6	1.7	3,293.1	2,840.0	0.2	1.3	451.6
Dec	25.8	284.0	1,364.9	1,099.8	0.0	0.8	264.3	2.0	3,274.3	2,823.8	0.3	0.4	449.8
2017 Jan	24.3	346.9	1,407.0	1,142.5	0.0	1.0	263.5	1.7	3,277.7	2,831.2	0.3	0.8	445.4
Feb	23.6	346.6	1,413.8	1,150.2	0.0	1.1	262.5	1.8	3,279.0	2,836.8	0.3	0.8	441.1
Mar	23.4	352.1	1,423.3	1,160.4	0.0	1.3	261.6	1.7	3,283.0	2,840.6	0.3	1.0	441.1
Apr	24.4	400.2	1,424.8	1,161.7	0.0	1.1	262.0	1.7	3,288.9	2,848.6	0.3	1.1	438.9
May	25.4	426.0	1,415.5	1,152.3	0.0	1.1	262.1	1.7	3,292.9	2,851.3	0.2	1.8	439.6
June	27.0	417.8	1,391.1	1,130.4	0.0	1.2	259.4	1.7	3,296.8	2,855.9	0.2	1.1	439.6
July	26.4	420.0	1,398.0	1,139.4	0.0	1.4	257.2	1.7	3,302.5	2,865.2	0.3	1.0	436.0
Aug	27.3	421.3	1,384.2	1,131.4	0.0	1.4	251.3	1.7	3,308.9	2,869.4	0.2	0.8	438.5
Sep	28.1	409.2	1,416.1	1,168.3	0.0	1.3	246.5	1.7	3,317.6	2,878.2	0.3	0.7	438.4
Oct	28.1	472.7	1,378.5	1,130.6	0.0	0.9	247.0	1.7	3,326.1	2,887.0	0.3	0.8	438.0
Nov	27.7	457.1	1,422.2	1,175.1	0.0	0.8	246.3	1.8	3,343.7	2,899.6	0.2	1.2	442.6
													Changes *
2008	– 0.1	+ 39.4	+ 125.9	+ 90.1	± 0.0	+ 30.6	+ 5.2	– 0.8	+ 92.0	+ 47.3	– 0.4	+ 1.8	+ 43.3
2009	– 0.5	– 23.6	– 147.2	– 157.3	– 0.0	– 24.1	+ 34.3	+ 0.2	+ 25.7	– 11.2	– 0.4	+ 1.4	+ 35.9
2010	– 0.9	+ 0.6	– 19.3	+ 61.5	± 0.0	– 24.0	– 56.8	– 0.3	+ 130.5	+ 78.7	+ 0.0	+ 23.8	+ 28.0
2011	– 0.2	+ 14.2	+ 47.3	+ 80.5	–	– 0.4	– 32.8	– 0.1	– 30.6	– 3.2	+ 0.0	– 21.5	– 5.9
2012	+ 2.7	+ 40.5	– 68.6	– 37.5	–	– 4.6	– 26.5	+ 0.1	+ 21.0	+ 9.8	– 0.2	– 4.3	+ 15.7
2013	+ 0.0	– 48.8	– 204.1	– 170.6	+ 0.0	– 0.7	– 32.7	– 0.2	+ 4.4	+ 0.3	– 0.1	– 0.6	+ 4.8
2014	+ 0.4	– 4.3	– 119.3	– 87.1	+ 0.0	+ 0.4	– 32.6	+ 0.1	+ 36.7	+ 20.6	– 0.1	– 0.6	+ 16.8
2015	+ 0.3	+ 73.7	– 80.7	– 4.3	– 0.0	– 0.4	– 75.9	– 0.1	+ 68.9	+ 54.1	– 0.0	– 0.3	+ 15.1
2016	+ 6.5	+129.1	+ 48.1	+ 66.9	–	– 0.9	– 17.9	+ 0.4	+ 43.7	+ 62.8	– 0.1	– 0.1	– 18.9
2016 June	+ 0.7	+ 16.4	– 10.9	– 7.8	–	– 0.1	– 3.0	+ 0.2	– 11.9	– 7.3	– 0.0	+ 0.4	– 5.0
July	+ 0.4	+ 19.4	– 7.6	– 4.5	–	– 0.3	– 2.8	– 0.1	+ 13.3	+ 10.2	– 0.0	– 0.0	+ 3.2
Aug	– 0.0	+ 7.9	– 1.0	+ 0.9	–	– 0.1	– 1.8	+ 0.0	+ 1.5	+ 4.6	+ 0.0	– 0.4	– 2.6
Sep	+ 1.3	+ 5.1	+ 20.0	+ 22.1	–	+ 0.0	– 2.1	– 0.0	+ 8.2	+ 9.1	– 0.0	+ 0.3	– 1.1
Oct	+ 1.8	+ 12.7	– 7.3	– 6.6	–	+ 0.1	– 0.8	– 0.0	+ 7.0	+ 8.6	– 0.0	+ 0.0	– 1.7
Nov	+ 0.1	+ 33.0	+ 37.3	+ 38.7	–	– 0.3	– 1.1	+ 0.0	+ 12.1	+ 11.4	– 0.0	– 0.3	+ 1.0
Dec	+ 3.1	– 7.7	– 32.7	– 29.0	–	– 0.3	– 3.3	+ 0.3	– 19.0	– 16.4	+ 0.1	– 0.9	– 1.8
2017 Jan	– 1.4	+ 62.9	+ 42.1	+ 42.6	–	+ 0.2	– 0.8	– 0.3	+ 3.3	+ 7.3	– 0.0	+ 0.5	– 4.4
Feb	– 0.7	– 0.3	+ 6.8	+ 7.7	–	+ 0.1	– 1.0	+ 0.1	+ 1.4	+ 5.7	– 0.0	– 0.0	– 4.2
Mar	– 0.3	+ 5.5	+ 9.5	+ 10.2	–	+ 0.2	– 0.9	– 0.0	+ 3.9	+ 3.7	+ 0.0	+ 0.2	– 0.0
Apr	+ 1.1	+ 48.1	+ 1.7	+ 1.3	–	–	+ 0.4	– 0.0	+ 5.9	+ 8.1	+ 0.0	+ 0.1	– 2.3
May	+ 0.9	+ 25.8	– 9.4	– 9.5	–	– 0.0	+ 0.1	– 0.0	+ 3.9	+ 2.6	– 0.1	+ 0.7	+ 0.7
June	+ 1.7	– 8.2	– 23.5	– 20.9	–	+ 0.1	– 2.7	– 0.0	+ 4.0	+ 4.6	+ 0.0	– 0.6	– 0.0
July	– 0.7	+ 2.2	+ 6.9	+ 9.0	–	+ 0.2	– 2.2	–	+ 5.6	+ 9.4	+ 0.0	– 0.2	– 3.6
Aug	+ 0.9	+ 1.3	– 13.8	– 8.0	–	+ 0.0	– 5.9	+ 0.0	+ 6.4	+ 4.1	– 0.0	– 0.2	+ 2.6
Sep	+ 0.8	– 12.1	+ 34.1	+ 38.3	– 0.0	– 0.1	– 4.1	– 0.0	+ 7.3	+ 8.8	+ 0.1	– 0.0	– 1.5
Oct	+ 0.1	+ 63.5	– 37.6	– 37.6	+ 0.0	– 0.4	+ 0.5	+ 0.0	+ 8.6	+ 8.8	– 0.0	+ 0.0	– 0.3
Nov	– 0.4	– 15.6	+ 43.7	+ 44.4	–	– 0.0	– 0.7	+ 0.1	+ 17.6	+ 12.6	– 0.0	+ 0.4	+ 4.6

***** See Table IV.2, footnote*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions which appear in the following Monthly Report, are not specially marked. **1** Excluding debt securities arising from the exchange of equalisation claims (see also footnote 2). **2** Including debt securities arising from the exchange of equalisation claims. **3** Including liabilities arising from registered debt securities, registered money market paper and non-negotiable bearer debt securities; including subordinated liabilities. **4** Including liabilities arising from monetary policy operations

IV Banks

Equalisation claims [2]	*Memo item* Fiduciary loans	Participating interests in domestic banks and enterprises	Deposits of domestic banks (MFIs) [3] Total	Sight deposits [4]	Time deposits [4]	Redis-counted bills [5]	*Memo item* Fiduciary loans	Deposits of domestic non-banks (non-MFIs) Total	Sight deposits	Time deposits [6]	Savings deposits [7]	Bank savings bonds [8]	*Memo item* Fiduciary loans	Period
End of year or month *														
–	51.1	109.4	1,478.6	122.1	1,356.5	0.0	20.0	2,579.1	779.9	1,125.4	555.4	118.4	36.4	2007
–	47.2	111.2	1,582.5	138.5	1,444.0	0.0	41.6	2,781.4	834.6	1,276.1	535.2	135.4	32.3	2008
–	43.9	106.1	1,355.1	128.9	1,226.2	0.0	35.7	2,829.7	1,029.5	1,102.6	594.5	103.2	43.4	2009
–	33.7	96.8	1,238.3	135.3	1,102.6	0.0	13.8	2,935.2	1,104.4	1,117.1	618.2	95.4	37.5	2010
–	36.3	94.6	1,210.5	114.8	1,095.3	0.0	36.1	3,045.5	1,168.3	1,156.2	616.1	104.8	36.5	2011
–	34.8	90.0	1,135.5	132.9	1,002.6	0.0	36.3	3,090.2	1,306.5	1,072.5	617.6	93.6	34.9	2012
–	31.6	92.3	1,140.3	125.6	1,014.7	0.0	33.2	3,048.7	1,409.9	952.0	610.1	76.6	32.9	2013
–	26.5	94.3	1,111.9	127.8	984.0	0.0	11.7	3,118.2	1,517.8	926.7	607.8	66.0	30.9	2014
–	20.4	89.6	1,065.6	131.1	934.5	0.0	6.1	3,224.7	1,673.7	898.4	596.5	56.1	29.3	2015
–	19.1	91.0	1,032.9	129.5	903.3	0.1	5.6	3,326.7	1,798.2	889.6	588.5	50.4	28.8	2016
–	19.6	89.9	1,038.6	152.5	886.0	0.0	6.0	3,259.9	1,722.6	894.1	590.0	53.1	28.7	2016 June
–	19.5	90.1	1,022.8	140.0	882.7	0.0	5.9	3,275.7	1,737.1	896.8	589.1	52.7	28.6	July
–	19.4	90.3	1,015.7	137.3	878.3	0.0	5.9	3,282.1	1,748.5	893.1	588.4	52.2	28.7	Aug
–	19.3	89.8	1,028.7	132.1	896.6	0.0	5.8	3,283.7	1,748.1	896.6	587.2	51.8	28.6	Sep
–	19.1	89.7	1,025.1	137.1	887.9	0.0	5.7	3,294.7	1,768.0	888.8	586.6	51.3	28.6	Oct
–	19.1	89.3	1,041.1	145.9	895.1	0.0	5.6	3,328.9	1,799.3	892.5	586.2	50.9	28.6	Nov
–	19.1	91.0	1,032.9	129.5	903.3	0.1	5.6	3,326.7	1,798.2	889.6	588.5	50.4	28.8	Dec
–	20.3	90.8	1,052.6	136.9	915.6	0.1	5.5	3,346.3	1,812.5	895.8	588.5	49.5	30.6	2017 Jan
–	20.3	89.4	1,054.6	141.4	913.1	0.0	5.6	3,345.5	1,816.6	891.4	588.5	49.0	30.5	Feb
–	20.1	89.1	1,077.0	137.4	939.6	0.0	5.5	3,342.8	1,817.0	890.9	586.7	48.2	30.4	Mar
–	20.1	88.8	1,074.8	140.7	934.2	0.0	5.5	3,360.3	1,844.4	881.9	586.2	47.8	30.3	Apr
–	20.0	88.7	1,079.5	142.0	937.5	–	5.5	3,368.4	1,852.2	883.4	585.7	47.0	30.4	May
–	19.7	88.4	1,053.9	125.6	928.3	0.0	5.5	3,370.3	1,869.2	869.8	584.7	46.6	29.8	June
–	19.6	88.5	1,061.7	125.0	936.6	0.0	5.4	3,361.5	1,866.0	866.0	583.5	46.0	29.9	July
–	19.6	88.9	1,065.1	121.2	943.9	0.0	5.4	3,376.5	1,884.2	864.4	582.4	45.4	30.0	Aug
–	19.5	88.1	1,071.5	120.2	951.3	0.0	5.3	3,380.7	1,891.7	861.9	581.8	45.3	30.0	Sep
–	19.4	87.9	1,081.0	122.8	958.2	0.0	5.3	3,396.5	1,916.8	853.4	581.5	44.8	29.9	Oct
–	19.4	88.1	1,079.8	125.9	953.9	0.0	5.3	3,424.3	1,944.0	855.0	581.0	44.3	30.1	Nov
Changes *														
–	– 5.4	+ 7.8	+ 124.3	+ 23.0	+ 101.3	– 0.0	– 3.6	+ 207.6	+ 54.3	+ 156.6	– 20.2	+ 17.0	– 1.3	2008
–	– 4.2	+ 0.7	– 225.4	– 9.7	– 215.7	– 0.0	– 5.7	+ 59.7	+ 211.4	– 179.3	+ 59.3	– 31.6	– 0.9	2009
–	– 2.1	– 9.2	– 96.5	+ 22.3	– 119.1	– 0.0	– 0.2	+ 77.8	+ 76.0	– 18.9	+ 24.0	– 3.3	– 1.7	2010
–	– 1.1	– 2.2	– 25.0	– 20.0	– 5.1	– 0.0	+ 0.1	+ 111.2	+ 63.7	+ 40.9	– 2.6	+ 9.3	– 1.1	2011
–	– 1.3	– 4.1	– 70.8	+ 21.5	– 91.9	– 0.0	+ 0.2	+ 42.2	+ 138.7	– 86.7	+ 1.5	– 11.2	– 1.6	2012
–	– 3.3	+ 2.4	– 79.4	– 24.1	– 55.3	+ 0.0	– 3.4	+ 40.2	+ 118.4	– 53.9	– 7.4	– 17.0	– 1.7	2013
–	– 1.9	+ 2.0	– 29.0	+ 2.2	– 31.2	– 0.0	– 0.6	+ 69.7	+ 107.9	– 25.3	– 2.4	– 10.6	– 2.0	2014
–	– 2.1	– 4.3	– 46.6	+ 3.3	– 50.0	+ 0.0	– 1.3	+ 106.5	+ 156.2	– 28.3	– 11.3	– 10.1	– 1.6	2015
–	– 1.3	+ 1.5	– 1.7	+ 0.3	– 2.0	+ 0.0	– 0.5	+ 104.7	+ 124.5	– 6.9	– 7.9	– 5.0	– 0.5	2016
–	– 0.1	+ 0.0	+ 12.8	+ 10.8	+ 2.0	–	+ 0.2	– 2.5	+ 0.9	– 1.7	– 1.1	– 0.5	– 0.3	2016 June
–	– 0.1	– 0.0	– 15.8	– 12.5	– 3.3	–	– 0.1	+ 15.8	+ 14.5	+ 2.7	– 0.9	– 0.5	– 0.0	July
–	– 0.1	+ 0.2	– 7.1	– 2.7	– 4.4	–	– 0.0	+ 6.4	+ 11.4	– 3.8	– 0.7	– 0.5	+ 0.0	Aug
–	– 0.1	– 0.5	+ 13.0	– 5.3	+ 18.3	–	– 0.1	+ 1.6	– 0.4	+ 3.6	– 1.2	– 0.3	– 0.0	Sep
–	– 0.2	+ 0.1	– 3.2	+ 1.5	– 4.7	+ 0.0	– 0.1	+ 11.0	+ 20.0	– 7.9	– 0.6	– 0.5	– 0.0	Oct
–	– 0.0	– 0.4	+ 16.0	+ 8.8	+ 7.3	– 0.0	– 0.0	+ 34.2	+ 31.3	+ 3.7	– 0.4	– 0.4	–	Nov
–	+ 0.0	+ 1.6	– 8.2	– 16.4	+ 8.2	+ 0.0	– 0.0	– 2.2	– 1.2	– 2.8	+ 2.3	– 0.5	+ 0.2	Dec
–	+ 1.2	– 0.2	+ 19.7	+ 7.4	+ 12.3	–	– 0.1	+ 19.6	+ 14.4	+ 6.2	– 0.1	– 0.9	+ 1.0	2017 Jan
–	– 0.1	– 1.4	+ 2.0	+ 4.6	– 2.5	– 0.0	+ 0.1	– 0.8	+ 4.1	– 4.5	+ 0.1	– 0.5	– 0.1	Feb
–	– 0.1	– 0.3	+ 22.4	– 4.1	+ 26.5	– 0.0	– 0.1	– 2.7	+ 0.4	– 0.5	– 1.9	– 0.7	– 0.1	Mar
–	– 0.1	– 0.3	– 2.2	+ 3.3	– 5.5	– 0.0	– 0.0	+ 17.5	+ 27.3	– 9.0	– 0.5	– 0.4	– 0.1	Apr
–	– 0.0	– 0.0	+ 4.6	+ 1.3	+ 3.3	– 0.0	+ 0.0	+ 8.1	+ 7.8	+ 1.6	– 0.5	– 0.8	+ 0.0	May
–	– 0.4	+ 0.0	– 24.6	– 16.1	– 8.5	+ 0.0	– 0.0	+ 10.9	+ 17.0	– 4.6	– 1.0	– 0.4	– 0.6	June
–	– 0.0	+ 0.1	+ 7.8	– 0.5	+ 8.3	–	– 0.0	– 8.8	– 3.1	– 3.8	– 1.2	– 0.7	+ 0.2	July
–	– 0.0	+ 0.4	+ 3.5	– 3.9	+ 7.3	+ 0.0	– 0.1	+ 15.0	+ 18.2	– 1.6	– 1.1	– 0.6	+ 0.1	Aug
–	– 0.1	– 0.3	– 3.3	– 1.0	– 2.3	–	– 0.1	+ 4.3	+ 7.5	– 2.5	– 0.6	– 0.1	– 0.1	Sep
–	– 0.1	– 0.1	+ 9.5	+ 2.6	+ 6.9	–	+ 0.0	+ 15.7	+ 25.1	– 8.5	– 0.3	– 0.5	– 0.0	Oct
–	– 0.0	+ 0.1	– 1.0	+ 3.1	– 4.2	–	+ 0.0	+ 27.7	+ 27.1	+ 1.5	– 0.5	– 0.5	+ 0.1	Nov

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

IV Banks

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

€ billion

Period	Cash in hand (non-euro-area banknotes and coins)	Lending to foreign banks (MFIs)							Lending to foreign non-banks (non-MFIs)					
		Total	Credit balances and loans, bills			Negotiable money market paper issued by banks	Securities issued by banks	*Memo item* Fiduciary loans	Total	Loans and bills			Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks
			Total	Short-term	Medium and long-term					Total	Short-term	Medium and long-term		
	End of year or month *													
2007	0.3	1,433.5	1,105.9	803.6	302.4	13.4	314.2	0.5	908.3	492.9	197.5	295.4	27.5	387.9
2008	0.3	1,446.6	1,131.6	767.2	364.3	15.6	299.5	1.9	908.4	528.9	151.4	377.5	12.9	366.6
2009	0.3	1,277.4	986.1	643.5	342.6	6.2	285.0	2.9	815.7	469.6	116.9	352.7	9.8	336.3
2010	0.5	1,154.1	892.7	607.7	285.1	2.1	259.3	1.8	773.8	461.4	112.6	348.8	10.1	302.3
2011	0.6	1,117.6	871.0	566.3	304.8	4.6	241.9	2.6	744.4	455.8	102.0	353.8	8.5	280.1
2012	0.8	1,046.0	813.5	545.5	268.1	5.4	227.0	2.6	729.0	442.2	105.1	337.1	9.0	277.8
2013	0.2	1,019.7	782.4	546.6	235.8	7.2	230.1	2.5	701.0	404.9	100.3	304.6	8.2	287.8
2014	0.2	1,125.2	884.8	618.7	266.1	7.9	232.5	1.1	735.1	415.2	94.4	320.8	6.5	313.5
2015	0.3	1,066.9	830.7	555.9	274.7	1.2	235.0	1.0	751.5	424.3	83.8	340.5	7.5	319.7
2016	0.3	1,055.9	820.6	519.8	300.7	0.5	234.9	1.0	756.2	451.6	90.1	361.4	5.0	299.6
2016 June	0.3	1,091.2	851.1	580.7	270.4	3.6	236.4	1.0	758.7	435.5	89.4	346.1	6.4	316.8
July	0.3	1,089.1	854.6	586.5	268.0	2.7	231.9	1.0	766.0	448.5	100.1	348.4	4.1	313.4
Aug	0.3	1,081.5	848.6	577.9	270.7	2.5	230.4	1.0	765.4	450.3	99.9	350.4	5.1	310.0
Sep	0.3	1,046.8	806.0	535.5	270.5	2.5	238.4	1.0	751.0	444.0	93.6	350.4	4.7	302.3
Oct	0.3	1,089.3	850.4	571.3	279.0	2.1	236.8	1.0	758.1	454.5	102.9	351.6	4.2	299.3
Nov	0.3	1,074.3	837.9	541.7	296.2	1.7	234.7	1.0	765.2	459.4	103.6	355.9	5.5	300.3
Dec	0.3	1,055.9	820.6	519.8	300.7	0.5	234.9	1.0	756.2	451.6	90.1	361.4	5.0	299.6
2017 Jan	0.3	1,069.4	836.4	537.3	299.0	0.8	232.2	1.7	772.9	468.4	109.0	359.4	5.3	299.1
Feb	0.3	1,088.4	854.7	552.1	302.6	1.3	232.5	1.7	782.0	474.4	110.6	363.8	6.2	301.3
Mar	0.3	1,086.7	854.7	548.7	306.0	1.9	230.0	1.7	777.5	475.7	110.9	364.9	4.1	297.7
Apr	0.3	1,063.7	833.7	529.7	304.0	1.9	228.0	1.7	774.4	477.4	114.5	362.9	4.8	292.2
May	0.3	1,037.5	804.3	506.9	297.4	2.2	231.0	1.9	771.7	475.9	112.3	363.6	5.1	290.8
June	0.3	1,043.5	812.2	515.4	296.8	2.3	229.0	1.9	756.2	461.8	102.5	359.3	6.3	288.1
July	0.3	1,018.5	788.2	493.2	295.0	2.3	227.9	2.1	751.5	458.0	102.6	355.4	6.1	287.4
Aug	0.2	1,000.5	772.3	478.4	293.9	2.2	226.0	2.1	743.9	454.3	104.0	350.3	6.0	283.6
Sep	0.3	1,007.0	780.1	484.7	295.4	1.9	225.1	2.1	743.3	457.8	107.9	349.9	6.7	278.8
Oct	0.3	996.7	769.4	473.5	295.9	1.9	225.3	2.1	739.9	457.9	104.8	353.1	6.5	275.6
Nov	0.3	988.3	761.0	467.6	293.4	1.4	225.9	2.2	736.5	454.9	105.5	349.3	6.4	275.2
	Changes *													
2008	+ 0.0	+ 8.5	+ 20.2	– 43.0	+ 63.2	+ 2.1	– 13.7	– 0.0	+ 4.3	+ 45.1	– 31.9	+ 77.0	– 14.5	– 26.3
2009	– 0.0	– 170.0	– 141.3	– 122.5	– 18.8	– 10.3	– 18.4	– 0.2	– 72.8	– 43.8	– 31.7	– 12.1	– 3.3	– 25.7
2010	+ 0.1	– 141.5	– 116.2	– 47.3	– 68.9	– 4.8	– 20.4	– 0.2	– 62.0	– 24.5	– 12.6	– 11.9	+ 0.4	– 38.0
2011	+ 0.1	– 48.4	– 32.6	– 45.3	+ 12.7	+ 2.5	– 18.4	+ 0.0	– 38.9	– 13.6	– 12.8	– 0.9	– 1.6	– 23.6
2012	+ 0.1	– 70.1	– 56.8	– 23.1	– 33.7	+ 0.9	– 14.1	– 0.1	– 9.4	– 7.5	+ 8.3	– 15.9	+ 0.6	– 2.5
2013	– 0.5	– 22.7	– 26.9	– 1.3	– 25.6	+ 1.8	+ 2.4	– 0.0	– 21.2	– 33.1	– 5.8	– 27.2	– 0.7	+ 12.6
2014	– 0.0	+ 86.1	+ 80.1	+ 63.2	+ 16.8	+ 0.7	+ 5.3	– 0.6	+ 5.7	– 10.2	– 12.8	+ 2.7	– 1.8	+ 17.7
2015	+ 0.1	– 91.8	– 86.0	– 82.2	– 3.8	– 6.7	+ 0.8	– 0.1	– 6.1	– 9.2	– 6.5	– 2.7	+ 1.1	+ 2.0
2016	+ 0.0	– 25.5	– 14.5	– 38.2	+ 23.7	– 0.7	– 10.3	– 0.0	+ 17.4	+ 28.9	+ 10.1	+ 18.8	– 3.0	– 8.5
2016 June	+ 0.0	+ 28.8	+ 26.7	+ 26.9	– 0.3	+ 0.1	+ 2.0	– 0.0	– 5.5	– 2.8	– 4.3	+ 1.4	– 2.8	+ 0.1
July	– 0.0	– 1.0	+ 4.4	+ 6.2	– 1.9	– 1.0	– 4.5	+ 0.0	+ 8.0	+ 13.6	+ 10.9	+ 2.7	– 2.3	– 3.3
Aug	+ 0.0	– 6.7	– 5.0	– 8.1	+ 3.0	– 0.2	– 1.5	+ 0.0	– 0.2	+ 2.2	– 0.1	+ 2.3	+ 1.0	– 3.3
Sep	– 0.0	– 44.3	– 42.2	– 42.1	– 0.1	– 0.0	– 2.1	+ 0.0	– 3.2	– 5.3	– 6.1	+ 0.8	– 0.4	+ 2.5
Oct	– 0.0	+ 38.4	+ 40.6	+ 34.1	+ 6.5	– 0.3	– 1.8	– 0.0	+ 5.4	+ 9.0	+ 9.1	– 0.1	– 0.5	– 3.1
Nov	+ 0.0	– 25.6	– 22.6	– 35.0	+ 12.3	– 0.5	– 2.5	+ 0.0	+ 0.9	– 0.4	– 0.5	+ 0.1	+ 1.2	+ 0.1
Dec	+ 0.0	– 20.7	– 19.9	– 23.1	+ 3.2	– 1.2	+ 0.4	– 0.0	– 10.7	– 9.1	– 13.4	+ 4.3	– 0.5	– 1.2
2017 Jan	+ 0.0	+ 18.9	+ 21.1	+ 19.8	+ 1.3	+ 0.3	– 2.5	+ 0.0	+ 19.9	+ 19.5	+ 19.3	+ 0.2	+ 0.3	+ 0.1
Feb	– 0.0	+ 14.0	+ 13.5	+ 12.3	+ 1.2	+ 0.4	+ 0.1	+ 0.0	+ 6.2	+ 3.5	+ 1.0	+ 2.5	+ 0.9	+ 1.8
Mar	– 0.0	+ 1.3	+ 3.0	– 1.8	+ 4.8	+ 0.4	– 2.1	– 0.0	– 2.7	+ 2.7	+ 0.6	+ 2.1	– 0.7	– 4.7
Apr	+ 0.0	– 16.1	– 14.2	– 15.4	+ 1.2	+ 0.0	– 1.9	+ 0.0	– 0.1	+ 4.2	+ 3.8	+ 0.4	+ 0.6	– 4.9
May	– 0.0	– 17.3	– 20.9	– 18.6	– 2.3	+ 0.3	+ 3.3	+ 0.2	+ 2.8	+ 3.0	– 0.3	+ 3.4	+ 0.4	– 0.6
June	– 0.0	+ 11.0	+ 12.7	+ 10.9	+ 1.9	+ 0.1	– 1.9	+ 0.0	– 12.8	– 11.8	– 9.3	– 2.5	+ 1.2	– 2.2
July	– 0.0	– 16.8	– 16.1	– 18.2	+ 2.1	+ 0.0	– 0.7	+ 0.1	+ 0.1	+ 0.2	+ 0.7	– 0.6	– 0.2	+ 0.1
Aug	– 0.0	– 19.5	– 17.7	– 15.3	– 2.4	– 0.1	– 1.8	+ 0.0	– 0.5	+ 3.0	+ 3.8	– 0.7	– 0.0	– 3.5
Sep	+ 0.1	+ 5.0	+ 6.5	+ 5.6	+ 0.8	– 0.4	– 1.1	– 0.0	– 0.8	+ 2.1	+ 3.4	– 1.4	+ 0.7	– 3.5
Oct	+ 0.0	– 13.4	– 13.6	– 12.3	– 1.3	+ 0.1	+ 0.2	+ 0.0	– 5.3	– 1.5	– 3.4	+ 2.0	– 0.2	– 3.6
Nov	– 0.0	– 3.2	– 3.4	– 3.4	– 0.1	– 0.5	+ 0.7	+ 0.0	– 0.8	– 0.9	+ 1.0	– 1.9	– 0.0	+ 0.1

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

IV Banks

Memo item Fiduciary loans	Participating interests in foreign banks and enterprises	Deposits of foreign banks (MFIs)						Deposits of foreign non-banks (non-MFIs)						Period
		Total	Sight deposits	Time deposits (including bank savings bonds)			Memo item Fiduciary loans	Total	Sight deposits	Time deposits (including savings deposits and bank savings bonds)			Memo item Fiduciary loans	
				Total	Short-term	Medium and long-term				Total	Short-term	Medium and long-term		
End of year or month *														
5.7	48.3	738.9	164.7	574.1	461.2	113.0	0.2	303.1	76.0	227.1	122.3	104.8	3.1	2007
25.5	45.1	703.3	218.1	485.1	362.3	122.9	0.3	286.1	92.2	193.9	95.1	98.8	2.5	2008
32.1	45.4	652.6	213.6	439.0	307.4	131.6	0.2	216.3	78.1	138.2	73.7	64.5	1.9	2009
15.6	48.8	741.7	258.7	483.0	349.3	133.6	0.1	227.6	84.8	142.7	76.7	66.0	1.5	2010
32.9	45.0	655.7	242.6	413.1	289.4	123.7	0.1	225.9	92.3	133.6	66.9	66.6	1.3	2011
32.6	46.4	691.1	289.4	401.7	284.6	117.0	0.1	237.6	107.2	130.3	69.1	61.2	1.2	2012
30.8	39.0	515.7	222.6	293.2	196.0	97.2	0.1	257.8	118.1	139.7	76.8	62.9	1.0	2013
14.0	35.6	609.2	277.1	332.1	242.7	89.4	0.1	221.0	113.0	107.9	47.8	60.1	0.7	2014
13.1	30.5	611.9	323.4	288.5	203.8	84.7	0.1	201.1	102.6	98.5	49.3	49.2	0.7	2015
13.1	28.7	696.1	374.4	321.6	234.2	87.5	0.0	206.2	100.3	105.9	55.2	50.8	0.7	2016
13.1	29.2	679.1	397.7	281.4	203.4	77.9	0.0	235.5	132.8	102.7	57.2	45.5	0.7	2016 June
13.1	29.4	706.1	408.3	297.8	217.9	80.0	0.0	244.0	129.1	114.9	68.2	46.6	0.7	July
13.1	29.4	701.3	398.5	302.8	220.1	82.7	0.0	248.3	127.3	121.0	74.9	46.1	0.7	Aug
13.1	29.4	679.5	366.0	313.5	231.3	82.2	0.0	233.3	124.6	108.7	62.0	46.7	0.7	Sep
13.2	28.8	692.7	398.6	294.1	211.9	82.2	0.0	266.3	146.2	120.1	72.0	48.1	0.7	Oct
13.2	28.9	703.9	416.7	287.2	203.2	84.0	0.0	266.2	138.3	128.0	79.1	48.9	0.7	Nov
13.1	28.7	696.1	374.4	321.6	234.2	87.5	0.0	206.2	100.3	105.9	55.2	50.8	0.7	Dec
13.0	28.4	746.1	452.6	293.5	206.4	87.1	0.0	246.7	125.6	121.1	71.1	50.0	0.7	2017 Jan
13.0	24.8	765.2	480.7	284.5	197.4	87.1	0.0	254.0	129.5	124.5	74.8	49.7	0.7	Feb
12.9	24.7	768.8	488.1	280.7	192.1	88.6	0.0	237.6	113.7	124.0	72.2	51.8	0.7	Mar
12.9	24.8	751.4	429.4	322.0	234.2	87.7	0.0	271.9	132.3	139.7	89.0	50.6	0.7	Apr
12.8	24.6	732.4	464.0	268.4	181.8	86.5	0.0	269.4	134.1	135.3	85.0	50.3	0.6	May
12.5	24.4	720.3	463.2	257.1	170.1	87.0	0.0	259.9	123.7	136.1	75.7	60.4	0.6	June
12.5	24.4	692.4	441.0	251.4	165.5	85.9	0.0	282.5	137.7	144.8	84.4	60.5	0.6	July
12.4	24.4	648.0	389.2	258.9	174.0	84.9	0.0	286.0	133.1	152.9	92.5	60.4	0.5	Aug
12.4	24.8	691.5	430.5	261.0	176.6	84.3	0.0	279.1	133.5	145.7	84.3	61.4	0.5	Sep
12.3	24.8	687.6	433.6	254.0	169.4	84.7	0.0	282.8	132.3	150.5	87.9	62.6	0.4	Oct
12.4	24.7	694.2	428.8	265.4	179.7	85.7	0.0	284.4	140.6	143.8	81.7	62.1	0.4	Nov
Changes *														
+ 0.7	– 3.1	– 50.1	+ 52.2	– 102.3	– 120.7	+ 18.5	+ 0.1	– 12.4	+ 16.1	– 28.5	– 19.4	– 9.1	– 0.6	2008
– 3.2	+ 0.1	– 81.4	– 2.1	– 79.3	– 57.5	– 21.7	– 0.2	– 33.5	– 13.3	– 20.1	– 17.0	– 3.1	– 0.6	2009
+ 0.2	+ 1.4	+ 895.4	+ 42.0	+ 542.4	+ 38.1	+ 136.8	– 0.1	– 1.6	+ 6.0	– 7.6	– 3.3	– 4.4	– 0.4	2010
– 0.1	– 3.9	– 88.8	– 13.8	– 75.0	– 61.8	– 13.1	– 0.0	– 9.3	+ 6.4	– 15.7	– 10.4	– 5.3	– 0.2	2011
– 0.3	+ 1.5	+ 38.2	+ 51.7	– 13.5	– 7.5	– 6.0	– 0.0	+ 12.6	+ 15.2	– 2.6	+ 2.5	– 5.1	– 0.1	2012
– 1.8	– 7.2	– 174.0	– 75.6	– 98.4	– 83.1	– 15.4	– 0.0	+ 13.5	+ 9.6	+ 3.9	+ 6.9	– 3.0	– 0.2	2013
+ 0.1	– 3.8	+ 76.3	+ 47.8	+ 28.5	+ 39.0	– 10.5	– 0.0	– 43.6	– 8.3	– 35.3	– 30.7	– 4.6	+ 0.2	2014
– 0.6	– 6.1	– 15.4	+ 40.6	– 56.0	– 48.6	– 7.4	– 0.0	– 26.5	– 13.9	– 12.6	+ 0.3	– 13.0	– 0.0	2015
– 0.1	– 1.5	+ 82.7	+ 51.0	+ 31.7	+ 27.0	+ 4.7	– 0.0	+ 3.5	– 3.1	+ 6.7	+ 5.9	+ 0.8	– 0.0	2016
– 0.2	+ 0.3	+ 16.8	+ 9.4	+ 7.4	+ 7.8	– 0.4	– 0.0	– 4.5	+ 2.2	– 6.8	– 7.3	+ 0.5	+ 0.0	2016 June
+ 0.0	+ 0.4	+ 27.8	+ 11.0	+ 16.8	+ 14.7	+ 2.1	– 0.0	+ 8.5	– 3.8	+ 12.3	+ 11.5	+ 0.8	– 0.0	July
+ 0.0	+ 0.0	– 4.3	– 9.5	+ 5.2	+ 2.4	+ 2.8	–	+ 4.5	– 1.7	+ 6.2	+ 6.7	– 0.5	– 0.1	Aug
+ 0.0	– 0.0	– 21.2	– 32.3	+ 11.1	+ 11.6	– 0.5	– 0.0	– 14.8	– 2.7	– 12.1	– 12.7	+ 0.7	– 0.0	Sep
+ 0.1	– 0.6	+ 11.1	+ 31.7	– 20.5	– 20.1	– 0.4	– 0.0	+ 32.5	+ 21.4	+ 11.2	+ 9.8	+ 1.3	+ 0.1	Oct
+ 0.0	+ 0.0	+ 4.9	+ 15.8	– 10.9	– 12.0	+ 1.1	– 0.0	– 2.2	– 9.0	+ 6.9	+ 6.4	+ 0.4	+ 0.0	Nov
– 0.1	– 0.3	– 9.2	– 42.7	+ 33.5	+ 30.2	+ 3.3	– 0.0	– 60.5	– 38.2	– 22.3	– 24.1	+ 1.8	+ 0.0	Dec
– 0.0	– 0.2	+ 52.9	+ 79.0	– 26.1	– 26.2	+ 0.1	–	+ 41.2	+ 25.6	+ 15.6	+ 16.2	– 0.6	– 0.0	2017 Jan
– 0.1	– 3.6	+ 15.9	+ 26.6	– 10.7	– 10.3	– 0.4	–	+ 6.6	+ 3.7	+ 2.9	+ 3.4	– 0.4	+ 0.0	Feb
– 0.0	– 0.0	+ 5.5	+ 8.3	– 2.8	– 4.5	+ 1.7	–	– 15.9	– 15.7	– 0.2	– 2.4	+ 2.2	– 0.0	Mar
– 0.0	+ 0.1	– 12.8	– 56.2	+ 43.4	+ 43.7	– 0.4	–	+ 34.4	+ 18.2	+ 16.2	+ 17.1	– 0.9	–	Apr
– 0.1	– 0.1	– 13.8	+ 36.5	– 50.3	– 49.8	– 0.5	–	– 0.9	+ 2.4	– 3.3	– 3.3	– 0.0	– 0.0	May
– 0.3	– 0.2	– 9.0	+ 0.6	– 9.6	– 10.5	+ 0.9	–	– 17.8	– 10.0	– 7.8	– 9.0	+ 1.2	– 0.0	June
– 0.0	+ 0.0	– 23.9	– 19.7	– 4.2	– 3.7	– 0.5	+ 0.0	+ 24.0	+ 14.4	+ 9.6	+ 9.3	+ 0.3	– 0.0	July
– 0.1	+ 0.0	– 42.9	– 51.2	+ 8.3	+ 9.1	– 0.8	– 0.0	+ 4.6	– 4.0	+ 8.6	+ 8.5	+ 0.0	– 0.1	Aug
– 0.0	+ 0.4	+ 42.4	+ 41.0	+ 1.5	+ 2.1	– 0.7	–	– 7.2	+ 0.2	– 7.4	– 8.4	+ 0.9	+ 0.0	Sep
– 0.1	– 0.0	– 5.9	+ 2.4	– 8.3	– 8.3	+ 0.0	–	+ 3.0	– 1.4	+ 4.4	+ 3.4	+ 1.1	– 0.1	Oct
+ 0.1	– 0.0	+ 9.4	– 3.6	+ 13.0	+ 11.6	+ 1.4	–	+ 2.3	+ 8.6	– 6.2	– 5.9	– 0.4	– 0.0	Nov

IV Banks

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

€ billion

Period	Lending to domestic non-banks, total		Short-term lending							Medium and long-term	
				to enterprises and households			to general government				to enterprises
	including negotiable money market paper, securities, equalisation claims	excluding negotiable money market paper, securities, equalisation claims	Total	Total	Loans and bills	Negotiable money market paper	Total	Loans	Treasury bills	Total	Total
	End of year or month *										
2007	2,975.7	2,649.5	331.2	301.8	301.5	0.3	29.4	28.2	1.2	2,644.6	2,168.3
2008	3,071.1	2,700.1	373.0	337.5	335.3	2.2	35.5	34.5	1.0	2,698.1	2,257.8
2009	3,100.1	2,692.6	347.3	306.3	306.2	0.1	41.0	37.1	3.9	2,752.8	2,299.7
2010	3,220.9	2,771.3	428.0	283.0	282.8	0.2	145.0	117.2	27.7	2,793.0	2,305.6
2011	3,197.8	2,775.4	383.3	316.5	316.1	0.4	66.8	60.7	6.0	2,814.5	2,321.9
2012	3,220.4	2,786.1	376.1	316.8	316.3	0.5	59.3	57.6	1.7	2,844.3	2,310.9
2013	3,131.6	2,693.2	269.1	217.7	217.0	0.6	51.4	50.8	0.6	2,862.6	2,328.6
2014	3,167.3	2,712.6	257.5	212.7	212.1	0.6	44.8	44.7	0.1	2,909.8	2,376.8
2015	3,233.9	2,764.4	255.5	207.8	207.6	0.2	47.8	47.5	0.2	2,978.3	2,451.4
2016	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0
2016 June	3,252.1	2,797.5	268.8	217.8	216.8	1.1	51.0	50.3	0.7	2,983.3	2,472.8
July	3,264.5	2,806.6	268.8	213.8	212.9	1.0	55.0	54.2	0.7	2,995.6	2,483.9
Aug	3,265.9	2,811.2	262.2	208.1	207.5	0.6	54.1	53.4	0.7	3,003.8	2,497.1
Sep	3,274.2	2,820.2	268.7	214.2	213.7	0.5	54.5	53.4	1.1	3,005.4	2,502.7
Oct	3,281.0	2,828.8	269.7	212.6	212.0	0.6	57.1	56.1	1.0	3,011.3	2,512.3
Nov	3,293.1	2,840.2	268.0	216.3	215.8	0.5	51.7	51.0	0.8	3,025.0	2,525.5
Dec	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0
2017 Jan	3,277.7	2,831.5	252.1	208.6	208.0	0.6	43.5	43.3	0.2	3,025.6	2,535.3
Feb	3,279.0	2,837.1	252.8	209.7	209.1	0.7	43.1	42.9	0.1	3,026.2	2,541.5
Mar	3,283.0	2,840.9	252.7	212.6	211.8	0.8	40.0	39.8	0.2	3,030.4	2,547.5
Apr	3,288.9	2,849.0	253.7	210.6	209.8	0.8	43.1	42.8	0.3	3,035.2	2,558.1
May	3,292.9	2,851.5	249.3	211.0	210.0	0.9	38.4	37.5	0.8	3,043.5	2,568.8
June	3,296.8	2,856.1	251.1	214.1	213.5	0.6	37.0	36.5	0.5	3,045.7	2,577.7
July	3,302.5	2,865.5	249.4	210.2	209.5	0.7	39.2	38.8	0.3	3,053.1	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
	Changes *										
2008	+ 92.0	+ 46.9	+ 43.1	+ 36.8	+ 34.9	+ 1.8	+ 6.3	+ 6.3	– 0.0	+ 48.9	+ 83.4
2009	+ 25.7	– 11.6	– 26.1	– 31.5	– 30.0	– 1.5	+ 5.5	+ 2.5	+ 2.9	+ 51.8	+ 36.6
2010	+ 130.5	+ 78.7	+ 80.4	– 23.4	– 23.5	+ 0.1	+ 103.8	+ 80.1	+ 23.7	+ 50.1	+ 14.9
2011	– 30.6	– 3.2	– 45.2	+ 33.6	+ 33.3	+ 0.2	– 78.7	– 57.0	– 21.7	+ 14.6	+ 9.4
2012	+ 21.0	+ 9.6	– 9.7	– 1.6	– 1.7	+ 0.1	– 8.2	– 3.8	– 4.3	+ 30.7	+ 10.9
2013	+ 4.4	+ 0.1	– 13.8	– 5.8	– 6.3	+ 0.5	– 8.0	– 7.0	– 1.1	+ 18.2	+ 17.6
2014	+ 36.7	+ 20.5	– 11.6	– 4.5	– 4.5	– 0.0	– 7.1	– 6.5	– 0.6	+ 48.3	+ 52.5
2015	+ 68.9	+ 54.1	+ 1.6	– 1.3	– 0.9	– 0.4	+ 2.9	+ 2.8	+ 0.1	+ 67.2	+ 73.9
2016	+ 43.7	+ 62.7	– 5.2	– 0.3	– 0.4	+ 0.1	– 4.9	– 4.8	– 0.2	+ 48.9	+ 79.8
2016 June	– 11.9	– 7.3	– 6.5	– 2.5	– 2.8	+ 0.3	– 4.0	– 4.1	+ 0.1	– 5.4	+ 0.2
July	+ 13.3	+ 10.2	+ 0.1	– 3.9	– 3.8	– 0.1	+ 4.0	+ 3.9	+ 0.1	+ 13.3	+ 12.0
Aug	+ 1.5	+ 4.6	– 6.7	– 5.8	– 5.4	– 0.4	– 0.9	– 0.8	– 0.1	+ 8.2	+ 13.2
Sep	+ 8.2	+ 9.0	+ 6.6	+ 6.2	+ 6.3	– 0.1	+ 0.4	– 0.0	+ 0.4	+ 1.6	+ 5.5
Oct	+ 7.0	+ 8.6	+ 1.1	– 1.5	– 1.6	+ 0.1	+ 2.6	+ 2.7	– 0.1	+ 5.8	+ 9.4
Nov	+ 12.1	+ 11.4	– 1.7	+ 3.7	+ 3.8	– 0.1	– 5.4	– 5.2	– 0.2	+ 13.7	+ 13.0
Dec	– 19.0	– 16.2	– 19.0	– 10.1	– 9.9	– 0.2	– 8.9	– 8.2	– 0.7	+ 0.0	+ 3.8
2017 Jan	+ 3.3	+ 7.3	+ 3.5	+ 2.9	+ 2.5	+ 0.3	+ 0.6	+ 0.5	+ 0.1	– 0.2	+ 5.3
Feb	+ 1.4	+ 5.6	+ 0.7	+ 1.2	+ 1.1	+ 0.1	– 0.4	– 0.3	– 0.1	+ 0.6	+ 6.2
Mar	+ 3.9	+ 3.7	– 0.2	+ 2.8	+ 2.7	+ 0.1	– 3.0	– 3.1	+ 0.1	+ 4.1	+ 5.9
Apr	+ 5.9	+ 8.1	+ 1.0	– 2.0	– 2.0	– 0.0	+ 3.0	+ 2.9	+ 0.1	+ 4.9	+ 10.6
May	+ 3.9	+ 2.5	– 4.0	+ 0.7	+ 0.5	+ 0.1	– 4.7	– 5.2	+ 0.5	+ 8.0	+ 7.8
June	+ 4.0	+ 4.6	+ 1.9	+ 3.3	+ 3.6	– 0.3	– 1.4	– 1.1	– 0.3	+ 2.1	+ 8.8
July	+ 5.6	+ 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	+ 17.6	+ 12.6	+ 0.0	+ 0.1	+ 0.2	– 0.1	– 0.1	– 0.6	+ 0.5	+ 17.6	+ 17.8

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

IV Banks

lending												
prises and households					to general government							
Loans						Loans						
Total	Medium-term	Long-term	Securities	*Memo item* Fiduciary loans	Total	Total	Medium-term	Long-term	Securities [1]	Equalisation claims [2]	*Memo item* Fiduciary loans	Period
End of year or month *												
1,987.3	207.7	1,779.6	181.1	46.5	476.2	332.5	31.9	300.6	143.7	–	4.7	2007
2,022.0	222.0	1,800.0	235.8	42.8	440.3	308.2	29.7	278.5	132.1	–	4.5	2008
2,051.3	242.7	1,808.6	248.4	39.6	453.1	298.0	32.2	265.8	155.1	–	4.3	2009
2,070.0	238.1	1,831.8	235.7	30.7	487.3	301.2	36.1	265.1	186.1	–	3.1	2010
2,099.5	247.9	1,851.7	222.4	32.7	492.6	299.1	41.1	258.0	193.5	–	3.6	2011
2,119.5	249.7	1,869.8	191.4	31.4	533.4	292.7	39.4	253.3	240.7	–	3.5	2012
2,136.9	248.0	1,888.9	191.7	28.9	534.0	288.4	38.8	249.7	245.6	–	2.7	2013
2,172.7	251.7	1,921.0	204.2	24.4	532.9	283.1	33.5	249.6	249.8	–	2.1	2014
2,232.4	256.0	1,976.3	219.0	18.3	527.0	277.0	27.9	249.0	250.0	–	2.1	2015
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	2016
2,256.9	258.7	1,998.2	216.0	17.8	510.4	273.5	26.9	246.6	236.9	–	1.8	2016 June
2,266.8	258.5	2,008.2	217.1	17.7	511.7	272.7	25.9	246.8	239.0	–	1.8	July
2,278.8	260.6	2,018.1	218.4	17.6	506.6	271.5	25.9	245.6	235.1	–	1.8	Aug
2,283.5	261.0	2,022.5	219.3	17.5	502.7	269.6	25.4	244.2	233.1	–	1.8	Sep
2,290.5	261.5	2,029.0	221.8	17.3	498.9	270.2	24.4	245.7	228.8	–	1.8	Oct
2,302.5	264.0	2,038.5	223.0	17.3	499.5	270.9	24.3	246.6	228.6	–	1.8	Nov
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	Dec
2,311.3	264.5	2,046.8	224.0	18.6	490.3	268.9	24.2	244.7	221.4	–	1.7	2017 Jan
2,316.5	263.2	2,053.3	225.1	18.5	484.7	268.6	25.0	243.7	216.1	–	1.7	Feb
2,322.0	264.4	2,057.6	225.5	18.4	482.9	267.3	24.6	242.7	215.6	–	1.7	Mar
2,331.2	265.4	2,065.9	226.8	18.4	477.2	265.1	23.6	241.5	212.0	–	1.7	Apr
2,342.6	266.2	2,076.4	226.2	18.3	474.8	261.3	23.4	238.0	213.4	–	1.7	May
2,346.1	267.4	2,078.7	231.6	18.0	468.0	260.0	23.0	237.0	208.1	–	1.6	June
2,357.7	268.3	2,089.4	231.5	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
Changes *												
+ 28.8	+ 12.0	+ 16.8	+ 54.7	– 5.3	– 34.5	– 23.2	– 2.3	– 20.8	– 11.4	–	– 0.1	2008
+ 23.5	+ 17.3	+ 6.3	+ 13.1	– 3.9	+ 15.2	– 7.6	+ 2.5	– 10.2	+ 22.8	–	– 0.2	2009
+ 18.6	– 4.0	+ 22.6	– 3.8	– 1.7	+ 35.2	+ 3.5	+ 3.5	– 0.0	+ 31.7	–	– 0.3	2010
+ 22.6	+ 2.2	+ 20.4	– 13.2	– 1.0	+ 5.2	– 2.1	+ 4.9	– 7.0	+ 7.3	–	– 0.2	2011
+ 21.6	+ 1.5	+ 20.1	– 10.7	– 1.1	+ 19.8	– 6.6	– 1.9	– 4.7	+ 26.4	–	– 0.2	2012
+ 17.7	– 0.1	+ 17.8	– 0.1	– 2.5	+ 0.6	– 4.3	– 0.7	– 3.6	+ 4.9	–	– 0.8	2013
+ 39.9	+ 5.6	+ 34.3	+ 12.5	– 1.8	– 4.1	– 8.5	– 5.1	– 3.4	+ 4.3	–	– 0.2	2014
+ 59.0	+ 4.5	+ 54.6	+ 14.8	– 2.1	– 6.6	– 6.9	– 4.8	– 2.0	+ 0.2	–	+ 0.0	2015
+ 75.1	+ 9.7	+ 65.4	+ 4.7	– 0.9	– 30.9	– 7.3	– 4.0	– 3.3	– 23.6	–	– 0.4	2016
+ 1.2	+ 0.7	+ 0.5	– 0.9	+ 0.1	– 5.6	– 1.6	– 0.2	– 1.4	– 4.0	–	– 0.2	2016 June
+ 10.8	+ 0.8	+ 10.1	+ 1.1	– 0.1	+ 1.3	– 0.8	– 1.0	+ 0.2	+ 2.1	–	– 0.0	July
+ 12.0	+ 2.1	+ 9.9	+ 1.3	– 0.1	– 5.1	– 1.2	– 0.0	– 1.2	– 3.9	–	– 0.0	Aug
+ 4.6	+ 0.3	+ 4.2	+ 0.9	– 0.1	– 3.8	– 1.8	– 0.5	– 1.3	– 2.0	–	– 0.0	Sep
+ 6.8	+ 0.5	+ 6.2	+ 2.7	– 0.2	– 3.6	+ 0.7	– 0.9	+ 1.7	– 4.3	–	– 0.0	Oct
+ 11.9	+ 2.4	+ 9.4	+ 1.1	– 0.1	+ 0.7	+ 0.9	– 0.1	+ 1.0	– 0.1	–	+ 0.0	Nov
+ 3.4	– 0.5	+ 3.9	+ 0.5	+ 0.0	– 3.8	– 1.5	– 0.4	– 1.1	– 2.3	–	– 0.0	Dec
+ 4.8	+ 0.3	+ 4.5	+ 0.5	+ 1.3	– 5.5	– 0.5	+ 0.3	– 0.8	– 5.0	–	– 0.0	2017 Jan
+ 5.1	– 1.3	+ 6.4	+ 1.1	– 0.1	– 5.6	– 0.2	+ 0.8	– 1.0	– 5.3	–	– 0.0	Feb
+ 5.5	+ 1.2	+ 4.3	+ 0.4	– 0.1	– 1.8	– 1.4	– 0.3	– 1.0	– 0.4	–	– 0.0	Mar
+ 9.3	+ 1.0	+ 8.3	+ 1.3	– 0.1	– 5.7	– 2.2	– 1.0	– 1.1	– 3.6	–	– 0.0	Apr
+ 8.5	+ 0.8	+ 7.7	– 0.7	– 0.0	+ 0.1	– 1.3	– 0.2	– 1.1	+ 1.4	–	– 0.0	May
+ 3.4	+ 1.2	+ 2.2	+ 5.4	– 0.3	– 6.7	– 1.3	– 0.3	– 1.0	– 5.4	–	– 0.1	June
+ 11.4	+ 1.0	+ 10.4	– 0.1	– 0.0	– 4.0	– 0.4	+ 0.1	– 0.5	– 3.6	–	+ 0.0	July
+ 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

IV Banks

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

€ billion

Period	Lending to domestic enterprises and households (excluding holdings of negotiable money market paper and excluding securities portfolios) [1]													
		of which				Lending to enterprises and self-employed persons								
			Housing loans											
	Total	Mortgage loans, total	Total	Mortgage loans secured by residential real estate	Other housing loans	Total	*of which* Housing loans	Manufacturing	Electricity, gas and water supply; refuse disposal, mining and quarrying	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Agriculture, forestry, fishing and aquaculture	Transportation and storage; post and telecommunications	Financial intermediation (excluding MFIs) and insurance companies
	Lending, total													**End of year or quarter ***
2015	2,440.0	1,253.3	1,230.2	1,010.4	219.8	1,314.2	339.6	127.4	100.9	60.5	125.2	50.0	65.3	130.5
2016 Sep	2,497.2	1,248.2	1,264.5	1,007.6	256.9	1,341.1	350.5	130.3	103.0	63.2	126.9	51.2	57.4	136.4
Dec	2,512.0	1,259.7	1,276.6	1,016.5	260.1	1,347.5	354.1	125.1	104.7	62.2	128.2	50.6	57.0	139.7
2017 Mar	2,533.8	1,267.0	1,283.2	1,022.4	260.8	1,364.4	356.6	129.4	105.2	66.9	131.5	50.5	55.9	141.0
June	2,559.7	1,280.1	1,297.8	1,033.7	264.1	1,377.8	360.9	131.5	108.3	65.7	130.8	51.0	54.7	141.5
Sep	2,589.5	1,296.7	1,315.7	1,046.9	268.8	1,392.7	366.5	131.8	109.7	67.1	133.3	50.9	53.0	146.0
	Short-term lending													
2015	207.6	–	8.5	–	8.5	173.8	4.3	33.7	4.7	11.5	42.0	3.9	5.3	24.1
2016 Sep	213.8	–	7.6	–	7.6	181.6	4.1	34.3	4.6	13.0	42.6	4.1	4.7	28.5
Dec	205.5	–	6.9	–	6.9	174.3	3.7	29.7	4.4	11.8	43.2	3.6	4.4	29.3
2017 Mar	211.8	–	6.9	–	6.9	181.3	3.7	33.6	4.5	13.6	44.8	3.8	4.2	28.6
June	213.6	–	6.7	–	6.7	183.3	3.5	34.7	4.7	13.7	43.3	4.0	4.6	28.1
Sep	213.5	–	6.5	–	6.5	183.5	3.6	33.8	4.0	14.0	45.2	3.9	4.3	28.1
	Medium-term lending													
2015	256.0	–	35.2	–	35.2	181.3	13.3	23.8	5.1	10.4	16.4	4.4	11.7	41.1
2016 Sep	261.0	–	34.8	–	34.8	183.4	13.4	24.3	5.7	10.5	16.5	4.6	11.0	41.1
Dec	264.1	–	34.5	–	34.5	186.4	13.5	23.6	5.5	10.5	17.2	4.5	11.2	41.8
2017 Mar	264.4	–	34.0	–	34.0	186.8	13.4	23.3	4.9	11.4	17.9	4.4	10.8	43.0
June	267.4	–	33.8	–	33.8	188.7	13.3	23.3	5.0	10.9	18.2	4.4	10.7	44.3
Sep	269.6	–	33.9	–	33.9	190.2	13.6	23.1	5.1	11.2	18.2	4.4	10.4	45.6
	Long-term lending													
2015	1,976.3	1,253.3	1,186.4	1,010.4	176.0	959.1	322.0	70.0	91.2	38.5	66.9	41.7	48.3	65.3
2016 Sep	2,022.5	1,248.2	1,222.1	1,007.6	214.5	976.1	332.9	71.7	92.7	39.7	67.8	42.4	41.6	66.9
Dec	2,042.4	1,259.7	1,235.1	1,016.5	218.6	986.8	336.9	71.8	94.8	39.9	67.7	42.5	41.4	68.6
2017 Mar	2,057.6	1,267.0	1,242.4	1,022.4	220.0	996.2	339.6	72.5	95.8	41.9	68.7	42.3	40.9	69.4
June	2,078.7	1,280.1	1,257.3	1,033.7	223.6	1,005.8	344.0	73.5	98.6	41.1	69.3	42.6	39.4	69.2
Sep	2,106.3	1,296.7	1,275.3	1,046.9	228.3	1,018.9	349.3	74.9	100.5	41.9	69.9	42.6	38.3	72.2
	Lending, total													**Change during quarter ***
2016 Q3	+ 24.5	+ 12.4	+ 16.0	+ 10.9	+ 5.1	+ 10.2	+ 4.2	– 1.1	+ 1.2	+ 0.6	+ 1.6	+ 0.3	– 1.6	+ 2.7
Q4	+ 14.4	+ 9.1	+ 12.4	+ 8.4	+ 4.0	+ 6.0	+ 3.8	– 5.2	+ 1.4	– 1.0	+ 1.3	– 0.6	– 0.3	+ 3.2
2017 Q1	+ 21.7	+ 7.3	+ 6.6	+ 5.8	+ 0.7	+ 16.8	+ 2.6	+ 4.3	+ 0.5	+ 2.0	+ 3.3	– 0.1	– 1.1	+ 1.2
Q2	+ 23.3	+ 12.7	+ 13.8	+ 11.2	+ 2.6	+ 11.1	+ 4.1	+ 2.1	+ 0.4	– 1.1	– 0.6	+ 0.7	– 1.3	+ 0.4
Q3	+ 29.5	+ 15.3	+ 17.8	+ 12.6	+ 5.2	+ 14.5	+ 5.7	+ 0.1	+ 1.1	+ 1.2	+ 2.4	+ 0.4	– 1.7	+ 2.0
	Short-term lending													
2016 Q3	– 2.9	–	– 0.3	–	– 0.3	– 2.9	– 0.2	– 2.8	– 0.1	– 0.1	+ 0.6	– 0.1	– 0.3	+ 1.3
Q4	– 7.6	–	– 0.7	–	– 0.7	– 6.6	– 0.5	– 4.6	– 0.2	– 1.2	+ 0.7	– 0.5	– 0.3	+ 0.9
2017 Q1	+ 6.3	–	– 0.0	–	– 0.0	+ 7.0	+ 0.0	+ 4.0	+ 0.1	+ 1.0	+ 1.6	+ 0.2	– 0.2	– 0.7
Q2	+ 2.1	–	– 0.1	–	– 0.1	+ 2.3	– 0.1	+ 1.1	+ 0.2	+ 0.1	– 1.4	+ 0.3	+ 0.3	– 0.4
Q3	– 0.1	–	– 0.2	–	– 0.2	+ 0.2	+ 0.0	– 0.9	– 0.7	+ 0.3	+ 1.8	– 0.2	– 0.3	+ 0.0
	Medium-term lending													
2016 Q3	+ 3.2	–	+ 0.1	–	+ 0.1	+ 2.4	+ 0.2	+ 0.7	+ 0.6	+ 0.1	+ 0.0	+ 0.1	– 0.1	+ 0.6
Q4	+ 2.4	–	– 0.3	–	– 0.3	+ 2.3	+ 0.0	– 0.6	– 0.3	– 0.0	+ 0.7	– 0.0	+ 0.2	+ 0.7
2017 Q1	+ 0.2	–	– 0.6	–	– 0.6	+ 0.4	– 0.1	– 0.4	– 0.5	+ 0.5	+ 0.7	– 0.1	– 0.4	+ 1.1
Q2	+ 3.0	–	– 0.1	–	– 0.1	+ 1.9	– 0.0	–	+ 0.0	– 0.4	+ 0.2	– 0.1	– 0.1	+ 1.3
Q3	+ 2.4	–	+ 0.2	–	+ 0.2	+ 1.5	+ 0.3	– 0.2	+ 0.2	+ 0.3	+ 0.0	+ 0.1	– 0.3	+ 1.3
	Long-term lending													
2016 Q3	+ 24.2	+ 12.4	+ 16.2	+ 10.9	+ 5.3	+ 10.7	+ 4.2	+ 1.0	+ 0.7	+ 0.6	+ 1.0	+ 0.3	– 1.2	+ 0.8
Q4	+ 19.6	+ 9.1	+ 13.3	+ 8.4	+ 4.9	+ 10.4	+ 4.3	+ 0.1	+ 1.8	+ 0.2	– 0.1	+ 0.0	– 0.2	+ 1.6
2017 Q1	+ 15.1	+ 7.3	+ 7.2	+ 5.8	+ 1.4	+ 9.4	+ 2.6	+ 0.7	+ 0.9	+ 0.5	+ 0.9	– 0.2	– 0.5	+ 0.8
Q2	+ 18.2	+ 12.7	+ 14.0	+ 11.2	+ 2.9	+ 6.9	+ 4.2	+ 1.0	+ 0.2	– 0.8	+ 0.6	+ 0.5	– 1.5	– 0.5
Q3	+ 27.2	+ 15.3	+ 17.8	+ 12.6	+ 5.2	+ 12.8	+ 5.4	+ 1.3	+ 1.7	+ 0.7	+ 0.5	+ 0.4	– 1.2	+ 0.7

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

IV Banks

Lending to employees and other individuals												Lending to non-profit institutions		
Services sector (including the professions)				*Memo items*				Other lending						
	of which								*of which*					
Total	Housing enterprises	Holding companies	Other real estate activities	Lending to self-employed persons [2]	Lending to craft enterprises	Total	Housing loans	Total	Instalment loans [3]	Debit balances on wage, salary and pension accounts	Total	*of which* Housing loans	Period
End of year or quarter *													**Lending, total**	
654.3	193.4	32.4	176.5	395.6	46.8	1,111.6	887.1	224.6	154.4	10.1	14.2	3.5	2015
672.7	201.4	34.8	180.8	401.1	46.8	1,142.0	910.5	231.5	162.3	9.8	14.2	3.5	2016 Sep
680.0	204.7	36.3	181.6	401.3	46.0	1,150.1	919.0	231.2	163.3	9.2	14.4	3.6	Dec
684.0	206.2	38.8	179.7	403.8	46.3	1,154.8	922.9	231.9	165.5	9.2	14.6	3.7	2017 Mar
694.3	209.8	39.6	183.6	408.2	48.5	1,167.3	933.2	234.2	168.0	8.9	14.5	3.8	June
700.9	211.2	41.1	185.7	410.4	48.3	1,182.2	945.4	236.7	170.4	8.9	14.6	3.7	Sep
													Short-term lending	
48.7	8.7	4.9	10.7	25.4	5.6	33.2	4.2	29.0	1.7	10.1	0.5	0.0	2015
49.9	8.5	5.9	11.1	24.7	5.7	31.6	3.4	28.2	1.7	9.8	0.5	0.0	2016 Sep
47.9	8.4	5.7	10.2	23.9	5.1	30.6	3.2	27.4	1.8	9.2	0.6	0.0	Dec
48.2	8.4	6.6	9.1	24.5	5.7	29.8	3.2	26.7	1.8	9.2	0.6	0.0	2017 Mar
50.1	9.0	6.5	9.7	24.5	5.7	29.7	3.1	26.6	1.8	8.9	0.5	0.0	June
50.2	9.6	6.7	10.0	23.7	5.5	29.4	2.9	26.5	1.7	8.9	0.5	0.0	Sep
													Medium-term lending	
68.4	10.1	7.3	19.3	32.4	3.5	74.2	21.9	52.3	47.4	–	0.6	0.0	2015
69.7	10.7	7.3	18.9	33.0	3.7	77.1	21.4	55.7	50.3	–	0.5	0.0	2016 Sep
72.1	11.1	8.2	19.3	32.9	3.6	77.3	21.1	56.2	51.0	–	0.5	0.0	Dec
71.1	11.3	8.6	17.8	32.7	3.6	77.1	20.6	56.5	51.7	–	0.5	0.0	2017 Mar
72.1	11.5	8.8	18.6	32.8	3.6	78.1	20.5	57.7	52.9	–	0.5	0.0	June
72.2	11.9	9.1	18.3	32.9	3.6	78.9	20.2	58.6	54.0	–	0.5	0.0	Sep
													Long-term lending	
537.3	174.6	20.2	146.5	337.8	37.7	1,004.2	861.0	143.3	105.3	–	13.0	3.5	2015
553.1	182.1	21.6	150.8	343.4	37.4	1,033.3	885.7	147.6	110.2	–	13.1	3.5	2016 Sep
560.0	185.2	22.4	152.2	344.5	37.3	1,042.3	894.7	147.6	110.5	–	13.3	3.5	Dec
564.7	186.5	23.6	152.7	346.5	37.1	1,047.9	899.2	148.8	112.1	–	13.4	3.7	2017 Mar
572.2	189.2	24.3	155.3	350.8	39.2	1,059.4	909.6	149.9	113.3	–	13.5	3.7	June
578.5	189.8	25.3	157.4	353.8	39.3	1,073.8	922.3	151.6	114.8	–	13.6	3.7	Sep
Change during quarter *													**Lending, total**	
+ 6.4	+ 2.7	+ 0.3	+ 3.1	+ 1.7	– 0.1	+ 14.1	+ 11.8	+ 2.3	+ 2.4	+ 0.0	+ 0.2	+ 0.1	2016 Q3
+ 7.1	+ 3.3	+ 1.5	+ 0.8	+ 0.2	– 0.8	+ 8.2	+ 8.5	– 0.4	+ 1.1	– 0.6	+ 0.2	+ 0.0	Q4
+ 6.8	+ 1.4	+ 2.3	+ 0.8	+ 2.3	+ 0.3	+ 4.9	+ 4.1	+ 0.8	+ 2.3	– 0.0	+ 0.1	– 0.0	2017 Q1
+ 10.5	+ 3.5	+ 0.8	+ 4.0	+ 3.4	+ 0.1	+ 12.2	+ 9.7	+ 2.6	+ 2.8	– 0.3	– 0.1	+ 0.1	Q2
+ 8.9	+ 3.0	+ 1.7	+ 2.7	+ 2.2	– 0.1	+ 14.9	+ 12.1	+ 2.8	+ 2.5	– 0.0	+ 0.1	– 0.0	Q3
													Short-term lending	
– 1.4	– 0.1	– 0.1	+ 0.3	– 0.8	– 0.2	– 0.0	– 0.1	+ 0.1	– 0.1	+ 0.0	+ 0.1	+ 0.0	2016 Q3
– 1.4	+ 0.1	– 0.3	– 0.5	– 0.8	– 0.6	– 1.1	– 0.2	– 0.9	+ 0.1	– 0.6	+ 0.0	+ 0.0	Q4
+ 1.0	+ 0.0	+ 0.9	– 0.2	+ 0.7	+ 0.6	– 0.7	– 0.0	– 0.7	+ 0.0	– 0.0	+ 0.1	– 0.0	2017 Q1
+ 2.2	+ 0.6	– 0.0	+ 0.8	–	– 0.0	– 0.1	– 0.1	– 0.0	– 0.0	– 0.3	– 0.1	+ 0.0	Q2
+ 0.1	+ 0.6	+ 0.2	+ 0.3	– 0.9	– 0.2	– 0.3	– 0.2	– 0.1	– 0.1	– 0.0	– 0.0	– 0.0	Q3
													Medium-term lending	
+ 0.4	+ 0.2	+ 0.1	– 0.1	+ 0.0	+ 0.0	+ 0.8	– 0.1	+ 0.9	+ 0.9	–	– 0.1	+ 0.0	2016 Q3
+ 1.7	+ 0.2	+ 1.0	– 0.0	– 0.1	– 0.1	+ 0.2	– 0.3	+ 0.5	+ 0.6	–	– 0.0	– 0.0	Q4
– 0.5	+ 0.2	+ 0.2	– 0.9	– 0.1	– 0.0	– 0.2	– 0.5	+ 0.3	+ 0.7	–	+ 0.0	– 0.0	2017 Q1
+ 1.0	+ 0.2	+ 0.1	+ 0.8	+ 0.1	+ 0.0	+ 1.1	– 0.1	+ 1.2	+ 1.3	–	+ 0.0	+ 0.0	Q2
+ 0.1	+ 0.3	+ 0.3	– 0.3	+ 0.1	– 0.0	+ 0.9	– 0.1	+ 1.0	+ 1.0	–	+ 0.0	+ 0.0	Q3
													Long-term lending	
+ 7.4	+ 2.5	+ 0.4	+ 2.8	+ 2.5	+ 0.1	+ 13.3	+ 12.0	+ 1.3	+ 1.6	–	+ 0.2	+ 0.1	2016 Q3
+ 6.8	+ 3.1	+ 0.8	+ 1.3	+ 1.1	– 0.1	+ 9.1	+ 9.0	+ 0.0	+ 0.4	–	+ 0.1	+ 0.0	Q4
+ 6.2	+ 1.2	+ 1.1	+ 2.0	+ 1.8	– 0.2	+ 5.8	+ 4.6	+ 1.2	+ 1.6	–	– 0.0	– 0.0	2017 Q1
+ 7.4	+ 2.7	+ 0.7	+ 2.4	+ 3.3	+ 0.0	+ 11.3	+ 9.8	+ 1.4	+ 1.6	–	+ 0.0	+ 0.0	Q2
+ 8.6	+ 2.0	+ 1.2	+ 2.7	+ 3.0	+ 0.1	+ 14.3	+ 12.4	+ 1.9	+ 1.6	–	+ 0.2	– 0.0	Q3

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

IV Banks

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

€ billion

Period	Deposits, total	Sight deposits	Time deposits 1,2					Savings deposits 3	Bank savings bonds 4	*Memo item*		
			Total	for up to and including 1 year	for more than 1 year 2					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos
					Total	for up to and including 2 years	for more than 2 years					
	Domestic non-banks, total											**End of year or month***
2014	3,118.2	1,517.8	926.7	257.0	669.7	29.4	640.3	607.8	66.0	30.9	26.2	1.7
2015	3,224.7	1,673.7	898.4	243.0	655.4	37.3	618.1	596.5	56.1	29.3	20.5	0.5
2016	3,326.7	1,798.2	889.6	232.4	657.3	47.2	610.1	588.5	50.4	28.8	18.3	0.9
2016 Dec	3,326.7	1,798.2	889.6	232.4	657.3	47.2	610.1	588.5	50.4	28.8	18.3	0.9
2017 Jan	3,346.3	1,812.5	895.8	241.0	654.9	46.8	608.0	588.5	49.5	30.6	18.1	2.5
Feb	3,345.5	1,816.6	891.4	237.3	654.1	46.5	607.6	588.5	49.0	30.5	17.6	1.5
Mar	3,342.8	1,817.0	890.9	237.8	653.1	47.8	605.3	586.7	48.2	30.4	17.2	0.9
Apr	3,360.3	1,844.4	881.9	229.2	652.6	50.3	602.3	586.2	47.8	30.3	17.3	0.8
May	3,368.4	1,852.2	883.4	229.3	654.1	52.3	601.8	585.7	47.0	30.4	17.1	0.4
June	3,370.3	1,869.2	869.8	226.4	643.4	53.5	589.9	584.7	46.6	29.8	16.9	0.9
July	3,361.5	1,866.0	866.0	223.2	642.8	54.1	588.6	583.5	46.0	29.9	16.7	0.7
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	3,424.3	1,944.0	855.0	212.4	642.6	55.3	587.2	581.0	44.3	30.1	15.1	1.6
												Changes*
2015	+ 106.5	+ 156.2	– 28.3	– 13.6	– 14.7	+ 7.6	– 22.3	– 11.3	– 10.1	– 1.6	– 5.7	– 1.2
2016	+ 104.7	+ 124.5	– 6.9	– 8.9	+ 2.0	+ 10.2	– 8.2	– 7.9	– 5.0	– 0.5	– 2.1	+ 0.3
2016 Dec	– 2.2	– 1.2	– 2.8	– 0.8	– 2.0	+ 0.5	– 2.5	+ 2.3	– 0.5	+ 0.2	– 0.2	+ 0.1
2017 Jan	+ 19.6	+ 14.4	+ 6.2	+ 8.6	– 2.4	– 0.4	– 2.1	– 0.1	– 0.9	+ 1.0	– 0.2	+ 1.7
Feb	– 0.8	+ 4.1	– 4.5	– 3.7	– 0.8	– 0.4	– 0.4	+ 0.1	– 0.5	– 0.1	– 0.5	– 1.1
Mar	– 2.7	+ 0.4	– 0.5	+ 0.5	– 1.0	+ 1.3	– 2.3	– 1.9	– 0.7	– 0.1	– 0.4	– 0.6
Apr	+ 17.5	+ 27.3	– 9.0	– 8.5	– 0.5	+ 2.5	– 3.0	– 0.5	– 0.4	– 0.1	+ 0.0	– 0.1
May	+ 8.1	+ 7.8	+ 1.6	+ 0.1	+ 1.5	+ 2.0	– 0.5	– 0.5	– 0.8	+ 0.0	– 0.2	– 0.4
June	+ 10.9	+ 17.0	– 4.6	– 2.9	– 1.7	+ 1.2	– 2.9	– 1.0	– 0.4	– 0.6	– 0.1	+ 0.4
July	– 8.8	– 3.1	– 3.8	– 3.2	– 0.6	+ 0.7	– 1.3	– 1.2	– 0.7	+ 0.2	– 0.2	– 0.1
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	+ 27.7	+ 27.1	+ 1.5	– 0.3	+ 1.7	+ 0.8	+ 0.9	– 0.5	– 0.5	+ 0.1	– 0.6	+ 0.4
	Domestic government											**End of year or month***
2014	186.7	52.4	128.2	84.5	43.7	7.5	36.2	3.8	2.3	29.1	4.8	0.5
2015	197.4	57.6	132.6	87.7	44.9	10.2	34.7	3.7	3.5	27.9	2.7	0.5
2016	199.8	57.9	133.5	79.5	54.0	16.6	37.4	3.9	4.5	27.1	2.5	–
2016 Dec	199.8	57.9	133.5	79.5	54.0	16.6	37.4	3.9	4.5	27.1	2.5	–
2017 Jan	202.2	55.1	138.7	84.7	54.1	16.4	37.7	3.8	4.5	26.7	2.5	–
Feb	205.7	61.4	136.0	81.8	54.2	15.8	38.4	3.7	4.6	26.8	2.5	–
Mar	204.0	58.9	136.8	81.4	55.4	16.5	38.9	3.7	4.7	26.7	2.5	–
Apr	203.1	59.1	135.6	77.9	57.7	18.7	39.0	3.6	4.7	26.7	2.5	–
May	209.7	61.1	140.3	80.4	59.9	20.4	39.5	3.7	4.6	26.4	2.5	–
June	209.9	58.1	143.5	81.8	61.8	21.8	40.0	3.7	4.7	25.8	2.4	–
July	207.2	55.6	143.2	80.4	62.8	22.4	40.4	3.7	4.7	25.8	2.4	–
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
												Changes*
2015	+ 10.1	+ 5.2	+ 3.7	+ 2.9	+ 0.8	+ 2.5	– 1.7	– 0.0	+ 1.2	– 1.2	– 2.1	+ 0.1
2016	+ 3.1	+ 0.3	+ 2.0	– 6.7	+ 8.7	+ 6.4	+ 2.3	+ 0.1	+ 0.7	– 0.8	– 0.2	– 0.5
2016 Dec	– 7.2	– 3.8	– 3.5	– 2.5	– 1.0	+ 0.2	– 1.1	+ 0.0	+ 0.1	– 0.1	– 0.1	–
2017 Jan	+ 2.4	– 2.7	+ 5.2	+ 5.1	+ 0.1	– 0.2	+ 0.3	– 0.1	+ 0.1	– 0.4	– 0.0	–
Feb	+ 3.5	+ 6.3	– 2.8	– 2.9	+ 0.2	– 0.6	+ 0.8	– 0.1	+ 0.1	+ 0.0	+ 0.0	–
Mar	– 1.7	– 2.5	+ 0.8	– 0.3	+ 1.1	+ 0.6	+ 0.5	– 0.0	+ 0.1	– 0.1	– 0.0	–
Apr	– 1.0	+ 0.3	– 1.2	– 3.5	+ 2.4	+ 2.3	+ 0.1	– 0.1	+ 0.1	– 0.0	+ 0.0	–
May	+ 6.7	+ 1.9	+ 4.7	+ 2.5	+ 2.2	+ 1.7	+ 0.5	+ 0.1	– 0.1	– 0.1	+ 0.0	–
June	– 0.1	– 3.0	+ 2.9	+ 1.3	+ 1.5	+ 1.4	+ 0.2	– 0.0	+ 0.0	– 0.4	– 0.0	–
July	– 2.8	– 2.5	– 0.4	– 1.3	+ 0.9	+ 0.5	+ 0.4	–	+ 0.0	– 0.0	+ 0.0	–
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	+ 4.0	+ 1.5	+ 2.6	– 0.2	+ 2.9	+ 1.5	+ 1.4	– 0.1	– 0.0	+ 0.0	– 0.0	–

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

IV Banks

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

€ billion

Period	Deposits, total	Sight deposits	Time deposits [1,2]					Savings deposits [3]	Bank savings bonds [4]	*Memo item*		
			Total	for up to and including 1 year	for more than 1 year [2]					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos
					Total	for up to and including 2 years	for more than 2 years					
	Domestic enterprises and households											**End of year or month***
2014	2,931.5	1,465.4	798.4	172.5	625.9	21.8	604.1	604.0	63.7	1.8	21.5	1.2
2015	3,027.3	1,616.1	765.8	155.3	610.5	27.1	583.5	592.7	52.6	1.4	17.8	–
2016	3,127.0	1,740.3	756.2	152.8	603.3	30.6	572.7	584.6	45.9	1.7	15.8	0.9
2016 Dec	3,127.0	1,740.3	756.2	152.8	603.3	30.6	572.7	584.6	45.9	1.7	15.8	0.9
2017 Jan	3,144.2	1,757.4	757.1	156.3	600.8	30.4	570.3	584.7	45.0	3.8	15.6	2.5
Feb	3,139.8	1,755.2	755.4	155.5	599.9	30.6	569.2	584.8	44.4	3.7	15.1	1.5
Mar	3,138.8	1,758.1	754.1	156.3	597.8	31.3	566.4	583.0	43.6	3.7	14.8	0.9
Apr	3,157.2	1,785.2	746.3	151.4	594.9	31.6	563.3	582.6	43.1	3.7	14.8	0.8
May	3,158.7	1,791.1	743.1	148.9	594.2	31.9	562.4	582.0	42.4	4.0	14.6	0.4
June	3,160.3	1,811.1	726.2	144.6	581.6	31.7	549.9	581.0	41.9	3.9	14.5	0.9
July	3,154.3	1,810.5	722.7	142.8	580.0	31.8	548.2	579.8	41.3	4.1	14.3	0.7
Aug	3,162.8	1,823.0	720.2	140.1	580.1	31.8	548.3	578.7	40.9	4.1	14.2	0.7
Sep	3,170.2	1,832.9	718.5	141.2	577.2	31.2	546.1	578.1	40.8	4.1	13.5	1.8
Oct	3,188.8	1,856.9	713.8	140.1	573.7	30.1	543.5	577.8	40.3	4.1	13.4	1.1
Nov	3,213.2	1,882.9	712.8	140.1	572.7	29.5	543.1	577.5	40.1	4.3	12.8	1.6
												Changes*
2015	+ 96.4	+ 151.0	– 32.0	– 16.5	– 15.4	+ 5.1	– 20.6	– 11.3	– 11.3	– 0.4	– 3.7	– 1.2
2016	+ 101.7	+ 124.2	– 8.9	– 2.2	– 6.7	+ 3.8	– 10.5	– 8.0	– 5.7	+ 0.3	– 1.9	+ 0.9
2016 Dec	+ 5.0	+ 2.7	+ 0.7	+ 1.7	– 1.1	+ 0.3	– 1.4	+ 2.3	– 0.6	+ 0.3	– 0.1	+ 0.1
2017 Jan	+ 17.2	+ 17.1	+ 1.0	+ 3.5	– 2.5	– 0.2	– 2.3	+ 0.1	– 1.0	+ 1.4	– 0.2	+ 1.7
Feb	– 4.3	– 2.2	– 1.7	– 0.8	– 0.9	+ 0.2	– 1.1	+ 0.2	– 0.6	– 0.1	– 0.5	– 1.1
Mar	– 1.0	+ 2.9	– 1.3	+ 0.8	– 2.1	+ 0.7	– 2.8	– 1.9	– 0.8	+ 0.0	– 0.3	– 0.6
Apr	+ 18.4	+ 27.0	– 7.8	– 5.0	– 2.8	+ 0.2	– 3.1	– 0.4	– 0.5	– 0.0	+ 0.0	– 0.1
May	+ 1.4	+ 5.9	– 3.2	– 2.5	– 0.7	+ 0.3	– 0.9	– 0.6	– 0.7	+ 0.1	– 0.2	– 0.4
June	+ 11.0	+ 19.9	– 7.5	– 4.2	– 3.3	– 0.2	– 3.1	– 1.0	– 0.4	– 0.2	– 0.1	+ 0.4
July	– 5.9	– 0.7	– 3.4	– 1.9	– 1.5	+ 0.1	– 1.6	– 1.2	– 0.7	+ 0.2	– 0.2	– 0.1
Aug	+ 8.6	+ 12.6	– 2.5	– 2.7	+ 0.2	– 0.0	+ 0.2	– 1.1	– 0.3	+ 0.0	– 0.1	– 0.0
Sep	+ 8.1	+ 9.9	– 1.0	+ 1.4	– 2.4	– 0.6	– 1.9	– 0.6	– 0.2	– 0.0	– 0.7	+ 1.1
Oct	+ 19.2	+ 23.9	– 4.0	– 1.0	– 3.0	– 1.0	– 2.0	– 0.2	– 0.4	+ 0.0	– 0.1	– 0.7
Nov	+ 23.7	+ 25.6	– 1.1	– 0.0	– 1.1	– 0.6	– 0.5	– 0.4	– 0.4	+ 0.1	– 0.6	+ 0.4
	of which: **Domestic enterprises**											**End of year or month***
2014	1,007.9	457.1	529.1	104.1	425.0	10.4	414.6	6.9	14.9	1.8	16.4	1.2
2015	1,029.8	502.8	506.5	99.8	406.7	14.4	392.3	7.1	13.3	1.3	14.0	–
2016	1,032.4	518.3	494.1	98.3	395.8	17.4	378.4	6.9	13.2	1.6	13.0	0.9
2016 Dec	1,032.4	518.3	494.1	98.3	395.8	17.4	378.4	6.9	13.2	1.6	13.0	0.9
2017 Jan	1,048.4	532.9	495.6	102.1	393.6	17.6	376.0	6.9	13.0	2.9	12.8	2.5
Feb	1,033.8	520.4	493.6	100.5	393.1	18.0	375.1	6.8	13.0	2.8	12.4	1.5
Mar	1,034.5	522.7	492.1	101.3	390.8	18.4	372.4	6.8	12.9	2.8	12.1	0.9
Apr	1,035.4	530.1	485.4	97.5	387.9	18.6	369.2	6.9	13.0	2.8	12.1	0.8
May	1,033.4	531.1	482.6	95.8	386.8	18.8	368.1	6.8	12.9	2.9	12.0	0.4
June	1,032.3	545.0	467.6	92.9	374.7	18.8	355.9	6.8	12.9	2.8	11.9	0.9
July	1,022.6	537.7	465.4	91.5	373.9	19.1	354.8	6.8	12.8	2.8	11.8	0.7
Aug	1,026.6	543.9	463.2	89.1	374.1	19.2	354.8	6.8	12.7	2.8	11.7	0.7
Sep	1,028.0	546.3	462.0	90.9	371.1	18.7	352.4	6.9	12.9	2.8	11.0	1.8
Oct	1,038.4	561.0	457.7	90.0	367.7	17.8	349.8	6.9	12.9	2.8	10.9	1.1
Nov	1,044.5	567.1	457.4	90.6	366.8	17.3	349.5	6.9	13.1	2.9	10.4	1.6
												Changes*
2015	+ 22.7	+ 46.0	– 22.1	– 3.8	– 18.3	+ 3.7	– 22.0	+ 0.3	– 1.5	– 0.5	– 2.5	– 1.2
2016	+ 4.6	+ 15.9	– 11.2	– 1.2	– 10.1	+ 3.2	– 13.2	– 0.2	+ 0.1	+ 0.2	– 0.9	+ 0.9
2016 Dec	– 10.6	– 8.8	– 1.5	+ 1.7	– 3.2	+ 0.4	– 3.6	– 0.1	– 0.1	+ 0.3	– 0.1	+ 0.1
2017 Jan	+ 16.0	+ 14.6	+ 1.6	+ 3.8	– 2.2	+ 0.2	– 2.4	–	– 0.2	+ 1.4	– 0.1	+ 1.7
Feb	– 14.2	– 12.6	– 1.6	– 1.1	– 0.5	+ 0.4	– 0.9	– 0.0	– 0.0	– 0.1	– 0.5	– 1.1
Mar	+ 0.7	+ 2.4	– 1.5	+ 0.8	– 2.3	+ 0.4	– 2.7	– 0.1	– 0.2	– 0.0	– 0.3	– 0.6
Apr	+ 0.9	+ 7.3	– 6.6	– 3.8	– 2.8	+ 0.2	– 3.1	+ 0.1	+ 0.2	– 0.0	+ 0.1	– 0.1
May	– 2.0	+ 1.0	– 2.7	– 1.7	– 1.0	+ 0.1	– 1.2	– 0.1	– 0.1	–	– 0.1	– 0.4
June	+ 8.3	+ 14.0	– 5.7	– 2.9	– 2.8	– 0.0	– 2.8	+ 0.0	– 0.0	– 0.2	– 0.1	+ 0.4
July	– 9.7	– 7.4	– 2.2	– 1.5	– 0.7	+ 0.4	– 1.1	– 0.0	– 0.1	–	– 0.2	– 0.1
Aug	+ 4.2	+ 6.2	– 2.0	– 2.4	+ 0.3	+ 0.1	+ 0.2	+ 0.1	– 0.1	– 0.0	– 0.0	– 0.0
Sep	+ 2.1	+ 2.4	– 0.6	+ 2.0	– 2.6	– 0.5	– 2.1	+ 0.1	+ 0.2	– 0.0	– 0.7	+ 1.1
Oct	+ 11.0	+ 14.7	– 3.7	– 0.8	– 2.9	– 0.8	– 2.0	– 0.0	– 0.0	–	– 0.1	– 0.7
Nov	+ 5.4	+ 5.7	– 0.4	+ 0.5	– 1.0	– 0.5	– 0.4	+ 0.1	+ 0.1	+ 0.1	– 0.5	+ 0.4

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

IV Banks

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

€ billion

Period	Deposits of domestic households and non-profit institutions, total	Sight deposits						Time deposits [1,2]					
		Total	by creditor group					Total	by creditor group				
			Domestic households				Domestic non-profit institutions		Domestic households				
			Total	Self-employed persons	Employees	Other individuals			Total	Self-employed persons	Employees	Other individuals	
	End of year or month*												
2014	1,923.6	1,008.3	980.1	173.3	673.0	133.8	28.2	269.3	254.7	27.8	185.0	41.8	
2015	1,997.5	1,113.3	1,081.2	188.9	748.6	143.7	32.1	259.3	246.2	24.9	179.8	41.6	
2016	2,094.5	1,222.0	1,186.9	206.0	828.6	152.3	35.1	262.1	248.6	25.0	182.0	41.5	
2017 June	2,128.0	1,266.1	1,230.1	211.0	866.2	152.9	36.0	258.6	244.3	24.1	180.2	39.9	
July	2,131.7	1,272.8	1,237.7	216.2	868.7	152.8	35.1	257.4	242.8	23.5	179.5	39.7	
Aug	2,136.3	1,279.2	1,243.6	219.1	871.3	153.3	35.5	257.0	242.2	23.8	181.5	36.9	
Sep	2,142.2	1,286.6	1,250.8	216.0	880.5	154.3	35.8	256.5	241.8	23.7	181.4	36.7	
Oct	2,150.4	1,295.9	1,260.1	221.4	884.8	153.9	35.7	256.1	241.6	23.6	181.4	36.6	
Nov	2,168.7	1,315.8	1,280.3	222.9	902.2	155.2	35.5	255.4	241.4	23.4	181.4	36.7	
	Changes*												
2015	+ 73.7	+ 105.0	+ 101.1	+ 15.6	+ 75.4	+ 10.1	+ 3.9	– 9.9	– 8.1	– 3.0	– 4.5	– 0.7	
2016	+ 97.1	+ 108.4	+ 105.3	+ 17.5	+ 78.7	+ 9.0	+ 3.0	+ 2.4	+ 1.8	+ 0.1	+ 1.9	– 0.3	
2017 June	+ 2.7	+ 6.0	+ 6.3	– 2.7	+ 8.0	+ 0.9	– 0.3	– 1.9	– 1.3	– 0.3	– 0.6	– 0.4	
July	+ 3.7	+ 6.7	+ 7.6	+ 5.1	+ 2.6	– 0.1	– 0.9	– 1.2	– 1.5	– 0.6	– 0.7	– 0.2	
Aug	+ 4.4	+ 6.4	+ 5.9	+ 2.9	+ 2.6	+ 0.5	+ 0.4	– 0.4	– 0.6	– 0.0	– 0.4	– 0.1	
Sep	+ 6.0	+ 7.5	+ 7.2	– 3.0	+ 9.2	+ 1.0	+ 0.3	– 0.5	– 0.3	– 0.1	– 0.0	– 0.3	
Oct	+ 8.3	+ 9.2	+ 9.4	+ 5.4	+ 4.3	– 0.3	– 0.1	– 0.3	– 0.3	– 0.2	– 0.1	– 0.1	
Nov	+ 18.3	+ 19.9	+ 20.2	+ 1.5	+ 17.4	+ 1.3	– 0.2	– 0.7	– 0.1	– 0.2	+ 0.0	+ 0.1	

* See Table IV.2, footnote*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Including subordinated liabilities and liabilities arising from registered debt

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

€ billion

Period	Deposits												
	Domestic government, total	Federal Government and its special funds [1]						State governments					
		Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds [2]	*Memo item* Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds [2]	*Memo item* Fiduciary loans
				for up to and including 1 year	for more than 1 year					for up to and including 1 year	for more than 1 year		
	End of year or month*												
2014	186.7	10.5	2.6	2.4	5.5	0.1	14.6	40.2	13.4	10.4	15.8	0.7	14.1
2015	197.4	9.6	3.1	3.9	2.6	0.1	14.1	44.3	13.2	13.7	16.5	0.9	13.5
2016	199.8	7.9	3.6	2.0	2.2	0.1	13.5	42.3	13.4	11.2	16.6	1.1	13.2
2017 June	209.9	7.9	3.5	2.0	2.3	0.1	13.2	50.7	11.5	20.6	17.4	1.1	12.6
July	207.2	7.9	3.8	1.6	2.4	0.1	13.2	49.9	11.3	19.6	17.8	1.2	12.6
Aug	213.6	7.9	3.9	1.4	2.6	0.1	13.2	49.9	11.1	19.8	17.9	1.2	12.7
Sep	210.5	8.0	4.1	1.3	2.6	0.1	13.2	49.8	11.7	19.2	17.7	1.2	12.7
Oct	207.6	7.9	4.0	1.3	2.4	0.1	13.2	46.9	11.8	16.1	17.7	1.2	12.6
Nov	211.1	8.3	4.2	1.3	2.7	0.1	13.2	44.8	12.0	13.9	17.7	1.3	12.6
	Changes*												
2015	+ 10.1	– 1.9	+ 0.5	+ 0.4	– 2.9	+ 0.0	– 0.6	+ 4.0	– 0.3	+ 3.4	+ 0.7	+ 0.2	– 0.6
2016	+ 3.1	– 1.2	+ 0.5	– 1.4	– 0.3	+ 0.0	– 0.5	– 1.8	+ 0.1	– 1.8	– 0.3	+ 0.1	– 0.3
2017 June	– 0.1	+ 0.1	– 0.2	+ 0.4	– 0.0	–	– 0.3	+ 2.4	+ 0.3	+ 1.8	+ 0.3	+ 0.0	– 0.1
July	– 2.8	– 0.0	+ 0.3	– 0.4	+ 0.1	– 0.0	– 0.0	– 0.9	– 0.3	– 1.0	+ 0.3	+ 0.1	– 0.0
Aug	+ 6.4	– 0.1	+ 0.0	– 0.3	+ 0.2	+ 0.0	+ 0.0	– 0.1	– 0.2	+ 0.2	– 0.1	– 0.0	+ 0.1
Sep	– 3.8	+ 0.0	+ 0.2	– 0.1	– 0.1	+ 0.0	– 0.0	– 0.2	+ 0.6	– 0.7	– 0.1	+ 0.0	– 0.0
Oct	– 3.5	– 0.2	– 0.1	+ 0.0	– 0.1	+ 0.0	+ 0.0	– 3.0	+ 0.1	– 3.0	– 0.0	+ 0.0	– 0.1
Nov	+ 4.0	+ 0.3	+ 0.2	+ 0.0	+ 0.1	– 0.0	+ 0.0	– 2.0	+ 0.1	– 2.2	+ 0.1	+ 0.1	– 0.0

* See Table IV.2, footnote *; excluding deposits of the Treuhand agency and its successor organisations, of the Federal Railways, east German Railways and Federal Post Office, and, from 1995, of Deutsche Bahn AG, Deutsche Post AG and Deutsche Telekom AG, and of publicly owned enterprises, which are included in "Enterprises". Statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in

IV Banks

Savings deposits [3]									Memo item			
	by maturity											
		more than 1 year [2]										
			of which									
Domestic non-profit institutions	up to and including 1 year	Total	up to and including 2 years	more than 2 years	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
End of year or month*												
14.6	68.4	200.9	11.4	189.5	597.2	587.7	9.4	48.8	0.0	5.0	–	2014
13.1	55.5	203.9	12.7	191.1	585.6	576.6	9.0	39.2	0.0	3.8	–	2015
13.5	54.5	207.5	13.3	194.3	577.7	569.3	8.4	32.7	0.1	2.9	–	2016
14.3	51.7	206.9	12.9	194.0	574.2	566.0	8.2	29.0	1.1	2.5	–	2017 June
14.6	51.3	206.1	12.7	193.4	573.1	565.0	8.1	28.5	1.3	2.5	–	July
14.8	51.0	206.0	12.5	193.5	571.8	563.8	8.0	28.2	1.3	2.5	–	Aug
14.7	50.3	206.2	12.5	193.7	571.2	563.1	8.0	27.9	1.3	2.5	–	Sep
14.6	50.1	206.0	12.3	193.7	571.0	563.0	8.0	27.5	1.3	2.5	–	Oct
14.0	49.5	205.9	12.2	193.6	570.5	562.8	7.8	27.0	1.4	2.4	–	Nov
Changes*												
– 1.8	– 12.8	+ 2.9	+ 1.4	+ 1.4	– 11.5	– 11.1	– 0.5	– 9.8	+ 0.0	– 1.2	–	2015
+ 0.6	– 1.0	+ 3.4	+ 0.7	+ 2.7	– 7.9	– 7.3	– 0.5	– 5.8	+ 0.1	– 0.9	–	2016
– 0.6	– 1.4	– 0.5	– 0.2	– 0.3	– 1.0	– 1.0	– 0.1	– 0.4	+ 0.0	– 0.0	–	2017 June
+ 0.3	– 0.4	– 0.8	– 0.2	– 0.6	– 1.2	– 1.1	– 0.1	– 0.5	+ 0.2	– 0.0	–	July
+ 0.2	– 0.3	– 0.1	– 0.1	+ 0.0	– 1.2	– 1.2	– 0.0	– 0.3	+ 0.0	– 0.0	–	Aug
– 0.1	– 0.6	+ 0.2	– 0.0	+ 0.2	– 0.7	– 0.7	– 0.0	– 0.3	– 0.0	– 0.0	–	Sep
– 0.0	– 0.2	– 0.1	– 0.1	+ 0.0	– 0.2	– 0.2	– 0.0	– 0.4	+ 0.0	– 0.0	–	Oct
– 0.6	– 0.6	– 0.2	– 0.1	– 0.1	– 0.4	– 0.2	– 0.2	– 0.5	+ 0.1	– 0.0	–	Nov

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						
		Time deposits [3]						Time deposits				
Total	Sight deposits	for up to and including 1 year	for more than 1 year	Savings deposits and bank savings bonds [2,4]	Memo item Fiduciary loans	Total	Sight deposits	for up to and including 1 year	for more than 1 year	Savings deposits and bank savings bonds [2]	Memo item Fiduciary loans	Period
End of year or month*												
48.0	25.3	11.2	7.0	4.5	0.4	88.0	11.1	60.6	15.4	0.9	–	2014
52.4	29.2	9.6	8.3	5.2	0.4	91.2	12.1	60.5	17.5	1.1	–	2015
56.0	31.5	8.7	10.1	5.7	0.4	93.6	9.4	57.6	25.1	1.5	–	2016
54.4	28.8	8.3	11.5	5.8	0.0	96.9	14.2	50.8	30.5	1.4	–	2017 June
51.4	26.0	8.1	11.6	5.7	0.0	97.9	14.5	51.1	31.0	1.3	–	July
57.7	31.2	8.8	11.9	5.8	0.0	98.2	15.1	50.0	31.9	1.2	–	Aug
55.5	28.0	9.0	12.7	5.8	0.0	97.1	15.0	48.0	33.0	1.2	–	Sep
54.1	27.0	8.7	12.8	5.7	0.0	98.8	17.2	46.4	34.1	1.1	–	Oct
57.0	30.0	9.1	12.5	5.4	0.0	101.0	14.9	47.9	37.0	1.0	–	Nov
Changes*												
+ 4.1	+ 3.8	– 1.5	+ 1.1	+ 0.7	+ 0.0	+ 4.0	+ 1.2	+ 0.6	+ 1.9	+ 0.2	–	2015
+ 3.7	+ 2.4	– 0.8	+ 1.6	+ 0.5	– 0.0	+ 2.4	– 2.6	– 2.8	+ 7.7	+ 0.2	–	2016
– 2.6	– 2.7	– 0.1	+ 0.3	– 0.0	– 0.0	+ 0.0	– 0.3	– 0.7	+ 1.0	+ 0.0	–	2017 June
– 2.9	– 2.9	– 0.2	+ 0.1	– 0.0	–	+ 1.0	+ 0.3	+ 0.3	+ 0.4	– 0.1	–	July
+ 6.3	+ 5.2	+ 0.7	+ 0.3	+ 0.0	–	+ 0.3	+ 0.5	– 1.1	+ 1.0	– 0.2	–	Aug
– 2.5	– 3.2	+ 0.2	+ 0.4	+ 0.0	–	– 1.2	– 0.1	– 2.2	+ 1.0	+ 0.0	–	Sep
– 1.4	– 1.1	– 0.3	+ 0.0	– 0.1	–	+ 1.1	+ 2.2	– 1.6	+ 0.5	– 0.0	–	Oct
+ 3.5	+ 3.4	+ 0.4	– 0.2	– 0.1	–	+ 2.1	– 2.2	+ 1.5	+ 2.9	– 0.1	–	Nov

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

IV Banks

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

€ billion

Period	Savings deposits [1]								Memo item Interest credited on savings deposits	Bank savings bonds [3], sold to			
		of residents					of non-residents				domestic non-banks		
			at three months' notice		at more than three months' notice								
	Total	Total	Total	of which Special savings facilities [2]	Total	of which Special savings facilities [2]	Total	of which At three months' notice		non-banks, total	Total	of which With maturities of more than 2 years	foreign non-banks
	End of year or month*												
2014	617.0	607.8	531.3	401.4	76.4	63.3	9.2	7.4	6.1	79.8	66.0	51.4	13.8
2015	605.4	596.5	534.6	379.7	61.9	48.0	8.9	7.4	4.4	64.9	56.1	41.0	8.7
2016	596.5	588.5	537.1	361.6	51.5	37.7	8.0	6.9	3.3	59.1	50.4	35.8	8.7
2017 July	591.2	583.5	538.3	353.8	45.2	34.1	7.7	6.7	0.1	54.3	46.0	32.8	8.3
Aug	590.0	582.4	538.0	352.6	44.4	33.2	7.6	6.7	0.1	53.6	45.4	32.5	8.2
Sep	589.4	581.8	538.0	350.7	43.9	32.6	7.6	6.6	0.1	53.5	45.3	32.5	8.2
Oct	589.0	581.5	538.5	349.7	43.0	31.9	7.5	6.6	0.1	53.1	44.8	32.2	8.3
Nov	588.5	581.0	538.6	349.8	42.4	31.2	7.5	6.5	0.2	52.6	44.3	31.9	8.3
	Changes*												
2015	– 11.6	– 11.3	+ 4.3	– 20.6	– 15.6	– 16.3	– 0.3	+ 0.0	.	– 15.1	– 10.1	– 6.6	– 5.1
2016	– 8.8	– 7.9	+ 2.5	– 18.4	– 10.4	– 10.3	– 0.9	– 0.5	.	– 5.0	– 5.0	– 4.7	– 0.0
2017 July	– 1.3	– 1.2	– 0.4	+ 6.3	– 0.8	– 0.8	– 0.1	– 0.0	.	– 0.9	– 0.7	– 0.5	– 0.2
Aug	– 1.1	– 1.1	– 0.3	– 1.0	– 0.8	– 0.9	– 0.1	– 0.0	.	– 0.7	– 0.6	– 0.3	– 0.1
Sep	– 0.6	– 0.6	+ 0.0	– 2.0	– 0.6	– 0.6	– 0.1	– 0.0	.	– 0.1	– 0.1	– 0.0	+ 0.0
Oct	– 0.4	– 0.3	+ 0.5	– 0.9	– 0.8	– 0.8	– 0.1	– 0.0	.	– 0.4	– 0.5	– 0.3	+ 0.1
Nov	– 0.5	– 0.5	+ 0.2	+ 0.1	– 0.6	– 0.7	– 0.1	– 0.0	.	– 0.5	– 0.5	– 0.3	– 0.0

***** See Table IV.2, footnote*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Excluding deposits under savings and loan contracts, which are classified as time deposits. **2** Savings deposits bearing interest at a rate which exceeds the minimum or basic rate of interest. **3** Including liabilities arising from non-negotiable bearer debt securities.

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

€ billion

Period	Negotiable bearer debt securities and money market paper										Non-negotiable bearer debt securities and money market paper [6]		Subordinated	
		of which				with maturities of								
						up to and including 1 year		more than 1 year up to and including 2 years						
	Total	Floating rate bonds [1]	Zero coupon bonds [1,2]	Foreign currency bonds [3,4]	Certificates of deposit	Total	of which without a nominal guarantee [5]	Total	of which without a nominal guarantee [5]	more than 2 years	Total	of which with maturities of more than 2 years	negotiable debt securities	non-negotiable debt securities
	End of year or month*													
2014	1,114.2	286.4	26.3	354.0	69.2	83.6	1.8	26.3	5.0	1,004.3	1.0	0.2	33.7	1.2
2015	1,075.7	189.2	30.2	384.1	88.7	109.8	2.1	28.4	5.7	937.5	0.3	0.2	31.9	0.5
2016	1,098.1	177.0	28.1	407.1	90.9	111.3	4.1	37.4	5.8	949.4	0.6	0.2	33.8	0.5
2017 July	1,092.4	169.3	26.1	378.5	79.9	99.9	5.0	39.4	6.3	953.1	0.4	0.2	32.2	0.5
Aug	1,088.4	166.5	27.8	375.5	79.0	100.5	5.1	37.9	6.5	950.0	0.4	0.2	32.2	0.5
Sep	1,084.0	161.5	28.2	378.8	84.4	106.0	5.0	37.0	6.5	941.0	0.3	0.2	32.1	0.5
Oct	1,079.1	149.6	28.0	383.2	86.6	106.4	5.1	35.5	6.5	937.1	0.3	0.2	31.1	0.5
Nov	1,072.3	147.9	25.9	377.3	84.9	103.4	5.0	35.1	6.7	933.8	0.3	0.2	30.7	0.5
	Changes*													
2015	– 38.5	– 97.2	+ 3.9	+ 30.1	+ 19.5	+ 26.2	+ 0.3	+ 2.1	+ 0.7	– 66.8	– 0.8	+ 0.0	– 1.8	– 0.7
2016	+ 22.1	– 12.0	– 2.1	+ 23.0	+ 2.2	+ 1.6	+ 2.0	+ 8.8	+ 0.1	+ 11.7	+ 0.3	– 0.1	+ 1.9	– 0.0
2017 July	– 14.7	– 3.0	+ 0.3	– 11.8	– 6.0	– 5.4	+ 0.2	– 0.4	+ 0.0	– 8.9	+ 0.1	+ 0.0	– 0.2	–
Aug	– 4.1	– 2.8	+ 1.7	– 2.9	– 0.9	+ 0.5	+ 0.1	– 1.5	+ 0.2	– 3.1	– 0.0	– 0.0	– 0.1	–
Sep	– 3.6	– 5.0	+ 0.4	+ 3.3	+ 5.5	+ 5.5	– 0.1	– 0.9	+ 0.0	– 8.2	– 0.1	+ 0.0	– 0.1	–
Oct	– 4.9	– 11.9	– 0.1	+ 4.4	+ 2.1	+ 0.5	+ 0.1	– 1.5	+ 0.0	– 3.9	– 0.0	+ 0.0	– 1.0	–
Nov	– 6.7	– 1.8	– 2.1	– 5.9	– 1.2	– 3.1	– 0.1	– 0.3	+ 0.2	– 3.3	– 0.0	– 0.0	– 0.3	–

***** See Table IV.2, footnote*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Including debt securities denominated in foreign currencies. **2** Issue value when floated. **3** Including floating rate notes and zero coupon bonds denominated in foreign currencies. **4** Bonds denominated in non-euro-area currencies. **5** Negotiable bearer debt securities respectively money market paper with a nominal guarantee of less than 100%. **6** Non-negotiable bearer debt securities are classified among bank savings bonds (see also Table IV.10, footnote 2).

IV Banks

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

€ billion

End of year/month	Number of associations	Balance sheet total 13	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)				Deposits of banks (MFIs) 5		Deposits of non-banks (non-MFIs)		Bearer debt securities outstanding	Capital (including published reserves) 7	*Memo item* New contracts entered into in year or month 8
			Credit balances and loans (excluding building loans) 1	Building loans 2	Bank debt securities 3	Building loans			Securities (including Treasury bills and Treasury discount paper) 4	Deposits under savings and loan contracts	Sight and time deposits	Deposits under savings and loan contracts	Sight and time deposits 6			
						Loans under savings and loan contracts	Interim and bridging loans	Other building loans								
All building and loan associations																
2015	21	213.6	43.1	0.0	17.5	15.8	93.4	17.5	21.4	2.0	21.3	159.2	5.3	2.4	9.9	98.5
2016	20	218.8	43.6	0.0	16.6	13.8	98.6	18.1	23.4	2.5	21.4	163.8	5.5	2.0	10.2	89.2
2017 Sep	20	229.9	43.2	0.0	16.7	12.7	102.9	24.6	24.8	2.5	24.7	165.8	9.7	2.9	11.0	6.7
Oct	20	230.6	43.2	0.0	16.9	12.6	103.2	24.9	24.8	2.5	26.0	166.1	9.6	2.8	11.0	6.8
Nov	20	229.1	42.3	0.0	16.1	12.5	103.5	24.8	24.9	2.6	24.0	166.3	9.5	3.0	11.0	7.2
Private building and loan associations																
2017 Sep	12	161.4	27.7	–	7.4	9.5	79.8	21.7	11.3	1.7	22.2	108.1	9.4	2.9	7.4	4.2
Oct	12	161.9	27.7	–	7.6	9.5	79.9	22.0	11.3	1.7	23.5	108.3	9.3	2.8	7.4	4.3
Nov	12	160.7	26.7	–	7.2	9.4	80.2	21.9	11.4	1.7	22.0	108.5	9.2	3.0	7.4	4.5
Public building and loan associations																
2017 Sep	8	68.5	15.5	0.0	9.3	3.2	23.1	2.9	13.5	0.9	2.5	57.7	0.3	–	3.6	2.4
Oct	8	68.7	15.6	0.0	9.3	3.1	23.2	2.9	13.5	0.9	2.5	57.8	0.3	–	3.6	2.4
Nov	8	68.4	15.5	0.0	8.9	3.1	23.3	3.0	13.6	0.9	2.1	57.8	0.3	–	3.6	2.7

Trends in building and loan association business

€ billion

Period	Changes in deposits under savings and loan contracts			Capital promised		Capital disbursed						Disbursement commitments outstanding at end of period		Interest and repayments received on building loans 10		
							Allocations									
							Deposits under savings and loan contracts		Loans under savings and loan contracts 9							
	Amounts paid into savings and loan accounts 9	Interest credited on deposits under savings and loan contracts	Repayments of deposits under cancelled savings and loan contracts	Total	*of which* Net allocations 11	Total	Total	*of which* Applied to settlement of interim and bridging loans	Total	*of which* Applied to settlement of interim and bridging loans	Newly granted interim and bridging loans and other building loans	Total	*of which* Under allocated contracts	Total	*of which* Repayments during quarter	*Memo item* Housing bonuses received 12
All building and loan associations																
2015	28.1	2.5	8.2	51.5	31.2	44.4	19.9	4.2	5.3	3.6	19.2	15.6	8.1	9.5	8.3	0.4
2016	27.5	2.2	7.6	46.8	27.4	40.9	17.2	4.4	4.9	3.7	18.8	16.3	8.0	8.0	7.2	0.2
2017 Sep	2.2	0.0	0.6	3.1	1.7	3.0	1.1	0.3	0.3	0.2	1.6	17.0	7.8	0.6	1.5	0.0
Oct	2.0	0.0	0.6	3.5	2.1	3.2	1.2	0.4	0.4	0.3	1.6	16.9	7.8	0.6		0.0
Nov	2.2	0.0	0.6	3.4	1.9	3.3	1.4	0.4	0.4	0.3	1.6	16.7	7.6	0.5		0.0
Private building and loan associations																
2017 Sep	1.4	0.0	0.4	2.2	1.1	2.2	0.8	0.2	0.2	0.2	1.2	12.3	4.6	0.5	1.1	0.0
Oct	1.3	0.0	0.3	2.6	1.4	2.5	0.9	0.3	0.3	0.2	1.2	12.2	4.6	0.5		0.0
Nov	1.4	0.0	0.3	2.6	1.3	2.5	1.0	0.3	0.3	0.2	1.3	12.1	4.5	0.4		0.0
Public building and loan associations																
2017 Sep	0.7	0.0	0.2	1.0	0.7	0.8	0.3	0.1	0.1	0.1	0.3	4.7	3.2	0.1	0.4	0.0
Oct	0.7	0.0	0.3	0.9	0.6	0.7	0.3	0.1	0.1	0.1	0.3	4.7	3.2	0.1		0.0
Nov	0.8	0.0	0.4	0.8	0.6	0.8	0.4	0.1	0.1	0.0	0.3	4.5	3.1	0.1		0.0

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

IV Banks

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

€ billion

Period	Number of: German banks (MFIs) *with* foreign branches and/or foreign subsidiaries	Number of: foreign branches [1] and/or foreign subsidiaries	Balance sheet total [7]	Lending to banks (MFIs): Total	Lending to banks (MFIs): Credit balances and loans: Total	Lending to banks (MFIs): Credit balances and loans: German banks	Lending to banks (MFIs): Credit balances and loans: Foreign banks	Lending to banks (MFIs): Money market paper, securities [2,3]	Lending to non-banks (non-MFIs): Total	Lending to non-banks (non-MFIs): Loans: Total	Lending to non-banks (non-MFIs): Loans: to German non-banks	Lending to non-banks (non-MFIs): Loans: to foreign non-banks	Lending to non-banks (non-MFIs): Money market paper, securities [2]	Other assets [7]: Total	Other assets [7]: *of which* Derivative financial instruments in the trading portfolio
	Foreign branches														**End of year or month** *
2014	56	205	1,926.2	548.8	532.2	201.2	331.0	16.5	593.5	473.1	14.0	459.1	120.5	783.8	551.9
2015	51	198	1,842.9	526.0	508.7	161.3	347.5	17.3	635.1	511.6	14.0	497.6	123.6	681.8	499.0
2016	51	191	1,873.3	584.2	570.5	205.0	365.5	13.8	580.5	489.8	14.5	475.3	90.8	708.5	485.3
2017 Jan	51	192	1,877.2	603.8	590.4	215.5	375.0	13.4	586.0	492.4	14.1	478.4	93.6	687.4	461.8
Feb	51	193	1,920.0	617.9	604.9	227.3	377.5	13.1	600.4	505.3	13.8	491.4	95.1	701.7	467.6
Mar	51	193	1,918.1	616.1	602.7	228.2	374.5	13.4	609.0	513.0	14.1	499.0	95.9	693.0	452.2
Apr	51	192	1,931.5	631.8	618.6	224.4	394.2	13.3	597.8	503.9	13.7	490.3	93.9	701.8	460.3
May	51	192	1,894.2	629.7	616.8	215.1	401.8	12.8	565.5	478.3	13.2	465.1	87.2	699.0	459.0
June	51	192	1,828.5	589.4	576.9	212.5	364.4	12.5	565.1	475.9	13.3	462.5	89.2	674.1	434.1
July	51	192	1,787.7	564.8	552.6	199.5	353.1	12.1	546.9	463.7	13.3	450.4	83.1	676.1	438.4
Aug	51	191	1,752.1	537.7	526.1	171.1	355.0	11.6	545.3	461.7	13.2	448.5	83.7	669.1	432.2
Sep	51	190	1,746.8	549.5	537.6	176.8	360.8	11.9	568.1	481.8	13.5	468.3	86.3	629.2	408.3
Oct	51	187	1,788.9	579.0	567.0	185.8	381.1	12.1	558.7	477.1	13.5	463.6	81.5	651.2	418.3
															Changes *
2015	− 5	− 7	− 145.0	− 56.3	− 56.0	− 40.0	− 16.0	− 0.3	+ 4.5	+ 7.0	+ 0.0	+ 7.0	− 2.6	− 109.0	− 58.2
2016	± 0	− 7	+ 29.1	+ 49.3	+ 52.9	+ 43.7	+ 9.2	− 3.5	− 56.4	− 24.6	+ 0.5	− 25.1	− 31.8	+ 24.9	− 14.8
2017 Feb	−	+ 1	+ 41.4	+ 9.6	+ 10.1	+ 11.8	− 1.8	− 0.4	+ 8.8	+ 7.9	− 0.2	+ 8.1	+ 0.9	+ 13.0	+ 2.9
Mar	−	−	− 1.2	+ 0.7	+ 0.4	+ 0.9	− 0.5	+ 0.4	+ 11.7	+ 10.6	+ 0.3	+ 10.3	+ 1.2	− 7.9	− 13.7
Apr	−	− 1	+ 14.9	+ 22.0	+ 22.0	− 3.8	+ 25.8	+ 0.1	− 4.5	− 3.1	− 0.4	− 2.6	− 1.4	+ 10.3	+ 11.7
May	−	−	− 35.2	+ 6.6	+ 6.8	− 9.3	+ 16.1	− 0.2	− 22.3	− 16.9	− 0.5	− 16.4	− 5.4	− 0.8	+ 4.0
June	−	−	− 64.4	− 34.7	− 34.4	− 2.5	− 31.9	− 0.2	+ 5.1	+ 2.5	+ 0.1	+ 2.3	+ 2.6	− 23.6	− 21.9
July	−	−	− 39.1	− 16.8	− 16.7	− 13.0	− 3.7	− 0.1	− 9.6	− 4.5	− 0.0	− 4.5	− 5.1	+ 3.7	+ 8.9
Aug	−	− 1	− 34.9	− 24.2	− 23.7	− 28.4	+ 4.7	− 0.5	+ 2.3	+ 1.1	− 0.2	+ 1.3	+ 1.2	− 6.3	− 4.3
Sep	−	− 1	− 5.5	+ 10.6	+ 10.3	+ 5.6	+ 4.6	+ 0.3	+ 20.5	+ 18.6	+ 0.3	+ 18.3	+ 1.9	− 40.0	− 25.1
Oct	−	− 3	+ 41.1	+ 25.6	+ 25.5	+ 9.1	+ 16.5	+ 0.1	− 13.6	− 8.4	+ 0.0	− 8.4	− 5.2	+ 21.0	+ 7.9
	Foreign subsidiaries														**End of year or month** *
2014	28	63	389.4	154.5	137.9	83.4	54.5	16.7	172.7	141.2	21.6	119.5	31.5	62.2	–
2015	24	58	376.0	126.5	113.5	50.1	63.4	13.0	184.3	152.5	22.2	130.3	31.8	65.1	–
2016	20	53	320.5	82.1	72.2	21.4	50.8	9.9	161.4	130.3	22.6	107.7	31.2	76.9	–
2017 Jan	20	53	314.1	81.3	71.7	22.0	49.7	9.6	161.5	130.5	22.9	107.6	31.0	71.3	–
Feb	20	53	315.4	80.7	71.2	30.9	40.4	9.5	162.0	130.8	23.1	107.7	31.2	72.7	–
Mar	20	53	309.8	79.8	70.7	31.1	39.7	9.1	162.7	131.5	23.0	108.5	31.2	67.2	–
Apr	20	53	303.2	73.1	64.1	24.8	39.3	9.0	160.8	130.9	22.8	108.0	29.9	69.3	–
May	20	53	295.9	72.1	64.6	26.7	38.0	7.5	157.0	128.3	23.0	105.3	28.7	66.8	–
June	20	51	285.2	72.4	65.2	27.0	38.2	7.2	155.5	126.6	22.9	103.7	28.9	57.2	–
July	20	53	280.7	79.2	72.5	26.6	45.9	6.8	147.0	119.2	22.7	96.5	27.8	54.5	–
Aug	20	52	279.0	74.8	67.8	28.8	39.0	6.9	153.1	125.7	23.0	102.7	27.5	51.1	–
Sep	20	52	284.6	77.0	70.2	30.2	39.9	6.8	155.2	127.1	23.0	104.1	28.1	52.4	–
Oct	20	50	276.9	73.1	66.7	27.8	38.9	6.4	145.5	118.2	22.9	95.3	27.3	58.3	–
															Changes *
2015	− 4	− 5	− 23.9	− 33.3	− 28.7	− 33.3	+ 4.6	− 4.6	+ 6.5	+ 6.2	+ 0.6	+ 5.6	+ 0.3	+ 2.9	–
2016	− 4	− 5	− 56.8	− 45.9	− 42.6	− 28.7	− 13.9	− 3.3	− 22.7	− 22.1	+ 0.4	− 22.4	− 0.6	+ 11.8	–
2017 Feb	−	−	+ 0.0	− 1.4	− 1.1	+ 8.9	− 10.0	− 0.2	+ 0.0	− 0.2	+ 0.2	− 0.4	+ 0.2	+ 1.4	–
Mar	−	−	− 4.9	− 0.4	− 0.1	+ 0.2	− 0.3	− 0.3	+ 1.0	+ 1.0	− 0.1	+ 1.1	+ 0.0	− 5.5	–
Apr	−	−	− 4.9	− 5.7	− 5.7	− 6.3	+ 0.5	+ 0.1	− 1.3	− 0.0	− 0.2	+ 0.1	− 1.3	+ 2.1	–
May	−	−	− 4.9	+ 0.5	+ 1.7	+ 1.9	− 0.1	− 1.3	− 2.9	− 1.7	+ 0.2	− 1.9	− 1.2	− 2.5	–
June	−	− 2	− 9.4	+ 1.1	+ 1.2	+ 0.3	+ 0.9	− 0.1	− 0.9	− 1.2	− 0.1	− 1.1	+ 0.2	− 9.6	–
July	−	+ 2	− 2.0	+ 8.3	+ 8.5	− 0.4	+ 8.9	− 0.2	− 7.6	− 6.5	− 0.2	− 6.3	− 1.1	− 2.7	–
Aug	−	− 1	− 0.9	− 4.0	− 4.2	+ 2.3	− 6.4	+ 0.2	+ 6.4	+ 6.7	+ 0.2	+ 6.5	− 0.3	− 3.4	–
Sep	−	−	+ 5.2	+ 2.0	+ 2.2	+ 1.4	+ 0.8	− 0.2	+ 1.9	+ 1.3	+ 0.1	+ 1.2	+ 0.6	+ 1.4	–
Oct	−	− 2	− 8.4	− 4.3	− 3.8	− 2.4	− 1.4	− 0.5	− 10.0	− 9.2	− 0.1	− 9.1	− 0.8	+ 5.9	–

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

IV Banks

Deposits									Money *market* paper and debt securities out-stand-ing [5]	Working capital and own funds	Other liabilities [6,7]		Period
	of banks (MFIs)			of non-banks (non-MFIs)									
					German non-banks [4]								
Total	Total	German banks	Foreign banks	Total	Total	Short-term	Medium and long-term	Foreign non-banks			Total	*of which* Derivative financial instruments in the trading portfolio	
End of year or month *												**Foreign branches**	
1,046.7	739.9	416.2	323.7	306.8	20.6	16.1	4.4	286.2	128.4	45.2	705.8	557.5	2014
1,060.9	715.3	359.3	356.0	345.6	21.1	16.2	4.9	324.6	128.9	49.9	603.1	497.4	2015
1,136.5	800.9	424.9	376.0	335.6	15.4	11.8	3.6	320.2	100.6	51.2	585.1	481.0	2016
1,161.3	804.3	417.6	386.7	357.0	15.2	11.7	3.5	341.8	111.2	50.9	553.9	456.6	2017 Jan
1,190.7	816.8	423.2	393.6	373.9	16.5	13.2	3.4	357.4	114.0	51.2	564.0	462.0	Feb
1,197.9	825.3	436.0	389.3	372.6	15.2	11.8	3.4	357.4	106.9	51.6	561.7	448.3	Mar
1,210.4	846.5	422.0	424.5	363.9	15.3	12.0	3.3	348.7	104.7	51.3	565.0	455.4	Apr
1,178.6	830.8	406.4	424.4	347.8	15.5	12.3	3.2	332.2	100.5	50.7	564.3	458.6	May
1,151.2	801.4	424.5	377.0	349.7	14.9	11.6	3.3	334.9	93.4	50.3	533.6	429.5	June
1,105.0	780.2	399.6	380.6	324.7	14.4	11.6	2.8	310.4	97.0	49.8	536.0	434.9	July
1,075.3	739.6	372.0	367.5	335.7	13.8	11.1	2.8	321.8	98.3	49.7	528.9	431.3	Aug
1,094.2	760.6	385.6	375.0	333.6	14.3	11.4	2.9	319.3	95.6	49.2	507.7	401.6	Sep
1,127.3	768.4	379.7	388.7	358.9	14.1	11.4	2.7	344.8	98.4	49.8	513.3	412.8	Oct
Changes *													
– 30.8	– 53.8	– 57.0	+ 3.2	+ 23.0	+ 0.5	+ 0.0	+ 0.4	+ 22.5	– 2.1	+ 4.7	– 124.1	– 65.8	2015
+ 66.8	+ 76.8	+ 65.6	+ 11.2	– 10.1	– 5.7	– 4.4	– 1.2	– 4.4	– 29.6	+ 1.2	– 18.1	– 17.3	2016
+ 24.8	+ 8.0	+ 5.6	+ 2.4	+ 16.8	+ 1.3	+ 1.5	– 0.1	+ 15.4	+ 1.6	+ 0.3	+ 10.2	+ 2.3	2017 Feb
+ 9.9	+ 11.1	+ 12.8	– 1.7	– 1.2	– 1.3	– 1.3	– 0.0	+ 0.1	– 6.4	+ 0.4	– 2.4	– 11.9	Mar
+ 19.0	+ 27.4	– 14.1	+ 41.5	– 8.5	+ 0.1	+ 0.2	– 0.1	– 8.6	– 0.7	– 0.3	+ 3.4	+ 11.1	Apr
– 22.7	– 6.8	– 15.5	+ 8.7	– 15.9	+ 0.3	+ 0.3	– 0.1	– 16.2	– 2.1	– 0.6	– 0.8	+ 8.7	May
– 21.7	– 23.8	+ 18.1	– 41.8	+ 2.1	– 0.7	– 0.7	+ 0.0	+ 2.8	– 5.9	– 0.4	– 30.6	– 25.8	June
– 38.5	– 13.8	– 24.8	+ 11.1	– 24.8	– 0.5	– 0.0	– 0.5	– 24.3	+ 5.3	– 0.5	+ 2.3	+ 10.2	July
– 26.8	– 37.9	– 27.6	– 10.2	+ 11.0	– 0.5	– 0.5	– 0.0	+ 11.6	+ 2.0	– 0.1	– 7.1	– 1.7	Aug
+ 18.1	+ 20.2	+ 13.6	+ 6.6	– 2.1	+ 0.5	+ 0.3	+ 0.2	– 2.6	– 2.8	– 0.5	– 21.2	– 30.7	Sep
+ 29.1	+ 3.9	– 6.0	+ 9.8	+ 25.2	– 0.2	– 0.0	– 0.2	+ 25.4	+ 1.9	+ 0.5	+ 5.6	+ 9.0	Oct
End of year or month *												**Foreign subsidiaries**	
297.1	173.6	101.1	72.5	123.5	20.3	14.5	5.8	103.2	18.4	25.9	48.0	–	2014
292.3	166.7	99.6	67.1	125.7	13.1	10.5	2.6	112.6	14.4	26.3	42.9	–	2015
247.0	134.3	71.8	62.5	112.7	12.2	6.7	5.5	100.5	13.6	23.8	36.0	–	2016
240.0	131.4	70.5	61.0	108.5	12.2	6.8	5.4	96.3	13.5	24.0	36.7	–	2017 Jan
239.3	129.5	70.4	59.1	109.8	13.0	7.6	5.4	96.8	13.9	24.1	38.2	–	Feb
237.1	126.8	68.1	58.6	110.3	13.8	8.4	5.4	96.5	13.8	23.7	35.2	–	Mar
229.6	116.9	57.7	59.1	112.7	12.9	7.2	5.7	99.8	13.8	23.6	36.2	–	Apr
224.9	114.1	55.8	58.3	110.8	13.4	7.7	5.7	97.4	13.7	23.5	33.7	–	May
216.3	105.1	53.8	51.3	111.2	13.4	7.6	5.8	97.8	13.1	23.0	32.8	–	June
213.2	104.2	55.0	49.2	109.0	13.9	8.0	5.9	95.1	13.0	23.0	31.5	–	July
211.8	103.9	56.6	47.3	108.0	13.4	7.7	5.7	94.6	13.0	23.1	31.1	–	Aug
217.0	105.9	58.1	47.9	111.1	12.6	7.1	5.6	98.5	12.9	23.2	31.5	–	Sep
208.6	99.9	53.3	46.7	108.7	11.7	5.9	5.8	97.0	12.9	23.1	32.3	–	Oct
Changes *													
– 12.3	– 11.2	– 1.5	– 9.7	– 1.1	– 7.2	– 4.0	– 3.2	+ 6.1	– 4.0	+ 0.4	– 7.9	–	2015
– 46.2	– 33.5	– 27.8	– 5.7	– 12.7	– 0.9	– 3.8	+ 2.9	– 11.9	– 0.8	– 2.5	– 7.3	–	2016
– 1.6	– 2.5	– 0.1	– 2.4	+ 0.9	+ 0.8	+ 0.8	– 0.0	+ 0.1	+ 0.4	+ 0.1	+ 1.1	–	2017 Feb
– 1.7	– 2.4	– 2.2	– 0.2	+ 0.7	+ 0.7	+ 0.8	– 0.0	– 0.0	– 0.1	– 0.4	– 2.7	–	Mar
– 6.3	– 9.1	– 10.4	+ 1.3	+ 2.8	– 0.9	– 1.2	+ 0.3	+ 3.7	+ 0.0	– 0.1	+ 1.5	–	Apr
– 3.0	– 1.8	– 2.0	+ 0.2	– 1.2	+ 0.5	+ 0.5	+ 0.0	– 1.6	– 0.1	– 0.1	– 1.8	–	May
– 7.7	– 8.4	– 2.0	– 6.4	+ 0.7	– 0.0	– 0.1	+ 0.1	+ 0.7	– 0.6	– 0.5	– 0.6	–	June
– 1.7	– 0.2	+ 1.1	– 1.3	– 1.5	+ 0.5	+ 0.4	+ 0.1	– 2.0	– 0.1	+ 0.0	– 0.3	–	July
– 0.8	+ 0.0	+ 1.6	– 1.6	– 0.8	– 0.5	– 0.3	– 0.2	– 0.3	– 0.0	+ 0.0	– 0.1	–	Aug
+ 4.9	+ 1.9	+ 1.5	+ 0.4	+ 3.0	– 0.7	– 0.6	– 0.1	+ 3.7	– 0.1	+ 0.2	+ 0.3	–	Sep
– 9.0	– 6.4	– 4.8	– 1.6	– 2.7	– 1.0	– 1.2	+ 0.2	– 1.7	– 0.0	– 0.1	+ 0.7	–	Oct

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

V Minimum reserves

1 Reserve maintenance in the euro area

€ billion

Maintenance period beginning in [1]	Reserve base [2]	Required reserves before deduction of lump-sum allowance [3]	Required reserves after deduction of lump-sum allowance [4]	Current accounts [5]	Excess reserves [6]	Deficiencies [7]
2010	10,559.5	211.2	210.7	212.4	1.7	0.0
2011	10,376.3	207.5	207.0	212.3	5.3	0.0
2012	10,648.6	106.5	106.0	489.0	383.0	0.0
2013	10,385.9	103.9	103.4	248.1	144.8	0.0
2014	10,677.3	106.8	106.3	236.3	130.1	0.0
2015	11,375.0	113.8	113.3	557.1	443.8	0.0
2016	11,918.5	119.2	118.8	919.0	800.3	0.0
2017 Oct	.	.	.	.	.	.
Nov	12,326.7	123.3	122.9	1,309.7	1,186.8	0.0
Dec p	12,415.8	124.2	123.8	...	...	...

2 Reserve maintenance in Germany

€ million

Maintenance period beginning in [1]	Reserve base [2]	German share of euro-area reserve base in per cent	Required reserves before deduction of lump-sum allowance [3]	Required reserves after deduction of lump-sum allowance [4]	Current accounts [5]	Excess reserves [6]	Deficiencies [7]
2010	2,530,997	24.0	50,620	50,435	51,336	901	0
2011	2,666,422	25.7	53,328	53,145	54,460	1,315	1
2012	2,874,716	27.0	28,747	28,567	158,174	129,607	1
2013	2,743,933	26.4	27,439	27,262	75,062	47,800	2
2014	2,876,931	26.9	28,769	28,595	75,339	46,744	4
2015	3,137,353	27.6	31,374	31,202	174,361	143,159	0
2016	3,371,095	28.3	33,711	33,546	301,989	268,443	0
2017 Oct	.	.	.	.	.	.	.
Nov	3,457,522	28.0	34,575	34,417	455,804	421,387	0
Dec p	3,456,192	27.8	34,562	34,404	...	...	...

(a) Required reserves of individual categories of banks

€ million

Maintenance period beginning in [1]	Big banks	Regional banks and other commercial banks	Branches of foreign banks	Landesbanken and savings banks	Credit cooperatives	Mortgage banks	Banks with special, development and other central support tasks
2010	10,633	7,949	1,845	18,128	9,153	556	2,170
2011	10,459	8,992	3,078	18,253	9,437	601	2,324
2012 [3]	5,388	4,696	2,477	9,626	4,886	248	1,247
2013	5,189	4,705	1,437	9,306	5,123	239	1,263
2014	5,593	4,966	1,507	9,626	5,375	216	1,312
2015	6,105	5,199	2,012	10,432	5,649	226	1,578
2016	6,384	5,390	2,812	10,905	5,960	236	1,859
2017 Oct	.	.	.	.	.	.	.
Nov	6,227	5,666	3,352	11,088	6,210	138	1,737
Dec	6,366	5,678	3,110	11,163	6,256	132	1,699

(b) Reserve base by subcategories of liabilities

€ million

Maintenance period beginning in [1]	Liabilities (excluding savings deposits, deposits with building and loan associations and repos) to non-MFIs with agreed maturities of up to 2 years	Liabilities (excluding repos and deposits with building and loan associations) with agreed maturities of up to 2 years to MFIs that are resident in euro-area countries but not subject to minimum reserve requirements	Liabilities (excluding repos and deposits with building and loan associations) with agreed maturities of up to 2 years to banks in non-euro-area countries	Savings deposits with agreed periods of notice of up to 2 years	Liabilities arising from bearer debt securities issued with agreed maturities of up to 2 years and bearer money market paper after deduction of a standard amount for bearer debt certificates or deduction of such paper held by the reporting institution
2010	1,484,334	2,376	344,440	594,119	105,728
2011	1,609,904	3,298	354,235	596,833	102,153
2012	1,734,716	2,451	440,306	602,834	94,453
2013	1,795,844	2,213	255,006	600,702	90,159
2014	1,904,200	1,795	282,843	601,390	86,740
2015	2,063,317	1,879	375,891	592,110	104,146
2016	2,203,100	1,595	447,524	585,099	133,776
2017 Oct	.	.	.	.	.
Nov	2,324,352	1,102	428,683	581,651	121,741
Dec	2,338,161	628	415,084	581,416	120,894

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

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

3 Eurosystem monetary policy operations allotted through tenders *

Date of settlement	Bid amount	Allotment amount	Fixed rate tenders: Fixed rate	Variable rate tenders: Minimum bid rate	Variable rate tenders: Marginal rate **1**	Variable rate tenders: Weighted average rate	Running for ... days
	€ million		% per annum				
Main refinancing operations							
2017 Nov 29	4,994	4,994	0.00	–	–	–	7
Dec 6	2,256	2,256	0.00	–	–	–	7
Dec 13	1,919	1,919	0.00	–	–	–	7
Dec 20	3,372	3,372	0.00	–	–	–	14
2018 Jan 3	2,910	2,910	0.00	–	–	–	7
Jan 10	3,007	3,007	0.00	–	–	–	7
Jan 17	2,418	2,418	0.00	–	–	–	7
Long-term refinancing operations							
2017 Oct 26	2,498	2,498	**2** ...	–	–	–	98
Nov 30	2,883	2,883	**2** ...	–	–	–	91
Dec 21	2,367	2,367	**2** ...	–	–	–	98

***** 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 June	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.20	– 0.15
July	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.21	– 0.15
Aug	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.21	– 0.16
Sep	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.17
Oct	– 0.36	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.18
Nov	– 0.35	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19
Dec	– 0.34	– 0.38	– 0.37	– 0.33	– 0.27	– 0.22	– 0.19

***** 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 o

End of month	Households' deposits				Non-financial corporations' deposits			
	with an agreed maturity of							
	up to 2 years		over 2 years		up to 2 years		over 2 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2016 Nov	0.39	74,620	1.49	218,016	0.10	82,888	1.56	19,037
Dec	0.38	74,227	1.48	220,035	0.10	81,192	1.54	19,097
2017 Jan	0.37	73,435	1.46	219,585	0.10	82,672	1.53	19,293
Feb	0.35	73,708	1.45	219,045	0.10	83,514	1.52	19,144
Mar	0.34	73,460	1.44	218,575	0.09	84,520	1.49	19,649
Apr	0.33	72,221	1.42	218,122	0.09	82,082	1.44	20,074
May	0.33	71,503	1.41	217,847	0.08	82,646	1.41	20,471
June	0.33	69,952	1.40	217,154	0.08	80,018	1.35	20,770
July	0.32	69,365	1.39	216,115	0.08	78,396	1.31	21,529
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	66,661	1.34	215,026	0.08	77,665	1.12	24,420

End of month	Housing loans to households 3						Loans for consumption and other purposes to households 4, 5					
	with a maturity of											
	up to 1 year 6		over 1 year and up to 5 years		over 5 years		up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2016 Nov	2.42	4,538	2.13	27,004	3.02	1,087,318	7.17	51,035	4.09	83,826	4.19	311,454
Dec	2.42	4,380	2.11	26,777	2.99	1,090,316	7.18	51,459	4.07	83,809	4.16	310,013
2017 Jan	2.43	4,463	2.10	26,399	2.96	1,090,663	7.21	51,134	4.04	83,791	4.13	310,789
Feb	2.41	4,314	2.09	26,272	2.94	1,093,062	7.24	50,975	4.02	83,726	4.11	311,206
Mar	2.47	4,342	2.07	26,205	2.91	1,097,148	7.32	51,515	4.01	84,063	4.09	311,220
Apr	2.45	4,296	2.05	26,173	2.88	1,102,315	7.10	50,383	3.99	84,268	4.08	310,696
May	2.44	4,356	2.04	26,187	2.85	1,106,601	7.13	50,320	3.96	84,963	4.06	312,176
June	2.44	4,253	2.03	26,205	2.83	1,113,177	7.17	51,412	3.95	85,256	4.04	311,592
July	2.46	4,128	2.01	26,016	2.80	1,118,677	7.15	50,266	3.93	85,648	4.03	312,427
Aug	2.45	4,083	2.00	25,936	2.77	1,123,854	7.17	49,529	3.92	86,101	4.01	313,807
Sep	2.42	3,979	2.00	25,995	2.75	1,129,577	7.12	50,538	3.91	86,330	4.00	313,232
Oct	2.38	4,257	1.99	25,924	2.73	1,133,364	7.14	49,847	3.89	86,778	3.98	313,554
Nov	2.44	3,948	1.98	25,924	2.71	1,137,884	7.00	49,267	3.87	87,491	3.96	313,735

End of month	Loans to non-financial corporations with a maturity of					
	up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2016 Nov	2.54	131,980	2.02	136,298	2.48	620,104
Dec	2.57	125,998	2.01	136,477	2.45	623,831
2017 Jan	2.52	130,773	2.00	136,921	2.42	628,271
Feb	2.55	132,264	1.99	136,362	2.41	631,862
Mar	2.54	132,741	1.98	136,980	2.39	632,484
Apr	2.51	133,262	1.98	137,137	2.37	637,174
May	2.45	133,371	1.97	137,779	2.35	643,570
June	2.51	134,741	1.95	138,252	2.33	639,615
July	2.45	134,305	1.95	138,763	2.31	644,816
Aug	2.44	133,164	1.94	139,374	2.30	648,618
Sep	2.45	137,868	1.93	138,872	2.28	649,416
Oct	2.39	139,478	1.92	139,638	2.26	651,950
Nov	2.42	140,390	1.91	141,195	2.25	657,975

***** The interest rate statistics gathered on a harmonised basis in the euro area from January 2003 are collected in Germany on a sample basis. The MFI interest rate statistics are based on the interest rates applied by MFIs and the related volumes of euro-denominated deposits and loans to households and nonfinancial corporations domiciled in the euro area. The household sector comprises individuals (including sole proprietors) and non-profit institutions serving households. Non-financial corporations include all enterprises other than insurance companies, banks and other financial institutions. The most recent figures are in all cases to be regarded as provisional. Subsequent revisions appearing in the following Monthly Report are not specially marked. Further information on the MFI interest rate statistics can be found on the Bundesbank's website (Statistics / Money and capital markets / Interest rates and yields / Interest rates on deposits and loans). **o** The statistics on outstanding amounts are collected at the end of the month. **1** The effective interest rates are calculated either as annualised agreed interest rates or as narrowly defined effective rates. Both calculation methods cover all interest payments on deposits and loans but not any other related charges which may occur for enquiries, administration, preparation of the documents, guarantees and credit insurance. **2** Data based on monthly balance sheet statistics. **3** Secured and unsecured loans for home purchase, including building and home improvements; including loans granted by building and loan associations and interim credits as well as transmitted loans granted by the reporting agents in their own name and for their own account. **4** Loans for consumption are defined as loans granted for the purpose of personal use in the consumption of goods and services. **5** For the purpose of these statistics, other loans are loans granted for other purposes such as business, debt consolidation, education etc. **6** Including overdrafts (see also footnotes 12 to 14 p 47•).

VI Interest rates

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

Reporting period	Households' deposits											
			with an agreed maturity of						redeemable at notice 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	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2016 Nov	0.07	1,208,967	0.30	5,075	0.58	523	0.77	907	0.24	533,406	0.32	51,649
Dec	0.07	1,220,413	0.23	5,583	0.51	621	0.68	967	0.24	536,031	0.32	51,299
2017 Jan	0.07	1,222,852	0.28	6,002	0.59	715	0.61	999	0.23	536,834	0.31	50,563
Feb	0.06	1,233,193	0.31	4,688	0.47	617	0.70	773	0.22	537,566	0.31	49,971
Mar	0.05	1,233,631	0.26	4,918	0.51	676	0.69	820	0.21	536,136	0.31	49,493
Apr	0.05	1,253,497	0.19	4,926	0.37	729	0.63	741	0.21	536,260	0.31	49,013
May	0.05	1,258,521	0.20	4,724	0.43	719	0.87	726	0.21	536,046	0.30	48,646
June	0.04	1,264,791	0.22	4,078	0.27	947	0.73	633	0.21	535,416	0.30	48,253
July	0.04	1,271,823	0.17	5,276	0.31	653	0.70	617	0.20	537,553	0.31	44,902
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	1,314,677	0.17	4,022	0.39	696	0.72	747	0.18	537,935	0.27	42,074

Reporting period	Non-financial corporations' deposits							
			with an agreed maturity of					
	Overnight		up to 1 year		over 1 year and up to 2 years		over 2 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million
2016 Nov	– 0.00	400,064	– 0.11	13,017	0.24	951	0.39	1,490
Dec	– 0.00	401,493	– 0.12	15,159	0.22	1,205	0.36	538
2017 Jan	– 0.00	400,475	– 0.05	11,356	0.22	754	0.40	314
Feb	– 0.00	397,363	– 0.07	10,802	0.13	631	0.54	336
Mar	– 0.01	395,640	– 0.09	12,614	0.19	450	0.79	309
Apr	– 0.01	397,203	– 0.07	9,275	0.08	899	0.33	1,039
May	– 0.01	401,652	– 0.05	10,212	0.13	912	0.30	837
June	– 0.02	415,078	– 0.14	14,661	0.07	525	0.24	586
July	– 0.01	402,113	– 0.09	11,516	0.19	859	0.26	1,382
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	428,778	– 0.08	9,337	0.09	897	0.22	1,237

Reporting period	Loans to households											
	Loans for consumption with an initial rate fixation of 4											
	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
2016 Nov	5.85	5.83	7,595	7.12	1,674	6.05	316	4.51	3,312	6.91	3,967
Dec	5.69	5.67	6,552	7.06	1,399	6.09	320	4.40	3,026	6.83	3,206
2017 Jan	6.06	6.04	8,603	7.16	1,886	6.15	330	4.59	3,242	6.97	5,031
Feb	5.82	5.80	8,187	6.92	1,619	6.15	273	4.37	3,094	6.69	4,820
Mar	5.62	5.60	9,849	6.88	1,761	6.12	341	4.15	4,041	6.64	5,467
Apr	5.66	5.65	8,222	6.91	1,544	6.17	287	4.32	3,415	6.61	4,520
May	5.89	5.87	9,372	7.22	1,814	6.41	337	4.49	3,846	6.87	5,189
June	5.90	5.88	8,683	7.24	1,685	6.28	308	4.49	3,574	6.89	4,801
July	5.99	5.97	8,940	7.32	1,872	6.22	299	4.57	3,561	6.95	5,080
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	7.09	1,413	6.09	306	4.31	3,827	6.80	4,083

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 +

Reporting period	Loans to households (cont'd)									
	Loans for other purposes to households with an initial rate fixation of 5									
	Total		*of which* renegotiated loans 9		floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million
Loans to households										
2016 Nov	1.92	6,305	1.89	2,070	1.79	3,051	2.71	837	1.81	2,417
Dec	1.93	7,774	1.89	2,343	1.86	3,262	2.61	1,085	1.79	3,427
2017 Jan	1.94	6,698	1.84	2,651	1.78	3,024	2.52	915	1.92	2,759
Feb	1.94	5,484	1.86	1,916	1.69	2,540	2.56	803	1.99	2,141
Mar	2.01	7,097	1.88	2,130	1.80	3,237	2.72	1,032	1.99	2,828
Apr	2.00	6,030	1.86	2,229	1.75	2,826	2.67	853	2.05	2,351
May	2.02	5,890	1.81	1,930	1.83	2,535	2.61	941	1.99	2,414
June	2.06	5,933	1.89	1,852	1.95	2,722	2.73	859	1.93	2,352
July	1.96	6,388	1.75	2,282	1.76	2,873	2.48	964	1.99	2,551
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
of which: **loans to sole proprietors**										
2016 Nov	2.03	4,139	.	.	2.00	1,920	2.78	647	1.76	1,572
Dec	2.01	5,393	.	.	1.98	2,257	2.71	881	1.76	2,255
2017 Jan	1.99	4,694	.	.	1.92	2,084	2.61	712	1.83	1,898
Feb	2.07	3,613	.	.	1.95	1,579	2.75	568	1.93	1,466
Mar	2.11	4,783	.	.	2.01	2,120	2.84	767	1.93	1,896
Apr	2.09	4,280	.	.	1.95	1,931	2.77	670	1.97	1,679
May	2.12	4,033	.	.	2.04	1,667	2.84	689	1.92	1,677
June	2.15	4,197	.	.	2.13	1,964	2.84	681	1.88	1,552
July	2.06	4,142	.	.	1.89	1,917	2.82	688	1.94	1,537
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	3,727	.	.	1.94	1,594	2.80	662	1.88	1,471

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

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

VI Interest rates

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

Reporting period	Loans to households (cont'd)						Loans to non-financial corporations			
	Revolving loans [12] and overdrafts [13] credit card debt [14]		*of which* Revolving loans [12] and overdrafts [13]		*of which* Extended credit card debt		Revolving loans [12] and overdrafts [13] credit card debt [14]		*of which* 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
2016 Nov	8.50	39,342	8.51	31,782	15.13	4,222	3.61	64,064	3.63	63,786
Dec	8.50	40,103	8.54	32,351	15.06	4,286	3.69	61,612	3.71	61,357
2017 Jan	8.55	39,784	8.54	32,190	15.12	4,309	3.61	64,182	3.63	63,925
Feb	8.65	39,345	8.62	31,953	15.14	4,291	3.68	65,697	3.70	65,431
Mar	8.66	40,215	8.61	32,949	15.13	4,273	3.67	65,990	3.68	65,698
Apr	8.50	38,972	8.49	31,353	15.13	4,295	3.64	65,154	3.66	64,865
May	8.46	39,394	8.50	31,647	15.13	4,259	3.53	65,353	3.54	65,067
June	8.44	40,606	8.47	32,739	15.13	4,328	3.59	67,282	3.61	66,992
July	8.45	39,300	8.46	31,374	15.11	4,423	3.52	65,979	3.54	65,695
Aug	8.48	38,663	8.47	30,914	15.12	4,364	3.48	66,012	3.49	65,718
Sep	8.44	39,630	8.48	31,635	15.09	4,393	3.52	67,886	3.54	67,559
Oct	8.47	39,133	8.48	31,101	15.10	4,493	3.41	67,481	3.42	67,162
Nov	8.30	38,664	8.35	30,480	15.11	4,386	3.45	67,826	3.46	67,490

Reporting period	Loans to non-financial corporations (cont'd)															
	Total		*of which* renegotiated loans [9]		Loans up to €1 million with an initial rate fixation of [15] floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 years		Loans over €1 million with an initial rate fixation of [15] floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 years	
	Effective interest rate [1] % pa	Volume [7] € million	Effective interest rate [1] % pa	Volume [7] € million	Effective interest rate [1] % pa	Volume [7] € million	Effective interest rate [1] % pa	Volume [7] € million	Effective interest rate [1] % pa	Volume [7] € million	Effective interest rate [1] % pa	Volume [7] € million	Effective interest rate [1] % pa	Volume [7] € million	Effective interest rate [1] % pa	Volume [7] € million
Total loans																
2016 Nov	1.45	58,860	1.52	15,959	2.48	8,095	2.64	1,497	1.69	1,361	1.16	36,792	1.32	2,628	1.49	8,487
Dec	1.53	78,985	1.63	22,509	2.50	8,638	2.57	1,829	1.77	1,881	1.27	48,315	1.64	3,444	1.62	14,878
2017 Jan	1.33	64,819	1.54	18,857	2.42	8,119	2.60	1,328	1.86	1,423	1.01	43,339	1.40	2,830	1.57	7,780
Feb	1.33	56,958	1.55	13,746	2.55	7,309	2.58	1,326	1.83	1,209	0.99	37,140	1.29	2,001	1.54	7,973
Mar	1.50	71,530	1.60	22,647	2.51	9,245	2.59	1,733	1.85	1,665	1.20	45,163	1.41	2,977	1.67	10,747
Apr	1.43	57,323	1.46	19,903	2.44	7,699	2.54	1,493	1.81	1,371	1.14	38,649	1.41	2,188	1.67	5,923
May	1.35	65,177	1.53	18,706	2.54	8,000	2.58	1,661	1.82	1,423	0.99	41,638	1.55	3,072	1.58	9,383
June	1.41	71,950	1.50	21,083	2.51	8,904	2.57	1,681	1.84	1,442	1.13	46,903	1.08	3,655	1.61	9,365
July	1.39	67,430	1.48	20,770	2.42	8,497	2.57	1,583	1.87	1,403	1.08	43,495	1.28	3,021	1.61	9,431
Aug	1.38	59,046	1.52	13,769	2.39	7,401	2.58	1,441	1.82	1,335	1.08	37,547	1.38	2,627	1.57	8,695
Sep	1.38	66,182	1.52	19,843	2.50	8,124	2.60	1,446	1.86	1,236	1.08	43,731	1.24	2,419	1.63	9,226
Oct	1.35	66,679	1.47	19,173	2.48	8,209	2.59	1,490	1.81	1,214	1.05	45,005	1.25	2,354	1.59	8,407
Nov	1.40	63,108	1.49	16,675	2.50	8,257	2.57	1,582	1.87	1,423	1.09	41,580	1.32	2,565	1.58	7,701
of which: collateralised loans [11]																
2016 Nov	1.49	8,480	.	.	2.00	494	2.41	159	1.57	401	1.29	4,031	2.04	610	1.50	2,785
Dec	1.55	16,083	.	.	1.91	662	2.46	176	1.57	569	1.39	8,076	1.96	1,310	1.62	5,290
2017 Jan	1.57	8,742	.	.	1.80	692	2.24	141	1.81	505	1.41	4,626	2.05	518	1.60	2,260
Feb	1.46	8,259	.	.	2.07	464	2.44	158	1.78	399	1.33	4,051	1.73	512	1.40	2,675
Mar	1.48	11,857	.	.	1.87	643	2.52	166	1.72	493	1.37	7,040	1.30	519	1.60	2,996
Apr	1.42	8,360	.	.	1.81	570	2.23	164	1.69	413	1.29	5,640	1.59	299	1.62	1,274
May	1.61	8,671	.	.	2.06	545	2.54	191	1.70	401	1.45	4,558	2.04	646	1.63	2,330
June	1.55	11,011	.	.	1.85	632	2.60	150	1.75	444	1.44	6,484	1.64	625	1.66	2,676
July	1.52	9,023	.	.	1.78	661	2.46	155	1.77	415	1.34	5,050	1.74	464	1.68	2,278
Aug	1.47	9,188	.	.	1.99	480	2.39	153	1.69	431	1.30	4,961	1.94	560	1.50	2,603
Sep	1.52	9,811	.	.	1.83	535	2.50	132	1.77	351	1.41	5,743	1.64	370	1.62	2,680
Oct	1.46	9,398	.	.	1.90	557	2.61	131	1.77	349	1.25	5,480	2.19	304	1.64	2,577
Nov	1.60	8,531	.	.	1.95	545	2.41	147	1.74	414	1.40	5,212	2.68	423	1.74	1,790

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 statistis, a loan is considered to be secured if collateral (among others financial collateral, real estate collateral, debt securities) in at leat the same value as the loan amount has been posted, pledged or assigned. **12** Including revolving loans which have all the following features: (a) the borrower may use or withdraw the funds to a pre-approved credit limit without giving prior notice to the lender; (b) the amount of available credit can increase and decrease as funds are borrowed and repaid; (c) the loan may be used repeatedly; (d) there is no obligation of regular repayment of funds. **13** Overdrafts are defined as debit balances on current accounts. They include all bank overdrafts regardless of whether they are within or beyond the limits agreed between customers and the bank. **14** Including convenience and extended credit card debt. Convenience credit is defined as the credit granted at an interest rate of 0% in the period between payment transactions effectuated with the card during one billing cycle and the date at which the debt balances from this specific billing cycle become due. **15** The amount category refers to the single loan transaction considered as new business.

VII Insurance corporations and pension funds

1 Assets

€ billion

End of year/quarter	Total	Currency and deposits [2]	Debt securities	Loans [3]	Shares and other equity	Investment funds shares/units	Financial derivatives	Insurance technical reserves	Non-financial assets	Remaining assets
Insurance corporations										
2012	1,694.4	405.1	240.1	251.7	211.4	425.1	6.1	59.0	43.3	52.7
2013	1,742.1	386.3	262.0	257.1	211.1	462.3	6.0	59.8	46.4	51.0
2014	1,892.0	371.6	321.0	271.4	215.9	542.3	6.4	63.9	49.3	50.2
2015	1,954.1	344.4	344.7	278.9	228.7	578.3	4.5	71.9	51.8	50.8
2016 Q1	2,007.8	343.6	374.1	280.2	230.0	596.3	5.2	73.7	53.1	51.7
Q2	2,034.6	336.1	395.8	281.9	229.6	607.7	4.8	73.5	53.2	52.0
2016 Q3 [1]	2,219.7	383.4	396.9	389.6	280.7	604.9	5.3	47.3	31.8	79.7
Q4	2,186.1	361.5	370.9	374.6	308.6	620.1	3.3	44.1	32.4	70.6
2017 Q1	2,189.3	347.1	391.8	364.9	298.6	631.6	2.8	50.4	32.5	69.7
Q2	2,177.9	335.5	392.3	362.3	302.3	641.2	3.1	49.1	32.6	59.6
Q3	2,190.5	322.2	398.9	367.8	308.2	649.9	3.1	49.5	32.7	58.3
Life insurance										
2012	927.6	261.4	120.0	148.0	31.7	299.2	3.0	18.0	26.1	20.1
2013	956.9	247.8	131.4	148.7	31.5	329.1	3.0	17.7	28.3	19.5
2014	1,044.1	237.2	161.2	153.4	32.3	390.3	3.2	17.8	29.7	19.1
2015	1,063.7	219.7	169.8	158.0	34.9	414.6	2.2	16.3	30.7	17.4
2016 Q1	1,095.7	219.1	187.0	159.2	35.3	428.0	2.5	15.6	31.9	17.2
Q2	1,116.7	214.5	201.7	160.7	35.6	438.0	2.4	14.9	32.0	16.9
2016 Q3 [1]	1,247.0	246.6	204.2	243.2	47.5	437.3	4.1	11.3	19.1	33.8
Q4	1,194.2	231.3	182.7	223.0	50.7	453.8	2.1	9.6	19.1	21.9
2017 Q1	1,170.4	217.6	196.1	215.1	38.6	458.6	1.7	8.2	19.1	15.3
Q2	1,172.7	209.4	199.6	215.3	39.3	464.7	2.0	8.0	19.1	15.3
Q3	1,178.6	201.0	203.3	218.0	40.5	471.0	1.9	7.9	19.1	16.0
Non-life insurance										
2012	427.3	130.4	59.9	48.9	40.3	97.7	1.5	24.8	12.3	11.4
2013	448.1	126.0	70.9	51.1	42.8	105.9	1.6	25.1	12.7	12.0
2014	486.4	122.8	89.4	53.9	44.3	122.5	1.8	26.5	13.7	11.5
2015	511.0	113.9	97.6	55.6	48.5	134.8	1.3	32.9	14.5	11.9
2016 Q1	527.6	113.2	108.2	55.5	49.6	140.6	1.5	32.8	14.5	11.8
Q2	532.8	109.4	113.6	55.8	49.3	144.5	1.4	32.8	14.4	11.7
2016 Q3 [1]	592.2	125.0	101.7	94.0	50.9	153.9	0.5	28.7	8.7	29.0
Q4	583.3	118.9	98.5	91.8	56.8	152.0	0.5	26.8	9.0	29.0
2017 Q1	606.5	118.0	105.8	91.4	56.9	156.8	0.3	34.0	9.1	34.2
Q2	603.4	114.5	107.1	90.6	58.5	159.9	0.4	33.2	9.1	30.1
Q3	603.8	109.5	109.2	92.3	59.6	162.7	0.4	32.5	9.2	28.4
Reinsurance [4]										
2012	339.5	13.2	60.2	54.7	139.4	28.2	1.6	16.2	4.8	21.2
2013	337.1	13.3	59.0	57.4	136.8	27.2	1.4	17.1	5.4	19.5
2014	361.4	12.4	69.7	64.1	139.2	29.5	1.4	19.6	5.9	19.6
2015	379.4	10.8	77.3	65.3	145.4	28.9	1.1	22.7	6.5	21.4
2016 Q1	376.0	11.2	78.5	64.0	145.1	27.3	1.1	20.4	6.4	21.9
Q2	373.7	11.9	79.8	62.8	144.8	25.8	1.0	18.8	6.4	22.4
2016 Q3 [1]	380.6	12.0	91.0	52.5	182.3	13.8	0.8	7.3	4.0	16.9
Q4	408.6	11.3	89.7	59.7	201.0	14.3	0.7	7.7	4.3	19.7
2017 Q1	412.5	11.5	89.9	58.4	203.0	16.2	0.8	8.1	4.3	20.2
Q2	401.9	11.6	85.6	56.4	204.4	16.6	0.7	7.9	4.4	14.2
Q3	408.1	11.7	86.3	57.4	208.1	16.2	0.9	9.2	4.4	13.9
Pension funds [5]										
2012	468.4	155.1	40.9	26.2	12.4	194.4	–	4.1	23.8	11.5
2013	494.6	154.3	42.5	27.6	13.0	216.2	–	4.4	25.1	11.7
2014	552.5	151.7	57.1	29.1	16.7	247.8	–	4.9	27.8	17.4
2015	579.5	145.5	60.2	28.8	19.1	268.5	–	5.4	31.5	20.4
2016 Q1	588.8	143.1	66.0	29.0	19.4	273.4	–	5.5	31.9	20.5
Q2	601.7	142.7	69.1	29.2	20.0	281.9	–	5.5	32.5	20.7
Q3	611.6	144.4	69.2	29.3	20.1	289.0	–	5.6	33.2	20.9
Q4	613.5	144.7	67.8	29.8	20.6	288.9	–	5.7	34.5	21.4
2017 Q1	619.9	146.2	66.1	30.3	21.2	293.9	–	5.8	34.9	21.6
Q2	623.7	143.7	69.0	30.7	21.4	295.3	–	6.8	35.3	21.5
Q3	631.6	142.9	71.0	30.8	21.8	301.1	–	6.9	35.5	21.7

1 Data as of 2016 Q3 are based on Solvency II supervisory data, valuation of listed securities at the corresponding consistent price from the ESCB's securities database. Up to and including 2016 Q2 data are based on Solvency I supervisory data from the Federal Financial Supervisory Authority (BaFin), supplemented by estimates and own calculations. **2** Accounts receivable to monetary financial institutions, including registered bonds, borrowers' note loans and registered Pfandbriefe. **3** Including deposits 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 funds reserves [3]	Non-life [4]			
Insurance corporations										
2012	1,694.4	22.4	73.1	152.0	1,280.0	1,009.2	270.8	0.0	69.5	97.4
2013	1,742.1	16.9	77.7	188.7	1,340.7	1,061.4	279.3	0.0	68.8	49.2
2014	1,892.0	17.3	84.3	193.0	1,411.6	1,113.8	297.8	0.0	70.5	115.3
2015	1,954.1	18.3	91.7	214.8	1,474.7	1,160.6	314.1	0.0	70.2	84.4
2016 Q1	2,007.8	17.7	92.9	220.4	1,501.0	1,179.8	321.2	0.0	71.5	104.3
Q2	2,034.6	17.6	93.0	191.1	1,508.4	1,188.4	320.1	0.0	71.6	152.9
2016 Q3 [1]	2,219.7	30.7	73.7	383.0	1,579.3	1,396.7	182.5	1.5	151.4	–
Q4	2,186.1	30.7	70.3	441.0	1,494.4	1,313.3	181.1	2.3	147.5	–
2017 Q1	2,189.3	30.5	57.2	448.5	1,511.7	1,309.5	202.3	1.8	139.5	–
Q2	2,177.9	28.6	57.0	450.7	1,505.2	1,308.3	196.9	2.1	134.3	–
Q3	2,190.5	28.5	58.4	455.4	1,512.8	1,317.0	195.7	2.3	133.2	–
Life insurance										
2012	927.6	0.0	23.1	16.3	814.9	801.2	13.7	0.0	34.9	38.5
2013	956.9	0.0	23.8	20.2	853.2	839.4	13.8	0.0	34.1	25.6
2014	1,044.1	0.0	24.7	21.6	891.8	877.4	14.4	0.0	32.8	73.3
2015	1,063.7	0.0	24.5	24.6	926.0	911.0	15.0	0.0	30.9	57.7
2016 Q1	1,095.7	0.0	26.0	23.6	938.7	923.4	15.2	0.0	30.7	76.8
Q2	1,116.7	0.0	27.8	22.3	943.1	927.8	15.3	0.0	30.2	93.3
2016 Q3 [1]	1,247.0	3.8	25.9	96.0	1,066.2	1,066.2	–	0.7	54.4	–
Q4	1,194.2	4.1	25.0	116.3	993.7	993.7	–	1.2	53.9	–
2017 Q1	1,170.4	4.0	12.5	116.3	991.7	991.7	–	0.9	44.8	–
Q2	1,172.7	4.0	12.1	119.8	989.5	989.5	–	1.0	46.2	–
Q3	1,178.6	4.1	12.3	121.5	993.9	993.9	–	1.1	45.8	–
Non-life insurance										
2012	427.3	0.0	11.5	44.4	329.9	208.0	122.0	0.0	14.9	26.6
2013	448.1	0.0	9.2	55.9	351.6	222.0	129.6	0.0	15.3	16.1
2014	486.4	0.0	10.5	58.2	369.8	236.5	133.4	0.0	15.6	32.3
2015	511.0	0.0	14.2	63.7	390.5	249.6	140.9	0.0	17.1	25.5
2016 Q1	527.6	0.0	14.6	62.0	399.6	253.8	145.9	0.0	17.5	33.9
Q2	532.8	0.0	14.5	57.7	401.6	256.8	144.9	0.0	17.2	41.9
2016 Q3 [1]	592.2	0.9	6.6	120.0	407.4	310.1	97.3	0.0	57.3	–
Q4	583.3	1.1	6.3	130.4	390.1	300.4	89.7	0.2	55.3	–
2017 Q1	606.5	1.1	7.3	134.0	408.9	300.7	108.2	0.1	55.0	–
Q2	603.4	1.1	6.8	135.6	406.7	302.4	104.3	0.1	53.0	–
Q3	603.8	1.1	6.9	137.3	406.6	305.7	100.9	0.1	51.9	–
Reinsurance [5]										
2012	339.5	22.4	38.5	91.3	135.1	–	135.1	0.0	19.8	32.4
2013	337.1	16.9	44.7	112.7	135.9	–	135.9	0.0	19.4	7.5
2014	361.4	17.3	49.1	113.3	150.0	–	150.0	0.0	22.1	9.6
2015	379.4	18.3	53.0	124.8	158.2	–	158.2	0.0	22.2	2.8
2016 Q1	376.0	17.7	52.5	118.3	157.3	–	157.3	0.0	22.5	7.7
Q2	373.7	17.6	51.7	111.2	156.6	–	156.6	0.0	22.9	13.6
2016 Q3 [1]	380.6	26.0	41.3	167.0	105.8	20.5	85.3	0.8	39.8	–
Q4	408.6	25.5	39.0	194.3	110.5	19.1	91.4	0.9	38.3	–
2017 Q1	412.5	25.3	37.4	198.2	111.1	17.0	94.1	0.8	39.7	–
Q2	401.9	23.5	38.1	195.2	109.1	16.4	92.6	1.1	35.0	–
Q3	408.1	23.3	39.3	196.6	112.3	17.5	94.8	1.1	35.6	–
Pension funds [6]										
2012	468.4	–	4.1	6.9	428.3	427.9	0.4	–	1.8	27.3
2013	494.6	–	4.2	8.9	453.4	452.9	0.5	–	2.9	25.3
2014	552.5	–	4.7	9.7	492.1	491.6	0.5	–	1.8	44.2
2015	579.5	–	4.9	11.3	518.3	517.9	0.4	–	6.1	38.9
2016 Q1	588.8	–	5.0	11.4	522.7	522.2	0.5	–	5.8	44.1
Q2	601.7	–	5.0	10.0	529.6	529.1	0.5	–	5.8	51.3
Q3	611.6	–	5.1	10.3	535.2	535.2	–	–	5.8	55.3
Q4	613.5	–	5.2	11.3	544.7	544.7	–	–	6.0	46.4
2017 Q1	619.9	–	5.2	11.9	552.4	552.4	–	–	6.0	44.3
Q2	623.7	–	6.1	11.6	554.3	554.3	–	–	6.2	45.5
Q3	631.6	–	6.1	12.0	559.9	559.9	–	–	6.2	47.4

1 Data as of 2016 Q3 are based on Solvency II supervisory data. Up to and including 2016 Q2 data are based on Solvency I supervisory data from the Federal Financial Supervisory Authority (BaFin), supplemented by estimates and own calculations. **2** Including deposits retained on ceded business as well as registered bonds, borrowers' note loans and registered Pfandbriefe. **3** As of 2016 Q3 insurance technical reserves "life" pursuant to Solvency II taking account of transitional measures. Up to and including 2016 Q2: Long-term net equity of households in life insurance (including ageing provisions of health insurance schemes and premium reserves of accident insurance schemes with guaranteed premium refund) and pension fund reserves pursuant to ESA 1995. **4** As of 2016 Q3 insurance technical reserves "non-life" pursuant to Solvency II. Up to and including 2016 Q2 unearned premiums and reserves for outstanding claims pursuant to ESA 1995. **5** Not including the reinsurance business conducted by primary insurers, which is included there. **6** The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes and occupational pension schemes for the self-employed. Social security funds are not included. **7** Own funds correspond to the sum of net worth and the liability item „Shares and other equity".

VIII Capital market

1 Sales and purchases of debt securities and shares in Germany

€ million

Period	Debt securities											
		Sales					Purchases					
		Domestic debt securities [1]					Residents					
	Sales = total purchases	Total	Bank debt securities	Corporate bonds (non-MFIs) [2]	Public debt securities [3]	Foreign debt securities [4]	Total [5]	Credit institutions including building and loan associations [6]	Deutsche Bundesbank	Other sectors [7]	Non-residents [8]
2005	252,658	110,542	39,898	2,682	67,965	142,116	94,718	61,740	.	32,978	157,940
2006	242,006	102,379	40,995	8,943	52,446	139,627	125,423	68,893	.	56,530	116,583
2007	217,798	90,270	42,034	20,123	28,111	127,528	– 26,762	96,476	.	– 123,238	244,560
2008	76,490	66,139	– 45,712	86,527	25,322	10,351	18,236	68,049	.	– 49,813	58,254
2009	70,208	– 538	– 114,902	22,709	91,655	70,747	90,154	12,973	8,645	77,181	– 19,945
2010	146,620	– 1,212	– 7,621	24,044	– 17,635	147,831	92,682	– 103,271	22,967	172,986	53,938
2011	33,649	13,575	– 46,796	850	59,521	20,075	– 23,876	– 94,793	36,805	34,112	57,526
2012	51,813	– 21,419	– 98,820	– 8,701	86,103	73,231	– 3,767	– 42,017	– 3,573	41,823	55,580
2013	– 15,969	– 101,616	– 117,187	153	15,415	85,646	16,409	– 25,778	– 12,708	54,895	– 32,380
2014	64,027	– 31,962	– 47,404	– 1,330	16,776	95,988	53,068	– 12,124	– 11,951	77,143	10,961
2015	31,809	– 36,010	– 65,778	26,762	3,006	67,819	123,820	– 66,330	121,164	68,986	– 92,012
2016	69,798	27,069	19,177	17,905	– 10,012	42,728	173,193	– 58,012	187,500	43,705	– 103,395
2017 Jan	24,212	22,588	12,008	4,673	5,908	1,624	20,521	– 7,443	18,146	9,818	3,692
Feb	4,188	– 2,177	12,413	1,756	– 16,346	6,365	21,814	– 5,044	16,715	10,143	– 17,626
Mar	9,225	8,713	1,179	– 131	7,665	512	17,676	– 8,293	17,769	8,200	– 8,451
Apr	– 12,590	– 15,170	– 5,909	– 276	– 8,985	2,580	3,520	– 5,737	12,817	– 3,560	– 16,110
May	39,706	28,463	10,800	1,096	16,567	11,243	17,325	3,906	12,751	668	22,381
June	3,582	– 1,090	2,876	– 5,769	1,802	4,672	10,890	– 11,745	12,871	9,764	– 7,309
July	– 7,719	– 17,251	– 7,196	8,174	– 18,228	9,532	9,807	– 6,471	11,565	4,713	– 17,526
Aug	13,913	12,771	– 1,814	– 1,581	16,166	1,143	7,547	– 8,730	9,902	6,375	6,366
Sep	– 13,841	– 18,254	– 8,577	– 3,456	– 6,221	4,413	1,397	– 8,357	12,865	– 3,111	– 15,238
Oct	– 12,039	– 10,152	– 9,775	– 2,760	2,383	– 1,887	9,522	– 4,841	12,199	2,164	– 21,561
Nov	27,268	22,066	893	6,338	14,835	5,202	22,889	3,359	13,355	6,175	4,378

€ million

Period	Shares						
		Sales		Purchases			
				Residents			
	Sales = total purchases	Domestic shares [9]	Foreign shares [10]	Total [11]	Credit institutions [6]	Other sectors [12]	Non-residents [13]
2005	32,364	13,766	18,597	1,036	10,208	– 9,172	31,329
2006	26,276	9,061	17,214	7,528	11,323	– 3,795	18,748
2007	– 5,009	10,053	– 15,062	– 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	39,903	18,778	21,125	34,148	17,203	16,945	5,755
2015	40,293	7,668	32,625	26,058	– 5,421	31,479	14,235
2016	33,504	4,409	29,095	32,324	– 5,143	37,467	1,180
2017 Jan	2,154	148	2,006	1,369	– 247	1,616	785
Feb	2,436	852	1,584	2,985	1,866	1,119	– 549
Mar	13,985	10,136	3,849	11,531	506	11,025	2,454
Apr	– 1,261	95	– 1,356	– 3,599	– 2,589	– 1,010	2,338
May	3,434	107	3,327	2,137	475	1,662	1,297
June	– 5,794	920	– 6,714	64	5,220	– 5,156	– 5,858
July	2,728	509	2,219	3,894	– 690	4,584	– 1,166
Aug	2,241	155	2,086	4,758	– 603	5,361	– 2,517
Sep	5,522	1,482	4,040	4,101	– 1,738	5,839	1,421
Oct	2,355	572	1,783	– 428	735	– 1,163	2,783
Nov	1,797	110	1,687	2,591	1,198	1,393	– 794

1 Net sales at market values plus/minus changes in issuers' portfolios of their own debt securities. **2** Including cross-border financing within groups from January 2011. **3** Including Federal Railways Fund, Federal Post Office and Treuhand agency. **4** Net purchases or net sales (–) of foreign debt securities by residents; transaction values. **5** Domestic and foreign debt securities. **6** Book values; statistically adjusted. **7** Residual; also including purchases of domestic and foreign securities by domestic mutual funds. Up to end-2008, data comprise Deutsche Bundesbank. **8** Net purchases or net sales (–) of domestic debt securities by non-residents; transaction values. **9** Excluding shares of public limited investment companies; at issue prices. **10** Net purchases or net sales (–) of foreign shares (including direct investment) by residents; transaction values. **11** Domestic and foreign shares. **12** Residual; also including purchases of domestic and foreign securities by domestic mutual funds. **13** Net purchases or net sales (–) of domestic shares (including direct investment) by non-residents; transaction values. — The figures for the most recent date are provisional; revisions are not specially marked.

VIII Capital market

2 Sales of debt securities issued by residents *

€ million nominal value

Period	Total	Bank debt securities [1]					Corporate bonds (non-MFIs) [2]	Public debt securities [3]
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions	Other bank debt securities		
	Gross sales [4]							
2005	988,911	692,182	28,217	103,984	160,010	399,969	24,352	272,380
2006	925,863	622,055	24,483	99,628	139,193	358,750	29,975	273,834
2007	1,021,533	743,616	19,211	82,720	195,722	445,963	15,043	262,872
2008	1,337,337	961,271	51,259	70,520	382,814	456,676	95,093	280,974
2009	1,533,616	1,058,815	40,421	37,615	331,566	649,215	76,379	398,423
2010	1,375,138	757,754	36,226	33,539	363,828	324,160	53,654	563,731
2011	1,337,772	658,781	31,431	24,295	376,876	226,180	86,615	592,376
2012	1,340,568	702,781	36,593	11,413	446,153	208,623	63,259	574,529
2013	1,433,628	908,107	25,775	12,963	692,611	176,758	66,630	458,891
2014	1,362,056	829,864	24,202	13,016	620,409	172,236	79,873	452,321
2015	1,359,422	852,045	35,840	13,376	581,410	221,417	106,676	400,700
2016 [5]	1,206,483	717,002	29,059	7,621	511,222	169,103	73,370	416,110
2017 Apr	87,097	55,296	2,170	58	45,233	7,836	2,707	29,094
May	88,568	55,536	1,700	238	41,685	11,913	5,015	28,016
June	73,438	42,842	5,005	364	25,324	12,148	4,284	26,312
July	81,160	47,165	292	562	38,013	8,298	11,105	22,889
Aug	83,236	47,675	2,476	20	36,804	8,374	1,462	34,100
Sep	80,958	48,059	1,940	76	34,328	11,716	3,712	29,186
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
	***of which:* Debt securities with maturities of more than four years [6]**							
2005	425,523	277,686	20,862	63,851	49,842	143,129	16,360	131,479
2006	337,969	190,836	17,267	47,814	47,000	78,756	14,422	132,711
2007	315,418	183,660	10,183	31,331	50,563	91,586	13,100	118,659
2008	387,516	190,698	13,186	31,393	54,834	91,289	84,410	112,407
2009	361,999	185,575	20,235	20,490	59,809	85,043	55,240	121,185
2010	381,687	169,174	15,469	15,139	72,796	65,769	34,649	177,863
2011	368,039	153,309	13,142	8,500	72,985	58,684	41,299	173,431
2012	421,018	177,086	23,374	6,482	74,386	72,845	44,042	199,888
2013	372,805	151,797	16,482	10,007	60,662	64,646	45,244	175,765
2014	420,006	157,720	17,678	8,904	61,674	69,462	56,249	206,037
2015	414,593	179,150	25,337	9,199	62,237	82,379	68,704	166,742
2016 [5]	375,859	173,900	24,741	5,841	78,859	64,460	47,818	154,144
2017 Apr	27,201	15,693	2,055	23	11,781	1,834	1,547	9,962
May	29,215	12,669	1,165	136	6,045	5,322	3,142	13,404
June	24,255	10,611	3,011	54	3,390	4,156	1,784	11,860
July	31,503	12,687	111	62	9,523	2,991	7,388	11,428
Aug	24,629	10,217	2,245	20	5,283	2,670	521	13,890
Sep	26,426	13,324	1,395	24	8,649	3,256	2,765	10,337
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
	Net sales [7]							
2005	141,715	65,798	– 2,151	– 34,255	37,242	64,962	10,099	65,819
2006	129,423	58,336	– 12,811	– 20,150	44,890	46,410	15,605	55,482
2007	86,579	58,168	– 10,896	– 46,629	42,567	73,127	– 3,683	32,093
2008	119,472	8,517	15,052	– 65,773	25,165	34,074	82,653	28,302
2009	76,441	– 75,554	858	– 80,646	25,579	– 21,345	48,508	103,482
2010	21,566	– 87,646	– 3,754	– 63,368	28,296	– 48,822	23,748	85,464
2011	22,518	– 54,582	1,657	– 44,290	32,904	– 44,852	– 3,189	80,289
2012	– 85,298	– 100,198	– 4,177	– 41,660	– 3,259	– 51,099	– 6,401	21,298
2013	– 140,017	– 125,932	– 17,364	– 37,778	– 4,027	– 66,760	1,394	– 15,479
2014	– 34,020	– 56,899	– 6,313	– 23,856	– 862	– 25,869	10,497	12,383
2015	– 65,147	– 77,273	9,271	– 9,754	– 2,758	– 74,028	25,300	– 13,174
2016 [5]	21,951	10,792	2,176	– 12,979	16,266	5,327	18,177	– 7,020
2017 Apr	– 15,906	– 5,239	1,191	– 1,613	– 1,034	– 3,781	– 1,836	– 8,832
May	26,524	10,344	– 1,329	– 1,105	13,027	– 250	– 226	16,406
June	– 6,370	1,035	2,036	– 245	4,667	– 5,423	– 2,704	– 4,701
July	– 12,190	– 6,664	– 2,176	209	– 1,958	– 2,738	8,539	– 14,065
Aug	13,424	– 1,646	975	– 94	2,334	– 4,861	– 934	16,004
Sep	– 11,050	– 6,065	– 749	– 1,959	779	– 4,137	– 1,796	– 3,189
Oct	– 1,501	179	1,342	229	– 1,165	– 227	– 1,952	272
Nov	22,681	– 24	444	123	– 1,471	880	6,842	15,863

***** For definitions, see the explanatory notes in the Statistical Supplement 2 Capital market statistics on p 21 ff. **1** Excluding registered bank debt securities. **2** Including cross-border financing within groups from January 2011. **3** Including Federal Railways Fund, Federal Post Office and Treuhand agency. **4** Gross sales means only initial sales of newly issued securities. **5** Sectoral reclassification of debt securities. e. **6** Maximum maturity according to the terms of issue. **7** Gross sales less redemptions.

VIII Capital market

3 Amounts outstanding of debt securities issued by residents *

€ million nominal value

End of year or month/ Maturity in years	Total	Bank debt securities					Corporate bonds (non-MFIs)	Public debt securities
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions	Other bank debt securities		
2005	2,914,723	1,751,563	157,209	519,674	323,587	751,093	83,942	1,079,218
2006	3,044,145	1,809,899	144,397	499,525	368,476	797,502	99,545	1,134,701
2007	3,130,723	1,868,066	133,501	452,896	411,041	870,629	95,863	1,166,794
2008	3,250,195	1,876,583	150,302	377,091	490,641	858,550	178,515	1,195,097
2009	3,326,635	1,801,029	151,160	296,445	516,221	837,203	227,024	1,298,581
2010	3,348,201	1 1,570,490	147,529	232,954	544,517	1 645,491	250,774	1 1,526,937
2011	3,370,721	1,515,911	149,185	188,663	577,423	600,640	247,585	1,607,226
2012	3,285,422	1 1,414,349	145,007	147,070	574,163	1 548,109	1 220,456	1 1,650,617
2013	3,145,329	1,288,340	127,641	109,290	570,136	481,273	221,851	1,635,138
2014	3,111,308	1,231,445	121,328	85,434	569,409	455,274	232,342	1,647,520
2015	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377
2016 1	3,068,111	1,164,965	132,775	62,701	633,578	335,910	275,789	1,627,358
2017 May	3,093,988	1,200,928	140,768	60,069	657,153	342,938	275,091	1,617,969
June	3,087,618	1,201,963	142,804	59,824	661,820	337,515	272,387	1,613,268
July	3,075,428	1,195,300	140,628	60,033	659,861	334,777	280,925	1,599,203
Aug	3,088,852	1,193,654	141,603	59,939	662,196	329,917	279,992	1,615,207
Sep	3,097,730	1,187,589	140,854	57,980	662,975	325,780	2 298,123	1,612,018
Oct	3,096,229	1,187,768	142,196	58,210	661,809	325,553	296,171	1,612,290
Nov	3,118,910	1,187,744	142,640	58,333	660,338	326,433	303,012	1,628,153
Breakdown by remaining period to maturity 3							**Position at end-November 2017**	
less than 2	1,027,058	457,222	42,654	23,817	278,881	111,870	57,324	512,511
2 to less than 4	667,968	280,105	32,758	13,160	157,695	76,494	55,644	332,219
4 to less than 6	437,329	170,659	28,726	8,361	88,353	45,218	38,777	227,891
6 to less than 8	315,786	113,940	19,676	6,004	62,170	26,088	31,329	170,517
8 to less than 10	235,802	76,394	14,967	4,258	34,776	22,394	12,120	147,288
10 to less than 15	131,463	37,760	2,839	1,243	19,077	14,600	23,244	70,459
15 to less than 20	83,200	17,979	299	1,241	13,005	3,435	8,774	56,447
20 and more	220,306	33,685	723	250	6,380	26,333	75,798	110,822

***** 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 capitalisation) level at end of period under review 2
			cash payments and exchange of convertible bonds 1	issue of bonus shares	contribution of claims and other real assets	contribution of shares, GmbH shares, etc	merger and transfer of assets	change of legal form	reduction of capital and liquidation	
2005	163,071	– 1,733	2,470	1,040	694	268	– 1,443	– 3,060	– 1,703	1,058,532
2006	163,764	695	2,670	3,347	604	954	– 1,868	– 1,256	– 3,761	1,279,638
2007	164,560	799	3,164	1,322	200	269	– 682	– 1,847	– 1,636	1,481,930
2008	168,701	4,142	5,006	1,319	152	0	– 428	– 608	– 1,306	830,622
2009	175,691	6,989	12,476	398	97	–	– 3,741	– 1,269	– 974	927,256
2010	174,596	– 1,096	3,265	497	178	10	– 486	– 993	– 3,569	1,091,220
2011	177,167	2,570	6,390	552	462	9	– 552	– 762	– 3,532	924,214
2012	178,617	1,449	3,046	129	570	–	– 478	594	– 2,411	1,150,188
2013	171,741	– 6,879	2,971	718	476	–	– 1,432	– 619	– 8,992	1,432,658
2014	177,097	5,356	5,332	1,265	1,714	–	– 465	– 1,044	– 1,446	1,478,063
2015	177,416	319	4,634	397	599	–	– 1,394	– 1,385	– 2,535	1,614,442
2016	176,355	– 1,062	3,272	319	337	–	– 953	– 2,165	– 1,865	1,676,397
2017 May	178,326	– 2	78	48	50	–	0	– 17	– 162	1,845,930
June	178,620	294	64	202	218	–	0	– 6	– 184	1,811,817
July	179,467	847	493	485	8	–	3	– 18	– 125	1,800,324
Aug	179,207	– 260	155	2	6	–	– 167	– 173	– 83	1,787,670
Sep	179,448	241	165	18	119	–	– 13	– 7	– 41	1,888,218
Oct	179,294	– 154	230	0	121	–	– 1	– 1	– 504	1,957,699
Nov	179,426	132	109	–	–	–	0	58	– 35	1,947,204

***** 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.

VIII Capital market

5 Yields and indices on German securities

Period	Yields on debt securities outstanding issued by residents [1]							Price indices [2,3]			
		Public debt securities			Bank debt securities			Debt securities		Shares	
	Total	Total	Listed Federal securities		Total	With a residual maturity of more than 9 and including 10 years	Corporate bonds (non-MFIs)	German bond index (REX)	iBoxx € Germany price index	CDAX share price index	German share index (DAX)
			Total	With a residual maturity of 9 and including 10 years [4]							
	% per annum							Average daily rate	End-1998 = 100	End-1987 = 100	End-1987 = 1000
2005	3.1	3.2	3.2	3.4	3.1	3.5	3.7	120.92	101.09	335.59	5,408.26
2006	3.8	3.7	3.7	3.8	3.8	4.0	4.2	116.78	96.69	407.16	6,596.92
2007	4.3	4.3	4.2	4.2	4.4	4.5	5.0	114.85	94.62	478.65	8,067.32
2008	4.2	4.0	4.0	4.0	4.5	4.7	6.3	121.68	102.06	266.33	4,810.20
2009	3.2	3.1	3.0	3.2	3.5	4.0	5.5	123.62	100.12	320.32	5,957.43
2010	2.5	2.4	2.4	2.7	2.7	3.3	4.0	124.96	102.95	368.72	6,914.19
2011	2.6	2.4	2.4	2.6	2.9	3.5	4.3	131.48	109.53	304.60	5,898.35
2012	1.4	1.3	1.3	1.5	1.6	2.1	3.7	135.11	111.18	380.03	7,612.39
2013	1.4	1.3	1.3	1.6	1.3	2.1	3.4	132.11	105.92	466.53	9,552.16
2014	1.0	1.0	1.0	1.2	0.9	1.7	3.0	139.68	114.37	468.39	9,805.55
2015	0.5	0.4	0.4	0.5	0.5	1.2	2.4	139.52	112.42	508.80	10,743.01
2016	0.1	0.0	0.0	0.1	0.3	1.0	2.1	142.50	112.72	526.55	11,481.06
2017	0.3	0.2	0.2	0.3	0.4	0.9	1.7	140.53	109.03	595.45	12,917.64
2017 July	0.4	0.3	0.3	0.5	0.5	1.0	1.7	140.78	108.71	552.08	12,118.25
Aug	0.3	0.2	0.2	0.4	0.4	0.9	1.6	141.85	110.01	551.25	12,055.84
Sep	0.3	0.2	0.2	0.4	0.4	0.9	1.7	141.21	109.06	585.63	12,828.86
Oct	0.3	0.3	0.2	0.4	0.4	0.9	1.6	141.63	109.70	603.37	13,229.57
Nov	0.3	0.2	0.2	0.3	0.4	0.8	1.6	141.23	109.62	597.74	13,023.98
Dec	0.3	0.2	0.2	0.3	0.4	0.8	1.7	140.53	109.03	595.45	12,917.64

1 Bearer debt securities with maximum maturities according to the terms of issue of over 4 years if their mean residual maturities exceed 3 years. Convertible debt securities, etc. debt securities with unscheduled redemption, zero-coupon bonds, floating-rate notes and bonds not denominated in euro are not included. Group yields for the various categories of securities are weighted by the amounts outstanding of the debt securities included in the calculation. Monthly figures are calculated on the basis of the yields on all the business days in a month. The annual figures are the unweighted means of the monthly figures. **2** End of year or month. **3** Source: Deutsche Börse AG. **4** Only debt securities eligible as underlying instruments for futures contracts; calculated as unweighted averages.

6 Sales and purchases of mutual fund shares in Germany

€ million

Period	Sales	Sales						Purchases					
		Open-end domestic mutual funds [1] (sales receipts)						Residents					
			Mutual funds open to the general public						Credit institutions including building and loan associations [2]		Other sectors [3]		
				of which									
	Sales = total purchases	Total	Total	Money market funds	Securities-based funds	Real estate funds	Specialised funds	Foreign funds [4]	Total	Total	*of which* Foreign mutual fund shares	Total	*of which* Foreign mutual fund shares	Non-residents [5]
2006	47,264	19,535	– 14,257	490	– 9,362	– 8,814	33,791	27,729	39,006	14,676	5,221	24,330	22,508	8,258
2007	55,778	13,436	– 7,872	– 4,839	– 12,848	6,840	21,307	42,342	51,309	– 229	4,240	51,538	38,102	4,469
2008	2,598	– 7,911	– 14,409	– 12,171	– 11,149	799	6,498	10,509	11,315	– 16,625	– 9,252	27,940	19,761	– 8,717
2009	49,929	43,747	10,966	– 5,047	11,749	2,686	32,780	6,182	38,132	– 14,995	– 8,178	53,127	14,361	11,796
2010	106,190	84,906	13,381	– 148	8,683	1,897	71,345	21,284	102,591	3,873	6,290	98,718	14,994	3,598
2011	46,512	45,221	– 1,340	– 379	– 2,037	1,562	46,561	1,291	39,474	– 7,576	– 694	47,050	1,984	7,036
2012	111,236	89,942	2,084	– 1,036	97	3,450	87,859	21,293	114,676	– 3,062	– 1,562	117,738	22,855	– 3,438
2013	123,736	91,337	9,184	– 574	5,596	3,376	82,153	32,400	117,028	771	100	116,257	32,300	6,709
2014	139,768	97,711	3,998	– 473	862	1,000	93,713	42,057	143,560	819	– 1,745	142,741	43,802	– 3,790
2015	180,762	146,136	30,420	318	22,345	3,636	115,716	34,626	173,417	7,362	494	166,055	34,131	7,345
2016	155,955	119,369	21,301	– 342	11,131	7,384	98,068	36,586	162,883	2,877	– 3,172	160,006	39,757	– 6,928
2017 May	6,140	5,658	3,113	– 12	2,492	238	2,545	481	5,515	422	250	5,093	231	625
June	4,858	4,745	1,831	66	874	488	2,915	113	5,512	556	662	4,956	– 549	– 654
July	14,039	9,699	4,537	– 35	4,033	353	5,162	4,340	13,152	545	230	12,607	4,110	887
Aug	9,664	6,458	408	238	1,450	– 1,493	6,050	3,206	9,686	517	– 47	9,169	3,253	– 22
Sep	6,275	3,246	3,996	31	2,849	709	– 750	3,029	6,499	102	– 224	6,397	3,253	– 224
Oct	18,167	10,973	906	– 285	501	322	10,068	7,194	17,151	414	– 176	16,737	7,370	1,016
Nov	10,789	8,591	2,614	11	2,316	256	5,978	2,198	15,638	– 43	– 285	15,681	2,483	– 4,849

1 Including public limited investment companies. **2** Book values. **3** Residual. **4** Net purchases or net sales (–) of foreign fund shares by residents; transaction values. **5** Net purchases or net sales (–) of domestic fund shares by non-residents; transaction values. — The figures for the most recent date are provisional; revisions are not specially marked.

IX Financial accounts

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

€ billion

Item	2014	2015	2016	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3
Acquisition of financial assets									
Currency and deposits	– 1.62	30.58	40.13	8.80	23.65	– 1.11	6.81	19.49	2.89
Debt securities	– 5.38	– 0.93	– 3.22	– 3.32	0.17	– 0.94	– 0.89	– 0.76	– 1.08
short-term debt securities	1.62	– 0.77	– 0.57	– 0.70	– 0.02	– 0.82	0.23	– 1.89	– 0.26
long-term debt securities	– 7.00	– 0.15	– 2.65	– 2.62	0.19	– 0.11	– 1.13	1.13	– 0.81
Memo item									
Debt securities of domestic sectors	– 1.88	0.73	– 2.60	– 2.54	– 0.04	– 0.52	– 0.52	– 0.06	– 1.08
Non-financial corporations	– 0.05	– 0.79	0.69	– 0.12	0.01	0.15	0.85	– 0.71	– 0.59
Financial corporations	– 1.26	1.93	– 2.49	– 1.80	– 0.53	– 0.47	– 0.34	0.64	– 0.11
General government	– 0.57	– 0.41	– 0.81	– 0.62	0.47	– 0.20	– 1.03	0.01	– 0.37
Debt securities of the rest of the world	– 3.50	– 1.66	– 0.62	– 0.78	0.21	– 0.41	– 0.38	– 0.71	– 0.00
Loans	18.48	27.12	12.62	– 6.83	0.18	13.86	28.72	4.64	2.13
short-term loans	33.19	25.81	8.63	– 1.52	– 3.94	13.62	17.82	– 0.63	– 0.49
long-term loans	– 14.71	1.31	3.99	– 5.31	4.11	0.24	10.90	5.27	2.62
Memo item									
to domestic sectors	14.11	8.90	– 1.44	– 5.36	– 2.10	1.40	10.74	– 1.20	– 2.48
Non-financial corporations	– 0.42	0.84	– 6.06	– 11.07	– 1.74	0.57	2.75	2.51	– 0.52
Financial corporations	14.46	7.88	4.47	5.67	– 0.40	0.78	7.99	– 3.71	– 1.96
General government	0.08	0.18	0.15	0.04	0.04	0.04	0.00	0.00	0.00
to the rest of the world	4.37	18.22	14.06	– 1.47	2.28	12.47	17.98	5.84	4.61
Equity and investment fund shares	– 1.85	44.57	60.08	3.70	12.11	34.87	16.26	– 2.42	19.00
Equity	8.53	28.23	54.26	4.45	8.03	32.83	17.51	– 0.24	16.70
Listed shares of domestic sectors	– 1.62	– 10.41	20.66	– 0.77	6.72	20.70	– 5.54	– 2.10	1.85
Non-financial corporations	– 5.39	– 8.04	20.34	– 0.94	6.83	20.62	– 5.45	– 2.26	1.89
Financial corporations	3.78	– 2.37	0.31	0.17	– 0.11	0.08	– 0.09	0.16	– 0.04
Listed shares of the rest of the world	– 4.85	12.45	10.13	– 0.59	1.37	8.69	3.23	11.72	– 6.00
Other equity [1]	14.99	26.19	23.47	5.81	– 0.07	3.44	19.83	– 9.86	20.85
Investment fund shares	– 10.38	16.35	5.82	– 0.75	4.08	2.04	– 1.25	– 2.18	2.29
Money market fund shares	0.23	0.21	0.36	– 0.10	– 0.03	0.79	– 0.28	0.00	– 1.07
Non-MMF investment fund shares	– 10.61	16.13	5.46	– 0.65	4.11	1.25	– 0.97	– 2.18	3.37
Insurance technical reserves	– 0.06	2.97	1.09	0.35	0.29	0.29	0.06	0.52	0.45
Financial derivatives	– 1.23	0.56	4.93	0.84	– 1.08	7.25	0.08	2.35	3.30
Other accounts receivable	– 78.98	28.63	– 1.44	– 4.03	– 3.39	– 3.56	79.72	– 22.21	23.80
Total	– 70.63	133.50	114.18	– 0.50	31.92	50.67	130.75	1.61	50.49
External financing									
Debt securities	1.26	7.78	23.71	4.60	2.88	5.82	7.57	– 0.52	0.96
short-term securities	– 11.63	1.96	– 0.15	0.18	– 0.57	– 1.79	5.47	– 0.42	– 2.62
long-term securities	12.89	5.82	23.85	4.43	3.45	7.61	2.11	– 0.10	3.58
Memo item									
Debt securities of domestic sectors	4.27	1.77	10.93	1.27	1.59	3.10	3.35	1.28	0.57
Non-financial corporations	– 0.05	– 0.79	0.69	– 0.12	0.01	0.15	0.85	– 0.71	– 0.59
Financial corporations	4.12	2.08	10.11	1.96	1.56	3.00	3.19	2.10	1.43
General government	0.00	0.02	0.01	0.00	0.01	0.00	– 0.01	0.02	0.00
Households	0.20	0.46	0.12	– 0.57	0.01	– 0.05	– 0.69	– 0.13	– 0.28
Debt securities of the rest of the world	– 3.01	6.02	12.78	3.33	1.29	2.73	4.23	– 1.80	0.39
Loans	– 7.50	46.98	43.32	7.74	17.29	– 12.09	46.99	13.76	18.39
short-term loans	0.60	29.81	14.68	– 1.69	3.27	– 2.34	7.72	2.93	7.89
long-term loans	– 8.10	17.17	28.65	9.43	14.02	– 9.75	39.27	10.83	10.50
Memo item									
from domestic sectors	10.66	20.12	19.91	– 6.44	11.38	– 11.24	28.01	8.98	9.25
Non-financial corporations	– 0.42	0.84	– 6.06	– 11.07	– 1.74	0.57	2.75	2.51	– 0.52
Financial corporations	22.22	26.12	25.58	3.78	15.41	– 5.54	18.81	5.15	12.26
General government	– 11.15	– 6.83	0.39	0.85	– 2.29	– 6.28	6.46	1.32	– 2.48
from the rest of the world	– 18.16	26.86	23.41	14.18	5.91	– 0.85	18.98	4.78	9.13
Equity	31.11	16.63	8.95	2.05	2.18	1.12	2.83	3.52	5.11
Listed shares of domestic sectors	– 0.34	7.36	21.96	3.30	4.33	17.00	– 6.70	2.68	3.73
Non-financial corporations	– 5.39	– 8.04	20.34	– 0.94	6.83	20.62	– 5.45	– 2.26	1.89
Financial corporations	2.22	11.75	– 2.31	3.22	– 2.25	– 2.13	– 0.88	6.21	0.63
General government	0.03	0.11	0.07	0.05	0.01	– 0.02	0.07	0.13	0.16
Households	2.80	3.55	3.85	0.98	– 0.26	– 1.47	– 0.44	– 1.40	1.04
Quoted shares of the rest of the world	9.09	– 1.34	– 20.44	– 2.89	– 4.10	– 16.16	7.03	– 1.28	– 1.77
Other equity [1]	22.37	10.61	7.43	1.64	1.95	0.29	2.51	2.12	3.16
Insurance technical reserves	6.41	5.60	3.60	0.90	0.90	0.90	0.90	0.90	0.90
Financial derivatives and employee stock options	– 0.21	– 10.81	– 0.13	– 5.71	8.05	– 7.81	2.60	2.23	3.14
Other accounts payable	– 1.73	15.92	28.53	0.20	– 1.61	23.79	28.73	– 24.82	– 8.08
Total	29.33	82.09	107.97	9.77	29.69	11.73	89.62	– 4.94	20.41

1 Including unlisted shares.

IX Financial accounts

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

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

Item	2014	2015	2016	2016			2017		
				Q2	Q3	Q4	Q1	Q2	Q3
Financial assets									
Currency and deposits	407.0	464.5	516.2	467.8	504.3	516.2	517.9	526.5	534.9
Debt securities	49.6	47.8	44.8	45.7	46.0	44.8	43.9	42.8	41.9
short-term debt securities	6.8	6.0	5.5	6.3	6.3	5.5	5.8	3.9	3.6
long-term debt securities	42.9	41.7	39.3	39.3	39.6	39.3	38.1	39.0	38.3
Memo item									
Debt securities of domestic sectors	22.9	23.3	20.8	21.4	21.4	20.8	20.3	20.2	19.3
Non-financial corporations	4.6	3.6	4.4	4.2	4.3	4.4	5.3	4.6	4.1
Financial corporations	12.7	14.5	12.0	13.0	12.5	12.0	11.6	12.3	12.3
General government	5.7	5.2	4.4	4.2	4.6	4.4	3.4	3.3	3.0
Debt securities of the rest of the world	26.7	24.4	24.0	24.3	24.5	24.0	23.6	22.7	22.6
Loans	455.3	485.3	496.8	481.8	480.9	496.8	526.2	527.4	530.4
short-term loans	356.2	383.7	392.4	381.9	377.6	392.4	410.8	408.4	406.9
long-term loans	99.1	101.5	104.4	99.9	103.3	104.4	115.3	119.0	123.5
Memo item									
to domestic sectors	303.6	312.5	311.1	311.8	309.7	311.1	321.8	320.6	318.2
Non-financial corporations	212.4	213.3	207.2	208.4	206.7	207.2	210.0	212.5	212.0
Financial corporations	84.9	92.8	97.2	96.8	96.4	97.2	105.2	101.5	99.5
General government	6.3	6.5	6.6	6.6	6.6	6.6	6.6	6.6	6.6
to the rest of the world	151.7	172.7	185.7	170.0	171.2	185.7	204.3	206.8	212.2
Equity and investment fund shares	1,698.6	1,872.9	1,914.9	1,746.9	1,804.2	1,914.9	1,995.7	1,982.0	2,012.9
Equity	1,563.1	1,720.9	1,755.0	1,595.2	1,646.0	1,755.0	1,834.9	1,823.8	1,851.5
Listed shares of domestic sectors	262.2	273.0	292.3	239.4	265.1	292.3	304.1	304.1	322.7
Non-financial corporations	252.2	266.6	286.2	233.7	259.3	286.2	298.6	297.9	315.9
Financial corporations	10.0	6.3	6.1	5.7	5.8	6.1	5.5	6.2	6.9
Listed shares of the rest of the world	50.0	62.5	73.9	62.1	64.5	73.9	79.7	89.3	80.1
Other equity [1]	1,250.8	1,385.4	1,388.8	1,293.6	1,316.3	1,388.8	1,451.2	1,430.4	1,448.7
Investment fund shares	135.5	151.9	159.9	151.7	158.2	159.9	160.8	158.2	161.4
Money market fund shares	1.2	1.4	1.9	1.1	1.0	1.9	1.7	1.7	0.6
Non-MMF investment fund shares	134.4	150.6	158.0	150.6	157.2	158.0	159.1	156.4	160.7
Insurance technical reserves	46.1	48.8	50.2	49.4	49.7	50.2	50.5	50.8	51.1
Financial derivatives	22.8	24.1	27.3	25.3	22.0	27.3	23.6	22.7	22.8
Other accounts receivable	883.4	913.5	946.1	910.5	913.8	946.1	1,031.3	980.5	1,029.6
Total	3,562.8	3,856.8	3,996.4	3,727.3	3,820.8	3,996.4	4,189.0	4,132.6	4,223.5
Liabilities									
Debt securities	150.9	156.8	183.8	179.0	183.0	183.8	189.7	188.1	210.2
short-term securities	1.8	3.0	2.9	5.3	4.7	2.9	8.3	7.9	5.3
long-term securities	149.1	153.7	180.9	173.7	178.3	180.9	181.4	180.2	205.0
Memo item									
Debt securities of domestic sectors	60.2	58.7	72.2	68.2	71.3	72.2	74.8	75.4	80.0
Non-financial corporations	4.6	3.6	4.4	4.2	4.3	4.4	5.3	4.6	4.1
Financial corporations	39.8	40.0	51.9	49.1	50.9	51.9	54.4	55.9	61.0
General government	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Households	15.8	15.0	15.7	14.9	15.9	15.7	15.0	14.8	14.8
Debt securities of the rest of the world	90.7	98.1	111.7	110.8	111.8	111.7	114.9	112.7	130.2
Loans	1,390.6	1,438.8	1,476.6	1,467.8	1,486.1	1,476.6	1,523.0	1,532.3	1,546.4
short-term loans	486.5	515.5	528.7	527.5	531.9	528.7	536.5	536.3	542.8
long-term loans	904.2	923.3	947.9	940.3	954.2	947.9	986.5	996.0	1,003.6
Memo item									
from domestic sectors	1,093.9	1,110.7	1,124.3	1,123.2	1,134.7	1,124.3	1,151.6	1,159.4	1,166.6
Non-financial corporations	212.4	213.3	207.2	208.4	206.7	207.2	210.0	212.5	212.0
Financial corporations	822.2	845.7	863.9	856.3	870.5	863.9	882.7	886.1	895.6
General government	59.2	51.7	53.2	58.6	57.5	53.2	58.8	60.8	59.0
from the rest of the world	296.7	328.0	352.4	344.6	351.4	352.4	371.4	372.8	379.8
Equity	2,543.6	2,673.9	2,749.3	2,490.5	2,665.4	2,749.3	2,870.5	2,889.4	2,973.8
Listed shares of domestic sectors	570.8	626.4	664.0	569.6	616.9	664.0	696.5	697.8	737.6
Non-financial corporations	252.2	266.6	286.2	233.7	259.3	286.2	298.6	297.9	315.9
Financial corporations	134.7	150.1	154.7	139.2	147.8	154.7	161.3	166.4	173.4
General government	35.2	43.4	44.4	40.4	40.8	44.4	47.0	46.7	51.0
Households	148.7	166.2	178.7	156.3	168.9	178.7	189.7	186.8	197.4
Quoted shares of the rest of the world	719.1	756.3	803.7	684.7	782.2	803.7	865.4	879.1	906.1
Other equity [1]	1,253.7	1,291.2	1,281.6	1,236.2	1,266.4	1,281.6	1,308.5	1,312.4	1,330.1
Insurance technical reserves	250.3	255.9	259.5	257.7	258.6	259.5	260.4	261.3	262.2
Financial derivatives and employee stock options	51.8	42.0	38.2	46.5	50.4	38.2	35.4	32.7	31.3
Other accounts payable	981.3	1,004.1	1,035.2	988.2	995.2	1,035.2	1,060.7	1,009.6	1,044.8
Total	5,368.5	5,571.4	5,742.6	5,429.7	5,638.7	5,742.6	5,939.7	5,913.3	6,068.7

1 Including unlisted shares.

IX Financial accounts

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

€ billion

Item	2014	2015	2016	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3
Acquisition of financial assets									
Currency and deposits	85.82	96.67	114.98	29.09	24.75	52.40	12.35	30.16	18.03
Currency	15.64	25.51	21.30	4.83	7.11	6.32	3.63	5.57	2.46
Deposits	70.18	71.16	93.68	24.26	17.63	46.09	8.72	24.59	15.57
Transferable deposits	73.84	100.96	105.26	28.09	23.41	46.52	13.26	29.95	20.65
Time deposits	8.74	– 9.22	1.28	2.16	– 1.73	0.02	– 1.59	– 2.32	– 2.47
Savings deposits (including savings certifikates)	– 12.41	– 20.58	– 12.87	– 5.99	– 4.05	– 0.45	– 2.96	– 3.04	– 2.61
Debt securities	– 18.00	– 17.40	– 12.20	– 4.10	– 3.16	– 3.18	– 1.19	– 1.57	– 2.42
short-term debt securities	– 0.67	0.75	– 0.10	– 0.62	0.10	0.33	0.38	0.20	– 0.33
long-term debt securities	– 17.33	– 18.16	– 12.10	– 3.48	– 3.26	– 3.50	– 1.57	– 1.77	– 2.09
Memo item									
Debt securities of domestic sectors	– 15.08	– 9.34	– 3.81	– 1.57	– 1.74	– 1.58	0.11	– 0.72	– 1.92
Non-financial corporations	0.02	0.39	0.02	– 0.59	0.03	– 0.09	– 0.65	– 0.20	– 0.25
Financial corporations	– 12.52	– 6.80	– 2.22	– 0.36	– 1.29	– 1.31	1.08	– 0.23	– 1.49
General government	– 2.58	– 2.93	– 1.61	– 0.63	– 0.48	– 0.18	– 0.33	– 0.28	– 0.18
Debt securities of the rest of the world	– 2.93	– 8.06	– 8.39	– 2.53	– 1.42	– 1.60	– 1.30	– 0.86	– 0.50
Equity and investment fund shares	36.87	46.39	42.23	11.57	10.20	4.79	10.62	12.07	14.56
Equity	12.17	15.03	18.16	5.22	3.35	– 0.67	1.86	1.96	5.53
Listed Shares of domestic sectors	4.61	4.06	6.49	2.69	0.25	– 3.03	– 0.70	– 0.67	1.54
Non-financial corporations	2.69	3.77	3.22	0.69	– 0.30	– 1.69	– 0.36	– 1.43	1.00
Financial corporations	1.93	0.28	3.28	2.00	0.55	– 1.33	– 0.33	0.76	0.54
Quoted shares of the rest of the world	3.70	6.75	6.83	1.21	2.08	1.88	1.78	1.96	2.65
Other equity [1]	3.86	4.22	4.83	1.32	1.02	0.47	0.77	0.66	1.34
Investment fund shares	24.70	31.36	24.07	6.35	6.86	5.46	8.76	10.12	9.03
Money market fund shares	– 0.34	– 0.57	– 0.52	– 0.15	0.10	– 0.17	– 0.22	0.04	– 0.16
Non-MMF investment fund shares	25.04	31.93	24.60	6.50	6.76	5.63	8.98	10.08	9.19
Non-life insurance technical reserves and provision for calls under standardised guarantees	22.85	20.09	19.58	3.65	3.79	8.01	2.85	2.87	2.82
Life insurance and annuity entitlements	31.89	31.36	24.63	5.26	5.60	5.60	13.44	10.82	5.37
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	36.84	30.85	20.63	5.14	5.40	1.63	7.64	4.32	6.73
Financial derivatives and employee stock options	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts receivable [2]	– 34.45	– 16.59	– 9.32	– 1.20	– 3.26	– 22.50	16.16	– 6.24	1.94
Total	161.81	191.36	200.53	49.42	43.31	46.75	61.87	52.43	47.04
External financing									
Loans	20.59	38.20	47.23	15.82	15.98	9.44	7.86	16.60	18.52
short-term loans	– 1.98	– 3.17	– 4.31	– 0.91	– 0.93	– 2.05	– 0.35	– 0.34	– 1.09
long-term loans	22.57	41.36	51.53	16.73	16.92	11.49	8.22	16.94	19.62
Memo item									
Mortage loans	24.87	35.63	41.69	12.13	14.30	11.00	6.08	13.28	15.80
Consumer loans	1.21	5.44	9.78	3.93	2.86	0.88	2.41	3.25	3.40
Entrepreneurial loans	– 5.49	– 2.88	– 4.24	– 0.24	– 1.17	– 2.44	– 0.62	0.07	– 0.68
Memo item									
Loans from monetary financial institutions	18.87	39.35	42.87	13.81	15.74	8.08	7.10	15.54	16.93
Loans from other financial institutions	1.72	– 1.16	4.36	2.01	0.25	1.37	0.77	1.06	1.59
Loans from general government and rest of the world	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Financial derivatives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts payable	0.78	– 1.14	– 0.72	– 0.13	– 0.13	– 0.44	0.11	0.07	0.02
Total	21.37	37.06	46.51	15.69	15.85	9.01	7.97	16.67	18.54

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

IX Financial accounts

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

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

Item	2014	2015	2016	2016			2017		
				Q2	Q3	Q4	Q1	Q2	Q3
Financial assets									
Currency and deposits	1,998.1	2,094.8	2,208.9	2,132.7	2,157.6	2,208.9	2,221.9	2,252.1	2,270.1
Currency	127.7	153.2	174.5	161.1	168.2	174.5	178.1	183.7	186.2
Deposits	1,870.4	1,941.6	2,034.4	1,971.6	1,989.5	2,034.4	2,043.8	2,068.4	2,084.0
Transferable deposits	981.4	1,082.4	1,188.0	1,117.9	1,141.5	1,188.0	1,201.2	1,231.2	1,251.8
Time deposits	256.4	246.8	248.7	250.4	248.7	248.7	247.9	245.6	243.1
Savings deposits (including savings certifikates)	632.7	612.4	597.7	603.4	599.3	597.7	594.7	591.7	589.1
Debt securities	162.2	139.8	127.4	133.5	130.6	127.4	126.7	125.4	123.6
short-term debt securities	2.1	2.9	2.7	2.3	2.4	2.7	3.1	3.2	2.9
long-term debt securities	160.1	136.9	124.7	131.2	128.3	124.7	123.6	122.2	120.7
Memo item									
Debt securities of domestic sectors	102.4	89.4	85.6	87.8	87.1	85.6	86.1	86.2	85.1
Non-financial corporations	14.1	13.4	13.9	13.1	14.1	13.9	13.3	13.0	12.9
Financial corporations	78.7	69.5	66.7	69.0	67.8	66.7	68.2	68.9	68.1
General government	9.6	6.5	5.0	5.7	5.2	5.0	4.6	4.3	4.1
Debt securities of the rest of the world	59.8	50.3	41.8	45.7	43.5	41.8	40.6	39.3	38.5
Equity and investment fund shares	951.4	1,040.7	1,107.7	1,028.6	1,068.8	1,107.7	1,155.5	1,158.1	1,192.9
Equity	508.9	555.9	589.9	540.8	563.7	589.9	614.6	610.9	632.2
Listed Shares of domestic sectors	169.7	188.9	200.8	174.6	187.9	200.8	213.0	211.1	223.7
Non-financial corporations	142.1	158.7	169.8	148.6	160.6	169.8	180.4	177.5	188.4
Financial corporations	27.6	30.3	31.0	26.0	27.3	31.0	32.6	33.6	35.4
Quoted shares of the rest of the world	64.0	74.8	86.8	76.8	80.7	86.8	93.1	92.7	96.5
Other equity [1]	275.3	292.2	302.4	289.4	295.1	302.4	308.5	307.1	311.9
Investment fund shares	442.5	484.8	517.8	487.8	505.1	517.8	540.9	547.2	560.7
Money market fund shares	4.0	3.4	2.8	3.0	3.0	2.8	2.7	2.8	2.6
Non-MMF investment fund shares	438.5	481.4	515.0	484.7	502.1	515.0	538.2	544.4	558.1
Non-life insurance technical reserves and provision for calls under standardised guarantees	307.2	324.3	339.9	329.9	332.8	339.9	342.7	345.6	348.4
Life insurance and annuity entitlements	885.6	919.5	947.8	935.0	941.4	947.8	961.3	972.1	977.5
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	752.1	786.6	811.3	795.3	800.4	811.3	818.9	823.2	830.0
Financial derivatives and employee stock options	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts receivable [2]	35.8	37.1	35.6	36.6	36.2	35.6	35.8	36.2	36.2
Total	5,092.5	5,342.8	5,578.5	5,391.5	5,467.9	5,578.5	5,662.8	5,712.6	5,778.6
Liabilities									
Loans	1,570.5	1,606.6	1,654.5	1,628.8	1,645.0	1,654.5	1,662.3	1,680.2	1,698.7
short-term loans	64.6	60.9	56.6	59.6	58.6	56.6	56.3	55.9	54.8
long-term loans	1,505.9	1,545.8	1,597.8	1,569.2	1,586.3	1,597.8	1,606.1	1,624.3	1,643.9
Memo item									
Mortage loans	1,118.0	1,153.8	1,195.6	1,170.3	1,184.6	1,195.6	1,201.7	1,218.0	1,234.4
Consumer loans	188.9	191.9	201.8	197.8	200.9	201.8	204.2	207.4	210.6
Entrepreneurial loans	263.6	260.9	257.0	260.7	259.5	257.0	256.4	254.8	253.8
Memo item									
Loans from monetary financial institutions	1,477.6	1,514.9	1,558.3	1,534.3	1,550.2	1,558.3	1,565.4	1,582.3	1,599.2
Loans from other financial institutions	92.9	91.8	96.1	94.5	94.8	96.1	96.9	98.0	99.6
Loans from general government and rest of the world	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial derivatives	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts payable	16.5	15.1	14.9	15.8	16.0	14.9	16.0	15.6	15.9
Total	1,587.0	1,621.7	1,669.4	1,644.6	1,661.0	1,669.4	1,678.3	1,695.8	1,714.6

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

X Public finances in Germany

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

Period	General government	Central government	State government	Local government	Social security funds	General government	Central government	State government	Local government	Social security funds
	€ billion					as a percentage of GDP				
	Deficit/surplus[1]									
2011	– 25.9	– 29.4	– 11.4	– 0.3	+ 15.3	– 1.0	– 1.1	– 0.4	– 0.0	+ 0.6
2012	– 0.9	– 16.1	– 5.5	+ 2.2	+ 18.4	– 0.0	– 0.6	– 0.2	+ 0.1	+ 0.7
2013	– 4.0	– 7.4	– 2.5	+ 0.5	+ 5.4	– 0.1	– 0.3	– 0.1	+ 0.0	+ 0.2
2014 **p**	+ 9.5	+ 8.7	– 1.1	– 1.2	+ 3.2	+ 0.3	+ 0.3	– 0.0	– 0.0	+ 0.1
2015 **p**	+ 19.4	+ 9.7	+ 3.8	+ 3.1	+ 2.7	+ 0.6	+ 0.3	+ 0.1	+ 0.1	+ 0.1
2016 **p**	+ 25.7	+ 7.4	+ 4.9	+ 5.2	+ 8.2	+ 0.8	+ 0.2	+ 0.2	+ 0.2	+ 0.3
2017 **pe**	+ 38.4	+ 3.1	+ 15.6	+ 9.9	+ 9.8	+ 1.2	+ 0.1	+ 0.5	+ 0.3	+ 0.3
2015 H1 **p**	+ 12.5	+ 1.5	+ 3.5	+ 4.6	+ 3.0	+ 0.8	+ 0.1	+ 0.2	+ 0.3	+ 0.2
H2 **p**	+ 6.9	+ 8.2	+ 0.4	– 1.4	– 0.2	+ 0.4	+ 0.5	+ 0.0	– 0.1	– 0.0
2016 H1 **p**	+ 17.5	+ 5.0	+ 4.1	+ 1.9	+ 6.6	+ 1.1	+ 0.3	+ 0.3	+ 0.1	+ 0.4
H2 **p**	+ 8.1	+ 2.4	+ 0.8	+ 3.3	+ 1.6	+ 0.5	+ 0.2	+ 0.0	+ 0.2	+ 0.1
2017 H1 **pe**	+ 21.2	– 1.5	+ 9.3	+ 6.4	+ 7.0	+ 1.3	– 0.1	+ 0.6	+ 0.4	+ 0.4
	Debt level[2]									**End of year or quarter**
2011	2,125.0	1,344.1	653.8	143.5	1.3	78.6	49.7	24.2	5.3	0.0
2012	2,202.2	1,387.9	683.5	147.5	1.2	79.8	50.3	24.8	5.3	0.0
2013	2,186.6	1,390.4	661.7	150.6	1.3	77.4	49.2	23.4	5.3	0.0
2014 **p**	2,187.0	1,396.5	655.0	152.0	1.4	74.6	47.6	22.3	5.2	0.0
2015 **p**	2,156.6	1,372.6	651.3	152.2	1.4	70.9	45.1	21.4	5.0	0.0
2016 **p**	2,140.0	1,366.8	634.0	153.4	1.1	68.1	43.5	20.2	4.9	0.0
2016 Q1 **p**	2,164.8	1,382.5	644.2	154.4	1.2	70.6	45.1	21.0	5.0	0.0
Q2 **p**	2,168.1	1,391.1	640.6	154.0	1.1	69.9	44.8	20.7	5.0	0.0
Q3 **p**	2,161.3	1,381.1	640.8	154.8	1.0	69.2	44.2	20.5	5.0	0.0
Q4 **p**	2,140.0	1,366.8	634.0	153.4	1.1	68.1	43.5	20.2	4.9	0.0
2017 Q1 **p**	2,113.2	1,350.9	624.0	152.1	1.2	66.5	42.5	19.6	4.8	0.0
Q2 **p**	2,108.0	1,353.5	617.8	151.5	0.9	65.9	42.3	19.3	4.7	0.0
Q3 **p**	2,102.1	1,352.8	616.7	149.8	0.8	65.1	41.9	19.1	4.6	0.0

Sources: Federal Statistical Office and Bundesbank calculations. **1** The deficit/surplus in accordance with ESA 2010 corresponds to the Maastricht definition. In connection with the publication of the 2017 annual figures, no revised figures were released for the first half of the year. Therefore, the 2017 half-year figures are not directly comparable with the annual figures. **2** Quarterly GDP ratios are based on the national output of the four preceding quarters.

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

Period	Revenue				Expenditure							Deficit/ surplus	*Memo item* Total tax burden [1]
		of which				*of which*							
	Total	Taxes	Social contributions	Other	Total	Social benefits	Compensation of employees	Intermediate consumption	Gross capital formation	Interest	Other		
	€ billion												
2011	1,182.7	598.8	442.3	141.7	1,208.6	633.9	208.6	124.1	61.4	67.5	113.1	– 25.9	1,045.6
2012	1,220.9	624.9	454.3	141.7	1,221.8	645.5	212.3	126.5	61.5	63.1	112.8	– 0.9	1,083.7
2013	1,259.0	651.0	465.0	143.0	1,263.0	666.4	217.8	133.0	60.1	55.5	130.2	– 4.0	1,120.3
2014 **p**	1,308.3	674.1	482.0	152.3	1,298.8	691.0	224.0	137.4	60.0	51.2	135.2	+ 9.5	1,160.7
2015 **p**	1,354.3	704.3	500.8	149.2	1,334.9	722.3	229.2	142.2	64.2	46.4	130.6	+ 19.4	1,212.2
2016 **p**	1,414.2	739.0	523.8	151.5	1,388.6	754.9	236.5	150.0	66.8	41.6	138.8	+ 25.7	1,269.6
2017 **pe**	1,474.1	773.3	548.0	152.8	1,435.7	783.9	246.6	154.4	70.2	38.9	141.8	+ 38.4	1,328.2
	as a percentage of GDP												
2011	43.8	22.2	16.4	5.2	44.7	23.4	7.7	4.6	2.3	2.5	4.2	– 1.0	38.7
2012	44.3	22.7	16.5	5.1	44.3	23.4	7.7	4.6	2.2	2.3	4.1	– 0.0	39.3
2013	44.5	23.0	16.5	5.1	44.7	23.6	7.7	4.7	2.1	2.0	4.6	– 0.1	39.6
2014 **p**	44.6	23.0	16.4	5.2	44.3	23.6	7.6	4.7	2.0	1.7	4.6	+ 0.3	39.6
2015 **p**	44.5	23.1	16.5	4.9	43.9	23.7	7.5	4.7	2.1	1.5	4.3	+ 0.6	39.8
2016 **p**	45.0	23.5	16.7	4.8	44.2	24.0	7.5	4.8	2.1	1.3	4.4	+ 0.8	40.4
2017 **pe**	45.2	23.7	16.8	4.7	44.0	24.0	7.6	4.7	2.2	1.2	4.3	+ 1.2	40.7
	Percentage growth rates												
2011	+ 6.5	+ 7.7	+ 3.8	+ 10.7	– 0.9	– 0.1	+ 2.5	+ 5.1	+ 3.3	+ 5.7	– 19.2	.	+ 6.0
2012	+ 3.2	+ 4.4	+ 2.7	+ 0.0	+ 1.1	+ 1.8	+ 1.8	+ 2.0	+ 0.2	– 6.5	– 0.3	.	+ 3.6
2013	+ 3.1	+ 4.2	+ 2.4	+ 1.0	+ 3.4	+ 3.2	+ 2.6	+ 5.1	– 2.2	– 12.0	+ 15.4	.	+ 3.4
2014 **p**	+ 3.9	+ 3.6	+ 3.6	+ 6.4	+ 2.8	+ 3.7	+ 2.9	+ 3.3	– 0.3	– 7.7	+ 3.9	.	+ 3.6
2015 **p**	+ 3.5	+ 4.5	+ 3.9	– 2.0	+ 2.8	+ 4.5	+ 2.3	+ 3.5	+ 7.0	– 9.3	– 3.4	.	+ 4.4
2016 **p**	+ 4.4	+ 4.9	+ 4.6	+ 1.6	+ 4.0	+ 4.5	+ 3.2	+ 5.5	+ 4.1	– 10.4	+ 6.2	.	+ 4.7
2017 **pe**	+ 4.2	+ 4.6	+ 4.6	+ 0.9	+ 3.4	+ 3.8	+ 4.3	+ 2.9	+ 5.1	– 6.5	+ 2.2	.	+ 4.6

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

X Public finances in Germany

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

€ billion

Period	Central, state and local government [1]									Social security funds [2]			General government, total		
	Revenue			Expenditure											
		of which			*of which* [3]										
	Total [4]	Taxes	Financial transactions [5]	Total [4]	Personnel expenditure	Current grants	Interest	Fixed asset formation	Financial transactions [5]	Deficit / surplus	Revenue [6]	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus
2010	634.7	530.6	7.9	713.6	190.7	308.5	57.7	39.7	11.4	– 78.9	516.5	512.7	+ 3.8	1,033.7	1,108.8	– 75.1
2011	689.6	573.4	22.8	711.6	194.3	301.3	56.8	38.5	13.7	– 22.0	526.3	511.2	+ 15.1	1,104.2	1,111.1	– 6.9
2012 **p**	745.0	600.0	14.7	770.2	218.8	285.2	69.9	42.6	25.5	– 25.2	536.2	518.8	+ 17.4	1,171.1	1,178.8	– 7.8
2013 **p**	761.8	619.7	14.7	773.6	225.3	286.9	65.7	42.8	23.5	– 11.8	536.7	531.9	+ 4.9	1,198.1	1,205.0	– 6.9
2014 **p**	791.8	643.6	11.3	786.7	236.0	292.9	57.1	45.9	17.6	+ 5.1	554.5	551.1	+ 3.5	1,245.3	1,236.7	+ 8.6
2015 **p**	829.5	673.3	10.4	804.1	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	844.5	251.3	320.5	43.4	49.0	11.8	+ 17.6	601.5	594.6	+ 6.9	1,354.7	1,330.2	+ 24.5
2015 Q1 **p**	196.0	160.9	2.4	198.8	58.5	80.5	18.4	7.7	2.5	– 2.8	137.3	142.8	– 5.4	307.6	315.8	– 8.2
Q2 **p**	208.4	167.7	1.5	185.2	59.5	72.8	7.2	9.1	3.0	+ 23.1	142.4	142.3	+ 0.1	325.0	301.8	+ 23.2
Q3 **p**	202.8	166.5	3.8	198.0	62.3	71.3	16.6	11.6	3.4	+ 4.7	141.2	143.4	– 2.1	318.1	315.5	+ 2.6
Q4 **p**	221.5	178.2	2.6	219.3	63.4	77.4	7.3	17.3	3.5	+ 2.2	152.7	145.3	+ 7.4	348.4	338.8	+ 9.6
2016 Q1 **p**	205.7	169.9	1.4	206.5	60.2	81.5	17.7	8.4	2.2	– 0.8	143.0	146.6	– 3.6	321.8	326.2	– 4.5
Q2 **p**	216.7	176.6	2.4	194.1	60.7	77.7	5.4	10.4	2.4	+ 22.7	148.7	147.0	+ 1.7	338.5	314.2	+ 24.3
Q3 **p**	207.1	169.3	2.9	210.9	62.0	79.3	14.5	12.3	2.4	– 3.8	148.3	149.7	– 1.4	328.2	333.4	– 5.2
Q4 **p**	233.1	189.2	2.1	233.4	68.0	82.3	7.7	17.2	4.8	– 0.3	160.1	152.2	+ 7.8	365.7	358.2	+ 7.5
2017 Q1 **p**	215.6	180.4	0.9	200.9	63.1	80.9	13.8	10.2	1.9	+ 14.6	150.3	155.1	– 4.8	337.5	327.7	+ 9.8
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

Source: Bundesbank calculations based on Federal Statistical Office data. **1** Annual figures based on the calculations of the Federal Statistical Office. Bundesbank supplementary estimations for the reporting years after 2011 that are not yet available. The quarterly figures contain numerous off-budget entities which are assigned to the general government sector as defined in the national accounts but are not yet included in the annual calculations. From 2012, also including the bad bank FMSW. **2** The annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional. The quarterly figures for some insurance sectors are estimated. **3** The development of the types of expenditure recorded here is influenced in part by statistical changeovers. **4** Including discrepancies in clearing transactions between central, state and local government. **5** On the revenue side, this contains proceeds booked as disposals of equity interests and as loan repayments. On the expenditure side, this contains the acquisition of equity interests and loans granted. **6** Including central government liquidity assistance to the Federal Employment Agency.

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

€ billion

Period	Central government			State government [2,3]			Local government [3]		
	Revenue [1]	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus
2010	288.7	333.1	– 44.4	266.8	287.3	– 20.5	175.4	182.3	– 6.9
2011	307.1	324.9	– 17.7	286.5	295.9	– 9.4	183.9	184.9	– 1.0
2012 **p**	312.5	335.3	– 22.8	311.0	316.1	– 5.1	200.0	198.5	+ 1.5
2013 **p**	313.2	335.6	– 22.4	324.3	323.9	+ 0.4	207.6	206.3	+ 1.3
2014 **p**	322.9	323.3	– 0.3	338.3	336.1	+ 2.1	218.7	218.7	– 0.1
2015 **p**	338.3	326.5	+ 11.8	355.1	350.6	+ 4.5	232.7	229.1	+ 3.6
2016 **p**	344.7	338.4	+ 6.2	381.1	373.5	+ 7.6	248.9	243.1	+ 5.8
2015 Q1 **p**	74.4	81.6	– 7.1	84.2	84.5	– 0.3	46.3	52.1	– 5.8
Q2 **p**	86.5	72.6	+ 13.9	87.0	83.6	+ 3.4	58.1	53.4	+ 4.7
Q3 **p**	85.9	89.0	– 3.2	87.8	84.2	+ 3.6	57.5	56.3	+ 1.2
Q4 **p**	91.5	83.4	+ 8.1	94.1	96.8	– 2.8	69.0	65.9	+ 3.0
2016 Q1 **p**	81.1	83.6	– 2.5	90.5	88.2	+ 2.4	49.0	55.1	– 6.1
Q2 **p**	87.5	73.6	+ 13.8	92.7	88.2	+ 4.4	61.1	57.9	+ 3.2
Q3 **p**	85.2	88.6	– 3.5	91.5	90.0	+ 1.5	60.7	60.7	+ 0.1
Q4 **p**	90.9	92.5	– 1.6	104.3	105.5	– 1.2	76.3	68.0	+ 8.3
2017 Q1 **p**	88.2	84.6	+ 3.5	95.6	90.0	+ 5.6	52.7	57.7	– 4.9
Q2 **p**	81.5	80.1	+ 1.4	96.3	93.6	+ 2.7	65.0	59.5	+ 5.5

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

X Public finances in Germany

5 Central, state and local government: tax revenue

€ million

Period	Total	Central and state government and European Union				Local government [3]	Balance of untransferred tax shares [4]	*Memo item* Amounts deducted in the federal budget [5]
		Total	Central government [1]	State government [1]	European Union [2]			
2010	530,587	460,230	254,537	181,326	24,367	70,385	– 28	28,726
2011	573,352	496,738	276,598	195,676	24,464	76,570	+ 43	28,615
2012	600,046	518,963	284,801	207,846	26,316	81,184	– 101	28,498
2013	619,708	535,173	287,641	216,430	31,101	84,274	+ 262	27,775
2014	643,624	556,008	298,518	226,504	30,986	87,418	+ 198	27,772
2015	673,276	580,485	308,849	240,698	30,938	93,003	– 212	27,241
2016	705,791	606,965	316,854	260,837	29,273	98,679	+ 148	27,836
2015 Q1	161,068	137,183	68,215	57,237	11,731	15,722	+ 8,163	6,433
Q2	167,763	143,248	76,762	59,298	7,188	24,814	– 299	6,633
Q3	166,468	143,854	79,783	59,551	4,520	23,006	– 392	7,558
Q4	177,978	156,200	84,089	64,613	7,499	29,461	– 7,684	6,618
2016 Q1	170,358	144,841	74,113	61,972	8,755	17,121	+ 8,396	6,488
Q2	176,879	152,042	82,184	64,684	5,175	25,205	– 368	6,512
Q3	169,374	145,700	76,638	61,573	7,489	23,839	– 165	7,584
Q4	189,180	164,382	83,919	72,608	7,855	32,513	– 7,715	7,253
2017 Q1	181,506	154,154	85,256	66,704	2,194	17,950	+ 9,403	6,606
Q2	177,090	149,915	76,387	66,605	6,922	27,631	– 456	6,825
Q3	180,407	155,250	82,576	66,718	5,957	25,517	– 361	7,467
2016 Oct	.	41,809	21,680	17,511	2,618	.	.	2,154
Nov	.	41,489	21,848	17,042	2,599	.	.	2,154
2017 Oct	.	41,842	21,824	17,819	2,199	.	.	2,157
Nov	.	44,181	23,658	18,349	2,175	.	.	2,157

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									Central government taxes [7]	State government taxes [7]	EU customs duties	*Memo item* Local government share in joint taxes
		Income taxes [2]					Turnover taxes [5]			Local business tax transfers [6]				
		Total	Wage tax [3]	Assessed income tax	Corporation tax	Investment income tax [4]	Total	Turnover tax	Turnover tax on imports					
2010	488,731	192,816	127,904	31,179	12,041	21,691	180,042	136,459	43,582	5,925	93,426	12,146	4,378	28,501
2011	527,255	213,534	139,749	31,996	15,634	26,155	190,033	138,957	51,076	6,888	99,133	13,095	4,571	30,517
2012	551,785	231,555	149,065	37,262	16,934	28,294	194,635	142,439	52,196	7,137	99,794	14,201	4,462	32,822
2013	570,213	245,909	158,198	42,280	19,508	25,923	196,843	148,315	48,528	7,053	100,454	15,723	4,231	35,040
2014	593,039	258,875	167,983	45,613	20,044	25,236	203,110	154,228	48,883	7,142	101,804	17,556	4,552	37,031
2015	620,287	273,258	178,891	48,580	19,583	26,204	209,921	159,015	50,905	7,407	104,204	20,339	5,159	39,802
2016	648,309	291,492	184,826	53,833	27,442	25,391	217,090	165,932	51,157	7,831	104,441	22,342	5,113	41,345
2015 Q1	146,924	66,225	41,557	13,134	5,438	6,097	51,852	40,050	11,803	143	22,268	5,207	1,228	9,741
Q2	153,155	69,728	44,267	12,323	5,851	7,287	50,754	38,063	12,691	1,760	24,892	4,838	1,183	9,907
Q3	153,307	66,010	43,251	10,666	4,452	7,640	53,203	40,029	13,174	2,019	25,637	5,029	1,409	9,453
Q4	166,901	71,295	49,816	12,457	3,842	5,180	54,111	40,873	13,238	3,484	31,407	5,265	1,339	10,701
2016 Q1	154,892	70,790	42,583	14,569	8,433	5,204	54,408	42,268	12,141	173	22,553	5,673	1,294	10,051
Q2	162,096	74,489	45,311	12,943	7,329	8,905	52,705	40,195	12,510	1,957	25,783	5,952	1,210	10,054
Q3	155,524	68,137	44,656	11,898	5,546	6,037	53,906	40,877	13,029	2,046	24,857	5,263	1,316	9,824
Q4	175,797	78,076	52,275	14,422	6,134	5,245	56,071	42,593	13,478	3,656	31,247	5,454	1,293	11,415
2017 Q1	165,352	76,990	45,309	17,009	8,511	6,161	57,502	44,196	13,306	438	23,364	5,834	1,224	11,198
Q2	161,036	78,178	48,256	14,825	7,872	7,225	54,243	39,885	14,358	2,059	19,868	5,407	1,281	11,121
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
2016 Oct	44,388	14,497	14,235	– 90	– 904	1,255	18,316	14,016	4,300	1,485	7,952	1,699	439	2,578
Nov	44,033	14,233	14,117	– 303	– 445	864	19,273	14,681	4,593	425	7,931	1,750	421	2,544
2017 Oct	44,597	14,525	14,880	– 191	– 1,404	1,240	18,478	13,928	4,550	1,704	7,779	1,689	423	2,756
Nov	46,997	15,686	15,083	– 391	– 376	1,371	20,491	15,745	4,746	312	8,239	1,870	399	2,816

Source: Federal Ministry of Finance and Bundesbank calculations. **1** This total, unlike that in Table X. 5, does not include the receipts from the equalisation of burdens levies, local business tax (less local business tax transfers to central and state government), real property taxes and other local government taxes, or the balance of untransferred tax shares. **2** Respective percentage share of central, state and local government in revenue: wage tax and assessed income tax 42.5:42.5:15, corporation tax and non-assessed taxes on earnings 50:50:-, final withholding tax on interest income and capital gains, non-assessed taxes on earnings 44:44:12. **3** After deducting child benefit and subsidies for supplementary private pension plans. **4** Final withholding tax on interest income and capital gains, non-assessed taxes on earnings. **5** The allocation of revenue to central, state and local government, which is adjusted at more regular intervals, is regulated in section 1 of the Revenue Adjustment Act. Respective percentage share of central, state and local government in revenue for 2016: 49.4:48.3:2.2. The EU share is deducted from central government's share. **6** Respective percentage share of central and state government for 2016: 22.4:77.6. **7** For the breakdown, see Table X. 7.

X Public finances in Germany

7 Central, state and local government: individual taxes

€ million

Period	Central government taxes [1]								State government taxes [1]				Local government taxes		
	Energy tax	Solidarity surcharge	Tobacco tax	Insurance tax	Motor vehicle tax	Electricity tax	Spirits tax	Other	Tax on the acquisition of land and buildings	Inheritance tax	Betting and lottery tax	Other	Total	*of which* Local business tax [2]	*of which* Real property taxes
2010	39,838	11,713	13,492	10,284	8,488	6,171	1,990	1,449	5,290	4,404	1,412	1,039	47,780	35,712	11,315
2011	40,036	12,781	14,414	10,755	8,422	7,247	2,149	3,329	6,366	4,246	1,420	1,064	52,984	40,424	11,674
2012	39,305	13,624	14,143	11,138	8,443	6,973	2,121	4,047	7,389	4,305	1,432	1,076	55,398	42,345	12,017
2013	39,364	14,378	13,820	11,553	8,490	7,009	2,102	3,737	8,394	4,633	1,635	1,060	56,549	43,027	12,377
2014	39,758	15,047	14,612	12,046	8,501	6,638	2,060	3,143	9,339	5,452	1,673	1,091	57,728	43,763	12,691
2015	39,594	15,930	14,921	12,419	8,805	6,593	2,070	3,872	11,249	6,290	1,712	1,088	60,396	45,752	13,215
2016	40,091	16,855	14,186	12,763	8,952	6,569	2,070	2,955	12,408	7,006	1,809	1,119	65,313	50,097	13,654
2015 Q1	4,704	3,783	2,223	5,825	2,454	1,806	570	904	2,760	1,668	426	353	14,288	10,912	2,982
Q2	9,512	4,278	3,683	2,187	2,361	1,465	470	937	2,561	1,617	433	227	16,368	12,383	3,636
Q3	10,159	3,714	3,981	2,436	2,108	1,643	496	1,102	3,021	1,335	401	272	15,180	11,118	3,697
Q4	15,220	4,155	5,034	1,972	1,883	1,678	534	930	2,906	1,670	452	236	14,561	11,339	2,899
2016 Q1	4,620	3,979	2,722	5,946	2,489	1,685	565	547	3,217	1,668	451	336	15,639	12,090	3,121
Q2	9,860	4,470	4,139	2,269	2,366	1,515	473	691	2,952	2,283	451	267	16,740	12,635	3,715
Q3	10,149	3,938	3,010	2,510	2,198	1,641	499	911	3,050	1,501	446	266	15,896	11,699	3,794
Q4	15,461	4,468	4,315	2,038	1,899	1,728	532	806	3,189	1,554	460	251	17,039	13,673	3,024
2017 Q1	4,812	4,324	2,637	6,178	2,536	1,746	578	553	3,359	1,641	490	343	16,593	12,905	3,228
Q2	10,091	4,809	3,634	2,353	2,374	1,784	476	−5,652	3,129	1,538	474	265	18,113	13,881	3,832
Q3	10,497	4,144	3,867	2,669	2,132	1,628	502	−324	3,394	1,497	417	273	16,698	12,443	3,824
2016 Oct	3,576	903	1,238	578	619	573	171	295	978	492	140	89	.	.	.
Nov	3,501	830	1,156	851	680	531	163	219	1,040	472	169	70	.	.	.
2017 Oct	3,636	918	1,010	594	647	573	177	224	1,056	410	148	75	.	.	.
Nov	3,471	908	1,377	817	695	558	169	244	1,120	526	158	65	.	.	.

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. **1** For the sum total, see Table X. 6. **2** Including revenue from offshore wind farms.

8 German pension insurance scheme: budgetary development and assets*

€ million

Period	Revenue [1,2]			Expenditure [1,2]			Deficit/ surplus	Assets [1,4]					*Memo item* Administrative assets
	Total	*of which* Contributions [3]	*of which* Payments from central government	Total	*of which* Pension payments	*of which* Pensioners' health insurance		Total	Deposits [5]	Securities	Equity interests, mortgages and other loans [6]	Real estate	
2010	250,133	172,767	76,173	248,076	211,852	14,343	+ 2,057	19,375	18,077	1,120	73	105	4,464
2011	254,968	177,424	76,200	250,241	212,602	15,015	+ 4,727	24,965	22,241	2,519	88	117	4,379
2012	259,700	181,262	77,193	254,604	216,450	15,283	+ 5,096	30,481	28,519	1,756	104	102	4,315
2013	260,166	181,991	77,067	258,268	219,560	15,528	+ 1,898	33,114	29,193	3,701	119	100	4,250
2014	269,115	189,080	78,940	265,949	226,204	15,978	+ 3,166	36,462	32,905	3,317	146	94	4,263
2015	276,129	194,486	80,464	277,717	236,634	16,705	− 1,588	35,556	32,795	2,506	167	88	4,228
2016	286,399	202,249	83,154	288,641	246,118	17,387	− 2,242	34,094	31,524	2,315	203	52	4,147
2015 Q1	65,923	45,653	20,025	68,435	58,671	4,125	− 2,512	34,084	31,583	2,262	148	92	4,255
Q2	68,700	48,483	19,945	68,443	58,390	4,113	+ 257	34,319	31,797	2,276	152	93	4,254
Q3	67,538	47,280	20,006	70,165	59,931	4,228	− 2,627	32,246	29,722	2,276	156	92	4,259
Q4	73,393	53,096	19,971	70,326	59,963	4,233	+ 3,067	35,574	32,794	2,506	158	117	4,242
2016 Q1	68,182	47,397	20,665	70,076	60,143	4,239	− 1,894	33,865	31,194	2,406	179	86	4,223
Q2	71,291	50,372	20,548	70,418	60,097	4,238	+ 873	34,427	31,892	2,265	183	87	4,220
Q3	70,218	49,333	20,670	73,782	63,081	4,453	− 3,564	31,412	28,776	2,365	187	84	4,213
Q4	76,136	55,171	20,733	74,016	63,117	4,450	+ 2,120	34,088	31,529	2,315	192	53	4,161
2017 Q1	71,301	49,388	21,715	73,731	63,263	4,460	− 2,430	31,660	29,133	2,270	205	52	4,140
Q2	74,581	52,739	21,632	73,785	63,016	4,440	+ 796	32,535	30,372	1,901	210	52	4,136
Q3	73,295	51,374	21,738	75,569	64,628	4,560	− 2,274	30,801	28,831	1,701	214	54	4,115

Sources: Federal Ministry of Labour and Social Affairs and German pension insurance scheme. * Excluding the German pension insurance scheme for the mining, railway and maritime industries. **1** The final annual figures do not tally with the quarterly figures, as the latter are all provisional. **2** Including financial compensation payments. Excluding investment spending and proceeds. **3** Including contributions for recipients of government cash benefits. **4** Largely corresponds to the sustainability reserves. End of year or quarter. **5** Including cash. **6** Excluding loans to other social security funds.

X Public finances in Germany

9 Federal Employment Agency: budgetary development*

€ million

Period	Revenue				Expenditure							Deficit/ surplus	Deficit offsetting grant or loan from central government
	Total 1	of which			Total	of which							
		Contributions	Insolvency compensation levy	Central government subscriptions		Unemployment benefit 2	Short-time working benefits 3	Job promotion 4	Re-integration payment 5	Insolvency benefit payment	Administrative expenditure 6		
2010	37,070	22,614	2,929	7,927	45,213	16,602	4,125	9,297	5,256	740	5,322	– 8,143	5,207
2011	37,563	25,433	37	8,046	37,524	13,776	1,324	8,369	4,510	683	5,090	+ 40	–
2012	37,429	26,570	314	7,238	34,842	13,823	828	6,699	3,822	982	5,117	+ 2,587	–
2013	32,636	27,594	1,224	245	32,574	15,411	1,082	6,040	.	912	5,349	+ 61	–
2014	33,725	28,714	1,296	–	32,147	15,368	710	6,264	.	694	5,493	+ 1,578	–
2015	35,159	29,941	1,333	–	31,439	14,846	771	6,295	.	654	5,597	+ 3,720	–
2016	36,352	31,186	1,114	–	30,889	14,435	749	7,035	.	595	5,314	+ 5,463	–
2015 Q1	8,209	6,969	310	–	8,599	4,267	387	1,586	.	165	1,287	– 390	–
Q2	8,758	7,467	326	–	7,856	3,758	214	1,591	.	172	1,318	+ 902	–
Q3	8,573	7,285	329	–	7,319	3,501	82	1,455	.	164	1,368	+ 1,254	–
Q4	9,619	8,220	367	–	7,665	3,320	87	1,662	.	152	1,624	+ 1,954	–
2016 Q1	8,376	7,271	261	–	7,984	4,083	395	1,739	.	150	984	+ 393	–
Q2	8,991	7,737	278	–	7,807	3,648	203	1,847	.	147	1,288	+ 1,184	–
Q3	8,877	7,609	276	–	7,349	3,428	74	1,608	.	165	1,399	+ 1,529	–
Q4	10,108	8,569	299	–	7,750	3,276	77	1,841	.	134	1,642	+ 2,358	–
2017 Q1	8,859	7,564	204	–	8,834	3,973	478	1,772	.	146	1,749	+ 26	–
Q2	9,355	8,112	227	–	7,964	3,529	173	1,802	.	155	1,577	+ 1,391	–
Q3	9,159	7,897	210	–	7,281	3,360	63	1,646	.	171	1,402	+ 1,878	–

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							
		Contributions 2	Central government funds 3		Hospital treatment	Pharmaceuticals	Medical treatment	Dental treatment 4	Therapeutical treatment and aids	Sickness benefits	Administrative expenditure 5	
2010	179,529	160,797	15,700	175,804	56,697	30,147	28,432	11,419	10,609	7,797	9,554	+ 3,725
2011	189,049	170,875	15,300	179,599	58,501	28,939	29,056	11,651	11,193	8,529	9,488	+ 9,450
2012	193,314	176,388	14,000	184,289	60,157	29,156	29,682	11,749	11,477	9,171	9,711	+ 9,025
2013	196,405	182,179	11,500	194,537	62,886	30,052	32,799	12,619	12,087	9,758	9,979	+ 1,867
2014	203,143	189,089	10,500	205,589	65,711	33,093	34,202	13,028	13,083	10,619	10,063	– 2,445
2015	210,147	195,774	11,500	213,727	67,979	34,576	35,712	13,488	13,674	11,227	10,482	– 3,580
2016	223,692	206,830	14,000	222,936	70,450	35,981	37,300	13,790	14,256	11,677	11,032	+ 757
2015 Q1	50,407	46,846	2,875	53,255	17,532	8,554	8,961	3,379	3,216	2,935	2,360	– 2,848
Q2	51,850	48,371	2,875	53,351	17,157	8,661	8,976	3,385	3,376	2,730	2,433	– 1,501
Q3	51,888	48,472	2,875	52,884	16,899	8,621	8,808	3,262	3,398	2,732	2,508	– 996
Q4	55,872	52,085	2,875	54,124	16,553	8,773	8,998	3,449	3,618	2,834	3,102	+ 1,747
2016 Q1	53,320	49,292	3,500	55,424	18,044	8,879	9,374	3,470	3,419	2,955	2,458	– 2,104
Q2	54,988	51,009	3,500	55,603	17,686	9,005	9,362	3,478	3,528	2,963	2,599	– 615
Q3	55,632	51,377	3,500	55,114	17,421	8,929	9,166	3,399	3,585	2,842	2,628	+ 517
Q4	59,552	55,146	3,500	56,832	17,342	9,194	9,351	3,526	3,698	2,912	3,291	+ 2,720
2017 Q1	55,809	51,632	3,625	57,716	18,632	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

Source: Federal Ministry of Health. **1** The final annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional. Excluding revenue and expenditure as part of the risk structure compensation scheme. **2** Including contributions from subsidised low-paid part-time employment. **3** Federal grant and 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	
				of which						
	Total	*of which* Contributions 2	Total	Non-cash care benefits	In-patient care	Nursing benefit	Contributions to pension insurance scheme 3	Administrative expenditure		
2010	21,864	21,659	21,539	2,933	9,567	4,673	869	1,028	+	325
2011	22,294	22,145	21,962	3,002	9,700	4,735	881	1,034	+	331
2012	23,082	22,953	22,988	3,135	9,961	5,073	881	1,083	+	95
2013	24,972	24,891	24,405	3,389	10,058	5,674	896	1,155	+	567
2014	25,974	25,893	25,457	3,570	10,263	5,893	946	1,216	+	517
2015	30,825	30,751	29,101	3,717	10,745	6,410	960	1,273	+	1,723
2016	32,171	32,100	30,936	3,846	10,918	6,673	983	1,422	+	1,235
2015 Q1	7,252	7,228	6,906	906	2,655	1,571	236	333	+	346
Q2	7,611	7,592	7,139	902	2,666	1,591	239	311	+	472
Q3	7,626	7,609	7,390	930	2,701	1,613	239	326	+	236
Q4	8,198	8,180	7,571	966	2,722	1,682	240	295	+	626
2016 Q1	7,600	7,578	7,587	941	2,703	1,613	238	389	+	13
Q2	7,918	7,901	7,659	949	2,724	1,665	244	331	+	259
Q3	7,958	7,942	7,810	961	2,746	1,682	247	373	+	147
Q4	8,550	8,535	7,941	975	2,741	1,877	250	322	+	608
2017 Q1	8,558	8,538	9,092	1,046	3,194	2,261	289	405	–	534
Q2	8,978	8,962	9,379	1,080	3,230	2,440	347	397	–	400
Q3	8,945	8,932	9,944	1,210	3,289	2,562	422	411	–	999

Source: Federal Ministry of Health. * Including transfers to the long-term care provident fund. **1** The final annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional. **2** Since 2005 including special contributions for childless persons (0.25% of income subject to insurance contributions). **3** For non-professional carers.

12 Central government: borrowing in the market

€ million

Period	Total new borrowing 1		*of which* Change in money market loans	*of which* Change in money market deposits 3
	Gross 2	Net		
2010	+ 302,694	+ 42,397	– 5,041	+ 1,607
2011	+ 264,572	+ 5,890	– 4,876	– 9,036
2012	+ 263,334	+ 31,728	+ 6,183	+ 13,375
2013	+ 246,781	+ 19,473	+ 7,292	– 4,601
2014	+ 192,540	– 2,378	– 3,190	+ 891
2015	+ 167,655	– 16,386	– 5,884	– 1,916
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

Source: Federal Republic of Germany – Finance Agency. **1** Including the Financial Market Stabilisation Fund, the Investment and Repayment Fund and the Restructuring Fund for Credit Institutions. **2** After deducting repurchases. **3** Excluding the central account balance with the Deutsche Bundesbank.

13 General government: debt by creditor*

€ million

Period (End of year or quarter)	Total	Banking system		Domestic non-banks		Foreign creditors pe
		Bundesbank	Domestic MFIs pe	Other domestic financial corporations pe	Other domestic creditors 1	
2010	2,088,387	4,440	667,539	207,062	62,207	1,147,138
2011	2,125,032	4,440	613,186	206,631	53,974	1,246,801
2012	2,202,242	4,440	637,133	199,132	60,140	1,301,397
2013	2,186,643	4,440	644,067	190,555	43,969	1,303,612
2014	2,186,954	4,440	613,794	190,130	44,915	1,333,675
2015	2,156,645	77,220	601,629	186,661	44,977	1,246,158
2016 p	2,140,009	196,320	578,865	179,755	41,352	1,143,717
2015 Q1	2,192,594	12,335	622,160	189,048	44,414	1,324,637
Q2	2,158,420	34,310	602,743	187,280	44,792	1,289,295
Q3	2,160,212	54,990	607,882	188,165	44,785	1,264,390
Q4	2,156,645	77,220	601,629	186,661	44,977	1,246,158
2016 Q1 p	2,164,801	100,051	616,144	183,160	41,334	1,224,112
Q2 p	2,168,052	133,297	604,796	181,372	39,529	1,209,058
Q3 p	2,161,325	163,636	591,243	179,359	38,827	1,188,260
Q4 p	2,140,009	196,320	578,865	179,755	41,352	1,143,717
2017 Q1 p	2,113,167	230,505	564,829	178,219	39,361	1,100,254
Q2 p	2,107,983	255,879	551,469	176,810	38,670	1,085,155
Q3 p	2,102,149	280,953	540,154	176,646	38,965	1,065,431

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

X Public finances in Germany

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

€ million

Period (End of year or quarter)	Total	Treasury discount paper (Bubills) 1	Treasury notes 2,3	Five-year Federal notes (Bobls) 2	Federal savings notes	Federal bonds (Bunds) 2	Day-bond	Direct lending by credit institutions 4	Loans from non-banks		Old debt	
									Social security funds	Other 4	Equalisation claims 5	Other 5,6
Central, state and local government												
2011	1,751,730	60,272	414,250	214,211	8,208	644,894	2,154	289,426	102	113,773	4,440	2
2012	1,791,656	57,172	417,470	234,355	6,818	667,198	1,725	288,133	70	114,272	4,440	2
2013	1,815,991	50,129	423,442	245,372	4,488	684,951	1,397	289,725	41	112,005	4,440	2
2014	1,817,244	27,951	429,633	259,186	2,375	703,812	1,187	275,582	42	113,035	4,440	2
2015 Q1	1,821,383	28,317	425,257	250,432	2,271	707,905	1,155	289,247	42	112,315	4,440	2
Q2	1,806,631	29,575	421,582	243,299	2,031	722,562	1,133	269,992	42	111,974	4,440	2
Q3	1,810,827	26,213	424,534	256,613	1,677	715,763	1,106	268,390	42	112,046	4,440	2
Q4	1,804,522	19,431	429,818	246,940	1,305	725,285	1,070	261,189	59	114,983	4,440	2
2016 Q1	1,813,655	21,804	427,090	240,281	1,205	730,533	1,051	275,378	100	111,771	4,440	2
Q2	1,812,131	29,543	427,813	235,389	1,108	727,922	1,033	275,038	40	109,804	4,440	2
Q3	1,804,296	31,237	433,493	245,945	922	717,358	1,021	260,003	39	109,835	4,440	2
Q4	1,786,609	24,509	430,701	236,136	737	724,528	1,010	254,273	21	110,251	4,440	2
2017 Q1 p	1,771,555	16,098	424,930	227,906	619	730,531	995	257,179	25	108,830	4,440	2
Q2 p	1,771,333	15,759	422,682	219,668	487	745,792	986	252,719	32	108,766	4,440	2
Q3 p	1,771,735	13,206	420,721	229,519	398	743,727	977	249,827	27	108,892	4,440	2
Central government 7,8												
2011	1,081,304	58,297	130,648	214,211	8,208	644,513	2,154	9,382	–	9,450	4,440	2
2012	1,113,032	56,222	117,719	234,355	6,818	666,775	1,725	16,193	–	8,784	4,440	2
2013	1,132,505	50,004	110,029	245,372	4,488	684,305	1,397	23,817	–	8,652	4,440	2
2014	1,130,128	27,951	103,445	259,186	2,375	702,515	1,187	20,509	–	8,518	4,440	2
2015 Q1	1,127,042	26,495	102,203	250,432	2,271	706,308	1,155	25,289	–	8,448	4,440	2
Q2	1,121,637	27,535	101,090	243,299	2,031	720,715	1,133	13,021	–	8,373	4,440	2
Q3	1,119,670	24,157	98,087	256,613	1,677	713,766	1,106	11,776	–	8,046	4,440	2
Q4	1,113,741	18,536	96,389	246,940	1,305	723,238	1,070	13,825	–	7,996	4,440	2
2016 Q1	1,124,391	20,526	98,232	240,281	1,205	728,457	1,051	22,533	–	7,664	4,440	2
Q2	1,128,595	28,369	99,417	235,389	1,108	725,469	1,033	26,236	–	7,133	4,440	2
Q3	1,114,708	30,626	102,053	245,945	922	714,903	1,021	7,794	–	7,002	4,440	2
Q4	1,102,410	23,609	95,727	236,136	737	722,124	1,010	11,761	–	6,866	4,440	2
2017 Q1	1,096,711	14,910	95,148	227,906	619	727,887	995	17,829	–	6,976	4,440	2
Q2	1,101,991	14,431	93,795	219,668	487	743,120	986	18,076	–	6,986	4,440	2
Q3	1,105,486	11,851	91,893	229,519	398	741,039	977	18,420	–	6,949	4,440	2
Q4	1,106,941	10,037	91,013	218,389	289	752,052	966	22,988	–	6,767	4,440	2
State government												
2011	536,696	1,975	283,601	.	.	.	.	150,631	62	100,426	.	1
2012	541,237	950	299,751	.	.	.	.	137,068	51	103,416	.	1
2013	545,788	125	313,412	.	.	.	.	131,302	30	100,918	.	1
2014	544,612	0	326,188	.	.	.	.	117,451	5	100,967	.	1
2015 Q1	546,975	1,821	323,055	.	.	.	.	121,130	5	100,964	.	1
Q2	537,947	2,040	320,492	.	.	.	.	114,816	5	100,593	.	1
Q3	543,477	2,056	326,447	.	.	.	.	114,081	5	100,887	.	1
Q4	543,003	895	333,429	.	.	.	.	106,720	5	101,953	.	1
2016 Q1	541,653	1,278	328,858	.	.	.	.	113,286	5	98,225	.	1
Q2	536,101	1,173	328,397	.	.	.	.	109,680	6	96,845	.	1
Q3	541,288	611	331,441	.	.	.	.	112,558	6	96,672	.	1
Q4	537,009	900	334,975	.	.	.	.	103,071	6	98,056	.	1
2017 Q1 p	529,520	1,188	329,782	.	.	.	.	101,940	3	96,607	.	1
Q2 p	524,502	1,327	328,887	.	.	.	.	97,768	3	96,516	.	1
Q3 p	523,024	1,355	328,828	.	.	.	.	96,031	3	96,806	.	1
Local government 9												
2011	133,730	.	–	.	.	381	.	129,412	40	3,897	.	.
2012	137,386	.	–	.	.	423	.	134,872	18	2,073	.	.
2013	137,698	.	–	.	.	646	.	134,606	11	2,435	.	.
2014	142,505	.	–	.	.	1,297	.	137,622	37	3,549	.	.
2015 Q1	147,366	.	–	.	.	1,597	.	142,829	37	2,903	.	.
Q2	147,047	.	–	.	.	1,847	.	142,155	37	3,008	.	.
Q3	147,680	.	–	.	.	1,997	.	142,534	37	3,112	.	.
Q4	147,778	.	–	.	.	2,047	.	140,644	54	5,033	.	.
2016 Q1	147,611	.	–	.	.	2,076	.	139,559	94	5,882	.	.
Q2	147,435	.	–	.	.	2,453	.	139,122	34	5,826	.	.
Q3	148,300	.	–	.	.	2,455	.	139,651	33	6,161	.	.
Q4	147,190	.	–	.	.	2,404	.	139,441	15	5,330	.	.
2017 Q1 p	145,325	.	–	.	.	2,645	.	137,410	23	5,247	.	.
Q2 p	144,840	.	–	.	.	2,672	.	136,875	29	5,265	.	.
Q3 p	143,225	.	–	.	.	2,687	.	135,376	24	5,138	.	.

Source: Bundesbank calculations based on data from the Federal Statistical Office. * Excluding direct intergovernmental borrowing. **1** Including Treasury financing paper. **2** Excluding issuers' holdings of their own securities. **3** Treasury notes issued by state government include long-term notes. **4** Mainly loans against borrowers' notes and cash advances. Including loans raised abroad. Other loans from non-banks, including loans from public supplementary pension funds and liabilities arising from the investment assistance levy. **5** Excluding offsets against outstanding claims. **6** Old debt mainly denominated in foreign currency, in accordance with the London Debts Agreement, old liabilities arising from housing construction and liabilities arising from housing construction by the former GDR's armed forces and from housing construction in connection with the return of the troops of the former USSR stationed in eastern Germany to their home country; excluding debt securities in own portfolios. **7** In contrast to the capital market statistics, the debt incurred through the joint issuance of Federal securities is recorded here under central government and its special funds in accordance with the agreed allocation ratios. **8** Including the Financial Market Stabilisation Fund, the Investment and Repayment Fund and the Restructuring Fund for Credit Institutions. **9** Including debt of municipal special purpose associations. Data other than year-end figures have been estimated.

XI Economic conditions in Germany

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

Item	2015	2016	2017	2015	2016	2017	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3
	Index 2010=100			Annual percentage change									
At constant prices, chained													
I Origin of domestic product													
Production sector (excluding construction)	112.8	114.9	117.7	2.2	1.9	2.5	1.1	4.5	1.2	0.6	4.5	– 0.4	2.8
Construction	102.9	104.9	107.2	0.0	1.9	2.2	1.4	5.3	1.7	– 0.4	6.4	0.6	2.7
Wholesale/retail trade, transport and storage, hotel and restaurant services	108.5	111.1	114.2	0.7	2.4	2.9	1.1	4.2	1.6	2.5	4.3	1.6	3.1
Information and communication	128.5	132.0	137.2	2.6	2.7	3.9	3.1	2.7	3.5	1.6	4.5	3.8	3.6
Financial and insurance activities	104.3	107.4	107.5	– 0.7	3.0	0.0	2.1	3.7	4.1	2.3	0.6	– 0.5	– 0.6
Real estate activities	103.3	103.9	105.3	0.2	0.6	1.4	0.5	0.9	0.4	0.5	1.7	0.8	1.8
Business services [1]	108.1	110.0	112.8	1.9	1.8	2.5	1.0	3.1	1.7	1.5	3.9	0.9	2.7
Public services, education and health	105.3	107.7	109.9	2.2	2.2	2.1	1.7	2.6	2.3	2.4	2.5	1.8	2.1
Other services	99.3	100.2	101.4	0.7	0.9	1.2	– 0.4	1.9	1.2	1.0	2.5	0.0	1.1
Gross value added	108.3	110.4	112.9	1.5	1.9	2.2	1.2	3.3	1.7	1.4	3.5	0.8	2.5
Gross domestic product [2]	108.6	110.7	113.1	1.7	1.9	2.2	1.5	3.3	1.7	1.3	3.4	1.0	2.3
II Use of domestic product													
Private consumption [3]	106.1	108.3	110.5	1.7	2.1	2.0	2.0	2.9	1.7	1.7	2.3	2.2	2.1
Government consumption	108.0	111.9	113.5	2.9	3.7	1.4	4.1	4.3	3.4	3.0	1.7	1.1	0.9
Machinery and equipment	111.1	113.4	117.4	3.9	2.2	3.5	4.7	6.4	1.4	– 2.6	3.5	1.5	4.6
Premises	108.3	111.3	114.2	– 1.4	2.7	2.6	3.1	5.4	2.1	0.4	6.4	2.0	3.2
Other investment [4]	117.3	123.8	128.0	5.5	5.5	3.5	6.8	6.8	6.1	2.6	3.9	3.4	3.2
Changes in inventories [5, 6]	.	.	.	– 0.3	– 0.2	0.1	– 0.6	– 0.7	0.2	0.4	– 0.2	0.3	0.2
Domestic demand	106.1	108.7	111.1	1.6	2.4	2.2	2.2	3.2	2.4	1.9	2.5	2.3	2.4
Net exports [6]	.	.	.	0.2	– 0.3	0.2	– 0.5	0.4	– 0.5	– 0.5	1.1	– 1.1	0.1
Exports	124.7	128.0	134.0	5.2	2.6	4.7	1.7	4.9	1.3	2.6	7.0	1.4	4.8
Imports	120.5	125.2	131.7	5.6	3.9	5.2	3.4	5.1	2.8	4.3	5.4	4.5	5.5
Gross domestic product [2]	108.6	110.7	113.1	1.7	1.9	2.2	1.5	3.3	1.7	1.3	3.4	1.0	2.3
At current prices (€ billion)													
III Use of domestic product													
Private consumption [3]	1,630.5	1,674.4	1,737.7	2.3	2.7	3.8	2.6	3.2	2.2	2.8	4.2	3.8	3.9
Government consumption	587.1	615.4	638.1	4.1	4.8	3.7	5.5	5.4	4.5	4.1	3.6	3.3	3.4
Machinery and equipment	200.8	205.8	213.4	4.7	2.5	3.7	5.2	6.7	1.7	– 2.3	3.7	1.8	4.8
Premises	291.0	304.5	322.0	0.4	4.6	5.8	4.6	7.3	4.1	2.5	9.2	5.1	6.6
Other investment [4]	112.5	119.7	125.4	7.0	6.4	4.8	7.8	7.4	6.9	3.7	4.9	4.8	4.7
Changes in inventories [5]	– 21.5	– 26.4	– 21.4	.	.	.	.	.	.	.	.	.	.
Domestic use	2,800.3	2,893.4	3,015.2	2.6	3.3	4.2	3.0	3.9	3.2	3.2	4.3	4.4	4.4
Net exports	243.3	250.6	248.1	.	.	.	.	.	.	.	.	.	.
Exports	1,426.7	1,450.0	1,542.6	6.4	1.6	6.4	1.2	3.1	– 0.0	2.3	8.7	3.5	6.4
Imports	1,183.4	1,199.4	1,294.5	4.1	1.4	7.9	0.4	1.0	0.2	3.9	9.6	8.0	7.2
Gross domestic product [2]	3,043.7	3,144.1	3,263.4	3.8	3.3	3.8	3.1	4.7	2.9	2.5	4.3	2.6	4.3
IV Prices (2010=100)													
Private consumption	106.2	106.9	108.7	0.6	0.6	1.7	0.6	0.3	0.5	1.1	1.8	1.6	1.7
Gross domestic product	108.7	110.1	111.8	2.0	1.3	1.5	1.6	1.3	1.2	1.2	0.9	1.6	1.9
Terms of trade	102.1	103.7	102.7	2.7	1.5	– 1.0	2.5	2.2	1.3	0.2	– 2.3	– 1.2	– 0.0
V Distribution of national income													
Compensation of employees	1,542.3	1,600.3	1,668.5	3.9	3.8	4.3	4.2	3.4	3.7	3.9	4.3	4.4	4.4
Entrepreneurial and property income	722.6	737.7	766.4	3.8	2.1	3.9	0.8	9.5	– 0.2	– 1.2	4.0	– 1.0	6.3
National income	2,264.9	2,338.0	2,434.8	3.8	3.2	4.1	3.0	5.2	2.3	2.5	4.2	2.7	5.1
Memo item: Gross national income	3,099.8	3,197.2	3,324.1	3.7	3.1	4.0	3.1	4.7	2.4	2.5	4.1	2.9	4.6

Source: Federal Statistical Office; figures computed in November 2017. Initial annual results for 2017: figures computed in January 2018. **1** Professional, scientific, technical, administration and support service activities. **2** Gross value added plus taxes on products (netted with subsidies on products). **3** Including non-profit institutions serving households. **4** Intellectual property rights (inter alia, computer software and entertainment, literary or artistic originals) and cultivated assets. **5** Including net increase in valuables. **6** Contribution of growth to GDP.

XI Economic conditions in Germany

2 Output in the production sector*

Adjusted for working-day variations **o**

	Production sector, total	of which: Construction	of which: Energy	Industry: Total	of which: by main industrial grouping: Intermediate goods	Capital goods	Durable goods	Non-durable goods	of which: by economic sector: Manufacture of basic metals and fabricated metal products	Manufacture of computers, electronic and optical products and electrical equipment	Machinery and equipment	Motor vehicles, trailers and semi-trailers
	2010=100											
% of total **1**	100.00	11.24	10.14	78.62	31.02	33.31	2.49	11.80	10.41	10.37	12.17	11.62
Period												
2013	106.4	106.4	96.4	107.7	104.4	114.0	100.1	100.6	108.3	106.0	113.7	114.7
2014	108.1	109.5	92.7	109.8	106.2	116.6	100.5	102.2	111.3	108.7	115.1	119.5
2015	108.6	107.0	97.5	110.3	106.1	117.6	102.8	101.9	111.4	109.4	114.8	119.3
2016	109.8	109.6	96.2	111.7	107.3	119.3	105.9	103.0	113.0	111.4	114.8	121.6
2016 Q3	110.1	117.9	91.8	111.4	108.3	117.6	103.0	104.0	112.6	113.5	113.2	119.4
Q4	112.9	120.5	101.6	113.3	104.8	124.1	109.6	106.1	111.7	114.1	124.1	117.8
2017 Q1	108.4	90.8	101.8	111.7	109.3	117.7	110.0	101.8	115.3	112.9	110.6	125.4
Q2	113.0	118.0	91.4	115.0	112.4	122.4	109.4	102.4	119.2	116.5	117.0	126.2
Q3 **r**	114.8	123.0	90.2	116.8	114.1	123.4	109.8	107.1	119.8	121.3	118.3	126.2
2016 Nov	118.7	123.6	102.2	120.2	111.8	131.6	115.9	111.3	121.8	120.4	127.3	131.0
Dec	104.3	115.4	103.1	102.9	90.6	116.7	98.4	97.2	94.6	105.3	130.9	90.1
2017 Jan	99.8	68.9	108.2	103.1	104.3	103.8	102.7	98.2	108.3	106.0	94.9	112.6
Feb	106.1	90.7	97.2	109.5	106.1	116.8	108.8	98.0	112.4	109.5	110.1	126.0
Mar	119.2	112.8	100.0	122.6	117.5	132.4	118.5	109.3	125.1	123.1	126.7	137.5
Apr	111.7	116.4	93.3	113.4	112.1	119.2	109.3	101.1	117.9	115.0	112.0	127.0
May	111.8	116.5	92.2	113.6	111.3	120.3	107.0	102.4	118.5	113.4	114.2	125.1
June	115.5	121.2	88.8	118.1	113.8	127.7	111.9	103.8	121.1	121.1	124.7	126.5
July **2,r**	115.0	125.7	89.2	116.7	115.3	122.9	104.9	105.6	121.0	120.8	117.1	125.0
Aug **2,r**	109.4	118.3	90.5	110.6	110.0	113.9	101.8	104.8	113.6	115.6	109.3	115.0
Sep **r**	120.1	124.9	90.9	123.2	117.0	133.3	122.7	110.9	124.7	127.6	128.6	138.7
Oct **x**	118.9	127.5	102.5	119.8	117.0	125.7	117.6	111.3	125.2	120.8	118.5	130.0
Nov **x,p**	125.4	130.5	101.1	127.9	119.4	140.5	121.8	116.1	127.9	129.4	132.5	147.6
	Annual percentage change											
2013	+ 0.1	± 0.0	− 1.0	+ 0.3	− 0.2	+ 0.6	− 0.4	+ 0.9	+ 0.9	− 1.7	− 1.3	+ 1.8
2014	+ 1.6	+ 2.9	− 3.8	+ 1.9	+ 1.7	+ 2.3	+ 0.4	+ 1.6	+ 2.8	+ 2.5	+ 1.2	+ 4.2
2015	+ 0.5	− 2.3	+ 5.2	+ 0.5	− 0.1	+ 0.9	+ 2.3	− 0.3	+ 0.1	+ 0.6	− 0.3	− 0.2
2016	+ 1.1	+ 2.4	− 1.3	+ 1.3	+ 1.1	+ 1.4	+ 3.0	+ 1.1	+ 1.4	+ 1.8	± 0.0	+ 1.9
2016 Q3	+ 0.9	+ 2.7	− 1.4	+ 0.9	+ 0.8	+ 0.9	+ 2.8	+ 0.8	+ 0.4	+ 2.3	− 0.3	+ 1.6
Q4	+ 1.4	+ 1.3	+ 0.9	+ 1.5	+ 1.5	+ 1.2	+ 4.0	+ 1.7	+ 1.8	+ 2.5	+ 1.4	+ 1.1
2017 Q1	+ 1.1	+ 2.1	− 0.6	+ 1.2	+ 1.5	+ 0.9	+ 3.1	+ 1.2	+ 2.0	+ 3.7	+ 1.3	+ 0.2
Q2	+ 3.5	+ 6.5	+ 2.7	+ 3.1	+ 3.8	+ 2.9	+ 5.0	+ 1.4	+ 4.0	+ 6.6	+ 3.6	+ 1.7
Q3 **r**	+ 4.3	+ 4.3	− 1.7	+ 4.9	+ 5.4	+ 4.9	+ 6.6	+ 3.0	+ 6.3	+ 6.9	+ 4.6	+ 5.8
2016 Nov	+ 2.5	+ 1.6	+ 0.9	+ 2.8	+ 2.1	+ 3.6	+ 2.2	+ 2.4	+ 4.0	+ 4.0	+ 4.9	+ 1.2
Dec	± 0.0	+ 0.1	+ 1.4	− 0.2	+ 0.4	− 0.9	+ 5.4	− 0.6	+ 0.2	− 0.3	+ 0.6	+ 0.2
2017 Jan	− 0.4	− 5.1	+ 0.7	− 0.1	+ 1.3	− 1.1	+ 3.3	− 1.1	+ 1.0	+ 4.3	− 0.3	− 2.2
Feb	+ 1.4	+ 4.3	± 0.0	+ 1.4	+ 0.7	+ 1.7	+ 3.0	+ 2.0	+ 1.9	+ 2.6	+ 3.7	+ 0.6
Mar	+ 2.1	+ 5.2	− 2.3	+ 2.3	+ 2.4	+ 2.0	+ 3.0	+ 2.5	+ 3.0	+ 4.1	+ 0.6	+ 1.9
Apr	+ 2.9	+ 7.3	+ 2.3	+ 2.3	+ 3.9	+ 1.0	+ 4.4	+ 1.2	+ 3.3	+ 7.4	+ 1.9	− 1.0
May	+ 5.0	+ 6.6	+ 2.6	+ 4.9	+ 4.0	+ 6.6	+ 10.1	+ 1.3	+ 5.5	+ 7.5	+ 6.5	+ 8.1
June	+ 2.8	+ 5.6	+ 3.3	+ 2.3	+ 3.6	+ 1.4	+ 1.2	+ 1.6	+ 3.3	+ 5.1	+ 2.6	− 1.5
July **2,r**	+ 4.2	+ 4.1	− 2.7	+ 4.8	+ 5.6	+ 4.6	+ 5.6	+ 2.8	+ 6.5	+ 8.0	+ 5.4	+ 2.6
Aug **2,r**	+ 4.7	+ 4.1	− 0.1	+ 5.2	+ 5.6	+ 5.7	+ 8.2	+ 2.3	+ 6.2	+ 6.8	+ 3.3	+ 9.9
Sep **r**	+ 4.1	+ 4.5	− 2.4	+ 4.7	+ 4.9	+ 4.5	+ 6.1	+ 3.7	+ 6.3	+ 6.1	+ 4.9	+ 5.3
Oct **x**	+ 2.8	+ 4.2	+ 3.0	+ 2.6	+ 4.6	+ 1.4	+ 2.7	+ 1.3	+ 5.6	+ 3.6	+ 3.8	− 1.7
Nov **x,p**	+ 5.6	+ 5.6	− 1.1	+ 6.4	+ 6.8	+ 6.8	+ 5.1	+ 4.3	+ 5.0	+ 7.5	+ 4.1	+ 12.7

Source of the unadjusted figures: Federal Statistical Office. * For explanatory notes, see Statistical Supplement Seasonally adjusted business statistics, Tables II.10 to II.12. **o** Using the Census X-12-ARIMA method, version 0.2.8. **1** Share of gross value added at factor cost of the production sector in the base year 2010. **2** Influenced by a change in holiday dates. **x** Provisional; estimated and adjusted in advance by the Federal Statistical Office to the results of the Quarterly Production Survey and the Quarterly Survey in the specialised construction industry, respectively.

XI Economic conditions in Germany

3 Orders received by industry *

Adjusted for working-day variations o

Period	Industry		of which: Intermediate goods		Capital goods		Consumer goods		of which: Durable goods		Non-durable goods	
	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change
Total												
2012	106.9	– 2.7	104.2	– 4.5	109.2	– 1.8	103.8	± 0.0	99.5	– 5.5	105.3	+ 1.9
2013	109.4	+ 2.3	103.2	– 1.0	114.3	+ 4.7	105.9	+ 2.0	101.8	+ 2.3	107.4	+ 2.0
2014	112.4	+ 2.7	103.9	+ 0.7	118.6	+ 3.8	110.8	+ 4.6	102.4	+ 0.6	113.7	+ 5.9
2015	114.8	+ 2.1	103.0	– 0.9	123.2	+ 3.9	114.3	+ 3.2	106.7	+ 4.2	116.9	+ 2.8
2016	115.7	+ 0.8	102.1	– 0.9	125.3	+ 1.7	115.3	+ 0.9	112.6	+ 5.5	116.2	– 0.6
2016 Nov	119.0	+ 2.1	107.5	+ 2.1	127.1	+ 1.8	118.3	+ 2.5	119.1	+ 8.7	118.0	+ 0.5
Dec	121.1	+ 9.5	93.6	+ 3.7	143.0	+ 13.9	104.1	– 2.1	103.5	+ 4.9	104.3	– 4.3
2017 Jan	115.1	+ 1.1	107.0	+ 2.6	120.7	+ 1.1	116.9	– 4.1	115.6	– 0.7	117.4	– 5.2
Feb	119.0	+ 6.0	111.8	+ 10.4	123.8	+ 3.7	121.7	+ 4.1	116.7	+ 12.0	123.4	+ 1.7
Mar	133.6	+ 4.3	119.5	+ 10.0	143.8	+ 0.8	131.2	+ 8.3	134.9	+ 14.7	129.9	+ 6.0
Apr	119.4	+ 5.5	111.0	+ 5.9	125.3	+ 4.9	118.7	+ 7.8	121.0	+ 2.4	117.9	+ 9.9
May	118.3	+ 5.7	109.2	+ 7.6	125.1	+ 4.9	116.4	+ 4.4	119.3	+ 18.5	115.4	+ 0.1
June	126.7	+ 6.7	114.2	+ 10.9	136.4	+ 4.6	120.9	+ 6.0	129.6	+ 16.8	117.8	+ 2.3
July	121.5	+ 6.5	112.3	+ 10.0	127.8	+ 4.7	123.6	+ 5.4	116.8	+ 6.1	126.0	+ 5.1
Aug	113.4	+ 9.9	108.7	+ 17.0	115.2	+ 5.7	124.4	+ 8.6	121.2	+ 18.9	125.4	+ 5.4
Sep	126.6	+ 11.2	112.4	+ 11.8	137.1	+ 11.2	123.1	+ 6.7	134.3	+ 12.7	119.1	+ 4.4
Oct	129.3	+ 8.9	117.3	+ 11.7	138.4	+ 7.8	125.9	+ 6.8	136.4	+ 5.2	122.2	+ 7.4
Nov p	131.0	+ 10.1	121.5	+ 13.0	138.3	+ 8.8	128.1	+ 8.3	140.7	+ 18.1	123.8	+ 4.9
From the domestic market												
2012	103.9	– 5.3	103.3	– 5.8	105.4	– 4.9	99.1	– 4.3	101.9	– 7.5	98.2	– 2.9
2013	104.4	+ 0.5	101.9	– 1.4	107.6	+ 2.1	100.4	+ 1.3	102.8	+ 0.9	99.5	+ 1.3
2014	105.6	+ 1.1	100.8	– 1.1	110.9	+ 3.1	102.4	+ 2.0	102.8	± 0.0	102.2	+ 2.7
2015	107.4	+ 1.7	99.0	– 1.8	116.3	+ 4.9	105.2	+ 2.7	102.1	– 0.7	106.3	+ 4.0
2016	107.4	± 0.0	96.8	– 2.2	118.7	+ 2.1	103.4	– 1.7	105.6	+ 3.4	102.6	– 3.5
2016 Nov	111.3	+ 0.8	102.4	+ 0.4	120.9	+ 1.4	107.5	– 0.7	114.6	+ 5.7	105.0	– 3.0
Dec	107.3	+ 9.6	86.4	+ 2.7	131.0	+ 16.1	91.0	+ 0.2	88.9	+ 6.3	91.7	– 1.8
2017 Jan	106.2	+ 0.5	100.8	+ 2.1	112.0	– 1.0	103.6	+ 0.2	104.6	+ 1.6	103.2	– 0.3
Feb	113.5	+ 7.5	108.4	+ 13.9	119.3	+ 3.2	109.9	+ 1.9	104.3	+ 3.8	111.9	+ 1.4
Mar	122.5	+ 4.9	111.5	+ 9.2	135.3	+ 1.9	111.3	+ 2.1	117.6	+ 1.0	109.1	+ 2.5
Apr	111.8	+ 3.2	104.8	+ 2.7	120.7	+ 4.0	99.9	+ 0.6	106.3	+ 0.1	97.6	+ 0.8
May	107.8	+ 2.7	102.7	+ 7.2	114.0	– 0.5	101.7	– 0.7	102.9	+ 8.2	101.3	– 3.5
June	116.4	+ 7.4	104.4	+ 7.6	130.3	+ 7.6	104.7	+ 4.0	106.4	+ 4.9	104.1	+ 3.7
July	115.2	+ 9.1	107.2	+ 9.8	123.9	+ 9.1	110.7	+ 5.3	106.1	+ 3.1	112.3	+ 6.0
Aug	109.0	+ 9.3	106.5	+ 17.0	110.7	+ 2.7	114.0	+ 10.7	112.4	+ 11.0	114.5	+ 10.5
Sep	115.7	+ 10.8	105.2	+ 13.4	126.8	+ 9.3	111.6	+ 7.3	123.5	+ 6.6	107.4	+ 7.5
Oct	119.2	+ 7.4	111.6	+ 11.0	127.5	+ 4.3	115.0	+ 7.5	131.5	+ 9.0	109.2	+ 6.8
Nov p	120.9	+ 8.6	112.9	+ 10.3	129.3	+ 6.9	119.0	+ 10.7	130.6	+ 14.0	114.9	+ 9.4
From abroad												
2012	109.2	– 0.7	105.2	– 3.0	111.6	+ 0.2	107.8	+ 3.6	97.3	– 3.7	111.3	+ 5.8
2013	113.5	+ 3.9	104.8	– 0.4	118.4	+ 6.1	110.7	+ 2.7	100.8	+ 3.6	114.1	+ 2.5
2014	117.9	+ 3.9	107.4	+ 2.5	123.4	+ 4.2	118.0	+ 6.6	102.1	+ 1.3	123.5	+ 8.2
2015	120.7	+ 2.4	107.7	+ 0.3	127.4	+ 3.2	122.1	+ 3.5	110.7	+ 8.4	126.0	+ 2.0
2016	122.4	+ 1.4	108.3	+ 0.6	129.4	+ 1.6	125.5	+ 2.8	118.8	+ 7.3	127.8	+ 1.4
2016 Nov	125.2	+ 2.9	113.6	+ 4.0	130.9	+ 1.9	127.6	+ 5.0	123.1	+ 11.2	129.1	+ 3.1
Dec	132.4	+ 9.4	102.0	+ 4.5	150.4	+ 12.7	115.3	– 3.6	116.3	+ 4.0	115.0	– 6.0
2017 Jan	122.4	+ 1.7	114.3	+ 3.2	126.0	+ 2.2	128.3	– 6.8	125.1	– 2.3	129.4	– 8.2
Feb	123.5	+ 4.9	115.9	+ 6.8	126.6	+ 4.0	131.7	+ 5.6	127.5	+ 18.7	133.2	+ 2.0
Mar	142.6	+ 3.9	129.0	+ 10.9	149.1	+ 0.2	148.2	+ 12.6	149.9	+ 26.3	147.6	+ 8.4
Apr	125.5	+ 7.2	118.2	+ 9.4	128.2	+ 5.4	134.8	+ 13.0	133.9	+ 4.1	135.1	+ 16.3
May	126.9	+ 8.0	116.9	+ 8.0	131.9	+ 8.0	128.9	+ 8.1	133.5	+ 26.5	127.3	+ 2.7
June	135.1	+ 6.3	125.8	+ 14.3	140.1	+ 2.9	134.7	+ 7.2	149.9	+ 25.5	129.4	+ 1.3
July	126.7	+ 4.7	118.2	+ 10.1	130.2	+ 2.2	134.7	+ 5.4	126.2	+ 8.4	137.7	+ 4.5
Aug	117.0	+ 10.3	111.2	+ 16.9	118.0	+ 7.5	133.3	+ 7.1	128.9	+ 25.9	134.7	+ 2.0
Sep	135.5	+ 11.3	120.9	+ 10.4	143.4	+ 12.2	132.9	+ 6.2	143.8	+ 17.8	129.1	+ 2.3
Oct	137.6	+ 10.2	123.9	+ 12.3	145.1	+ 9.7	135.2	+ 6.3	140.7	+ 2.4	133.3	+ 7.8
Nov p	139.3	+ 11.3	131.6	+ 15.8	143.8	+ 9.9	135.9	+ 6.5	149.5	+ 21.4	131.3	+ 1.7

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. o Using the Census X-12-ARIMA method, version 0.2.8.

XI Economic conditions in Germany

4 Orders received by construction *

Adjusted for working-day variations o

Period	Total		Breakdown by type of construction										Breakdown by client 1			
			Building								Civil engineering		Industry		Public sector 2	
			Total		Housing construction		Industrial construction		Public sector construction							
	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change
2013	119.2	+ 3.9	126.5	+ 4.2	140.6	+ 6.3	128.0	+ 3.1	93.9	+ 2.3	111.9	+ 3.7	121.9	+ 2.7	107.7	+ 4.1
2014	118.5	– 0.6	127.2	+ 0.6	146.6	+ 4.3	126.7	– 1.0	90.6	– 3.5	109.9	– 1.8	121.7	– 0.2	104.0	– 3.4
2015	124.2	+ 4.8	133.6	+ 5.0	165.4	+ 12.8	124.4	– 1.8	98.5	+ 8.7	114.8	+ 4.5	122.6	+ 0.7	109.2	+ 5.0
2016	142.2	+ 14.5	153.7	+ 15.0	193.4	+ 16.9	143.0	+ 15.0	107.5	+ 9.1	130.7	+ 13.9	137.1	+ 11.8	126.9	+ 16.2
2016 Oct	145.2	+ 23.4	156.9	+ 22.6	194.4	+ 22.8	147.8	+ 26.9	110.3	+ 7.3	133.6	+ 24.4	144.7	+ 20.1	126.1	+ 27.9
Nov	127.1	+ 7.0	139.7	+ 1.9	189.4	+ 24.4	121.8	– 15.8	95.1	+ 12.0	114.5	+ 13.9	124.4	– 11.5	104.8	+ 26.0
Dec	131.1	+ 6.2	149.9	+ 10.9	171.8	+ 2.8	153.8	+ 22.6	95.4	– 5.7	112.2	+ 0.4	141.0	+ 22.8	104.5	– 8.8
2017 Jan	113.5	+ 4.7	125.0	+ 6.3	154.5	+ 4.7	122.5	+ 15.2	74.4	– 19.1	102.1	+ 2.9	124.5	+ 11.9	85.9	– 4.1
Feb	130.2	+ 7.9	144.2	+ 14.4	176.0	+ 11.6	139.0	+ 20.3	97.4	+ 2.9	116.2	+ 0.7	127.3	+ 16.1	114.8	– 2.0
Mar	179.1	+ 8.8	190.5	+ 13.2	243.7	+ 7.2	172.4	+ 17.7	139.7	+ 19.4	167.7	+ 4.2	165.2	+ 10.2	167.3	+ 8.3
Apr	165.1	+ 9.3	170.3	+ 9.6	204.4	+ 4.4	166.4	+ 16.7	114.7	+ 0.6	160.0	+ 9.0	153.8	+ 9.4	160.9	+ 11.8
May	155.5	– 1.2	162.6	– 7.7	202.3	– 3.5	143.2	– 17.5	142.1	+ 20.8	148.5	+ 7.1	138.6	– 11.2	154.1	+ 11.7
June r	173.2	+ 4.8	188.0	+ 3.8	238.5	+ 6.9	164.3	– 6.1	159.2	+ 36.3	158.4	+ 6.1	156.0	– 3.5	164.6	+ 13.0
July	164.0	+ 7.5	167.6	+ 2.5	203.9	+ 4.6	159.5	+ 0.8	120.4	+ 2.6	160.4	+ 13.2	155.1	+ 7.7	157.1	+ 8.8
Aug	145.3	+ 4.6	153.0	+ 2.9	184.9	+ 0.4	142.4	+ 0.5	121.5	+ 22.0	137.7	+ 6.6	139.0	+ 5.0	135.9	+ 6.7
Sep	151.8	+ 5.1	163.6	+ 1.2	200.0	– 11.3	148.1	+ 11.2	138.2	+ 14.9	140.0	+ 9.9	144.9	+ 11.7	139.5	+ 9.8
Oct	141.2	– 2.8	152.6	– 2.7	203.3	+ 4.6	130.8	– 11.5	117.8	+ 6.8	129.7	– 2.9	132.3	– 8.6	125.3	– 0.6

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. o Using the Census X-12-ARIMA method, version 0.2.8. 1 Excluding housing construction orders. 2 Including road construction.

5 Retail trade turnover *

Adjusted for calendar variations o

Period	Total				*of which*											
					in stores by enterprises main product range											
					Food, beverages, tobacco 1		Textiles, clothing, footwear and leather goods		Information and communications equipment		Construction and flooring materials, household appliances, furniture		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles		Retail sale via mail order houses or via internet as well as other retail sale 2	
	At current prices		At prices in year 2010		At current prices											
	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change
2013	106.3	+ 1.7	101.3	+ 0.4	109.0	+ 3.6	103.0	+ 0.7	95.4	– 3.6	102.3	– 2.1	103.4	+ 2.7	123.5	+ 6.0
2014	108.2	+ 1.8	102.7	+ 1.4	111.6	+ 2.4	104.9	+ 1.8	94.6	– 0.8	101.9	– 0.4	110.7	+ 7.1	126.2	+ 2.2
2015	3 112.2	+ 3.7	3 106.7	+ 3.9	114.8	+ 2.9	105.2	+ 0.3	95.5	+ 1.0	104.6	+ 2.6	116.6	+ 5.3	3 151.5	+ 20.0
2016 4	115.0	+ 2.5	108.8	+ 2.0	117.0	+ 1.9	104.8	– 0.4	95.4	– 0.1	106.1	+ 1.4	121.4	+ 4.1	166.6	+ 10.0
2016 Nov	121.4	+ 2.9	114.1	+ 1.9	118.9	+ 2.1	111.1	+ 6.6	109.7	– 0.7	112.2	– 2.0	126.9	+ 3.5	201.0	+ 8.2
Dec	139.9	+ 3.9	131.9	+ 2.2	138.3	+ 3.3	128.7	+ 3.5	151.2	+ 2.0	116.1	+ 2.4	137.3	+ 5.0	221.1	+ 8.3
2017 Jan	107.9	+ 3.1	101.8	+ 1.1	108.8	+ 1.3	91.3	+ 1.9	107.2	+ 9.8	91.1	– 1.5	119.0	+ 3.0	173.3	+ 10.7
Feb	105.8	+ 4.6	99.0	+ 2.3	109.2	+ 3.9	83.6	+ 6.6	88.4	+ 3.8	93.1	– 0.6	116.1	+ 2.7	162.3	+ 6.5
Mar	122.4	+ 6.6	113.8	+ 4.6	122.1	+ 4.7	113.4	+ 17.9	98.6	+ 8.6	117.4	+ 4.4	127.8	+ 3.2	180.5	+ 5.9
Apr	120.2	+ 5.5	111.4	+ 3.8	124.2	+ 6.4	113.2	+ 2.7	89.2	+ 8.4	113.0	+ 1.1	123.7	+ 4.0	173.2	+ 16.4
May	120.0	+ 5.0	111.3	+ 3.4	123.3	+ 4.2	109.6	+ 2.8	85.0	+ 7.1	110.9	+ 0.9	124.5	+ 5.2	173.0	+ 10.7
June	118.6	+ 6.4	110.5	+ 4.6	122.0	+ 5.2	109.3	+ 8.4	90.7	+ 6.3	106.5	+ 3.1	123.9	+ 5.9	169.0	+ 11.2
July	120.2	+ 4.3	112.7	+ 2.9	123.6	+ 4.0	109.2	+ 2.7	97.5	+ 10.2	108.4	+ 2.1	127.5	+ 2.7	170.0	+ 13.3
Aug	116.0	+ 4.4	108.4	+ 2.6	120.1	+ 3.7	102.9	+ 6.6	93.2	+ 9.6	101.9	+ 0.5	122.0	+ 3.5	167.7	+ 9.4
Sep	119.2	+ 7.5	110.3	+ 5.3	118.9	+ 5.5	129.8	+ 27.8	97.2	+ 10.0	103.6	+ 2.9	123.2	+ 2.9	176.3	+ 11.7
Oct	124.1	+ 2.9	114.6	+ 1.1	123.3	+ 3.8	126.7	– 3.7	105.7	+ 3.8	113.9	+ 1.2	126.6	+ 1.7	183.8	+ 2.2
Nov	128.1	+ 5.5	118.5	+ 3.9	125.6	+ 5.6	121.5	+ 9.4	114.7	+ 4.6	114.6	+ 2.1	129.9	+ 2.4	224.6	+ 11.7

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. o Using the Census X-12-ARIMA method, version 0.2.8. 1 Including stalls and markets. 2 Not in stores, stalls or markets. 3 As of May 2015, integration of a larger online retail sales based enterprise that founded a business establishment in Germany in May 2015. 4 As of January 2016, figures are provisional, in some cases revised, and particularly uncertain in recent months due to estimates for missing reports.

XI Economic conditions in Germany

6 Labour market *

Period	Employment [1]		Employment subject to social contributions [2,3,r]						Short time workers [4]		Unemployment [5]			
			Total		of which:					of which:		of which:		
	Thousands	Annual percentage change	Thousands	Annual percentage change	Production sector	Services excluding temporary employment	Temporary employment	Solely jobs exempt from social contributions [2,r]	Total	Cyclically induced	Total	Recipients of insured unemployment benefits	Unemployment rate [5,6] in %	Vacancies, [5,7] thousands
	Thousands													
2013	42,319	+ 0.6	29,713	+ 1.3	8,783	19,958	743	5,017	191	77	2,950	970	6.9	457
2014	42,672	+ 0.8	30,197	+ 1.6	8,860	20,332	770	5,029	134	49	2,898	933	6.7	490
2015	43,069	+ 0.9	30,823	+ 2.1	8,938	20,840	806	4,856	130	44	2,795	859	6.4	569
2016	43,638	+ 1.3	31,508	+ 2.2	9,028	21,407	834	4,804	128	42	2,691	822	6.1	655
2017	...	...	...	...	...	...	...	...	...	...	2,533	855	5.7	731
2014 Q4	42,965	+ 0.8	30,614	+ 1.6	8,956	20,625	796	5,018	110	46	2,738	846	6.3	510
2015 Q1	42,517	+ 0.7	30,360	+ 1.8	8,833	20,551	756	4,863	310	51	2,993	1,011	6.9	515
Q2	42,998	+ 0.8	30,671	+ 2.0	8,895	20,740	792	4,863	61	47	2,772	822	6.3	560
Q3	43,286	+ 1.0	30,928	+ 2.1	8,974	20,865	840	4,868	47	33	2,759	827	6.3	595
Q4	43,476	+ 1.2	31,333	+ 2.3	9,049	21,204	837	4,829	101	46	2,655	775	6.0	604
2016 Q1	43,096	+ 1.4	31,077	+ 2.4	8,929	21,131	793	4,785	312	50	2,892	932	6.6	610
Q2	43,557	+ 1.3	31,350	+ 2.2	8,988	21,298	820	4,823	59	47	2,674	782	6.1	653
Q3	43,832	+ 1.3	31,593	+ 2.1	9,056	21,431	858	4,827	46	35	2,651	808	6.0	682
Q4	44,066	+ 1.4	32,014	+ 2.2	9,137	21,770	866	4,781	93	36	2,547	766	5.8	677
2017 Q1	r 43,740	r + 1.5	31,790	+ 2.3	9,040	21,697	830	4,728	307	41	2,734	[8] 987	6.2	671
Q2	r 44,206	r + 1.5	32,064	+ 2.3	9,110	21,857	852	4,762	36	25	2,513	822	[9] 5.6	717
Q3	r 44,482	r + 1.5	[10] 32,328	[10] + 2.3	[10] 9,172	[10] 22,016	[10] 892	[10] 4,767	...	[10] 16	2,504	833	5.6	763
Q4	...	...	...	...	...	...	...	...	...	...	2,381	780	5.3	771
2014 Aug	42,815	+ 0.8	30,312	+ 1.6	8,904	20,362	802	5,046	44	32	2,902	934	6.7	515
Sep	42,976	+ 0.8	30,663	+ 1.7	8,992	20,608	813	5,013	51	39	2,808	885	6.5	518
Oct	43,065	+ 0.8	30,676	+ 1.6	8,980	20,645	808	5,021	61	49	2,733	836	6.3	517
Nov	43,017	+ 0.7	30,636	+ 1.6	8,960	20,645	798	5,020	63	52	2,717	834	6.3	515
Dec	42,813	+ 0.8	30,398	+ 1.7	8,864	20,565	753	5,012	204	39	2,764	867	6.4	498
2015 Jan	42,444	+ 0.7	30,276	+ 1.8	8,815	20,498	747	4,846	327	50	3,032	1,043	7.0	485
Feb	42,470	+ 0.7	30,342	+ 1.9	8,818	20,546	756	4,821	352	52	3,017	1,034	6.9	519
Mar	42,638	+ 0.8	30,528	+ 2.0	8,865	20,651	777	4,829	251	50	2,932	955	6.8	542
Apr	42,832	+ 0.8	30,645	+ 1.9	8,895	20,723	784	4,850	67	54	2,843	868	6.5	552
May	43,013	+ 0.8	30,718	+ 2.0	8,901	20,776	794	4,875	57	44	2,762	815	6.3	557
June	43,150	+ 0.9	30,771	+ 2.0	8,915	20,788	819	4,902	59	45	2,711	782	6.2	572
July	43,190	+ 0.9	30,744	+ 2.1	8,934	20,724	840	4,908	49	35	2,773	830	6.3	589
Aug	43,245	+ 1.0	30,988	+ 2.2	8,993	20,901	846	4,841	40	26	2,796	851	6.4	597
Sep	43,422	+ 1.0	31,333	+ 2.2	9,076	21,153	850	4,810	51	39	2,708	799	6.2	600
Oct	43,508	+ 1.0	31,368	+ 2.3	9,068	21,206	846	4,814	61	47	2,649	764	6.0	612
Nov	43,545	+ 1.2	31,389	+ 2.5	9,060	21,247	842	4,846	66	52	2,633	764	6.0	610
Dec	43,374	+ 1.3	31,150	+ 2.5	8,964	21,167	798	4,843	177	39	2,681	798	6.1	591
2016 Jan	43,005	+ 1.3	30,983	+ 2.3	8,906	21,073	784	4,774	343	48	2,920	961	6.7	581
Feb	43,059	+ 1.4	31,069	+ 2.4	8,923	21,127	793	4,769	343	50	2,911	947	6.6	614
Mar	43,224	+ 1.4	31,209	+ 2.2	8,954	21,217	804	4,782	252	52	2,845	888	6.5	635
Apr	43,388	+ 1.3	31,314	+ 2.2	8,983	21,279	809	4,806	67	55	2,744	817	6.3	640
May	43,577	+ 1.3	31,410	+ 2.3	9,000	21,337	826	4,838	57	45	2,664	774	6.0	655
June	43,707	+ 1.3	31,443	+ 2.2	9,010	21,339	846	4,865	54	42	2,614	754	5.9	665
July	43,689	+ 1.2	31,378	+ 2.1	9,007	21,273	853	4,863	43	31	2,661	805	6.0	674
Aug	43,807	+ 1.3	31,675	+ 2.2	9,076	21,486	865	4,802	50	38	2,684	830	6.1	685
Sep	43,999	+ 1.3	32,007	+ 2.2	9,157	21,729	869	4,768	46	35	2,608	787	5.9	687
Oct	44,086	+ 1.3	32,045	+ 2.2	9,154	21,773	871	4,767	50	39	2,540	756	5.8	691
Nov	44,131	+ 1.3	32,069	+ 2.2	9,147	21,807	876	4,794	52	40	2,532	756	5.7	681
Dec	43,982	+ 1.4	31,848	+ 2.2	9,063	21,731	835	4,794	178	30	2,568	785	5.8	658
2017 Jan	r 43,656	r + 1.5	31,707	+ 2.3	9,017	21,648	825	4,719	370	43	2,777	[8] 1,010	6.3	647
Feb	r 43,704	r + 1.5	31,774	+ 2.3	9,032	21,690	828	4,706	335	42	2,762	1,014	6.3	675
Mar	r 43,861	r + 1.5	31,930	+ 2.3	9,078	21,777	838	4,722	216	40	2,662	935	6.0	692
Apr	r 44,035	r + 1.5	32,013	+ 2.2	9,101	21,831	838	4,748	39	27	2,569	861	5.8	706
May	r 44,215	r + 1.5	32,131	+ 2.3	9,124	21,900	859	4,775	36	25	2,498	810	[9] 5.6	714
June	r 44,367	r + 1.5	32,165	+ 2.3	9,135	21,902	878	4,802	33	22	2,473	796	5.5	731
July	r 44,351	r + 1.5	[10] 32,123	[10] + 2.4	[10] 9,121	[10] 21,868	[10] 889	[10] 4,805	...	[10] 18	2,518	842	5.6	750
Aug	r 44,457	r + 1.5	[10] 32,410	[10] + 2.3	[10] 9,191	[10] 22,074	[10] 896	[10] 4,742	...	[10] 16	2,545	855	5.7	765
Sep	r 44,637	r + 1.5	[10] 32,740	[10] + 2.3	[10] 9,274	[10] 22,311	[10] 902	[10] 4,704	...	[10] 15	2,449	800	5.5	773
Oct	r 44,711	r + 1.4	[10] 32,788	[10] + 2.3	[10] 9,275	[10] 22,364	[10] 902	[10] 4,697	...	[10] 24	2,389	772	5.4	780
Nov	[11] 44,744	[11] + 1.4	...	...	...	...	...	...	...	...	2,368	772	5.3	772
Dec	...	...	...	...	...	...	...	...	...	...	2,385	796	5.3	761

Sources: Federal Statistical Office; Federal Employment Agency. * Annual and quarterly figures: averages; calculated by the Bundesbank; deviations from the official figures are due to rounding. **1** Workplace concept; averages. **2** Monthly figures: end of month. **3** From January 2012, excluding all persons taking up federal voluntary service or a year of social or ecological work. **4** Number within a given month. **5** Mid-month level. **6** Relative to the total civilian labour force. **7** Excluding government-assisted forms of employment and seasonal jobs, including jobs located abroad. **8** From January 2017, persons receiving additional income assistance (unemployment benefit and unemployment benefit II at the same time) shall be assigned to the legal category of the Third Book of the Social Security Code (SGB III). **9** From May 2017 calculated on the basis of new labour force figures. **10** Unadjusted figures estimated by the Federal Employment Agency. In 2015 and 2016, the estimated values for Germany deviated from the final data by a maximum of 1.1 % for employees subject to social contributions, by a maximum of 0.5 % for persons solely in jobs exempt from social contributions, and by a maximum of 33.9 % for cyclically induced short-time work. **11** Initial preliminary estimate by the Federal Statistical Office.

XI Economic conditions in Germany

7 Prices

Period	Harmonised Index of Consumer Prices						Memo item: Consumer price index (national concept)	Construction price index	Index of producer prices of industrial products sold on the domestic market [5]	Index of producer-prices agricultural products [5]	Indices of foreign trade prices		HWWI Index of World Market Prices of Raw Materials [6]	
	Total	*of which* [1] Food [2]	Non-energy industrial goods	Energy [3]	Services	*of which* Housing rents [4]					Exports	Imports	Energy [7]	Other raw materials [8]
	2015 = 100						2010 = 100						2015 = 100	
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	106.7	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	...	...	...	...	99.6	107.1
2016 Feb	99.5	100.8	99.9	91.8	100.6	100.7	106.5	112.5	101.2	106.0	103.4	95.8	64.0	88.6
Mar	100.3	101.2	101.0	92.7	101.5	100.8	107.3		101.2	106.6	103.6	96.5	72.3	93.6
Apr	99.8	101.6	101.5	93.6	99.7	100.9	106.9		101.3	105.9	103.5	96.4	75.1	95.5
May	100.2	101.3	101.4	95.0	100.5	101.0	107.2	113.1	101.7	106.0	103.7	97.3	82.6	97.2
June	100.3	101.0	100.7	96.2	100.9	101.1	107.3		102.1	106.4	103.9	97.8	87.9	98.9
July	100.7	101.3	100.0	95.1	102.2	101.2	107.6		102.3	110.0	104.1	97.9	84.4	100.2
Aug	100.6	100.9	100.3	94.3	102.3	101.4	107.6	113.7	102.2	106.7	104.0	97.7	83.9	98.6
Sep	100.6	101.2	101.5	94.9	101.4	101.5	107.7		102.0	104.8	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	108.9	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	111.4	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	113.2	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 [9]	114.9	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	116.3	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	117.7	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	120.0	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	121.0	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	121.4	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	120.3	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	121.3	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	116.2	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	114.6	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	115.0	106.1	102.1	110.3	103.8
Dec	103.4	105.5	102.8	98.5	104.2	103.6	110.6		...	...	...	...	113.7	103.6
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	– 0.2	– 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	...	...	...	...	+ 19.7	+ 8.8
2016 Feb	– 0.2	+ 1.1	+ 1.0	– 8.6	+ 0.7	+ 1.1	± 0.0	+ 1.5	– 3.0	+ 1.1	– 1.2	– 5.7	– 40.7	– 16.3
Mar	+ 0.1	+ 1.4	+ 0.8	– 8.9	+ 1.6	+ 1.1	+ 0.3		– 3.1	+ 1.4	– 1.6	– 5.9	– 33.7	– 12.6
Apr	– 0.3	+ 1.2	+ 1.1	– 8.5	+ 0.5	+ 1.1	– 0.1		– 3.1	– 0.1	– 2.0	– 6.6	– 35.0	– 9.6
May	± 0.0	+ 0.9	+ 1.2	– 8.0	+ 1.1	+ 1.1	+ 0.1	+ 1.8	– 2.7	+ 1.1	– 1.6	– 5.5	– 29.3	– 7.2
June	+ 0.2	+ 0.9	+ 0.9	– 6.4	+ 1.4	+ 1.1	+ 0.3		– 2.2	+ 0.9	– 1.3	– 4.6	– 22.4	– 4.4
July	+ 0.4	+ 1.5	+ 0.9	– 7.0	+ 1.4	+ 1.1	+ 0.4		– 2.0	+ 5.3	– 1.2	– 3.8	– 20.4	– 1.4
Aug	+ 0.3	+ 1.2	+ 0.7	– 5.9	+ 1.3	+ 1.3	+ 0.4	+ 2.0	– 1.6	+ 4.5	– 0.9	– 2.6	– 8.3	+ 2.7
Sep	+ 0.5	+ 1.2	+ 0.8	– 3.6	+ 1.3	+ 1.3	+ 0.7		– 1.4	– 2.4	– 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	± 0.0	– 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	+ 3.5	+ 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	+ 5.5	+ 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 [9]	+ 7.6	+ 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	+ 9.7	+ 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	+ 10.4	+ 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	+ 13.3	+ 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	+ 14.2	+ 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	+ 14.1	+ 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	+ 9.4	+ 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	+ 13.7	+ 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	+ 10.9	+ 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	+ 5.2	+ 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	+ 3.2	+ 1.2	+ 2.7	+ 15.6	– 4.3
Dec	+ 1.6	+ 2.8	+ 1.2	+ 1.2	+ 1.4	+ 1.6	+ 1.7		...	...	...	...	+ 6.7	– 9.1

Sources: Eurostat; Federal Statistical Office and Bundesbank calculation based on data from the Federal Statistical Office; for the Index of World Market Prices of Raw Materials: HWWI. **1** 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 January 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
2009	1,009.5	0.1	672.6	0.3	380.7	6.9	1,053.3	2.6	1,569.2	– 0.8	156.2	– 5.9	10.0
2010	1,039.0	2.9	702.2	4.4	385.3	1.2	1,087.5	3.2	1,606.4	2.4	160.1	2.5	10.0
2011	1,088.6	4.8	729.4	3.9	380.4	– 1.3	1,109.8	2.0	1,653.7	2.9	158.2	– 1.2	9.6
2012	1,133.0	4.1	756.8	3.8	387.6	1.9	1,144.5	3.1	1,695.6	2.5	157.6	– 0.4	9.3
2013	1,167.4	3.0	778.3	2.8	388.1	0.1	1,166.4	1.9	1,717.2	1.3	153.7	– 2.5	8.9
2014	1,212.7	3.9	806.9	3.7	398.4	2.6	1,205.2	3.3	1,759.8	2.5	166.6	8.4	9.5
2015	1,260.8	4.0	836.6	3.7	417.0	4.7	1,253.7	4.0	1,804.0	2.5	173.5	4.2	9.6
2016	1,311.5	4.0	869.1	3.9	430.1	3.1	1,299.2	3.6	1,854.1	2.8	179.7	3.5	9.7
2016 Q2	319.5	3.6	207.6	3.7	106.0	3.1	313.6	3.5	462.9	3.4	43.6	5.3	9.4
Q3	323.3	3.9	218.6	3.6	108.8	4.2	327.4	3.8	461.8	2.2	37.7	2.0	8.2
Q4	363.1	4.1	240.4	3.8	106.9	3.0	347.4	3.6	472.4	2.9	39.9	4.4	8.5
2017 Q1	319.3	4.5	211.7	4.6	112.9	4.2	324.6	4.4	477.7	4.5	62.5	6.9	13.1
Q2	333.9	4.5	216.0	4.0	109.9	3.7	325.9	3.9	480.2	3.7	44.8	2.8	9.3
Q3	338.2	4.6	228.4	4.4	111.7	2.6	340.0	3.8	480.7	4.1	40.1	6.5	8.3

Source: Federal Statistical Office; figures computed in November 2017. * Households including non-profit institutions serving households. **1** Residence concept. **2** After deducting the wage tax payable on gross wages and salaries and employees' contributions to the social security funds. **3** Social security benefits in cash from the social security funds, central, state and local government and foreign countries, pension payments (net), private funded social benefits, less social contributions on social benefits, consumption-related taxes and public charges. **4** Net wages and salaries plus monetary social benefits received. **5** Mass income plus operating surplus, mixed income, property income (net), other current transfers received, income of non-profit institutions serving households, less taxes (excluding wage tax and consumption-related taxes) and other current transfers paid. Including the increase in claims on company pension funds. **6** Including the increase in claims on company pension funds. **7** Saving as a percentage of disposable income.

9 Negotiated pay rates (overall economy)

Period	Index of negotiated wages [1]								*Memo item:* Wages and salaries per employee [3]	
	On an hourly basis		On a monthly basis							
			Total		Total excluding one-off payments		Basic pay rates [2]			
	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change	2010=100	Annual percentage change
2009	98.4	2.0	98.3	2.0	98.4	2.3	98.2	2.5	97.6	– 0.1
2010	100.0	1.6	100.0	1.7	100.0	1.7	100.0	1.8	100.0	2.5
2011	101.7	1.7	101.7	1.7	101.8	1.8	101.8	1.8	103.4	3.4
2012	104.4	2.7	104.4	2.6	104.7	2.9	104.7	2.9	106.2	2.7
2013	107.0	2.5	107.0	2.5	107.3	2.5	107.3	2.5	108.4	2.1
2014	110.1	2.9	109.9	2.8	110.1	2.6	110.1	2.7	111.4	2.8
2015	112.6	2.2	112.4	2.2	112.6	2.2	112.7	2.3	114.5	2.8
2016	114.9	2.1	114.7	2.1	115.0	2.1	115.2	2.2	117.3	2.4
2016 Q2	107.8	2.1	107.6	2.1	107.6	1.8	114.8	2.1	114.6	2.0
Q3	117.4	2.1	117.2	2.2	117.5	2.2	115.8	2.2	115.4	2.4
Q4	128.3	2.2	128.0	2.2	128.4	2.2	116.1	2.3	128.4	2.5
2017 Q1	109.0	2.5	108.7	2.5	109.0	2.4	116.7	2.5	113.7	2.8
Q2	110.0	2.1	109.8	2.0	110.1	2.3	117.6	2.4	117.8	2.7
Q3	119.8	2.0	119.5	2.0	119.8	2.0	118.2	2.0	118.6	2.8
2017 May	110.1	2.1	109.8	2.0	110.2	2.1	117.6	2.3	.	.
June	109.8	1.6	109.6	1.6	109.9	2.2	117.7	2.3	.	.
July	138.6	1.9	138.3	1.9	138.7	1.9	118.0	2.0	.	.
Aug	110.3	2.1	110.0	2.0	110.4	2.0	118.2	2.1	.	.
Sep	110.4	2.1	110.1	2.0	110.5	2.0	118.3	2.0	.	.
Oct	110.9	2.0	110.6	2.0	111.0	2.0	118.4	2.0	.	.
Nov	168.3	1.6	167.8	1.5	168.4	1.5	118.6	2.1	.	.

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 November 2017.

XI Economic conditions in Germany

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

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

Period		Assets									Equity and liabilities						
				of which				*of which*				Liabilities					
													Long-term		Short-term		
																of which	
		Total assets	Non-current assets	Intangible assets	Tangible assets	Financial assets	Current assets	Inventories	Trade receivables	Cash 1	Equity	Total	Total	*of which* Financial debt	Total	Financial debt	Trade payables
		Total (€ billion)															
2013		1,902.2	1,171.1	385.0	485.2	232.4	731.1	187.5	175.8	136.5	569.6	1,332.6	706.0	379.8	626.6	191.0	163.1
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		2,226.6	1,394.6	470.7	565.2	273.1	832.0	215.6	190.6	136.2	633.8	1,592.8	860.8	465.4	732.0	222.7	180.3
2016		2,371.4	1,479.8	493.0	595.4	289.7	891.6	227.0	218.1	152.1	676.0	1,695.5	889.0	482.0	806.5	249.0	192.9
2015 H2		2,226.6	1,394.6	470.7	565.2	273.1	832.0	215.6	190.6	136.2	633.8	1,592.8	860.8	465.4	732.0	222.7	180.3
2016 H1		2,256.6	1,381.0	462.4	549.8	272.0	875.6	226.7	195.2	140.5	607.4	1,649.2	895.4	464.6	753.8	243.9	174.9
H2		2,371.4	1,479.8	493.0	595.4	289.7	891.6	227.0	218.1	152.1	676.0	1,695.5	889.0	482.0	806.5	249.0	192.9
2017 H1	p	2,387.4	1,472.0	501.7	582.8	289.4	915.4	238.2	220.7	151.8	705.0	1,682.4	886.8	497.2	795.6	246.2	194.9
		as a percentage of total assets															
2013		100.0	61.6	20.2	25.5	12.2	38.4	9.9	9.2	7.2	29.9	70.1	37.1	20.0	32.9	10.0	8.6
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	21.1	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	28.5	71.5	37.5	20.3	34.0	10.5	8.1
2015 H2		100.0	62.6	21.1	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 H1		100.0	61.2	20.5	24.4	12.1	38.8	10.1	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	28.5	71.5	37.5	20.3	34.0	10.5	8.1
2017 H1	p	100.0	61.7	21.0	24.4	12.1	38.3	10.0	9.2	6.4	29.5	70.5	37.2	20.8	33.3	10.3	8.2
		Groups with a focus on the production sector (€ billion) 2															
2013		1,523.6	908.2	257.2	384.6	215.6	615.4	171.2	136.1	104.1	450.9	1,072.6	560.4	282.8	512.2	170.2	114.9
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		1,782.1	1,077.3	304.0	446.9	259.0	704.8	198.9	147.1	104.5	485.5	1,296.6	689.8	353.1	606.8	198.3	127.6
2016		1,909.6	1,146.4	322.1	473.4	270.8	763.3	209.8	170.1	115.6	514.5	1,395.1	715.3	369.4	679.8	223.1	141.0
2015 H2		1,782.1	1,077.3	304.0	446.9	259.0	704.8	198.9	147.1	104.5	485.5	1,296.6	689.8	353.1	606.8	198.3	127.6
2016 H1		1,818.4	1,059.3	296.6	432.5	254.2	759.1	210.1	150.0	112.3	466.0	1,352.3	717.9	351.0	634.4	219.2	130.0
H2		1,909.6	1,146.4	322.1	473.4	270.8	763.3	209.8	170.1	115.6	514.5	1,395.1	715.3	369.4	679.8	223.1	141.0
2017 H1	p	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
		as a percentage of total assets															
2013		100.0	59.6	16.9	25.2	14.2	40.4	11.2	8.9	6.8	29.6	70.4	36.8	18.6	33.6	11.2	7.5
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	19.3	35.6	11.7	7.4
2015 H2		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 H1		100.0	58.3	16.3	23.8	14.0	41.8	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	19.3	35.6	11.7	7.4
2017 H1	p	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
		Groups with a focus on the services sector (€ billion)															
2013		378.6	262.9	127.8	100.6	16.8	115.7	16.3	39.7	32.3	118.6	260.0	145.6	97.0	114.4	20.8	48.2
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		461.8	333.5	170.9	122.0	18.9	128.3	17.1	48.1	36.5	161.4	300.4	173.7	112.6	126.6	26.0	51.9
2015 H2		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 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		461.8	333.5	170.9	122.0	18.9	128.3	17.1	48.1	36.5	161.4	300.4	173.7	112.6	126.6	26.0	51.9
2017 H1	p	466.2	335.1	177.0	119.3	16.3	131.1	14.0	48.8	26.6	155.1	311.1	178.6	119.2	132.6	21.9	41.8
		as a percentage of total assets															
2013		100.0	69.5	33.8	26.6	4.5	30.6	4.3	10.5	8.5	31.3	68.7	38.5	25.6	30.2	5.5	12.7
2014		100.0	69.6	36.5	25.6	3.2	30.4	4.1	11.1	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	72.2	37.0	26.4	4.1	27.8	3.7	10.4	7.9	35.0	65.0	37.6	24.4	27.4	5.6	11.2
2015 H2		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 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	72.2	37.0	26.4	4.1	27.8	3.7	10.4	7.9	35.0	65.0	37.6	24.4	27.4	5.6	11.2
2017 H1	p	100.0	71.9	38.0	25.6	3.5	28.1	3.0	10.5	5.7	33.3	66.7	38.3	25.6	28.4	4.7	9.0

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

XI Economic conditions in Germany

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

Period	Revenues		Operating income before depreciation and amortisation (EBITDA [1])		Operating income before depreciation and amortisation (EBITDA [1]) as a percentage of revenues					Operating income (EBIT)		Operating income (EBIT) as a percentage of revenues				
					Weighted average		Distribution [2]					Weighted average		Distribution [2]		
							First quartile	Median	Third quartile					First quartile	Median	Third quartile
	€ billion [3]	Annual change in % [4]	€ billion [3]	Annual change in % [4]	%	Annual change in percentage points [4]	%	%	%	€ billion [3]	Annual change in % [4]	%	Annual change in percentage points [4]	%	%	%
	Total															
2009	1,158.6	– 10.7	135.6	– 16.9	11.7	– 0.9	3.9	9.4	15.7	55.9	– 29.2	4.8	– 1.3	– 0.1	4.9	9.3
2010	1,321.0	13.3	181.4	30.6	13.7	1.8	6.6	11.4	18.5	98.3	66.6	7.4	2.4	3.2	6.8	12.1
2011	1,414.4	8.5	175.9	0.5	12.4	– 1.0	5.4	10.9	17.4	93.9	– 4.1	6.6	– 0.9	2.7	6.6	12.0
2012	1,533.0	6.6	189.3	3.1	12.4	– 0.4	5.2	10.2	17.5	95.7	– 7.7	6.2	– 0.9	1.9	6.0	11.0
2013	1,541.1	– 0.6	187.1	– 2.8	12.1	– 0.3	5.1	10.3	18.3	99.5	5.5	6.5	0.4	1.9	5.8	10.9
2014	1,565.6	1.0	198.7	4.9	12.7	0.5	5.7	10.3	17.2	109.3	8.5	7.0	0.5	1.9	6.1	11.1
2015	1,636.2	6.9	196.4	– 1.0	12.0	– 1.0	6.1	10.6	17.6	91.6	– 16.3	5.6	– 1.5	1.7	6.5	11.3
2016	1,626.1	– 0.4	214.9	8.0	13.2	1.0	6.6	11.4	17.9	112.0	9.2	6.9	0.5	2.3	6.6	12.0
2012 H2	782.2	5.2	95.9	2.6	12.3	– 0.3	4.7	11.0	17.9	39.9	– 19.2	5.1	– 1.4	1.4	6.8	11.7
2013 H1	762.8	– 0.2	93.4	– 3.5	12.2	– 0.4	3.4	9.3	16.5	53.8	– 7.6	7.1	– 0.6	0.6	4.9	10.7
H2	780.0	– 1.1	93.8	– 2.0	12.0	– 0.1	5.4	10.7	19.2	45.7	25.5	5.9	1.3	1.7	6.1	12.1
2014 H1	757.2	– 0.9	97.2	4.6	12.8	0.7	4.7	9.5	16.0	57.8	9.4	7.6	0.7	1.0	5.2	10.5
H2	808.7	2.9	101.5	5.2	12.6	0.3	5.4	10.8	19.1	51.5	7.6	6.4	0.3	1.7	7.1	12.0
2015 H1	815.7	8.7	102.9	5.7	12.6	– 0.4	4.8	10.1	17.6	59.1	1.4	7.3	– 0.5	1.1	5.9	10.9
H2	831.7	5.2	93.8	– 7.5	11.3	– 1.5	6.3	11.5	18.1	32.7	– 36.7	3.9	– 2.6	2.3	7.1	11.7
2016 H1	782.3	– 2.0	111.8	6.3	14.3	1.1	6.1	10.5	17.6	65.6	2.7	8.4	0.4	1.5	6.4	11.3
H2	843.8	1.1	103.1	9.9	12.2	1.0	6.7	11.9	19.0	46.4	21.1	5.5	0.8	2.9	7.5	12.5
2017 H1 p	844.9	7.2	126.0	14.4	14.9	0.9	5.7	10.1	17.2	78.6	29.3	9.3	1.6	1.8	5.8	11.6
	Groups with a focus on the production sector [5]															
2009	837.7	– 11.8	94.9	– 20.6	11.3	– 1.3	2.5	9.0	14.0	40.0	– 32.6	4.8	– 1.5	– 1.4	4.3	8.8
2010	980.7	15.8	136.2	38.7	13.9	2.3	6.6	11.4	16.3	75.7	72.4	7.7	2.6	3.0	7.3	12.0
2011	1,079.0	10.6	130.0	– 1.7	12.1	– 1.5	5.5	11.3	16.4	74.1	– 4.9	6.9	– 1.1	2.1	6.8	11.5
2012	1,173.8	7.7	140.8	5.3	12.0	– 0.3	5.4	10.2	16.1	81.7	2.2	7.0	– 0.4	1.8	6.1	9.8
2013	1,179.0	– 0.8	138.7	– 2.6	11.8	– 0.2	4.4	10.3	15.5	74.5	– 5.8	6.3	– 0.3	1.3	5.7	10.0
2014	1,197.3	1.0	147.9	5.8	12.4	0.6	5.1	9.6	15.3	82.0	9.3	6.9	0.5	1.4	5.9	10.2
2015	1,283.3	7.0	144.0	– 2.7	11.2	– 1.1	6.1	10.4	15.5	65.2	– 20.2	5.1	– 1.8	1.8	6.5	10.0
2016	1,267.1	– 1.1	156.5	6.0	12.4	0.8	6.5	10.6	15.9	80.5	4.3	6.4	0.3	2.5	6.2	10.4
2012 H2	593.9	6.1	67.5	5.3	11.4	– 0.1	4.4	10.5	15.9	34.9	0.2	5.9	– 0.3	0.6	6.2	10.2
2013 H1	588.8	– 0.1	71.7	– 4.8	12.2	– 0.6	3.1	9.3	15.0	43.1	– 10.9	7.3	– 0.9	0.6	5.3	9.7
H2	591.7	– 1.4	67.1	– 0.3	11.3	0.1	4.0	10.4	15.8	31.4	1.7	5.3	0.2	0.6	5.8	10.9
2014 H1	584.4	– 1.1	74.2	3.8	12.7	0.6	4.7	9.6	15.0	46.2	8.9	7.9	0.7	1.4	5.4	9.6
H2	613.1	3.0	73.7	7.8	12.0	0.5	4.4	9.8	15.8	35.8	9.8	5.8	0.4	0.7	6.3	10.7
2015 H1	636.8	8.8	80.1	7.9	12.6	– 0.1	5.1	10.0	15.4	48.8	4.9	7.7	– 0.3	2.1	6.1	10.0
H2	647.1	5.3	63.9	– 13.3	9.9	– 2.1	5.3	10.9	15.5	16.4	– 52.5	2.5	– 3.3	1.7	6.8	10.3
2016 H1	610.8	– 2.7	83.9	1.2	13.7	0.5	6.7	10.6	15.6	50.6	– 6.7	8.3	– 0.3	1.7	6.4	9.9
H2	656.4	0.5	72.6	11.9	11.1	1.1	6.2	11.3	16.4	29.9	35.0	4.6	0.9	2.4	6.3	10.4
2017 H1 p	678.6	7.5	98.4	18.4	14.5	1.3	5.9	9.9	16.0	63.9	37.0	9.4	2.0	2.2	5.8	10.5
	Groups with a focus on the services sector															
2009	321.0	– 7.4	40.7	– 4.9	12.7	0.3	4.7	10.7	20.3	16.0	– 16.3	5.0	– 0.5	1.7	5.7	12.7
2010	340.4	5.8	45.1	8.9	13.3	0.4	5.6	10.8	19.6	22.6	46.8	6.7	1.7	3.3	5.9	12.4
2011	335.5	1.7	45.9	7.6	13.7	0.8	5.4	10.1	20.7	19.7	– 0.7	5.9	– 0.1	3.2	6.1	13.8
2012	359.2	2.8	48.5	– 3.4	13.5	– 0.9	5.1	10.0	22.7	14.0	– 47.2	3.9	– 3.0	2.1	5.7	14.0
2013	362.2	– 0.1	48.4	– 3.3	13.4	– 0.4	5.1	9.9	21.1	25.0	84.4	6.9	3.0	2.5	5.9	12.2
2014	368.3	1.0	50.8	2.2	13.8	0.2	6.0	12.7	22.6	27.3	5.7	7.4	0.3	2.9	6.5	13.7
2015	352.9	6.4	52.4	4.8	14.9	– 0.2	6.1	11.4	22.1	26.4	– 1.6	7.5	– 0.6	1.4	6.7	14.1
2016	358.9	2.4	58.3	14.6	16.3	1.8	6.8	13.5	25.1	31.5	24.7	8.8	1.5	2.3	8.2	15.3
2012 H2	188.3	2.3	28.5	– 4.0	15.1	– 1.0	5.2	11.2	23.7	5.1	– 73.2	2.7	– 5.2	2.7	7.4	15.3
2013 H1	174.0	– 0.5	21.7	1.4	12.5	0.2	3.9	8.0	19.2	10.7	12.8	6.2	0.7	0.9	4.6	12.8
H2	188.3	0.3	26.7	– 6.7	14.2	– 1.1	5.6	11.3	21.8	14.3	241.4	7.6	5.2	2.2	7.3	13.4
2014 H1	172.9	– 0.5	23.0	7.6	13.3	1.0	4.8	9.3	20.4	11.6	11.6	6.7	0.7	1.0	5.1	13.5
H2	195.6	2.4	27.8	– 2.2	14.2	– 0.7	6.4	13.5	23.8	15.7	1.4	8.1	– 0.1	3.6	8.1	18.0
2015 H1	178.9	8.4	22.8	– 2.2	12.7	– 1.5	4.4	10.9	21.5	10.3	– 15.7	5.8	– 1.6	– 0.5	4.5	14.2
H2	184.7	4.6	29.9	10.8	16.2	0.9	7.3	12.2	23.5	16.3	9.3	8.8	0.4	2.5	7.7	15.0
2016 H1	171.5	1.2	27.8	27.7	16.2	3.5	5.1	10.3	23.8	15.0	62.1	8.7	3.3	1.0	6.4	14.9
H2	187.5	3.6	30.5	4.6	16.3	0.2	7.4	13.5	24.3	16.5	2.7	8.8	– 0.1	4.0	8.9	17.1
2017 H1 p	166.3	5.8	27.6	0.3	16.6	– 0.8	5.4	11.0	21.3	14.7	– 0.1	8.8	– 0.5	1.4	5.8	14.7

***** 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	2014	2015	2016 r	2017 Q1 r	Q2 r	Q3 r	Aug r	Sep	Oct p
A Current account	+ 245,761	+ 335,017	+ 368,856	+ 70,431	+ 70,768	+ 129,043	+ 39,200	+ 46,578	+ 35,947
1 Goods									
Exports	1,966,061	2,138,897	2,130,214	558,797	565,780	563,019	180,239	195,759	193,754
Imports	1,724,958	1,780,137	1,754,551	488,200	476,505	467,720	153,962	159,421	166,463
Balance	+ 241,104	+ 358,760	+ 375,661	+ 70,598	+ 89,274	+ 95,298	+ 26,276	+ 36,338	+ 27,291
2 Services									
Receipts	706,388	769,235	783,880	191,218	208,178	220,249	72,073	73,425	70,235
Expenditure	628,051	707,420	745,957	179,295	188,284	188,657	62,963	60,971	63,493
Balance	+ 78,338	+ 61,817	+ 37,921	+ 11,923	+ 19,894	+ 31,590	+ 9,109	+ 12,453	+ 6,742
3 Primary income									
Receipts	638,693	666,059	662,031	159,345	173,660	166,187	55,982	55,511	50,489
Expenditure	570,131	614,175	567,874	130,915	175,256	130,744	42,441	46,124	37,150
Balance	+ 68,565	+ 51,882	+ 94,156	+ 28,430	– 1,596	+ 35,442	+ 13,540	+ 9,387	+ 13,339
4 Secondary income									
Receipts	96,442	109,468	109,909	25,693	28,936	25,118	7,954	8,884	8,229
Expenditure	238,688	246,910	248,791	66,213	65,741	58,407	17,680	20,484	19,655
Balance	– 142,246	– 137,442	– 138,884	– 40,520	– 36,805	– 33,287	– 9,725	– 11,600	– 11,425
B Capital account	+ 13,711	– 12,466	– 814	– 10,301	– 10,204	– 1,824	– 710	– 958	+ 1,290
C Financial account (Increase: +)	+ 264,839	+ 283,782	+ 310,245	+ 69,436	+ 62,387	+ 162,237	+ 37,502	+ 68,037	+ 37,272
1 Direct investment	+ 71,932	+ 241,686	+ 222,811	– 1,883	+ 8,795	+ 15,904	– 7,563	+ 18,013	+ 28,954
By resident units abroad	+ 216,544	+ 976,478	+ 411,941	+ 204,780	+ 27,242	– 139,883	+ 9,601	+ 13,484	+ 35,310
By non-resident units in the euro area	+ 144,612	+ 734,796	+ 189,129	+ 206,664	+ 18,448	– 155,788	+ 17,163	– 4,529	+ 6,356
2 Portfolio investment	+ 26,370	+ 96,384	+ 416,553	+ 99,247	+ 25,986	+ 148,379	+ 89,942	+ 29,812	+ 50,659
By resident units abroad	+ 459,905	+ 392,290	+ 392,236	+ 174,760	+ 171,362	+ 190,906	+ 73,870	+ 48,664	+ 25,961
Equity and Investment fund shares	+ 142,536	+ 10,920	+ 22,568	+ 30,756	+ 55,787	+ 56,747	+ 24,574	+ 11,158	+ 24,755
Long-term debt securities	+ 224,271	+ 368,619	+ 366,925	+ 96,999	+ 128,250	+ 115,816	+ 34,987	+ 18,621	+ 12,666
Short-term debt securities	+ 93,094	+ 12,750	+ 2,745	+ 47,004	– 12,674	+ 18,344	+ 14,309	+ 18,885	– 11,460
By non-resident units in the euro area	+ 433,535	+ 295,905	– 24,317	+ 75,513	+ 145,377	+ 42,527	– 16,072	+ 18,853	– 24,698
Equity and Investment fund shares	+ 303,756	+ 238,775	+ 83,573	+ 90,519	+ 164,308	+ 116,043	+ 20,869	+ 30,404	+ 47,697
Long-term debt securities	+ 141,184	+ 91,835	– 157,034	– 63,416	– 21,865	– 71,572	– 32,409	– 13,161	– 46,081
Short-term debt securities	– 11,406	– 34,707	+ 49,145	+ 48,412	+ 2,935	– 1,943	– 4,532	+ 1,610	– 26,314
3 Financial derivatives and employee stock options	+ 49,274	+ 87,196	+ 18,505	+ 23,174	– 2,345	– 10,654	– 5,073	– 2,930	– 595
4 Other investment	+ 112,902	– 152,049	– 363,335	– 48,821	+ 31,524	+ 8,063	– 39,123	+ 16,722	– 39,095
Eurosystem	+ 31,506	– 25,391	– 151,295	– 29,782	– 8,922	– 10,058	– 15,791	– 29,879	+ 32,994
General government	+ 12,224	+ 19,293	+ 1,807	+ 2,011	– 4,087	– 4,142	+ 2,224	– 6,067	– 178
MFIs (excluding the Eurosystem)	+ 99,280	– 120,298	– 151,020	– 16,912	+ 18,795	+ 20,567	– 13,644	+ 30,349	– 85,601
Enterprises and households	– 30,106	– 25,656	– 62,827	– 4,138	+ 25,736	+ 1,696	– 11,913	+ 22,320	+ 13,690
5 Reserve assets	+ 4,360	+ 10,565	+ 15,712	– 2,280	– 1,572	+ 545	– 682	+ 6,421	– 2,651
D Net errors and omissions	+ 5,369	– 38,765	– 57,797	+ 9,306	+ 1,823	+ 35,020	– 988	+ 22,418	+ 35

* 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]							
2002	+ 41,655	+ 142,103	+ 6,008	– 45,440	– 25,596	– 29,413	– 4,010	+ 8,038	– 2,065	– 29,606
2003	+ 31,347	+ 130,021	– 2,105	– 48,708	– 18,920	– 31,047	+ 5,920	+ 47,559	– 445	+ 10,292
2004	+ 101,205	+ 153,166	– 6,859	– 38,713	+ 16,860	– 30,109	– 119	+ 112,834	– 1,470	+ 11,748
2005	+ 105,730	+ 157,010	– 6,068	– 40,600	+ 20,905	– 31,585	– 2,334	+ 96,436	– 2,182	– 6,960
2006	+ 135,959	+ 161,447	– 4,205	– 34,641	+ 41,453	– 32,300	– 1,328	+ 157,142	– 2,934	+ 22,511
2007	+ 169,636	+ 201,989	– 922	– 34,881	+ 36,332	– 33,804	– 1,597	+ 183,169	+ 953	+ 15,130
2008	+ 143,318	+ 184,521	– 3,586	– 31,467	+ 24,724	– 34,461	– 893	+ 121,336	+ 2,008	– 21,088
2009	+ 141,233	+ 141,167	– 6,064	– 19,648	+ 54,757	– 35,043	– 1,858	+ 129,693	+ 8,648	– 9,683
2010	+ 144,890	+ 161,146	– 5,892	– 27,041	+ 50,665	– 39,880	+ 1,219	+ 92,757	+ 1,613	– 53,351
2011	+ 165,078	+ 163,426	– 8,900	– 31,574	+ 68,235	– 35,010	+ 419	+ 120,857	+ 2,836	– 44,639
2012	+ 193,590	+ 200,401	– 10,518	– 32,775	+ 64,858	– 38,894	– 413	+ 151,417	+ 1,297	– 41,759
2013	+ 189,616	+ 212,662	– 3,663	– 41,376	+ 61,969	– 43,639	– 563	+ 225,360	+ 838	+ 36,307
2014	+ 218,026	+ 228,361	– 5,873	– 25,323	+ 56,177	– 41,188	+ 2,355	+ 238,630	– 2,564	+ 18,248
2015	+ 259,963	+ 261,182	– 2,668	– 18,602	+ 57,370	– 39,987	– 635	+ 234,603	– 2,213	– 24,725
2016	+ 259,286	+ 268,369	– 1,434	– 21,218	+ 52,136	– 40,001	+ 1,112	+ 243,586	+ 1,686	– 16,811
2014 Q4	+ 66,413	+ 60,143	– 2,536	– 3,609	+ 21,123	– 11,244	– 216	+ 68,678	– 1,722	+ 2,481
2015 Q1	+ 59,401	+ 60,330	– 1,426	– 2,104	+ 17,030	– 15,855	+ 298	+ 29,421	– 21	– 30,277
Q2	+ 59,356	+ 68,659	– 1,737	– 2,871	+ 611	– 7,043	+ 505	+ 72,121	– 465	+ 12,260
Q3	+ 67,057	+ 67,516	+ 978	– 10,628	+ 16,866	– 6,697	+ 701	+ 67,337	– 1,455	– 421
Q4	+ 74,149	+ 64,676	– 483	– 2,999	+ 22,864	– 10,391	– 2,138	+ 65,723	– 272	– 6,287
2016 Q1	+ 63,623	+ 63,412	+ 621	– 3,363	+ 16,933	– 13,359	– 269	+ 36,937	+ 1,228	– 26,417
Q2	+ 69,291	+ 77,109	+ 242	– 4,009	+ 584	– 4,393	+ 1,092	+ 62,620	+ 761	– 7,762
Q3	+ 58,213	+ 67,022	– 126	– 11,696	+ 13,516	– 10,630	+ 228	+ 61,531	– 261	+ 3,090
Q4	+ 68,160	+ 60,827	– 2,171	– 2,150	+ 21,103	– 11,620	+ 61	+ 82,498	– 43	+ 14,278
2017 Q1	+ 65,369	+ 66,740	+ 2,419	– 3,315	+ 15,902	– 13,958	+ 457	+ 74,476	– 360	+ 8,649
Q2	+ 55,218	+ 67,377	– 170	– 4,015	+ 4,662	– 12,805	+ 7	+ 73,956	+ 385	+ 18,731
Q3	+ 62,775	+ 68,216	– 172	– 11,066	+ 16,579	– 10,953	+ 856	+ 53,953	+ 152	– 9,679
2015 June	+ 26,136	+ 25,478	+ 38	– 1,180	+ 3,980	– 2,143	– 355	+ 25,400	– 318	– 382
July	+ 25,776	+ 25,151	– 896	– 3,062	+ 6,027	– 2,339	+ 448	+ 20,865	– 1,170	– 5,359
Aug	+ 14,760	+ 16,897	+ 661	– 4,616	+ 5,265	– 2,785	+ 44	+ 21,976	– 180	+ 7,171
Sep	+ 26,521	+ 25,469	+ 1,213	– 2,950	+ 5,575	– 1,573	+ 209	+ 24,497	– 105	– 2,233
Oct	+ 22,205	+ 23,927	+ 147	– 4,630	+ 6,013	– 3,105	– 85	+ 20,171	+ 154	– 1,949
Nov	+ 25,362	+ 22,542	+ 4	– 685	+ 6,368	– 2,863	+ 183	+ 24,896	– 548	– 649
Dec	+ 26,582	+ 18,207	– 634	+ 2,315	+ 10,483	– 4,423	– 2,236	+ 20,656	+ 123	– 3,689
2016 Jan	+ 14,891	+ 14,140	– 3	– 1,527	+ 4,518	– 2,241	– 37	– 2,007	– 186	– 16,860
Feb	+ 19,889	+ 22,040	+ 724	– 226	+ 5,600	– 7,525	+ 520	+ 18,706	+ 1,478	– 1,703
Mar	+ 28,843	+ 27,232	– 99	– 1,610	+ 6,815	– 3,594	– 752	+ 20,238	– 64	– 7,853
Apr	+ 27,951	+ 27,812	– 116	– 858	+ 2,726	– 1,730	+ 1,287	+ 25,738	+ 696	– 3,500
May	+ 17,694	+ 23,149	+ 511	– 880	– 4,001	– 574	+ 268	+ 14,378	+ 776	– 3,583
June	+ 23,646	+ 26,147	– 153	– 2,271	+ 1,859	– 2,089	– 463	+ 22,504	– 711	– 679
July	+ 18,065	+ 20,523	+ 520	– 3,503	+ 4,494	– 3,449	– 139	+ 18,115	+ 342	+ 188
Aug	+ 16,667	+ 21,044	– 367	– 4,965	+ 5,092	– 4,504	– 126	+ 18,180	+ 93	+ 1,639
Sep	+ 23,481	+ 25,455	– 279	– 3,227	+ 3,930	– 2,677	+ 493	+ 25,236	– 695	+ 1,262
Oct	+ 18,411	+ 20,456	+ 163	– 3,551	+ 5,076	– 3,570	– 182	+ 30,423	– 145	+ 12,194
Nov	+ 24,860	+ 23,551	– 385	– 339	+ 5,677	– 4,029	– 90	+ 25,794	+ 140	+ 1,024
Dec	+ 24,889	+ 16,820	– 1,949	+ 1,740	+ 10,349	– 4,021	+ 332	+ 26,281	– 38	+ 1,060
2017 Jan	+ 13,840	+ 15,862	+ 278	– 1,271	+ 6,080	– 6,830	– 262	+ 19,471	– 124	+ 5,892
Feb	+ 20,556	+ 22,960	+ 993	– 777	+ 3,008	– 4,635	+ 271	+ 7,355	– 216	– 13,473
Mar	+ 30,973	+ 27,919	+ 1,148	– 1,268	+ 6,814	– 2,492	+ 448	+ 47,650	– 21	+ 16,229
Apr	+ 14,565	+ 19,381	– 43	– 769	+ 4,234	– 8,281	– 311	+ 21,979	– 2	+ 7,725
May	+ 15,842	+ 23,185	– 1,020	– 1,801	– 4,624	– 918	+ 66	+ 10,040	– 47	– 5,867
June	+ 24,812	+ 24,811	+ 893	– 1,445	+ 5,052	– 3,606	+ 251	+ 41,937	+ 434	+ 16,874
July	+ 19,061	+ 21,041	+ 654	– 3,793	+ 6,191	– 4,378	+ 553	+ 14,839	+ 463	– 4,776
Aug	+ 17,912	+ 21,521	– 788	– 4,819	+ 4,646	– 3,437	+ 146	+ 8,723	– 912	– 9,336
Sep	+ 25,802	+ 25,653	– 39	– 2,455	+ 5,742	– 3,138	+ 156	+ 30,391	+ 602	+ 4,433
Oct	+ 18,842	+ 20,886	+ 412	– 3,402	+ 5,577	– 4,220	– 206	+ 10,913	+ 1,176	– 7,723
Nov p	+ 25,409	+ 25,389	– 426	– 619	+ 5,876	– 5,237	– 512	+ 28,442	– 270	+ 3,545

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

XII External sector

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

€ million

Group of countries/country		2014	2015	2016	2017 Jan. / Oct.	Jul	Aug	Sep	Oct	Nov p
All countries 1	Exports	1,123,746	1,193,555	1,203,833	1,062,186	103,136	102,982	110,394	108,025	116,453
	Imports	910,145	949,245	954,917	859,052	84,379	82,953	86,292	89,110	92,779
	Balance	+ 213,601	+ 244,310	+ 248,916	+ 203,133	+ 18,757	+ 20,029	+ 24,103	+ 18,915	+ 23,674
I European countries	Exports	761,914	803,425	818,644	726,664	69,451	68,801	75,546	74,976	...
	Imports	642,738	653,782	657,753	587,471	57,625	55,045	59,206	61,542	...
	Balance	+ 119,176	+ 149,643	+ 160,891	+ 139,192	+ 11,826	+ 13,756	+ 16,340	+ 13,434	...
1 EU member states (28)	Exports	648,446	692,493	705,548	624,020	59,722	58,586	64,942	64,551	...
	Imports	527,117	543,334	551,344	490,596	48,572	46,094	49,925	51,808	...
	Balance	+ 121,329	+ 149,159	+ 154,204	+ 133,425	+ 11,150	+ 12,493	+ 15,017	+ 12,742	...
Euro area (19)	Exports	413,753	434,075	441,092	391,742	37,893	35,980	40,839	40,547	...
	Imports	350,550	356,643	358,848	317,032	31,724	29,390	31,762	33,379	...
	Balance	+ 63,203	+ 77,432	+ 82,244	+ 74,710	+ 6,168	+ 6,589	+ 9,077	+ 7,168	...
of which										
Austria	Exports	55,807	58,217	59,778	52,138	5,100	4,952	5,547	5,490	...
	Imports	36,218	37,250	38,543	34,306	3,434	3,297	3,693	3,531	...
	Balance	+ 19,590	+ 20,967	+ 21,235	+ 17,832	+ 1,666	+ 1,655	+ 1,854	+ 1,959	...
Belgium and Luxembourg	Exports	47,345	46,196	46,931	41,745	3,814	3,991	4,162	4,132	...
	Imports	42,548	40,116	40,960	36,972	3,763	3,444	3,598	3,668	...
	Balance	+ 4,797	+ 6,079	+ 5,971	+ 4,773	+ 50	+ 547	+ 564	+ 464	...
France	Exports	100,580	102,762	101,106	87,605	8,405	7,787	9,056	8,944	...
	Imports	66,714	66,819	65,651	53,540	5,266	4,775	5,206	5,963	...
	Balance	+ 33,866	+ 35,943	+ 35,454	+ 34,066	+ 3,139	+ 3,012	+ 3,850	+ 2,981	...
Italy	Exports	54,240	57,987	61,265	54,425	5,554	4,263	5,851	5,681	...
	Imports	48,522	49,038	51,737	46,166	4,902	4,053	4,574	4,931	...
	Balance	+ 5,718	+ 8,949	+ 9,528	+ 8,259	+ 652	+ 210	+ 1,277	+ 750	...
Netherlands	Exports	72,736	79,191	78,433	70,927	6,952	7,035	7,230	7,498	...
	Imports	87,796	87,889	83,142	75,355	7,446	7,011	7,450	7,899	...
	Balance	– 15,060	– 8,697	– 4,709	– 4,428	– 494	+ 24	– 220	– 400	...
Spain	Exports	34,820	38,715	40,497	35,901	3,447	3,012	3,746	3,641	...
	Imports	24,804	26,442	27,870	26,263	2,735	2,071	2,683	2,679	...
	Balance	+ 10,016	+ 12,273	+ 12,627	+ 9,638	+ 712	+ 941	+ 1,064	+ 962	...
Other EU member states	Exports	234,693	258,417	264,456	232,279	21,829	22,607	24,103	24,004	...
	Imports	176,567	186,691	192,496	173,564	16,848	16,703	18,164	18,430	...
	Balance	+ 58,126	+ 71,727	+ 71,960	+ 58,715	+ 4,982	+ 5,903	+ 5,940	+ 5,574	...
of which										
United Kingdom	Exports	79,163	89,018	85,939	71,151	6,983	6,583	7,295	6,978	...
	Imports	38,545	38,414	35,654	31,023	3,241	2,867	3,108	3,256	...
	Balance	+ 40,618	+ 50,604	+ 50,285	+ 40,128	+ 3,741	+ 3,715	+ 4,187	+ 3,722	...
2 Other European countries	Exports	113,468	110,932	113,096	102,643	9,728	10,215	10,604	10,426	...
	Imports	115,621	110,448	106,409	96,876	9,053	8,951	9,281	9,734	...
	Balance	– 2,153	+ 484	+ 6,687	+ 5,768	+ 675	+ 1,263	+ 1,323	+ 692	...
of which										
Switzerland	Exports	46,202	49,070	50,161	45,315	4,188	4,328	4,528	4,564	...
	Imports	39,392	42,089	43,896	38,086	3,725	3,379	3,656	3,535	...
	Balance	+ 6,810	+ 6,981	+ 6,265	+ 7,229	+ 463	+ 950	+ 872	+ 1,030	...
II Non-European countries	Exports	358,337	387,398	382,486	332,918	33,410	33,948	34,579	32,793	...
	Imports	267,407	295,461	297,164	271,571	26,754	27,898	27,085	27,567	...
	Balance	+ 90,930	+ 91,936	+ 85,322	+ 61,347	+ 6,656	+ 6,050	+ 7,494	+ 5,225	...
1 Africa	Exports	22,505	23,897	24,434	21,893	1,925	2,033	1,931	2,178	...
	Imports	20,242	18,307	16,675	16,834	1,601	1,830	1,647	1,706	...
	Balance	+ 2,263	+ 5,590	+ 7,759	+ 5,059	+ 324	+ 204	+ 284	+ 472	...
2 America	Exports	135,293	156,982	147,542	127,756	13,059	12,642	12,846	12,640	...
	Imports	74,191	85,582	83,499	74,209	7,093	7,169	7,091	7,481	...
	Balance	+ 61,103	+ 71,400	+ 64,043	+ 53,547	+ 5,966	+ 5,472	+ 5,755	+ 5,159	...
of which										
United States	Exports	95,928	113,733	106,822	92,209	9,165	8,992	9,199	9,171	...
	Imports	49,207	60,217	57,968	50,889	4,663	5,019	4,896	5,121	...
	Balance	+ 46,721	+ 53,516	+ 48,855	+ 41,320	+ 4,502	+ 3,973	+ 4,303	+ 4,050	...
3 Asia	Exports	190,973	196,297	200,158	174,022	17,500	18,318	18,796	17,034	...
	Imports	170,050	188,621	193,979	177,174	17,704	18,661	18,047	18,130	...
	Balance	+ 20,923	+ 7,676	+ 6,179	– 3,152	– 204	– 343	+ 749	– 1,096	...
of which										
Middle East	Exports	35,462	39,518	36,659	27,220	2,576	2,781	3,258	2,525	...
	Imports	7,865	7,330	6,581	5,724	671	578	610	486	...
	Balance	+ 27,598	+ 32,188	+ 30,079	+ 21,496	+ 1,904	+ 2,203	+ 2,648	+ 2,040	...
Japan	Exports	16,910	16,968	18,307	16,280	1,812	1,642	1,765	1,560	...
	Imports	19,007	20,180	21,922	19,226	1,799	1,914	1,957	1,887	...
	Balance	– 2,097	– 3,213	– 3,615	– 2,946	+ 13	– 272	– 193	– 327	...
People's Republic of China 2	Exports	74,369	71,284	76,046	70,392	7,339	7,698	7,194	7,028	...
	Imports	79,828	91,930	94,172	82,695	8,319	8,770	8,525	8,745	...
	Balance	– 5,459	– 20,646	– 18,126	– 12,303	– 981	– 1,071	– 1,331	– 1,716	...
New industrial countries and emerging markets of Asia 3	Exports	48,476	51,510	51,921	44,403	4,377	4,506	5,152	4,441	...
	Imports	38,782	42,478	42,966	42,990	4,319	4,586	4,235	4,443	...
	Balance	+ 9,695	+ 9,032	+ 8,955	+ 1,413	+ 58	– 79	+ 917	– 2	...
4 Oceania and polar regions	Exports	9,566	10,221	10,352	9,247	926	954	1,006	941	...
	Imports	2,924	2,951	3,011	3,354	357	238	300	250	...
	Balance	+ 6,641	+ 7,271	+ 7,341	+ 5,893	+ 569	+ 716	+ 706	+ 691	...

* 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		
		of which									
	Total	Transport	Travel [2]	Financial services	Charges for the use of intellectual property	Telecommunications, computer and information services	Other business services	Government goods and services [3]	Compensation of employees	Investment income	Other primary income [4]
2012	– 32,775	– 10,189	– 35,422	+ 8,793	+ 3,030	+ 1,442	– 9,459	+ 3,103	+ 2,187	+ 61,666	+ 1,005
2013	– 41,376	– 9,881	– 37,713	+ 8,056	+ 3,656	– 870	– 5,518	+ 3,073	+ 541	+ 60,205	+ 1,223
2014	– 25,323	– 7,301	– 37,653	+ 7,008	+ 3,639	+ 2,785	– 1,418	+ 3,024	+ 451	+ 54,849	+ 877
2015	– 18,602	– 5,476	– 36,595	+ 9,331	+ 4,942	+ 4,037	– 3,116	+ 3,106	+ 783	+ 56,948	– 361
2016	– 21,218	– 5,962	– 38,266	+ 9,189	+ 6,450	+ 3,312	– 3,276	+ 3,119	+ 652	+ 53,196	– 1,712
2016 Q1	– 3,363	– 1,660	– 6,286	+ 2,095	+ 1,215	+ 219	– 819	+ 852	+ 756	+ 16,817	– 640
Q2	– 4,009	– 1,080	– 8,654	+ 2,174	+ 1,190	+ 1,238	– 687	+ 831	– 107	+ 3,501	– 2,810
Q3	– 11,696	– 1,414	– 15,956	+ 1,892	+ 1,629	+ 483	– 173	+ 833	– 384	+ 15,089	– 1,190
Q4	– 2,150	– 1,808	– 7,371	+ 3,029	+ 2,416	+ 1,372	– 1,597	+ 604	+ 386	+ 17,788	+ 2,928
2017 Q1	– 3,315	– 1,260	– 5,956	+ 2,016	+ 1,223	+ 426	– 1,464	+ 723	+ 740	+ 16,280	– 1,118
Q2	– 4,015	– 438	– 9,179	+ 2,305	+ 1,600	+ 908	– 948	+ 785	– 91	+ 6,584	– 1,832
Q3	– 11,066	– 1,224	– 16,110	+ 2,389	+ 1,609	+ 459	+ 228	+ 704	– 482	+ 18,171	– 1,110
2017 Jan	– 1,271	– 470	– 1,575	+ 831	+ 289	– 317	– 660	+ 201	+ 271	+ 6,219	– 410
Feb	– 777	– 298	– 1,459	+ 478	+ 484	+ 62	– 498	+ 277	+ 272	+ 3,072	– 335
Mar	– 1,268	– 492	– 2,921	+ 707	+ 450	+ 681	– 307	+ 244	+ 197	+ 6,989	– 373
Apr	– 769	– 109	– 1,760	+ 881	+ 688	– 392	– 532	+ 262	– 42	+ 4,720	– 444
May	– 1,801	– 165	– 3,049	+ 806	+ 293	+ 212	– 554	+ 255	– 18	– 3,162	– 1,444
June	– 1,445	– 164	– 4,371	+ 618	+ 619	+ 1,088	+ 138	+ 268	– 31	+ 5,026	+ 56
July	– 3,793	– 211	– 4,879	+ 693	+ 817	– 167	– 485	+ 182	– 190	+ 6,750	– 369
Aug	– 4,819	– 500	– 6,429	+ 1,110	+ 460	+ 75	– 130	+ 259	– 146	+ 5,167	– 374
Sep	– 2,455	– 512	– 4,801	+ 586	+ 332	+ 551	+ 843	+ 262	– 146	+ 6,255	– 366
Oct	– 3,402	– 465	– 5,365	+ 734	+ 1,374	– 27	– 256	+ 241	+ 182	+ 5,942	– 546
Nov p	– 619	– 472	– 1,641	+ 1,065	+ 391	+ 135	– 556	+ 187	+ 195	+ 6,034	– 353

1 Including freight and insurance costs of foreign trade. **2** Since 2001, the sample results of a household survey have been used on the expenditure side. **3** Domestic public authorities' receipts from and expenditure on services, not included elsewhere; including the receipts from foreign military bases. **4** Includes, inter alia, taxes on leasing, production and imports transferred to the EU as well as subsidies received from the EU.

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

€ million

Period		General government			All sectors excluding general government [2]		
			of which			*of which*	
	Total	Total	Current international cooperation [1]	Current taxes on income, wealth etc.	Total	Personal transfers between resident and nonresident households [3]	*of which* Workers' remittances
2012	– 38,894	– 25,446	– 5,167	+ 5,206	– 13,448	– 2,952	– 2,952
2013	– 43,639	– 28,923	– 4,733	+ 6,174	– 14,715	– 3,250	– 3,229
2014	– 41,188	– 28,106	– 5,972	+ 8,101	– 13,082	– 3,476	– 3,451
2015	– 39,987	– 24,925	– 6,648	+ 9,830	– 15,062	– 3,540	– 3,523
2016	– 40,001	– 26,227	– 8,376	+ 9,934	– 13,774	– 4,214	– 4,196
2016 Q1	– 13,359	– 10,088	– 2,840	+ 1,307	– 3,271	– 1,052	– 1,049
Q2	– 4,393	– 836	– 1,567	+ 5,561	– 3,556	– 1,053	– 1,049
Q3	– 10,630	– 6,866	– 1,702	+ 1,772	– 3,763	– 1,053	– 1,049
Q4	– 11,620	– 8,437	– 2,267	+ 1,294	– 3,183	– 1,055	– 1,049
2017 Q1	– 13,958	– 7,816	– 2,668	+ 1,774	– 6,141	– 1,157	– 1,153
Q2	– 12,805	– 2,861	– 1,394	+ 5,170	– 9,944	– 1,158	– 1,153
Q3	– 10,953	– 5,549	– 1,779	+ 1,726	– 5,405	– 1,157	– 1,153
2017 Jan	– 6,830	– 3,731	– 1,622	+ 189	– 3,099	– 386	– 384
Feb	– 4,635	– 2,699	– 699	+ 714	– 1,936	– 385	– 384
Mar	– 2,492	– 1,386	– 347	+ 871	– 1,106	– 386	– 384
Apr	– 8,281	– 1,856	– 398	+ 811	– 6,425	– 385	– 384
May	– 918	+ 829	– 198	+ 3,216	– 1,748	– 387	– 384
June	– 3,606	– 1,835	– 798	+ 1,143	– 1,771	– 386	– 384
July	– 4,378	– 2,624	– 906	+ 482	– 1,755	– 385	– 384
Aug	– 3,437	– 1,463	– 696	+ 455	– 1,974	– 386	– 384
Sep	– 3,138	– 1,462	– 177	+ 789	– 1,676	– 386	– 384
Oct	– 4,220	– 2,955	– 994	+ 99	– 1,265	– 387	– 384
Nov p	– 5,237	– 2,831	– 808	+ 60	– 2,406	– 386	– 384

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

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

€ million

Period	Total	Non-produced non-financial assets	Capital transfers
2012	– 413	+ 1,745	– 2,158
2013	– 563	+ 1,105	– 1,668
2014	+ 2,355	+ 2,898	– 542
2015	– 635	+ 2,377	– 3,012
2016	+ 1,112	+ 3,324	– 2,212
2016 Q1	– 269	– 521	+ 253
Q2	+ 1,092	+ 2,219	– 1,127
Q3	+ 228	+ 887	– 659
Q4	+ 61	+ 739	– 679
2017 Q1	+ 457	+ 643	– 186
Q2	+ 7	+ 445	– 438
Q3	+ 856	+ 1,596	– 740
2017 Jan	– 262	– 85	– 178
Feb	+ 271	+ 8	+ 263
Mar	+ 448	+ 719	– 271
Apr	– 311	– 37	– 274
May	+ 66	+ 215	– 149
June	+ 251	+ 267	– 16
July	+ 553	+ 757	– 203
Aug	+ 146	+ 341	– 194
Sep	+ 156	+ 499	– 342
Oct	– 206	– 6	– 199
Nov p	– 512	+ 77	– 590

XII External sector

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

€ million

Item	2014	2015	2016	2017					
				Q1	Q2	Q3	Sep	Oct	Nov p
I Net domestic investment abroad (Increase: +)	+ 301,030	+ 249,102	+ 380,469	+ 235,373	+ 45,266	+ 59,457	+ 72,346	– 25,346	+ 31,697
1 Direct investment	+ 83,960	+ 101,357	+ 69,323	+ 48,982	+ 22,668	+ 21,526	+ 13,345	+ 11,216	+ 7,681
Equity	+ 56,733	+ 67,801	+ 61,655	+ 16,835	+ 14,149	+ 17,977	+ 5,812	+ 5,460	+ 6,317
of which Reinvestment of earnings [1]	+ 18,535	+ 9,711	+ 13,224	+ 6,206	+ 7,891	+ 9,172	+ 3,972	+ 4,678	+ 3,537
Debt instruments	+ 27,227	+ 33,556	+ 7,668	+ 32,147	+ 8,520	+ 3,549	+ 7,533	+ 5,757	+ 1,364
2 Portfolio investment	+ 146,979	+ 122,005	+ 96,602	+ 30,952	+ 20,473	+ 30,813	+ 10,420	+ 6,815	+ 8,594
Shares [2]	+ 8,935	+ 19,561	+ 17,288	+ 5,528	– 2,404	+ 5,150	+ 2,978	+ 1,508	+ 1,194
Investment fund shares [3]	+ 42,057	+ 34,626	+ 36,586	+ 16,923	+ 4,382	+ 10,575	+ 3,029	+ 7,194	+ 2,198
Long-term debt securities [4]	+ 95,025	+ 73,519	+ 48,826	+ 5,347	+ 19,465	+ 16,462	+ 6,666	– 343	+ 6,655
Short-term debt securities [5]	+ 963	– 5,700	– 6,098	+ 3,155	– 970	– 1,374	– 2,253	– 1,544	– 1,453
3. Financial derivatives and employee stock options [6]	+ 31,896	+ 26,202	+ 32,792	+ 0	+ 2,351	+ 1,370	+ 1,132	+ 1,359	+ 2,291
4. Other investment [7]	+ 40,759	+ 1,750	+ 180,067	+ 155,799	– 612	+ 5,596	+ 46,847	– 45,913	+ 13,400
Monetary financial institutions [8]	+ 76,296	– 90,287	+ 18,747	+ 72,179	– 26,659	– 16,026	+ 12,735	– 14,804	– 5,691
Long-term	+ 21,139	– 2,803	+ 45,099	+ 12,896	+ 2,596	– 1,397	– 67	+ 715	– 1,885
Short-term	+ 55,156	– 87,484	– 26,353	+ 59,283	– 29,255	– 14,629	+ 12,802	– 15,519	– 3,806
Enterprises and households [9]	– 2,952	– 19,122	– 10,373	+ 7,423	– 2,807	+ 5,161	+ 9,967	+ 1,189	+ 9,381
Long-term	+ 6,364	+ 12,513	+ 1,254	– 162	– 723	– 683	– 172	+ 222	– 669
Short-term	– 9,316	– 31,635	– 11,627	+ 7,585	– 2,084	+ 5,844	+ 10,139	+ 966	+ 10,049
General government	+ 17,295	– 12,205	+ 1,202	– 567	– 2,565	– 2,668	– 2,600	– 628	+ 2,495
Long-term	– 405	– 7,557	– 5,331	– 1,253	– 1,240	– 403	– 272	– 24	– 281
Short-term	+ 17,700	– 4,648	+ 6,533	+ 686	– 1,325	– 2,265	– 2,328	– 604	+ 2,776
Bundesbank	– 49,880	+ 123,364	+ 170,491	+ 76,764	+ 31,420	+ 19,129	+ 26,745	– 31,669	+ 7,215
5. Reserve assets	– 2,564	– 2,213	+ 1,686	– 360	+ 385	+ 152	+ 602	+ 1,176	– 270
II Net foreign investment in the reporting country (Increase: +)	+ 62,400	+ 14,499	+ 136,883	+ 160,898	– 28,690	+ 5,504	+ 41,954	– 36,259	+ 3,255
1 Direct investment	+ 11,930	+ 47,284	+ 46,695	+ 28,686	+ 5,896	+ 21,007	+ 10,461	+ 2,940	+ 7,818
Equity	+ 23,558	+ 20,935	+ 12,126	+ 5,627	– 887	+ 5,656	+ 1,562	+ 1,894	+ 3,240
of which Reinvestment of earnings [1]	+ 3,325	+ 4,375	+ 5,905	+ 3,565	+ 1,533	+ 4,115	+ 1,290	+ 1,773	+ 1,355
Debt instruments	– 11,628	+ 26,349	+ 34,569	+ 23,059	+ 6,783	+ 15,351	+ 8,900	+ 1,046	+ 4,579
2 Portfolio investment	+ 13,483	– 74,941	– 111,309	– 20,789	– 4,557	– 28,041	– 14,056	– 17,844	– 1,290
Shares [2]	+ 6,314	+ 9,725	– 985	+ 1,460	– 2,181	– 2,286	+ 1,405	+ 2,701	– 819
Investment fund shares [3]	– 3,790	+ 7,345	– 6,928	+ 136	– 1,338	+ 641	– 224	+ 1,016	– 4,849
Long-term debt securities [4]	+ 14,131	– 101,208	– 95,730	– 12,459	+ 781	– 20,992	– 15,336	– 22,092	+ 6,378
Short-term debt securities [5]	– 3,171	+ 9,197	– 7,666	– 9,926	– 1,819	– 5,405	+ 98	+ 531	– 1,999
3. Other investment [7]	+ 36,987	+ 42,156	+ 201,497	+ 153,000	– 30,029	+ 12,538	+ 45,548	– 21,355	– 3,274
Monetary financial institutions [8]	+ 32,480	– 41,166	+ 86,802	+ 107,204	– 18,932	– 3,551	+ 35,631	– 3,384	+ 11,643
Long-term	– 14,558	– 19,536	+ 5,834	+ 2,847	+ 347	– 1,325	+ 295	+ 1,092	+ 1,071
Short-term	+ 47,039	– 21,630	+ 80,968	+ 104,357	– 19,279	– 2,226	+ 35,336	– 4,476	+ 10,572
Enterprises and households [9]	+ 16,355	+ 10,459	+ 1,988	+ 13,837	– 16,249	+ 8,815	+ 8,090	+ 778	+ 7,156
Long-term	+ 2,960	+ 15,960	+ 6,716	+ 3,042	+ 667	+ 4,489	+ 285	+ 3,401	– 142
Short-term	+ 13,395	– 5,501	– 4,728	+ 10,795	– 16,916	+ 4,327	+ 7,805	– 2,623	+ 7,298
General government	– 5,575	– 11,521	+ 1,796	+ 1,161	– 548	+ 5,846	+ 1,448	– 1,366	+ 879
Long-term	– 931	– 3,942	– 2,847	– 2,850	– 842	+ 281	+ 366	+ 119	– 84
Short-term	– 4,645	– 7,579	+ 4,642	+ 4,012	+ 294	+ 5,565	+ 1,082	– 1,485	+ 963
Bundesbank	– 6,273	+ 84,383	+ 110,911	+ 30,797	+ 5,700	+ 1,428	+ 380	– 17,382	– 22,953
III Net financial account (Net lending: + / net borrowing: -)	+ 238,630	+ 234,603	+ 243,586	+ 74,476	+ 73,956	+ 53,953	+ 30,391	+ 10,913	+ 28,442

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)
		Reserve assets					Other investment				
	Total	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	Portfolio investment 2		
	1	2	3	4	5	6	7	8	9	10	11
1999 Jan 5	95,316	93,940	29,312	1,598	6,863	56,167	1,376	–	–	9,628	85,688
1999	141,958	93,039	32,287	1,948	6,383	52,420	48,919	26,275	–	7,830	134,128
2000	100,762	93,815	32,676	1,894	5,868	53,377	6,947	– 6,851	–	8,287	92,475
2001	76,147	93,215	35,005	2,032	6,689	49,489	– 17,068	– 30,857	–	10,477	65,670
2002	103,948	85,002	36,208	1,888	6,384	40,522	18,780	4,995	166	66,278	37,670
2003	95,394	76,680	36,533	1,540	6,069	32,538	18,259	4,474	454	83,329	12,065
2004	93,110	71,335	35,495	1,512	5,036	29,292	21,110	7,851	665	95,014	– 1,904
2005	130,268	86,181	47,924	1,601	2,948	33,708	43,184	29,886	902	115,377	14,891
2006	104,389	84,765	53,114	1,525	1,486	28,640	18,696	5,399	928	134,697	– 30,308
2007	179,492	92,545	62,433	1,469	949	27,694	84,420	71,046	2,527	176,569	2,923
2008	230,775	99,185	68,194	1,576	1,709	27,705	129,020	115,650	2,570	237,893	– 7,118
2009	323,286	125,541	83,939	13,263	2,705	25,634	190,288	177,935	7,458	247,645	75,641
2010	524,695	162,100	115,403	14,104	4,636	27,957	337,921	325,553	24,674	273,241	251,454
2011	714,662	184,603	132,874	14,118	8,178	29,433	475,994	463,311	54,065	333,730	380,932
2012	921,002	188,630	137,513	13,583	8,760	28,774	668,672	655,670	63,700	424,999	496,003
2013	721,741	143,753	94,876	12,837	7,961	28,080	523,153	510,201	54,834	401,524	320,217
2014	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	396,314	282,490
2015	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	481,801	318,907
2016	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	592,799	397,651
2017	1,142,845	166,842	117,347	13,987	4,294	31,215	923,765	906,941	52,238	682,166	460,679
2015 Apr	762,437	171,758	116,812	14,967	5,796	34,184	544,620	532,192	46,058	436,061	326,376
May	758,500	173,842	118,141	15,124	5,744	34,833	538,619	526,191	46,039	436,637	321,863
June	756,263	168,299	113,838	15,000	5,617	33,844	543,502	531,074	44,461	439,905	316,357
July	763,247	163,071	108,872	15,172	4,919	34,107	555,013	542,585	45,162	444,709	318,537
Aug	781,286	162,917	110,012	14,934	5,164	32,807	573,712	561,284	44,657	440,954	340,331
Sep	774,428	161,922	108,959	14,941	5,191	32,831	567,602	555,174	44,903	462,529	311,899
Oct	786,694	166,664	112,836	15,126	5,199	33,503	575,246	562,818	44,784	468,522	318,172
Nov	813,320	163,816	108,820	15,475	5,217	34,303	604,946	592,518	44,558	482,779	330,541
Dec	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	481,801	318,907
2016 Jan	807,971	164,656	111,126	15,055	5,197	33,278	599,427	587,000	43,888	473,127	334,844
Feb	839,336	177,917	122,535	15,109	6,899	33,374	617,434	605,006	43,985	489,497	349,839
Mar	837,375	171,266	117,844	14,730	6,730	31,962	621,617	609,190	44,491	492,161	345,214
Apr	856,266	175,738	121,562	14,793	6,759	32,623	638,201	625,774	42,327	495,599	360,667
May	884,887	173,927	118,133	14,970	6,839	33,984	667,972	655,544	42,988	501,617	383,270
June	922,232	184,628	128,963	14,746	6,780	34,139	693,498	681,070	44,106	518,466	403,766
July	904,044	186,300	130,417	14,698	6,736	34,449	672,748	660,320	44,996	518,921	385,124
Aug	918,692	183,951	128,171	14,685	6,642	34,452	689,906	677,479	44,834	525,322	393,370
Sep	957,860	183,796	128,795	14,657	6,605	33,738	728,554	715,738	45,510	549,884	407,976
Oct	947,718	181,623	126,245	14,708	6,631	34,039	720,795	708,029	45,300	543,007	404,711
Nov	991,108	177,348	121,032	14,917	6,572	34,826	766,905	754,057	46,855	552,602	438,506
Dec	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	592,799	397,651
2017 Jan	1,034,804	177,256	121,656	14,806	6,523	34,270	809,862	795,621	47,687	577,997	456,807
Feb	1,060,894	184,666	128,507	14,976	6,248	34,935	828,264	814,375	47,964	609,242	451,652
Mar	1,075,039	181,898	126,158	14,886	6,183	34,671	843,892	829,751	49,249	623,526	451,513
Apr	1,089,144	180,726	126,011	14,697	6,055	33,963	858,281	843,439	50,137	603,035	486,108
May	1,098,879	175,958	122,486	14,459	5,907	33,107	871,724	857,272	51,197	604,178	494,701
June	1,098,880	171,295	118,235	14,349	5,695	33,016	875,312	860,764	52,273	628,540	470,340
July	1,092,769	169,735	117,330	14,124	5,531	32,750	871,752	856,510	51,282	619,671	473,099
Aug	1,089,883	171,044	119,770	14,071	5,530	31,673	867,696	852,511	51,143	629,245	460,638
Sep	1,115,200	169,937	118,208	14,089	5,471	32,169	894,441	878,888	50,821	629,642	485,557
Oct	1,085,916	172,047	118,569	14,208	5,446	33,824	862,772	848,443	51,097	612,351	473,564
Nov	1,091,832	169,539	117,208	14,069	5,168	33,094	869,988	855,548	52,305	589,275	502,557
Dec	1,142,845	166,842	117,347	13,987	4,294	31,215	923,765	906,941	52,238	682,166	460,679

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

XII External sector

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

€ million

End of year or month	Claims on non-residents							Liabilities vis-à-vis non-residents						
			Claims on foreign non-banks							Liabilities vis-à-vis foreign non-banks				
					from trade credits							from trade credits		
	Total	Balances with foreign banks	Total	from financial operations	Total	Credit terms granted	Advance payments effected	Total	Loans from foreign banks	Total	from financial operations	Total	Credit terms used	Advance payments received
All countries														
2013	787,308	282,026	505,282	325,614	179,668	164,454	15,214	939,252	144,884	794,368	632,110	162,258	95,302	66,957
2014	833,644	279,559	554,085	365,230	188,856	174,058	14,798	959,833	154,566	805,267	636,328	168,939	102,126	66,813
2015	866,912	265,170	601,743	409,858	191,885	177,397	14,488	1,003,050	150,054	852,996	672,312	180,684	109,062	71,622
2016	855,814	241,683	614,131	412,871	201,260	187,086	14,174	1,025,815	128,831	896,984	708,734	188,250	115,808	72,443
2017 June	873,636	216,911	656,726	441,631	215,094	201,253	13,841	1,051,719	119,559	932,160	740,409	191,751	118,820	72,931
July	866,338	215,822	650,516	440,689	209,826	196,355	13,471	1,051,322	116,987	934,335	745,799	188,536	115,024	73,512
Aug	859,633	213,414	646,219	440,278	205,941	192,378	13,564	1,054,736	117,557	937,179	749,860	187,319	113,159	74,160
Sep	878,076	218,625	659,451	442,168	217,283	203,538	13,746	1,052,248	122,376	929,872	733,677	196,195	123,424	72,770
Oct	886,990	219,737	667,253	450,138	217,114	203,035	14,080	1,056,403	121,812	934,591	737,990	196,602	122,549	74,053
Nov	895,408	225,441	669,967	448,362	221,605	207,285	14,320	1,071,448	127,397	944,051	746,433	197,618	125,046	72,572
Industrial countries [1]														
2013	697,475	278,723	418,753	296,675	122,077	108,620	13,458	852,420	143,577	708,843	594,623	114,220	79,543	34,676
2014	733,191	274,660	458,531	330,034	128,497	115,398	13,099	869,392	153,412	715,980	595,396	120,583	85,122	35,461
2015	761,648	261,267	500,381	368,033	132,348	119,309	13,038	906,968	145,136	761,832	635,205	126,627	90,716	35,911
2016	748,340	237,789	510,551	371,663	138,888	126,211	12,677	931,963	124,504	807,460	674,402	133,058	95,933	37,125
2017 June	756,604	212,904	543,701	396,298	147,402	135,227	12,176	956,798	115,708	841,090	707,159	133,931	97,108	36,823
July	750,965	211,939	539,026	397,315	141,711	129,870	11,840	954,229	111,507	842,722	712,597	130,124	93,446	36,679
Aug	746,289	209,552	536,737	398,012	138,724	126,825	11,899	960,329	112,945	847,384	717,235	130,148	93,097	37,051
Sep	762,901	214,616	548,285	400,613	147,672	135,554	12,118	950,851	112,989	837,862	701,135	136,726	100,527	36,199
Oct	770,998	215,632	555,366	408,088	147,278	134,763	12,515	954,155	112,569	841,585	704,993	136,593	99,803	36,790
Nov	780,013	221,473	558,540	406,282	152,258	139,664	12,595	969,026	118,814	850,212	710,415	139,797	103,618	36,179
EU member states [1]														
2013	589,286	264,271	325,014	237,949	87,066	76,539	10,527	713,044	129,044	583,999	504,337	79,663	53,340	26,323
2014	617,489	259,516	357,973	266,777	91,196	80,585	10,611	724,674	138,894	585,780	502,054	83,726	56,580	27,147
2015	626,482	243,139	383,344	289,190	94,153	83,665	10,488	743,011	134,564	608,448	524,316	84,132	58,384	25,748
2016	605,613	219,938	385,675	288,730	96,945	86,930	10,016	757,649	114,258	643,390	555,414	87,976	61,160	26,817
2017 June	597,934	194,237	403,696	300,021	103,675	94,123	9,553	786,173	105,077	681,096	589,821	91,274	64,949	26,326
July	593,228	192,791	400,437	300,403	100,034	90,467	9,567	784,598	100,389	684,209	594,647	89,562	63,447	26,115
Aug	590,108	190,337	399,771	301,487	98,283	88,730	9,554	788,546	100,783	687,763	597,936	89,827	63,581	26,246
Sep	603,874	194,645	409,229	305,203	104,026	94,222	9,804	777,661	101,038	676,623	581,892	94,731	68,693	26,039
Oct	608,934	194,952	413,982	309,636	104,346	94,188	10,158	779,905	100,699	679,205	584,535	94,670	68,382	26,288
Nov	619,055	200,992	418,063	310,187	107,876	97,631	10,245	790,006	102,986	687,020	589,715	97,304	71,078	26,226
of which: **Euro-area** [2]														
2013	428,179	197,430	230,749	174,605	56,143	49,968	6,175	603,366	101,722	501,645	448,142	53,502	36,671	16,832
2014	456,469	204,043	252,426	194,207	58,219	51,999	6,220	606,525	107,694	498,831	444,401	54,430	37,498	16,932
2015	465,919	195,751	270,168	208,862	61,305	54,730	6,575	598,884	93,947	504,937	452,298	52,639	37,994	14,644
2016	445,368	167,575	277,794	213,498	64,295	57,575	6,721	609,399	75,639	533,760	477,891	55,869	41,068	14,801
2017 June	438,331	148,448	289,883	221,502	68,381	61,226	7,155	636,945	69,711	567,234	507,451	59,783	44,573	15,210
July	433,899	146,251	287,648	221,209	66,439	59,229	7,209	636,189	66,063	570,126	510,427	59,699	44,398	15,301
Aug	432,126	144,124	288,001	222,827	65,174	57,979	7,195	639,953	64,913	575,040	514,960	60,080	44,729	15,351
Sep	441,962	147,862	294,100	225,777	68,323	60,949	7,374	625,362	63,972	561,390	499,409	61,981	46,863	15,118
Oct	448,758	150,417	298,341	229,402	68,939	61,336	7,603	630,810	65,738	565,072	502,267	62,805	47,418	15,386
Nov	456,192	152,788	303,404	231,844	71,560	63,879	7,681	638,742	67,557	571,186	506,096	65,090	49,716	15,374
Emerging economies and developing countries [3]														
2013	89,826	3,303	86,523	28,937	57,586	55,829	1,757	86,829	1,307	85,522	37,487	48,035	15,755	32,280
2014	100,400	4,849	95,551	35,193	60,358	58,659	1,699	90,439	1,153	89,285	40,931	48,354	17,003	31,352
2015	104,276	3,094	101,182	41,825	59,358	57,908	1,450	91,912	947	90,964	36,908	54,057	18,346	35,711
2016	106,063	2,647	103,416	41,192	62,224	60,727	1,497	90,708	1,401	89,307	34,132	55,175	19,875	35,300
2017 June	115,552	2,742	112,810	45,299	67,511	65,846	1,665	92,055	1,240	90,815	33,049	57,765	21,674	36,091
July	113,881	2,607	111,273	43,331	67,942	66,311	1,631	92,488	1,195	91,293	33,001	58,292	21,541	36,751
Aug	111,844	2,585	109,259	42,222	67,037	65,372	1,664	90,634	1,161	89,473	32,425	57,048	20,022	37,026
Sep	113,639	2,699	110,940	41,511	69,428	67,801	1,628	92,871	1,181	91,689	32,342	59,347	22,859	36,488
Oct	114,353	2,695	111,658	42,007	69,652	68,087	1,565	93,843	1,136	92,706	32,797	59,909	22,708	37,201
Nov	113,776	2,551	111,224	42,036	69,188	67,462	1,725	94,677	1,138	93,539	35,818	57,721	21,390	36,331

* 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. **r** Corrected.

XII External sector

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

EUR 1 = currency units ...

Yearly or monthly average	Australia AUD	Canada CAD	China CNY [1]	Denmark DKK	Japan JPY	Norway NOK	Sweden SEK	Switzerland CHF	United Kingdom GBP	United States USD
2000	1.5889	1.3706	[2] 7.6168	7.4538	99.47	8.1129	8.4452	1.5579	0.60948	0.9236
2001	1.7319	1.3864	7.4131	7.4521	108.68	8.0484	9.2551	1.5105	0.62187	0.8956
2002	1.7376	1.4838	7.8265	7.4305	118.06	7.5086	9.1611	1.4670	0.62883	0.9456
2003	1.7379	1.5817	9.3626	7.4307	130.97	8.0033	9.1242	1.5212	0.69199	1.1312
2004	1.6905	1.6167	10.2967	7.4399	134.44	8.3697	9.1243	1.5438	0.67866	1.2439
2005	1.6320	1.5087	10.1955	7.4518	136.85	8.0092	9.2822	1.5483	0.68380	1.2441
2006	1.6668	1.4237	10.0096	7.4591	146.02	8.0472	9.2544	1.5729	0.68173	1.2556
2007	1.6348	1.4678	10.4178	7.4506	161.25	8.0165	9.2501	1.6427	0.68434	1.3705
2008	1.7416	1.5594	10.2236	7.4560	152.45	8.2237	9.6152	1.5874	0.79628	1.4708
2009	1.7727	1.5850	9.5277	7.4462	130.34	8.7278	10.6191	1.5100	0.89094	1.3948
2010	1.4423	1.3651	8.9712	7.4473	116.24	8.0043	9.5373	1.3803	0.85784	1.3257
2011	1.3484	1.3761	8.9960	7.4506	110.96	7.7934	9.0298	1.2326	0.86788	1.3920
2012	1.2407	1.2842	8.1052	7.4437	102.49	7.4751	8.7041	1.2053	0.81087	1.2848
2013	1.3777	1.3684	8.1646	7.4579	129.66	7.8067	8.6515	1.2311	0.84926	1.3281
2014	1.4719	1.4661	8.1857	7.4548	140.31	8.3544	9.0985	1.2146	0.80612	1.3285
2015	1.4777	1.4186	6.9733	7.4587	134.31	8.9496	9.3535	1.0679	0.72584	1.1095
2016	1.4883	1.4659	7.3522	7.4452	120.20	9.2906	9.4689	1.0902	0.81948	1.1069
2017	1.4732	1.4647	7.6290	7.4386	126.71	9.3270	9.6351	1.1117	0.87667	1.1297
2017 Jan	1.4252	1.4032	7.3189	7.4355	122.14	8.9990	9.5110	1.0714	0.86100	1.0614
Feb	1.3886	1.3942	7.3143	7.4348	120.17	8.8603	9.4762	1.0660	0.85273	1.0643
Mar	1.4018	1.4306	7.3692	7.4356	120.68	9.0919	9.5279	1.0706	0.86560	1.0685
Apr	1.4241	1.4408	7.3892	7.4376	118.29	9.1993	9.5941	1.0727	0.84824	1.0723
May	1.4878	1.5041	7.6130	7.4400	124.09	9.4001	9.7097	1.0904	0.85554	1.1058
June	1.4861	1.4941	7.6459	7.4376	124.58	9.4992	9.7538	1.0874	0.87724	1.1229
July	1.4772	1.4641	7.7965	7.4366	129.48	9.3988	9.5892	1.1059	0.88617	1.1511
Aug	1.4919	1.4889	7.8760	7.4379	129.70	9.3201	9.5485	1.1398	0.91121	1.1807
Sep	1.4946	1.4639	7.8257	7.4401	131.92	9.3275	9.5334	1.1470	0.89470	1.1915
Oct	1.5099	1.4801	7.7890	7.4429	132.76	9.3976	9.6138	1.1546	0.89071	1.1756
Nov	1.5395	1.4978	7.7723	7.4420	132.39	9.6082	9.8479	1.1640	0.88795	1.1738
Dec	1.5486	1.5108	7.8073	7.4433	133.64	9.8412	9.9370	1.1689	0.88265	1.1836

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

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

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

XII External sector

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

1999 Q1=100

Period	Effective exchange rate of the Euro						Indicators of the German economy's price competitiveness						
	EER-19 1				EER-38 2		Based on the deflators of total sales 3				Based on consumer price indices		
							26 selected industrial countries 5						
	Nominal	In real terms based on consumer price indices	In real terms based on the deflators of gross domestic product 3	In real terms based on unit labour costs of national economy 3	Nominal	In real terms based on consumer price indices 4	Total	Euro area countries	Non-euro area countries	37 countries 6	26 selected industrial countries 5	37 countries 6	56 countries 7
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	88.1	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	86.0	90.1	93.0	91.4	90.8
2002	90.1	90.2	89.5	89.3	95.1	90.5	92.2	95.4	88.4	90.6	93.5	91.9	91.7
2003	100.7	101.2	100.4	100.4	107.1	101.4	95.5	94.5	97.4	94.7	97.0	96.5	96.7
2004	104.6	104.9	103.2	103.7	111.7	105.0	95.8	93.2	99.8	94.9	98.4	98.0	98.3
2005	102.9	103.4	100.9	101.7	109.7	102.4	94.6	91.9	98.9	92.8	98.4	96.9	96.5
2006	102.8	103.3	100.1	100.4	109.6	101.7	93.3	90.3	98.2	91.0	98.5	96.4	95.8
2007	106.1	106.0	101.9	102.5	113.0	103.6	94.2	89.5	102.0	91.2	100.7	97.8	96.9
2008	109.3	108.1	103.2	105.7	117.2	105.5	94.3	88.1	105.1	90.3	102.1	97.7	97.0
2009	110.7	108.8	104.1	110.6	120.2	106.6	94.6	88.8	104.3	90.8	101.7	97.9	97.4
2010	103.6	101.1	95.8	102.5	111.7	97.6	92.1	88.5	98.0	87.0	98.7	93.6	91.9
2011	103.3	100.1	93.6	101.0	112.4	97.0	91.7	88.3	97.3	86.1	98.1	92.7	91.3
2012	97.7	94.8	88.2	94.9	107.3	92.2	89.8	88.2	92.3	83.5	95.8	89.7	88.2
2013	101.0	97.7	90.9	97.5	111.8	95.1	92.1	88.7	97.6	85.4	98.1	91.4	90.1
2014	101.4	97.2	90.9	98.4	114.3	95.4	92.8	89.6	97.9	86.1	98.2	91.6	90.7
2015	91.7	87.6	82.8	88.3	105.7	p 87.0	90.0	90.5	89.2	82.5	94.1	86.4	p 85.8
2016	94.4	89.5	84.9	p 89.5	109.7	p 89.3	90.9	91.0	90.7	83.9	94.7	87.5	p 87.0
2015 Jan	94.6	90.3			108.1	89.3					95.1	87.8	87.0
Feb	92.8	88.7	83.4	89.9	106.2	87.8	90.0	90.3	89.6	82.5	94.8	87.2	86.4
Mar	90.0	86.1			103.0	85.1					93.6	85.6	84.6
Apr	89.1	85.3			101.7	84.0					93.4	85.2	84.0
May	91.0	87.0	81.5	87.1	104.1	85.8	89.6	90.4	88.3	81.9	94.0	86.2	85.1
June	91.7	87.7			105.2	86.8					94.1	86.4	85.6
July	90.7	86.6			104.3	85.8					93.7	85.8	85.0
Aug	92.4	88.1	83.1	88.3	107.2	88.0	90.2	90.5	89.5	82.8	94.3	86.7	86.4
Sep	93.2	88.9			108.7	89.3					94.5	87.1	87.1
Oct	93.0	88.8			108.2	88.7					94.5	87.1	86.9
Nov	90.5	86.3	83.1	88.0	105.1	p 86.0	90.2	90.8	89.4	82.9	93.5	85.8	p 85.3
Dec	91.9	87.5			107.1	p 87.5					93.7	86.2	p 85.9
2016 Jan	93.0	88.4			108.9	p 88.7					93.9	86.7	p 86.7
Feb	94.2	89.2	84.7	p 89.3	110.3	p 89.9	90.8	91.1	90.3	83.7	94.4	87.2	p 87.1
Mar	93.6	88.8			109.1	p 89.0					94.5	87.0	p 86.7
Apr	94.4	89.5			109.8	p 89.4					94.9	87.6	p 87.1
May	94.6	89.9	85.1	p 89.8	110.3	p 89.9	90.9	91.1	90.6	84.1	94.8	87.7	p 87.4
June	94.4	89.7			109.9	p 89.6					94.6	87.6	p 87.2
July	94.6	89.8			109.6	p 89.2					94.8	87.6	p 86.9
Aug	94.9	90.0	85.3	p 89.7	110.1	p 89.5	91.1	91.1	91.1	84.1	95.0	87.7	p 87.1
Sep	95.1	90.1			110.3	p 89.7					95.1	87.8	p 87.2
Oct	95.1	90.2			110.0	p 89.4					95.4	87.9	p 87.1
Nov	94.6	89.6	84.6	p 89.3	109.7	p 89.0	90.8	90.9	90.7	83.7	94.7	87.4	p 86.7
Dec	93.7	88.9			108.6	p 88.2					94.6	87.3	p 86.6
2017 Jan	93.9	89.1			109.1	p 88.4					94.4	87.1	p 86.4
Feb	93.4	88.8	83.4	p 88.3	108.2	p 87.9	90.5	90.8	90.0	83.2	94.4	87.0	p 86.1
Mar	94.0	89.2			108.6	p 88.0					94.6	87.1	p 86.1
Apr	93.7	89.0			108.3	p 87.7					94.4	87.0	p 86.0
May	95.6	90.5	84.7	p 89.3	110.5	p 89.3	91.6	91.4	91.9	84.2	95.4	88.1	p 87.1
June	96.3	91.3			111.5	p 90.1					95.9	88.5	p 87.6
July	97.6	92.4			113.4	p 91.5					96.6	89.2	p 88.5
Aug	99.0	93.6	87.7	p 92.1	115.1	p 92.8	93.2	91.5	95.9	85.8	97.2	89.8	p 89.2
Sep	99.0	93.6			115.1	p 92.8					97.4	89.9	p 89.4
Oct	98.6	p 93.1			114.9	p 92.4					97.1	p 89.5	p 89.0
Nov	98.5	p 92.9	...	...	115.1	p 92.5	...	...	...	...	97.1	p 89.4	p 89.0
Dec	98.8	p 93.2			115.4	p 92.7					p 97.3	p 89.5	p 89.1

***** The effective exchange rate corresponds to the weighted external value of the currency concerned. The method of calculating the indicators of the German economy's price competitiveness is consistent with the procedure used by the ECB to compute the effective exchange rates of the euro (see Monthly Report, November 2001, pp 50-53, May 2007, pp 31-35 and August 2017, pp 41-43). For more detailed information on methodology see the ECB's Occasional Paper No 134 (www.ecb.eu). A decline in the figures implies an increase in competitiveness. **1** ECB calculations are based on the weighted averages of the changes in the bilateral exchange rates of the euro against the currencies of the following countries: Australia, Bulgaria, Canada, China, Croatia, Czechia, Denmark, Hong Kong, Hungary, Japan, Norway, Poland, Romania, Singapore, South Korea, Sweden, Switzerland, the United Kingdom and the United States. Where current price and wage indices were not available, estimates were used. **2** ECB calculations. Includes countries belonging to the EER-19 group (see footnote 1) and additional Algeria, Argentina, Brazil, Chile, Iceland, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, Philippines, Russian Federation, South Africa, Taiwan, Thailand, Turkey and Venezuela. **3** Annual and quarterly averages. **4** Data for Argentina are currently not available due to the state of emergency in the national statistical system declared by the government of Argentina on 7 January 2016. As a consequence, Argentina is not included in the calculation of the EER-38 CPI deflated series from February 2016. The policy regarding the inclusion of Argentina will be reconsidered in the future depending on further developments. **5** Euro area countries (from 2001 including Greece, from 2007 including Slovenia, from 2008 including Cyprus and Malta, from 2009 including Slovakia, from 2011 including Estonia, from 2014 including Latvia, from 2015 including Lithuania) as well as Canada, Denmark, Japan, Norway, Sweden, Switzerland, the United Kingdom and the United States. **6** Euro area countries (see footnote 5) and countries belonging to the EER-19 group. **7** Euro area countries and countries belonging to the EER-38 group (see footnote 2).

Overview of publications by the Deutsche Bundesbank

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

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

Annual Report

Financial Stability Review

Monthly Report

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

Monthly Report articles

February 2017
- The current economic situation in Germany

March 2017
- German balance of payments in 2016
- Federal states' cyclical adjustment in the context of the debt brake

April 2017
- The role of banks, non-banks and the central bank in the money creation process
- Demographic change, immigration and the potential output of the German economy

May 2017
- The current economic situation in Germany

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

July 2017
- The market for corporate bonds in the low-interest-rate environment
- The development of government interest expenditure in Germany and other euro area countries
- Return on private financial assets taking into account inflation and taxes
- The danger posed to the global economy by protectionist tendencies
- Changes to the MFI interest rate statistics

August 2017
- The current economic situation in Germany

September 2017
- Monetary policy indicators at the lower bound based on term structure models
- Distributed ledger technologies in payments and securities settlement: potential and risks

– The performance of German credit institutions in 2016
– Changes to the investment funds statistics: scope enhancements, results and outlook

October 2017
– Global liquidity, foreign exchange reserves and exchange rates of emerging market economies
– The natural rate of interest
– The supervisory review and evaluation process for smaller institutions and proportionality considerations
– The Eurosystem's new money market statistical reporting – initial results for Germany
– The new ESCB insurance statistics – integrated reporting flow and initial results

November 2017
– The current economic situation in Germany

December 2017
– Outlook for the German economy – macroeconomic projections for 2018 and 2019 and an outlook for 2020
– German enterprises' profitability and financing in 2016
– Mark-ups of firms in selected European countries
– The Eurosystem's financial market infrastructure – origin and future set-up

January 2018
– The impact of the internationalisation of German firms on domestic investment
– The importance of bank profitability and bank capital for monetary policy
– Developments in corporate financing in the euro area since the financial and economic crisis
– Finalising Basel III

Statistical Supplements to the Monthly Report

1 Banking statistics[1, 2]
2 Capital market statistics[1, 2]
3 Balance of payments statistics[1, 2]
4 Seasonally adjusted business statistics[1, 2]
5 Exchange rate statistics[2]

Special Publications

Makro-ökonometrisches Mehr-Länder-Modell, November 1996[3]

Europäische Organisationen und Gremien im Bereich von Währung und Wirtschaft, May 1997[3]

Die Zahlungsbilanz der ehemaligen DDR 1975 bis 1989, August 1999[3]

The market for German Federal securities, May 2000

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

Bundesbank Act, September 2002

Weltweite Organisationen und Gremien im Bereich von Währung und Wirtschaft, March 2013[3]

Die Europäische Union: Grundlagen und Politikbereiche außerhalb der Wirtschafts- und Währungsunion, April 2005[3]

Die Deutsche Bundesbank – Aufgabenfelder, rechtlicher Rahmen, Geschichte, April 2006[3]

European economic and monetary union, April 2008

For footnotes, see p 86•.

Special Statistical Publications

1 Banking statistics guidelines, July 2017[2, 4]

2 Banking statistics customer classification, July 2017[2]

3 Aufbau der bankstatistischen Tabellen, July 2013[2, 3]

4 Financial accounts for Germany 2011 to 2016, May 2017[2]

5 Extrapolated results from financial statements of German enterprises 1997 to 2015, December 2016[2]

6 Verhältniszahlen aus Jahresabschlüssen deutscher Unternehmen von 2013 bis 2014, May 2017[2, 3]

7 Notes on the coding list for the balance of payments statistics, September 2013[2]

8 The balance of payments statistics of the Federal Republic of Germany, 2nd edition, February 1991[o]

9 Securities deposits, August 2005

10 Foreign direct investment stock statistics, April 2017[1, 2]

11 Balance of payments by region, July 2013

12 Technologische Dienstleistungen in der Zahlungsbilanz, June 2011[3]

Discussion Papers*

30/2017
(Un)expected monetary policy shocks and term premia

31/2017
Bargaining power and outside options in the interbank lending market

32/2017
Vulnerable asset management? The case of mutual funds

33/2017
Moral suasion in regional government bond markets

34/2017
A severity function approach to scenario selection

35/2017
Why do banks bear interest rate risk?

36/2017
Liquidity provision as a monetary policy tool: the ECB's non-standard measures after the financial crisis

37/2017
A stress test framework for the German residential mortgage market – methodology and application

38/2017
Changes in education, wage inequality and working hours over time

39/2017
Appropriate monetary policy and forecast disagreement at the FOMC

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o Not available on the website.
* As of 2000 these publications have been made available on the Bundesbank's website in German and English. Since the beginning of 2012, no longer subdivided into series 1 and series 2.
For footnotes, see p 86•.

Banking legislation

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

2 Banking Act, July 2014[2]

2a Solvency Regulation, December 2006[2]
Liquidity Regulation, December 2006[2]

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